START
HERE

2012-2014
College Catalog

EASTERN IOWA COMMUNITY COLLEGES
CLINTON ♦ MUSCATINE ♦ SCOTT

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EASTERN IOWA COMMUNITY COLLEGES
CLINTON ♦ MUSCATINE ♦ SCOTT

ACADEMIC CALENDAR

Fall Semester 2012

August 13	Fall Tuition and Fees Due
August 27	Fall Classes Begin
August 28	Last Day for 75% Tuition Refund/To Add Fall First Eight Week Classes
August 31	Fall 2012 Graduation Applications Due
August 31	Last Day for 50% Tuition Refund for First Eight Week classes
August 31	Last Day for 75% Tuition Refund/To Add Fall 16 Week Classes
September 3	Labor Day (College Closed)
September 7	Last Day for 50% Tuition Refund for 16 Week Classes/For Book Exchange or Return for First Eight & 16 Week Classes
September 28	District Staff Development Day - No Classes
October 12	Last Day to Withdraw from First Eight Week Classes
October 19	Mid-Term
October 19	First Eight Week Classes End
October 22	Second Eight Week Classes Begin
October 23	Last Day for 75% Tuition Refund/To Add Fall Second Eight Week Classes
October 26	Last Day for 50% Tuition Refund/For Book Exchange or Return for Second Eight Week Classes
November 6	Advising Day
November 21 - 23	Thanksgiving (College CLOSED)
November 30	Last Day to Withdraw from 16 Week Classes
December 11	Last Day to Withdraw from Second Eight Week Classes
December 13, 14, & 17	Final Exams
December 18	Fall Term Ends
December 18	Grades Due by 5 p.m.

Spring Semester 2013

January 2	Spring Tuition and Fees Due
January 14	Spring Classes Begin
January 15	Last Day for 75% Tuition Refund/To Add First Eight Week Classes
January 18	Spring/Summer 2013 Graduation Applications Due
January 18	Last Day for 50% Tuition Refund for First Eight Week Classes
January 18	Last Day for 75% Tuition Refund/To Add Spring 16 Week Classes
January 21	Martin Luther King Day -- College CLOSED
January 25	Last Day for 50% Tuition Refund for 16 Week Classes/For Book Exchange or Return for First Eight & 16 Week Classes
February 15	District Staff Development Day - No Classes
March 1	Last Day to Withdraw from First Eight Week Classes
March 8	Mid-Term
March 8	First Eight Week Classes End
March 11 - 16	Spring Break
March 18	Second Eight Week Classes Begin
March 19	Last Day for 75% Tuition Refund/To Add Spring Second Eight Week Classes
March 22	Last Day for 50% Tuition Refund for Second Eight Week Classes
April 9	Advising Day
April 29	Last Day to Withdraw from 16 Week Classes
May 8	Last Day to Withdraw from Second Eight Week Classes
May 10, 13 & 14	Final Exams
May 13	Commencement-Clinton Community College 6:00pm
May 14	Commencement-Muscatine Community College 7:00pm
May 15	Commencement-Scott Community College 6:00pm
May 15	Spring Term Ends
May 15	Grades Due by 5 p.m.
May 27	Memorial Day - College CLOSED

Summer Term 2013

June 3	Summer Tuition and Fees Due

First Four Week & Eight Week Summer Sessions

June 3	First Four Week & Eight Week Summer Sessions Begin
June 4	Last Day for 75% Tuition Refund/To Add Classes to First Four Week & Eight Week Summer Sessions Begin
June 7	Last Day for 50% Tuition Refund/For Book Exchange or Return for First Four Week & Eight Week Summer Sessions
June 21	Last Day to Withdraw from First Four Week Session
June 28	First Four Week Session End
July 1	First Four Week Session Grades Due by 5 p.m.
July 4	College CLOSED
July 19	Last Day to Withdraw from Eight Week Session
July 26	Eight Week Session Ends
July 29	Eight Week Session Grades Due by 5 p.m.

Second Four Week Session

July 1	Second Four Week Session Begins
July 2	Last Day for 75% Tuition Refund/To Add Second Four Week Classes
July 4	College CLOSED
July 5	Last Day for 50% Tuition Refund/For Book Exchange or Return for

Second Four Week Classes

July 19	Last Day to Withdraw from Second Four Week Classes
July 26	Second Four Week Session Ends
July 29	Second Four Week Session Grades Due by 5 p.m.

Fall Semester 2013

August 12	Fall Tuition and Fees Due
August 26	Fall Classes Begin
August 27	Last Day for 75% Tuition Refund/To Add Fall First Eight Week Classes
August 30	Fall 2013 Graduation Applications Due
August 30	Last Day for 50% Tuition Refund for First Eight Week classes
August 30	Last Day for 75% Tuition Refund/To Add Fall 16 Week Classes
September 2	Labor Day (College Closed)
September 6	Last Day for 50% Tuition Refund for 16 Week Classes/For Book Exchange or Return for First Eight & 16 Week Classes
September 27	District Staff Development Day - No classes
October 11	Last Day to Withdraw from First Eight Week Classes
October 18	Mid-Term
October 18	First Eight Week Classes End
October 21	Second Eight Week Classes Begin
October 22	Last Day for 75% Tuition Refund/To Add Fall Second Eight Week Classes
October 25	Last Day for 50% Tuition Refund/For Book Exchange or Return for Second Eight Week Classes
November 5	Advising Day
November 26	Last Day to Withdraw from 16 Week Classes
November 27 - 29	Thanksgiving (College CLOSED)
December 10	Last Day to Withdraw from Second Eight Week Classes
December 12, 13 & 16	Final Exams
December 17	Fall Term Ends
December 17	Grades Due by 5 p.m.

Spring Semester 2014

January 12	Spring Tuition and Fees Due
January 13	Spring Classes Begin
January 14	Last Day for 75% Tuition Refund/To Add First Eight Week Classes
January 17	Spring/Summer 2014 Graduation Applications Due
January 17	Last Day for 50% Tuition Refund for First Eight Week Classes
January 17	Last Day for 75% Tuition Refund/To Add Spring 16 Week Classes
January 20	Martin Luther King Day -- College CLOSED
January 24	Last Day for 50% Tuition Refund for 16 Week Classes/For Book Exchange or Return for First Eight & 16 Week Classes
February 14	District Staff Development Day - No classes
February 28	Last Day to Withdraw from First Eight Week Classes
March 7	Mid-Term
March 7	First Eight Week Classes End
March 10 - 15	Spring Break
March 17	Second Eight Week Classes Begin
March 18	Last Day for 75% Tuition Refund/To Add Spring Second Eight Week Classes
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April 28	Last Day to Withdraw from 16 Week Classes
May 7	Last Day to Withdraw from Second Eight Week Classes
May 9, 12 & 13	Final Exams
May 12	Commencement-Clinton Community College 6:00pm
May 13	Commencement-Muscatine Community College 7:00pm
May 14	Commencement-Scott Community College 6:00pm
May 14	Spring Term Ends
May 14	Grades Due by 5 p.m.
May 26	Memorial Day - College CLOSED

Summer Term 2014

June 2	Summer Tuition and Fees Due

First Four Week & Eight Week Summer Sessions

June 2	First Four Week & Eight Week Summer Sessions Begin
June 3	Last Day for 75% Tuition Refund/To Add Classes to First Four Week & Eight Week Summer Sessions Begin
June 6	Last Day for 50% Tuition Refund/For Book Exchange or Return for First Four Week & Eight Week Summer Sessions
June 20	Last Day to Withdraw from First Four Week Session
June 27	First Four Week Session End
June 30	First Four Week Session Grades Due by 5 p.m.
July 4	College CLOSED
July 18	Last Day to Withdraw from Eight Week Session
July 25	Eight Week Session Ends
July 28	Eight Week Session Grades Due by 5 p.m.

Second Four Week Session

June 30	Second Four Week Session Begins
July 1	Last Day for 75% Tuition Refund/To Add Second Four Week Classes
July 4	College CLOSED
July 7	Last Day for 50% Tuition Refund/For Book Exchange or Return for Second Four Week Classes
July 18	Last Day to Withdraw from Second Four Week Classes
July 25	Second Four Week Session Ends
July 28	Second Four Week Session Grades Due by 5 p.m.

LOCATIONS

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

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

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

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

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

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

Wilton Center
1215 Cypress
Wilton, IA 52778
1-800-477-5002
563-732-2038

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

* Toll free for calls made within area code 563

EASTERN IOWA COMMUNITY COLLEGES

SAMPLE COURSE SCHEDULING CARD   Today's Date _____

Name _____   Social Security # _____
   (last)   (first)   (middle)

Address _____   Concentration/Program _____   Code # _____

_____   Semester/Year _____
   (city)   (state)   (zip)   (For which you are scheduling)   New Student ❑

Telephone Number   (_____) _____   Assessed _____   Returning Student ❑

Email Address _____

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

TOTAL SEMESTER HOURS [ ]

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

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

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

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

Any changes made to your original schedule may affect your Promissory Note plan. Contact the Business Office for details.

_____
STUDENT SIGNATURE

_____
ADVISOR SIGNATURE

WELCOME TO YOUR COMMUNITY COLLEGE

Mission Statement

Eastern Iowa Community Colleges delivers quality education and services to strengthen our community. Our mission is accomplished by:

- Excelling in teaching and learning
- Identifying future needs
- Preparing tomorrow's workforce
- Promoting lifelong learning
- Fostering innovation
- Valuing diversity
- Committing to global sustainability
- Ensuring accessibility for all

Quality Vision

EICC is committed to meeting or exceeding customer needs and expectations through Continuous Quality Improvement.

Accreditation

EICC is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The HLC address is 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602-2504. Phone: (800)621-7440 / (312) 263-0456
FAX: (312) 263-7462

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

A Message from the Chancellor

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

We have a long tradition of excellence and commitment to the success of our students. We continue to invest in our facilities and support resources to serve you better - something you can see when you visit our campuses and facilities. We have updated our classrooms, technology and hands-on learning labs to make our campuses great places to learn. We've also designed new course delivery methods because we understand that each of you has unique needs and learning styles.

What may not be as visibly apparent is our passionate commitment to help you achieve your goals. Whatever program you choose, we are focused on helping you earn your degree or certificate, and to ensuring your success in transfer or the world of work. Our faculty and staff are dedicated to your future success. Our goal is to help you get ahead in whatever career or field of study you choose.

We're here to help you as you begin your college journey. I encourage you to visit our website at www.eicc.edu for more information - including "virtual tours" of our campuses. Please call on us for assistance with class registration, financial aid planning, career guidance, campus life questions or with any other questions you might have.

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

Sincerely,

Don Doucette
Chancellor

Student
Information

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ◆ MUSCATINE ◆ SCOTT

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STUDENT INFORMATION

ADMISSIONS

General Policy

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

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

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

Concurrent Enrollments

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

High School Students

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

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

Pre-High School Students- Special Status Admission

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

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

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

Home School Students- Special Status Admissions

EICC will consider the admission of a student to credit classes who are not attending a public or private school, and are currently enrolled as home school students. Students may apply to the college for special status consideration for admittance. Enrollment may be considered as enrichment to the home school program, but is not intended to substitute for the home school experience. The following policies and procedures will apply to the enrollment of home school students:
1. Complete an Admission Application
2. Students who are home schooled must provide a current copy of a signed home school permission agreement between the appropriate school system and the authorizing parent or guardian. Such documentation must be provided to the Dean of Student Development prior to admission to the College.
3. Prior to admission, an applicant who does not have a high school diploma will be required to demonstrate that they possess specific pre-requisite skills by taking the COMPASS Assessment or submitting ACT scores.
4. The College reserves the right to limit the number of courses and which type of courses a student may take. Additionally the student will be required to meet with a college advisor when selecting courses for registration. "Special Status" admissions must be approved by the Dean of Student Development.

Application Procedures

To apply for admission to Clinton, Muscatine or Scott Community College, you will need to:
1. Submit an application for admission. If you are applying to more than one EICC college, you only need to submit one application.
2. Send official transcripts from any other college you have attended, if you have previous college credit. Direct your requests for evaluation of transfer credit to the College Registrar.
3. Provide assessment scores from ACT, or COMPASS (computerized testing) taken within the last five years.

Please contact the Admissions Office for more information.

International Student Admissions

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

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

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

Re-enrollment

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

Transfer Credit

From Other Colleges to EICC

We accept transfer credit from colleges and universities accredited by the North Central Association of Schools or its regional affiliates. Credit for equivalent courses will be accepted to satisfy specific course requirements for graduation. The transfer credit you receive may vary depending on the academic program you choose, and college registrars will decide on elective credit or course substitutions on an individual basis. Transfer credit will be recorded on your EICC transcript after you have requested a transcript evaluation. Transfer grades are not used in your EICC grade point average.

From Career and Technical to Arts and Sciences Programs

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

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

Admission on Restricted Status

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

Special Student Admission

Veterans

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

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

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

Military Personnel

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

Residency Status for Military Personnel and Veterans

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

Senior Citizens

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

Audit or CEU

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

REGISTRATION

Registration Procedures

To enroll in classes you may meet with an advisor and complete the appropriate forms, or log on to www.eicc.edu and follow the ebridge link to enroll online. Students may enroll in a maximum of 11 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.

Late Registration

You will have a better selection of courses and class times if you register early. Late registration is during the first week of class for 16-week sessions. Late registration for summer or shortened sessions is during the first two class meetings.

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 Campus Cruiser and follow the ebridge link to add the class. Classes may be added during the first week of classes for a full semester class. Summer or short term sessions have two days to add a class.

Dropping a Class

To drop a class you may meet with an advisor and complete the appropriate form or log on to Campus Cruiser 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. This process may also be done via ebridge within the last dates to withdraw for the course. 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 Campus Cruiser and follow the ebridge link to withdraw from all of your classes. NOTE: Check the Tuition and Fees Refund policy for a possible refund.

Course Repeats

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

Academic Load

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

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

Class Attendance

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

Graduation

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

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

EDUCATIONAL COSTS

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

Tuition

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

Books and Supplies

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

Transcript Recording Fees

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

Early Registration Fee

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

Tuition Refunds

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

Courses that are 16 weeks in length:

100%	Prior to the beginning of the term
75%	First week of term
50%	Second week of term

Courses that meet for one week or less:

100%   Prior to the official start date of
        the course*

No refund after the course has begun

For all other courses:

100%   Prior to official start date of the
        session*

75%   During the first two days of the
        session*

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

*See Registration Center for specific course dates.

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

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

RESIDENCY

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

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

STUDENT HEALTH INSURANCE

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

FINANCIAL AID

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

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

General Policy

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

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

Federal Assistance

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

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

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

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

STUDENT INFORMATION

State Assistance

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

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

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

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

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

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

EICC Programs

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

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

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

GRADUATION AND GENERAL EDUCATION REQUIREMENTS

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

Associate in Arts (A.A.) Degree

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

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

Courses that satisfy specific requirements for A.A. concentration areas are listed on pages 47-68.

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

Associate in Science (A.S.) Degree

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

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

Courses that satisfy requirements for specific A.S. concentration areas are listed on pages 47-68.

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

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

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

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

1. A maximum of 11 credit hours of vocational-technical credit may be accepted as electives.

2. A maximum of four credit hours of Student Development courses may be counted toward the A.S. degree.

3. All course work for the A.S. degree must be numbered at the 100 level or higher.

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

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

Diploma Programs

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

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

Certificate Programs

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

ACADEMIC REQUIREMENTS

Academic Standing

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

A   4.00 x number of credit hours of A credit received

A-   3.67 x number of credit hours of A- credit received

B+   3.33 x number of credit hours of B+ credit received

B   3.00 x number of credit hours of B credit received

B-   2.67 x number of credit hours of B- credit received

C+   2.33 x number of credit hours of C+ credit received

C   2.00 x number of credit hours of C credit received

C-   1.67 x number of credit hours of C- credit received

D+   1.33 x number of credit hours of D+ credit received

D   1.00 x number of credit hours of D credit received

D-   0.67 x number of credit hours of D- credit received

F   0.00 x number of credit hours of F credit received

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

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

Grading and Transcript Designations

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

STUDENT INFORMATION

Marking System

A excellent performance

B above average performance

C average performance

D below average performance

F failure, no credit granted or grade points awarded, but credits attempted are figured into GPA as zeroes. "F" grades are given for poor performance, poor attendance, failure to officially withdraw or failure to meet makeup requirements for an Incomplete grade.

I failure to complete required work due to justifiable extenuating circumstances. An "I" grade means you have asked for and received permission from your instructor to complete the required course work no later than mid-term of the following academic term, not including summer sessions. Failure to complete the work in that time frame will result in an "F" grade.

W official withdrawal from a course. To qualify for a "W" grade, you must complete the withdrawal form two weeks prior to the first day of final exams. Contact the College Registrar for summer and short-term withdrawal dates. If you leave a course without officially withdrawing, you will receive an "F" or the grade that reflects your course performance.

N audit. Audit is a "no credit/no pass" grade that you can use for several purposes: you may choose it during registration instead of a course grade or in place of withdrawal with instructor permission if you are already enrolled in a course; OR the college may award the "N" grade to students in developmental courses who do not make sufficient progress to move into credit courses. When you audit a course, you and your instructor will agree on your attendance and participation in class activities. The audit option is offered only on a space-available basis. You must complete the audit form by the end of the 10th day prior to the first day of final exams.

P given when you pass a course and earn credit without grade points being awarded. Courses transferred into EICC with a "P" grade are considered to be credit without being calculated into your GPA.

X course has been repeated.

O Fresh Start grade

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

Prerequisite Course Grade Recommendation

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

Satisfactory Progress

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

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

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

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

Types of Credit

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

Credit Transfer

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

Articulation

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

Transfer Guarantee

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

Joint Admission

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

Class Standing

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

Academic Honors

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

Honor Graduates

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

Incomplete Grades

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

Withdrawal from College

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

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

Catalog Requirements

You may choose to graduate under the requirements of any EICC catalog from the preceding five years 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 each academic year.) However, it is best to graduate under the most current catalog requirements, especially if you plan to transfer to a four-year college or you are enrolled in a program requiring specialized accreditation.

Fresh Start

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

Graduation GPA and Residency Requirements

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

Credit for Prior Learning

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

Alternative Delivery

Clinton, Muscatine and Scott Community Colleges offer many options for course delivery. Visit www.eicc.edu for information about these options.

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

Student Handbook

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

STUDENT INFORMATION

Student Learning Assessment

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

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

CONFIDENTIALITY OF STUDENT RECORDS

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

The college may release the following types of information to the public as the college sees fit, keeping in mind the privacy of the student and the totality of the surrounding circumstances: name, address, telephone listing, e-mail address, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, academic honor rolls, degrees and awards received, full-time/part-time status, most recent previous school or institution attended by the student and photograph and likeness, artwork, or writing.
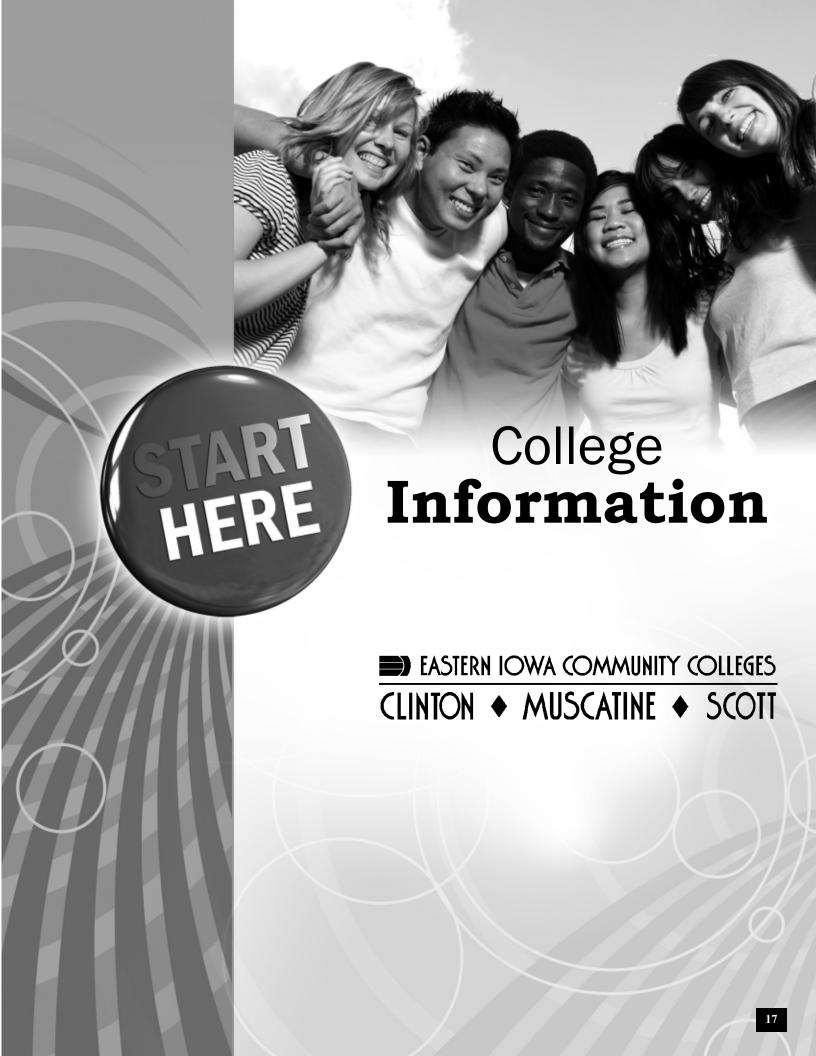
Any student objecting to the public release of such information must file a written objection with the Registrar's Office within 30 calendar days of the beginning of the term in which he or she first enrolls during that year. It is necessary for the student to renew his or her objection at the beginning of each school year.

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

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

Online Voter Registration

www.sos.state.ia.us/elections

College
Information

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ◆ MUSCATINE ◆ SCOTT

START HERE

CLINTON COMMUNITY COLLEGE

THE COMMUNITY

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

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

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

THE COLLEGE

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

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

CCC Alumni Association

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

The Alumni Association is an active supporter of the college and hosts many annual events such as the Student Leader Luncheon and the Outstanding Awards that highlight those that give outstanding support to CCC. In addition, the Alumni Association supports four different scholarships for CCC students ranging from $200 to a full-time Alumni Honor Scholarship.

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

STUDENT PROGRAMS

Intercollegiate and Intramural Athletics

Clinton Community College is a member of the National Junior College Athletic Association (NJCAA). The college has men's basketball and women's volleyball teams. Competition and eligibility are governed by the Iowa College Conference Athletic Codes and the NJCAA. To participate, a student must be doing passing work at all times in at least 12 credit hours of course work, must have passed 12 credits of course work in the previous semester of college attendance and maintain a minimum 2.0 GPA. To be eligible for a second session of competition, a student must pass 24 credit hours with a minimum 2.0 GPA. Contact the Athletic Director with questions.

The college also offers student intramural programs throughout the year.

Clubs and Organizations

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

Phi Theta Kappa

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

Student Senate

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

Student Newspaper

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

STUDENT SERVICES

Housing

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

Library

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

Career Services

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

Success Center

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

Student Success

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

Internet

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

PAUL B. SHARAR FOUNDATION

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

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

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

The Paul B. Sharar Foundation office is located on the college campus. For more information, visit the Web Site at www.eicc.edu/ccc/sharar/index.html

MUSCATINE COMMUNITY COLLEGE

THE COMMUNITY

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

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

THE COLLEGE

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

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

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

STUDENT PROGRAMS

Clubs and Organizations

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

Phi Theta Kappa

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

Student Government

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

Intercollegiate and Intramural Athletics

Muscatine Community College is a member of the Iowa Community College Athletic Conference and offers intercollegiate competition in men's baseball and women's softball.

The college also offers a variety of intramural activities ranging from volleyball, basketball to pool table, table tennis, 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

Skills Center

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

Disability Accommodations

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

Housing

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

Test Center

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

Advising Center

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

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

Study Skills

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

Career Assistance

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

Child Care

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

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

Library

The library is a place to find 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 from the region; EBSCO and Academic One File, ways to access over 10,000 magazines, journals, and newspapers online. The Library and C omputer Labs have 43 computers, 3 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 or table tennis and enjoy time with friends. The lounge is open during all school hours and offers a food area for a quick lunch or snack between classes.

Internet

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

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**

SCOTT COMMUNITY COLLEGE

THE COMMUNITY

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

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

THE COLLEGE

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

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

STUDENT PROGRAMS

Student Government

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

Clubs and Organizations

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

Phi Theta Kappa

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

Honors Program

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

Athletics

Students can participate in these intercollegiate sports at Scott Community College: women's soccer, men's soccer, women's golf and men's golf. More information is available in the Campus Activities Office.

STUDENT SERVICES

Disability Accommodations

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

Guidance

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

Advising

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

Housing

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

Student Success

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

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

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

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

Job Placement

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

Library Services

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

Events Publications

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

Class Schedules

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

College Bookstore

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

Internet

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

SCOTT COMMUNITY COLLEGE FOUNDATION

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

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

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

CONTINUING EDUCATION

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

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

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

Continuing Education District Office
563-336-3444

Clinton Community College
563-244-7100

Muscatine Community College
563-288-6100

Scott Community College
563-441-4100

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

COSTS

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

ADMISSION

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

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

REGISTRATION

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

Cancelled Classes

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

Late Enrollment

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

Class Limits

Class limits help us ensure quality instruction. We will keep a waiting list with individuals listed in order of the date of their contact with the college, and this list will be used to fill classes after the first meeting. If pre-registration is sufficient 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 District holds memberships in several organizations including the American Society for Training and Development (ASTD), the National Council of Continuing Education and Training (NCCET), the Iowa Association of Lifelong Learning (IALL), the National Coalition of Advanced Technology Centers (NCATC), and the National Council for Workforce Education (NCWE).

PROGRAMS

Professional Development

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

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

Management and Supervision - Programs include Frontline Leadership/Leadership 2000 from AchieveGlobal, the Vital Learning Supervision Series, as well as online management courses.

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

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

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

Customized Training

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

Short-Term Skills Training

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

ABE/HSC/ESL

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

The High School Completion (HSC) program prepares individuals to pass the General Education Development Test (GED) and serves as a brush-up prior to entering college or the job market. Regular high school credit classes are also available in selected school districts.

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

General Interest

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

Mandatory Programs

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

Continuing Education Unit (CEU)

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

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

BUSINESS AND INDUSTRY CENTER

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

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

Small Business Development Center

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

The SBDC is jointly sponsored by EICC, the State of Iowa and the U.S. Small Business Administration. There are 16 centers throughout Iowa.

ECONOMIC DEVELOPMENT

EICC's economic development department provides a wide variety of assistance to business and industry throughout the eastern Iowa region. The Iowa New Jobs Training Program and the Iowa Jobs Training Program have provided training incentives to almost 500 area companies and nearly 40,000 employees have participated in the training.
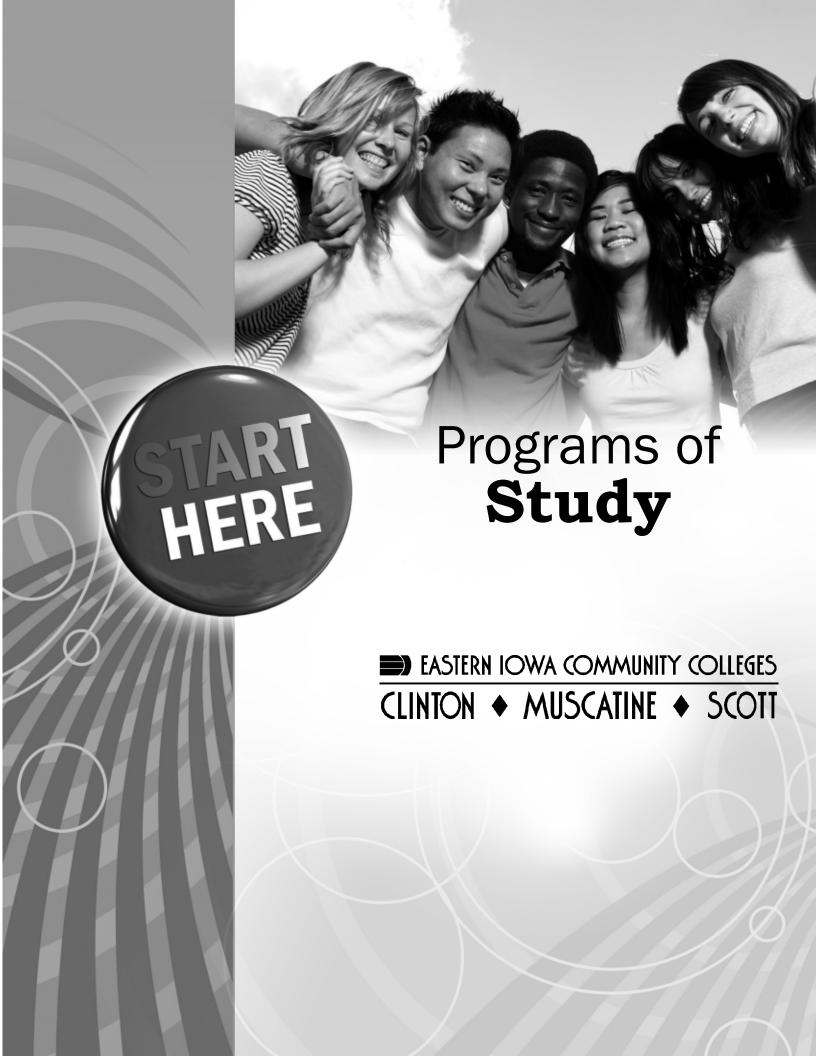
The Iowa Waste Reduction Center is a partnership program between EICC and the Iowa Department of Natural Resources. The local representative of the program is located at EICC and assists companies in reducing their waste stream by finding other companies that can use these wastes in their manufacturing processes.

The Graphic Arts Training and Consulting has developed a national reputation for providing expert training and consulting services to printing firms throughout the Midwest. The training professionals each have expertise in certain areas of the graphic arts process and deliver customized training programs at company locations.

Eastern Iowa Career Link Essentials is a partnership of EICC and leading area manufacturers to deliver a pre-employment training program to meet the needs of partner companies to create a pool of trained applicants for their workforce needs. This 56-hour program is delivered over a four-week time period in the evenings.

Eastern Iowa Job Training

The Eastern Iow@Work offices, in partnership with the Iowa Workforce Development Centers, are administered by Eastern Iowa Community Colleges. The program was designed by Congress as a cooperative venture between business and government to offer training to help people enter or re-enter the workforce. Eastern Iow@Work also helps businesses with the costs of hiring and training new employees. Services are available to residents and businesses in Clinton, Jackson, Muscatine and Scott Counties.

START HERE

Programs of
Study

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ◆ MUSCATINE ◆ SCOTT

Program of Study by Career Cluster

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

Program of Study	Degree Awarded	Location	Page
AGRICULTURE, FOOD & NATURAL RESOURCES			
Agriculture, Transfer	AA, AS	MCC	47
Conservation, Transfer	AS	MCC	52
Equestrian Science	AAS	CCC, MCC, SCC/BHC*	96
Farm Management	AAS	MCC	97
Feed & Fertilizer Marketing	AAS	MCC	98
Health, Safety and Environmental Technology (HSET)	AAS, Certificate	CCC, MCC, SCC	102
Horse Science Technology	AAS, Certificate	CCC, MCC, SCC/BHC*	104
Horticulture	AAS	MCC	105
Renewable Energy Systems	AAS	SCC	126
ARCHITECTURE & CONSTRUCTION			
Geographic Information Systems	Certificate	CCC	130
Heating, Ventilation & Air Conditioning (HVAC)	AAS, Diploma, Certificate	SCC	103
Technical Drafting & Computer Aided Design	AAS	CCC	130
ARTS, A/V TECHNOLOGY AND COMMUNICATIONS			
English, Transfer	AA	CCC, MCC, SCC	53
Fine Arts - Art, Transfer	AA	CCC, MCC, SCC	55
Fine Arts - Drama, Transfer	AA	MCC, SCC	55
Fine Arts - Music, Transfer	AA	MCC	56
Graphic Arts Technology	AAS, Diploma	CCC	100
Journalism/Communication, Transfer	AA	CCC, MCC, SCC	57
Speech, Transfer	AA	CCC, MCC, SCC	68
BUSINESS, MANAGEMENT AND ADMINISTRATION			
Administrative & Office Support	AAS	CCC, MCC, SCC	74-76
Administrative Support	Diploma	CCC	74
Apparel Merchandising	Diploma, Certificate	SCC	112
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC	50
Business Management	AAS	CCC, MCC, SCC	82
Clerk Receptionist	Certificate	MCC	76
Computer Applications for the Office	Certificate	CCC	74
Entrepreneurship	Certificate	CCC, MCC, SCC	83
International Trade	Certificate	CCC, MCC, SCC/BHC*	113
Interior Design	AAS	SCC	112
Management/Supervision	Certificate	CCC, MCC, SCC	83
Management, Transfer	AA	CCC, MCC, SCC	60
Microcomputer Application Software Specialist	Diploma	SCC	77
Office Assistant	Diploma	MCC	75
Office Support	Certificate	CCC, SCC	74, 77
Small Business Management	Certificate	CCC, MCC, SCC	83
Software Applications Specialist	Certificate	MCC	76
EDUCATION AND TRAINING			
Early Childhood Education	AAS	SCC	91
Education, Transfer (Secondary, Elementary or Early Childhood)	AA	CCC, MCC, SCC	53
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC	61

PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location	Page
FINANCE			
Accounting Assistant	Certificate	MCC	75
Accounting Management	AAS, Diploma	CCC, MCC, SCC	73
Banking, Transfer	AA	CCC, MCC, SCC	48
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC	50
GOVERNMENT AND PUBLIC ADMINISTRATION			
History, Transfer	AA	CCC, MCC, SCC	57
Political Science, Transfer	AA	CCC, MCC, SCC	64
HEALTH SCIENCE			
Cancer Information Management	AAS, Diploma	SCC	84
Dental Assisting	AAS[1], Diploma	SCC	88
Electroneurodiagnostic Technology	AAS	SCC	94
Emergency Medical Services	AAS	CCC, MCC, SCC	95
EMT	Certificate	CCC, MCC, SCC	95
EMT, Advanced	Certificate	CCC, MCC, SCC	95
Health Information Technology	AAS, Diploma	CCC, MCC, SCC	101
Massage Therapy & Body Work	Certificate	CCC, MCC, SCC/BHC*	119
Nursing, Associate Degree	AAS	CCC, SCC	123
Practical Nursing	Diploma	CCC, MCC, SCC	123
Physical Therapist Assistant	AAS	CCC, MCC, SCC/BHC*	124
Pre-Chiropractic, Transfer	AA, AS	CCC, MCC, SCC	65
Pre-Health Professional, Transfer	AA, AS	CCC, MCC, SCC	66
Pre-Nursing, Trinity Transfer	AA	CCC, MCC, SCC	66
Radiologic Technology	AAS	SCC	125
Respiratory Care	AAS	CCC, MCC, SCC/NICC**	127
Surgical Technology	AAS, Diploma	SCC	129
Sterile Processing & Distribution	Certificate	SCC	129
Veterinary Technician	AAS	MCC	133
[1]Pending Department of Education approval			
HOSPITALITY AND TOURISM			
Baking	Certificate	SCC	87
Culinary Arts Apprenticeship	AAS	SCC	86
Culinary Arts Assistant	Certificate	SCC	86
Event Management	Certificate	SCC	106
Hospitality Management	AAS	SCC	106
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC	161
Restaurant Management	AAS	SCC	128
HUMAN SERVICES			
Early Childhood Education	AAS	SCC	91
Early Childhood Education	Diploma, Certificate	MCC, SCC	91
Interpreter, American Sign Language	AAS	SCC	113
Psychology, Transfer	AA	CCC, MCC, SCC	67
Social Work, Transfer	AA	CCC, MCC, SCC	67
Sociology, Transfer	AA	CCC, MCC, SCC	68

PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location	Page
INFORMATION TECHNOLOGY			
A+ Preparation	Certificate	CCC, MCC, SCC	110
CISCO Networking - CCNA	Certificate	SCC	109
CISCO Networking (CCNA)	Certificate	CCC, MCC	109
Computer Repair & Help Desk Support	Certificate	CCC, MCC, SCC	110
Game Development	AAS	SCC	109
Network+ Preparation	Certificate	CCC, MCC, SCC	111
Networking	AAS	CCC, MCC, SCC	108
Software Development	AAS	CCC, MCC, SCC	107
Web Design	Certificate	MCC, SCC	109
Web Game Development	Certificate	SCC	110
Wireless LAN	Certificate	CCC, MCC, SCC	111
LAW, PUBLIC SAFETY AND SECURITY			
Criminal Justice, Transfer	AA	CCC, MCC, SCC	52
Fire Service Officer	AAS	CCC, MCC, SCC/BHC*	99
Law Enforcement	AAS, Certificate	CCC, MCC, SCC/BHC*	114-115
Pre-Law, Transfer	AA	CCC, MCC, SCC	66
Private Security Officer	Certificate	CCC, MCC, SCC/BHC*	115
MANUFACTURING			
Applied Electricity	Certificate	SCC	93
CAD/PRO Engineer	AAS, Diploma, Certificate	CCC, MCC, SCC	120-121
CNC Programming	Certificate	SCC	85
CNC/Machining	AAS	SCC	85
Electrical Systems	Certificate	SCC	93
Electromechanical Studies	AAS, Diploma	SCC	92
Hydraulic/Pneumatic Systems	Certificate	SCC	93
Manual Machining	Certificate	SCC	85
Manufacturing Maintenance	AAS, Certificate	MCC	118
Manufacturing Technology	AAS	MCC	119
Mechatronics Technology	AAS, Diploma	CCC	122
PRO Engineer/Solid Modeling	Certificate	CCC, MCC, SCC	121
Process Control	Certificate	MCC	119
Technical Studies	AAS	CCC, MCC, SCC	131
Welding	AAS, Diploma	SCC	134
Welding, Basic	Certificate	MCC, SCC	135
Welding, General Maintenance	Certificate	SCC	135
Welding, Production	Certificate	CCC, SCC	135
Welding, Structural	Certificate	SCC	135
MARKETING, SALES AND SERVICE			
Apparel Merchandising	Diploma, Certificate	SCC	112
Interior Design	AAS	SCC	112
Marketing	Certificate	CCC, MCC, SCC	83
Marketing, Transfer	AA	CCC, MCC, SCC	60

PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location	Page
SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS			
Biology, Transfer	AA, AS	CCC, MCC, SCC	49
Chemistry, Transfer	AA, AS	CCC, MCC, SCC	51
Environmental Science, Transfer	AA, AS	CCC, MCC, SCC	54
Mathematics, Transfer	AA, AS	CCC, MCC, SCC	61
Physical Science, Transfer	AA, AS	CCC, MCC, SCC	62
Physics, Transfer	AA, AS	CCC, MCC, SCC	63
Pre-Engineering, Transfer	AS	CCC, MCC, SCC	65
TRANSPORTATION, DISTRIBUTION AND LOGISTICS			
Auto Collision Repair Technology	AAS, Diploma, Certificate	SCC	78-79
Automotive Technology	AAS, Diploma	SCC	80
Automotive Technology, Basic Service	Certificate	SCC	81
Automotive Technology, General Service	Certificate	SCC	81
Aviation, Transfer	AA	CCC, MCC, SCC	47
Diesel Technology	AAS	SCC	90
Logistics	AAS, Diploma, Certificate	CCC, MCC, SCC	116
Radio Frequency Identification	Certificate	MCC, SCC	117
Truck Driving	Certificate	SCC	132
UNDECIDED			
Transfer	AA	CCC, MCC, SCC	41
Transfer, Interest in Science or Math	AS	CCC, MCC, SCC	43

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

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

Program of Study by Award

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

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

Program of Study	Location	Page
Agriculture	MCC	47
Aviation	CCC, MCC, SCC	47
Banking	CCC, MCC, SCC	48
Biology	CCC, MCC, SCC	49
Business Administration/Accounting	CCC, MCC, SCC	50
Chemistry	CCC, MCC, SCC	51
Criminal Justice	CCC, MCC, SCC	52
Education (Secondary, Elementary or Early Childhood)	CCC, MCC, SCC	53
English	CCC, MCC, SCC	53
Environmental Science	CCC, MCC, SCC	54
Fine Arts - Art	CCC, MCC, SCC	55
Fine Arts - Drama	MCC, SCC	55
Fine Arts - Music	MCC	56
History	CCC, MCC, SCC	57
Journalism/ Communication	CCC, MCC, SCC	57
Liberal Arts	CCC, MCC, SCC	58-59
Management	CCC, MCC, SCC	60
Marketing	CCC, MCC, SCC	60
Mathematics	CCC, MCC, SCC	61
Physical Education & Recreation	CCC, MCC, SCC	61
Physical Science	CCC, MCC, SCC	62
Physics	CCC, MCC, SCC	64
Pre-Chiropractic	CCC, MCC, SCC	65
Pre-Health Professional	CCC, MCC, SCC	66
Pre-Law	CCC, MCC, SCC	66
Psychology	CCC, MCC, SCC	67
Social Work	CCC, MCC, SCC	67
Sociology	CCC, MCC, SCC	68
Speech	CCC, MCC, SCC	68
Undecided	CCC, MCC, SCC	41

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

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

Program of Study	Location	Page
Agriculture	MCC	47
Biology	CCC, MCC, SCC	49
Chemistry	CCC, MCC, SCC	51
Conservation	MCC	52
Environmental Science	CCC, MCC, SCC	53
Mathematics	CCC, MCC, SCC	61
Physical Science	CCC, MCC, SCC	62
Physics	CCC, MCC, SCC	63
Pre-Chiropractic	CCC, MCC, SCC	63
Pre-Engineering	CCC, MCC, SCC	65
Pre-Health Professional	CCC, MCC, SCC	65
Undecided, Interest in Science and Math	CCC, MCC, SCC	43

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

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

Program of Study	Location	Page
Accounting Management	CCC, MCC, SCC	73
Administrative & Office Support	CCC, MCC, SCC	74-76
Auto Collision Repair Technology	CCC, MCC, SCC	78
Automotive Technology	SCC	80
Business Management	CCC, MCC, SCC	82
CAD/PRO Engineer	CCC, MCC, SCC	120
Cancer Information Management	SCC	84
CNC/Machining	SCC	85
Culinary Arts Apprenticeship	SCC	86
Dental Assisting[1]	SCC	88
Diesel Technology	SCC	90
Early Childhood Education	SCC	91
Electromechanical Studies	SCC	92
Electroneurodiagnostic Technology	SCC	94
Emergency Medical Services	CCC, MCC, SCC	95
Equestrian Science	CCC, MCC, SCC/BHC*	96
Farm Management	MCC	97
Feed & Fertilizer Marketing	MCC	98
Fire Service Officer	CCC, MCC, SCC/BHC*	99
Game Development	SCC	109
Graphic Arts Technology	CCC	100
Health Information Technology	CCC, MCC, SCC	101
Health, Safety and Environmental Technology (HSET)	CCC, MCC, SCC	102
Heating, Ventilation & Air Conditioning (HVAC)	SCC	103
Horse Science Technology	CCC, MCC, SCC/BHC*	104
Horticulture	MCC	105
Hospitality Management	SCC	106
Interior Design	SCC	112
Interpreter, American Sign Language	SCC	113
Law Enforcement	CCC, MCC, SCC/BHC*	114
Logistics	CCC, MCC, SCC	116
Manufacturing Maintenance	MCC	118
Manufacturing Technology	MCC	119
Mechatronics Technology	CCC	122
Networking	CCC, MCC, SCC	108
Nursing, Associate Degree	CCC, SCC	123
Physical Therapist Assistant	CCC, MCC, SCC/BHC*	124
Radiologic Technology	SCC	125
Renewable Energy Systems	SCC	126
Respiratory Care	CCC, MCC, SCC/NICC**	127
Restaurant Management	SCC	128
Software Development	CCC, MCC, SCC	107
Surgical Technology	SCC	129
Technical Drafting & Computer Aided Design	CCC	130
Technical Studies	CCC, MCC, SCC	131
Veterinary Technician	MCC	133
Welding	SCC	134

[1]Pending Department of Education approval

PROGRAM OF STUDY BY AWARD

Diploma

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

Program of Study	Location	Page
Accounting Management	CCC, MCC, SCC	73
Administrative Support	CCC	74
Apparel Merchandising	SCC	112
Auto Collision Repair Technology	SCC	78
Automotive Technology	SCC	80
CAD/PRO Engineer	CCC, MCC, SCC	121
Cancer Information Management	SCC	84
Dental Assisting	SCC	89
Early Childhood Education	MCC, SCC	91
Electromechanical Studies	SCC	92
Graphic Arts Technology	CCC	100
Health Information Technology	CCC, MCC, SCC	101
Heating, Ventilation & Air Conditioning (HVAC)	SCC	103
Logistics	CCC, MCC, SCC	116
Mechatronics Technology	CCC	122
Microcomputer Application Software Specialist	SCC	77
Office Assistant	MCC	75
Practical Nursing	CCC, MCC, SCC	123
Surgical Technology	SCC	129
Welding	SCC	134

Certificate

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

Program of Study	Location	Page
A+ Preparation	CCC, MCC, SCC	110
Accounting Assistant	MCC	75
Apparel Merchandising	SCC	112
Applied Electricity	SCC	93
Auto Collision Repair Technology	SCC	79
Automotive Technology, Basic Service	SCC	81
Automotive Technology, General Service	SCC	81
Baking	SCC	87
CAD/PRO Engineer	CCC, MCC, SCC	121
CISCO Networking - CCNA	SCC	109
CISCO Networking (CCNA)	CCC, MCC	109
Clerk Receptionist	MCC	76
CNC Programming	SCC	85
Computer Applications for the Office	CCC	74
Computer Repair & Help Desk Support	CCC, MCC, SCC	110
Culinary Arts Assistant	SCC	86
Early Childhood Education	MCC, SCC	91
Electrical Systems	SCC	93
EMT	CCC, MCC, SCC	95
EMT, Advanced	CCC, MCC, SCC	95
Entrepreneurship	CCC, MCC, SCC	83
Event Management	SCC	106
Geographic Information Systems	CCC	130
Health, Safety, & Environmental Technology	CCC, MCC, SCC	102
Heating, Ventilation and Air Conditioning	SCC	103
Heating, Ventilation and Air Conditioning Apprenticeship	SCC	103
Horse Science Technology	CCC, MCC, SCC/104BHC*	104
Hydraulic/Pneumatic Systems	SCC	93
International Trade	CCC, MCC, SCC/BHC*	113
Law Enforcement	CCC, MCC, SCC/BHC*	114
Logistics	CCC, MCC, SCC	117
Management/Supervision	CCC, MCC, SCC	83
Manual Machining	SCC	85
Manufacturing Maintenance	MCC	118
Marketing	CCC, MCC, SCC	83
Massage Therapy & Body Work	CCC, MCC, SCC/BHC*	119
Network+ Preparation	CCC, MCC, SCC	111
Office Support	CCC, SCC	77
Private Security Officer	CCC, MCC, SCC/BHC*	115
PRO Engineer/Solid Modeling	CCC, MCC, SCC	121
Process Control	MCC	119
Radio Frequency Identification	MCC, SCC	117
Small Business Management	CCC, MCC, SCC	83
Software Applications Specialist	MCC	76
Sterile Processing & Distribution	SCC	129
Truck Driving	SCC	132
Web Design	MCC, SCC	109
Web Game Development	SCC	110
Welding, Basic	MCC, SCC	135
Welding, General Maintenance	SCC	135
Welding, Production	CCC, SCC	135
Welding, Structural	SCC	135
Wireless LAN	CCC, MCC, SCC	111

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

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

Program of Study by Alphabetical Order

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

Program of Study	Degree Awarded	Location	Page
A+ Preparation	Certificate	CCC, MCC, SCC	110
Accounting Assistant	Certificate	MCC	75
Accounting Management	AAS, Diploma	CCC, MCC, SCC	73
Administrative & Office Support	AAS	CCC, MCC, SCC	74-76
Administrative Support	Diploma	CCC	74
Agriculture, Transfer	AA, AS	MCC	47
Apparel Mechandising	Diploma, Certificate	SCC	112
Applied Electricity	Certificate	SCC	93
Auto Collision Repair Technology	AAS, Diploma, Certificate	SCC	78-79
Automotive Technology	AAS, Diploma	SCC	80
Automotive Technology Basic Service	Certificate	SCC	81
Automotive Technology General Service	Certificate	SCC	81
Aviation, Transfer	AA	CCC, MCC, SCC	47
Baking	Certificate	SCC	87
Banking, Transfer	AA	CCC, MCC, SCC	48
Biology, Transfer	AA, AS	CCC, MCC, SCC	49
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC	50
Business Management	AAS	CCC, MCC, SCC	82
CAD/PRO Engineer	AAS, Diploma, Certificate	CCC, MCC, SCC	120-121
Cancer Information Management	AAS, Diploma	SCC	84
Chemistry, Transfer	AA, AS	CCC, MCC, SCC	51
CISCO Networking - CCNA	Certificate	SCC	109
CISCO Networking (CCNA)	Certificate	CCC, MCC	109
Clerk Receptionist	Certificate	MCC	76
CNC Programming	Certificate	SCC	85
CNC/Machining	AAS	SCC	85
Computer Applications for the Office	Certificate	CCC	74
Computer Repair & Help Desk Support	Certificate	CCC, MCC, SCC	110
Conservation, Transfer	AS	MCC	52
Criminal Justice, Transfer	AA	CCC, MCC, SCC	52
Culinary Arts Apprenticeship	AAS	SCC	86
Culinary Arts Assistant	Certificate	SCC	86
Dental Assisting	AAS[1], Diploma	SCC	88-89
Diesel Technology	AAS	SCC	90
Early Childhood Education	AAS	SCC	91
Early Childhood Education	Diploma, Certificate	MCC, SCC	91
Education, Transfer (Secondary, Elementary or Early Childhood)	AA	CCC, MCC, SCC	53
Electrical Systems	Certificate	SCC	93
Electromechanical Studies	AAS, Diploma	SCC	92
Electroneurodiagnostic Technology	AAS	SCC	94
Emergency Medical Services	AAS	CCC, MCC, SCC	95
EMT	Certificate	CCC, MCC, SCC	95
EMT, Advanced	Certificate	CCC, MCC, SCC	95
English, Transfer	AA	CCC, MCC, SCC	53
Entrepreneurship	Certificate	CCC, MCC, SCC	83
Environmental Science, Transfer	AA, AS	CCC, MCC, SCC	54
Equestrian Science	AAS	CCC, MCC, SCC/BHC*	96

Program of Study	Degree Awarded	Location	Page
Event Management	Certificate	SCC	106
Farm Management	AAS	MCC	97
Feed & Fertilizer Marketing	AAS	MCC	98
Fine Arts - Art, Transfer	AA	CCC, MCC, SCC	55
Fine Arts - Drama, Transfer	AA	MCC, SCC	55
Fine Arts - Music, Transfer	AA	MCC	56
Fire Service Officer	AAS	CCC, MCC, SCC/BHC*	99
Game Development	AAS	SCC	109
Geographic Information Systems	Certificate	CCC	130
Graphic Arts Technology	AAS, Diploma	CCC	100
Health Information Technology	AAS, Diploma	CCC, MCC, SCC	101
Health, Safety and Environmental Technology (HSET)	AAS, Certificate	CCC, MCC, SCC	102
Heating, Ventilation & Air Conditioning (HVAC)	AAS, Diploma, Certificate	SCC	103
History, Transfer	AA	CCC, MCC, SCC	57
Horse Science Technology	AAS, Certificate	CCC, MCC, SCC/BHC*	104
Horticulture	AAS	MCC	105
Hospitality Management	AAS	SCC	106
Hydraulic/Pneumatic Systems	Certificate	SCC	93
Interior Design	AAS	SCC	112
International Trade	Certificate	CCC, MCC, SCC/BHC*	113
Interpreter, American Sign Language	AAS	SCC	113
Journalism/Communication, Transfer	AA	CCC, MCC, SCC	57
Law Enforcement	AAS, Certificate	CCC, MCC, SCC/BHC*	114
Liberal Arts	AA	CCC, MCC, SCC	58-59
Liberal Arts, Interest in Science and Math	AS	CCC, MCC, SCC	43
Logistics	AAS, Diploma, Certificate	CCC, MCC, SCC	116
Management/Supervision	Certificate	CCC, MCC, SCC	83
Management, Transfer	AA	CCC, MCC, SCC	60
Manual Machining	Certificate	SCC	85
Manufacturing Maintenance	AAS, Certificate	MCC	118
Manufacturing Technology	AAS	MCC	119
Marketing	Certificate	CCC, MCC, SCC	83
Marketing, Transfer	AA	CCC, MCC, SCC	60
Massage Therapy & Body Work	Certificate	CCC, MCC, SCC/BHC*	119
Mathematics, Transfer	AA, AS	CCC, MCC, SCC	61
Mechatronics Technology	AAS, Diploma	CCC	122
Microcomputer Application Software Specialist	Diploma	SCC	77
Network+ Preparation	Certificate	CCC, MCC, SCC	111
Networking	AAS	CCC, MCC, SCC	108
Nursing, Associate Degree	AAS	CCC, SCC	123
Office Assistant	Diploma	MCC	75
Office Support	Certificate	CCC, SCC	74, 77
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC	61
Physical Science, Transfer	AA, AS	CCC, MCC, SCC	62
Physical Therapist Assistant	AAS	CCC, MCC, SCC/BHC*	124
Physics, Transfer	AA, AS	CCC, MCC, SCC	63
Political Science, Transfer	AA	CCC, MCC, SCC	64
Practical Nursing	Diploma	CCC, MCC, SCC	123
Pre-Chiropractic, Transfer	AA, AS	CCC, MCC, SCC	65
Pre-Engineering, Transfer	AS	CCC, MCC, SCC	65
Pre-Health Professional, Transfer	AA, AS	CCC, MCC, SCC	66

Program of Study	Degree Awarded	Location	Page
Pre-Law, Transfer	AA	CCC, MCC, SCC	66
Pre-Nursing, Trinity	AA	CCC, MCC, SCC	66
Private Security Officer	Certificate	CCC, MCC, SCC/BHC*	115
PRO Engineer/Solid Modeling	Certificate	CCC, MCC, SCC	121
Process Control	Certificate	MCC	119
Psychology, Transfer	AA	CCC, MCC, SCC	67
Radio Frequency Identification	Certificate	MCC, SCC	117
Radiologic Technology	AAS	SCC	125
Renewable Energy Systems	AAS	SCC	126
Respiratory Care	AAS	CCC, MCC, SCC/NICC**	127
Restaurant Management	AAS	SCC	128
Small Business Management	Certificate	CCC, MCC, SCC	83
Social Work, Transfer	AA	CCC, MCC, SCC	67
Sociology, Transfer	AA	CCC, MCC, SCC	68
Software Applications Specialist	Certificate	MCC	76
Software Development	AAS	CCC, MCC, SCC	107
Speech, Transfer	AA	CCC, MCC, SCC	68
Sterile Processing & Distribution	Certificate	SCC	129
Surgical Technology	AAS, Diploma	SCC	129
Technical Drafting & Computer Aided Design	AAS	CCC	130
Technical Studies	AAS	CCC, MCC, SCC	131
Truck Driving	Certificate	SCC	132
Veterinary Technician	AAS	MCC	133
Web Design	Certificate	MCC, SCC	109
Web Game Development	Certificate	SCC	110
Welding	AAS, Diploma	SCC	134
Welding, Basic	Certificate	MCC, SCC	135
Welding, General Maintenance	Certificate	SCC	135
Welding, Production	Certificate	SCC	135
Welding, Structural	Certificate	SCC	135
Wireless LAN	Certificate	CCC, MCC, SCC	111

[1] Pending Department of Education Approval

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

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

START
HERE

Arts &
Sciences

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ♦ MUSCATINE ♦ SCOTT

Arts & Sciences Concentration Listing

Concentration Areas	Award	College(s)
Agriculture	AA/AS Degree	MCC
Aviation	AA Degree	CCC,MCC,SCC
Banking	AA Degree	CCC,MCC,SCC
Biology	AA/AS Degree	CCC,MCC,SCC
Business Administration/Accounting	AA Degree	CCC,MCC,SCC
Chemistry	AA/AS Degree	CCC,MCC,SCC
Conservation	AS Degree	MCC
Criminal Justice	AA Degree	CCC,MCC,SCC
Education	AA Degree	CCC,MCC,SCC
English	AA Degree	CCC,MCC,SCC
Environmental Science	AA/AS Degree	CCC,MCC,SCC
Fine Arts-Art	AA Degree	CCC,MCC,SCC
Fine Arts-Drama	AA Degree	MCC, SCC
Fine Arts-Music	AA Degree	MCC
History	AA Degree	CCC,MCC,SCC
Journalism/Communication	AA Degree	CCC,MCC,SCC
Liberal Arts	AA Degree	CCC,MCC,SCC
Management	AA Degree	CCC,MCC,SCC
Marketing	AA Degree	CCC,MCC,SCC
Mathematics	AA/AS Degree	CCC,MCC,SCC
Physical Education/Recreation	AA Degree	CCC,MCC,SCC
Physical Science	AA/AS Degree	CCC,MCC,SCC
Physics	AA/AS Degree	CCC,MCC,SCC
Political Science	AA Degree	CCC,MCC,SCC
Pre-Chiropractic	AA/AS Degree	CCC,MCC,SCC
Pre-Engineering	AS Degree	CCC,MCC,SCC
Pre-Health Professional	AA/AS Degree	CCC,MCC,SCC
Pre-Bachelor of Science in Nursing	AA/AS Degree	CCC,MCC,SCC
Pre-Dentistry	AA/AS Degree	CCC,MCC,SCC
Pre-Dental Hygiene	AA/AS Degree	CCC,MCC,SCC
Pre-Medical Technology	AA/AS Degree	CCC,MCC,SCC
Pre-Medical	AA/AS Degree	CCC,MCC,SCC
Pre-Mortuary Science	AA/AS Degree	CCC,MCC,SCC
Pre-Nursing-Trinity	AA Degree	CCC,MCC,SCC
Pre-Pharmacy	AA/AS Degree	CCC,MCC,SCC
Pre-Physical Therapy	AA/AS Degree	CCC,MCC,SCC
Pre-Veterinary	AA/AS Degree	CCC,MCC,SCC
Pre-Law	AA Degree	CCC,MCC,SCC
Psychology	AA Degree	CCC,MCC,SCC
Social Work	AA Degree	CCC,MCC,SCC
Sociology	AA Degree	CCC,MCC,SCC
Speech	AA Degree	CCC,MCC,SCC

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.

Clinton, Muscatine & Scott Community Colleges   **A.A. Degree**

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

Communications (9 credits required)

Credits

Select one of these courses:

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

Select one of these courses:

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

Select one of these courses:

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

Arts and Humanities (9 credits required)

Select one Literature course:

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

Select one Humanities course:

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

Select one course in the Fine Arts:

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

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

Cultural/Historical Perspectives (6 credits required)

Select one course from the Western perspective:

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

Select one course from an International perspective or language:

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

Social Sciences (6 credits required)

Select one Economics or Political Science course:

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

Select one Psychology or Sociology course:

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

Note: Requirements continue on next page.

GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges   A.A. Degree

Natural Sciences (8 credits required)

Select one course in the Life Sciences:

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

Select one course in the Physical Sciences:

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

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

Mathematics (3 credits required)

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

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

Computer Skills (3 credits or demonstrated proficiency required)

CSC:110	Introduction to Computers	3

Electives (Up to 19 credits required)

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

Concentration Electives

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

Clinton, Muscatine & Scott Community Colleges   **A.S. Degree**

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

Communications (9 credits required)

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

Arts and Humanities (6 credits required)

Select one course from two of the following categories:

Literature:

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

Humanities:

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

Fine Arts:

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

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

Cultural/Historical Perspectives (3 credits required)

Select one course:

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

Social Sciences (3 credits required)

Select one course:

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

Mathematics & Natural Sciences (24 credits required)

Select at least two Natural Sciences courses:

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

GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges   **A.S. Degree**

CHM:261/263	Organic Chemistry I	4-5
CHM:271/273	Organic Chemistry II	4-5
ENV:111	Environmental Science	4
ENV:139	Energy and the Environment	4
ENV:145	Conservation Biology	4
PHS:120	Exploring Physical Science	4
PHS:152	Astronomy	5
PHS:166	Meteorology: Weather & Climate	4
PHS:172	Physical Geology	4
PHY:110	Survey of Physics I	3
PHY:111	Survey of Physics II	3
PHY:162	College Physics I	4
PHY:172	College Physics II	4
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5

Select at least one Mathematics course:

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

Computer Skills (Demonstrated proficiency required)

To demonstrate proficiency, students may select one of the following options:
Complete the Computer Skills Proficiency Exam with a passing score, OR
Complete CSC:110 Introduction to Computers with a passing grade.

Electives (Up to 17 credits required)

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

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

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

Concentration Electives

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

Clinton, Muscatine & Scott Community Colleges   **A.S. in Pre-Engineering**

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

Communications (9 credits required)

		Credits

Select one of these courses:

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

Select one of these courses:

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

Select one of these courses:

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

Arts and Humanities (0-9 credits required)

Select one course from two of the following categories:

Literature course:

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

Humanities course:

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

Fine Arts:

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

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

Cultural/Historical Perspectives (0-9 credits required)

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

Social Sciences (3 credits required)

Select one course:

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

Natural Sciences (18-20 credits required)*

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

Clinton, Muscatine & Scott Community Colleges   **A.S. in Pre-Engineering**

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

Mathematics (21 credits required)*

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

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

Computer Skills (3 - 6 credits)

CSC:110	Introduction to Computers	3

Electives (Up to 11 credits required)

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

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

Muscatine Community College

General Education Requirements

Choose from the General Education Curriculum listed on pages 29-32 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:

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

Concentration Electives

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

Strongly Recommended Electives

AGA:285	Crop Protection	3.5
AGA:349	Fertilizers	1.5
AGA:351	Soil Science	1.5
AGA:881	Grain Science	1.75
AGB:231	Futures and Options	1.5
AGB:232	Livestock and Grain Marketing	3
AGS:119	Livestock Management	2
AGS:180	Sheep Production	1.5
AGS:315	Principles of Animal Nutrition	3
AGS:401	Swine Production	3
AGS:410	Swine Production II	1.5
AGS:554	Beef Production	3
AGS:881	Feeds	1.75

Clinton, Muscatine & Scott Community Colleges

General Education Requirements

Choose from the General Education Curriculum listed on pages 29-30 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:

		Credits
Communications:		
SPC:112	Public Speaking	3
Social Sciences:		
ECN:130	Principles of Microeconomics	3
Natural Sciences:		
PHY:162	College Physics I	4
PHS:166	Meteorology: Weather and Climate	4
ENV:111	Environmental Science	4

Concentration Electives

Aviation 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

AVI:130	Private Pilot Ground School	3
AVI:172	Private Pilot Flight Training	2
AVI:210	Instrument Ground School	2
AVI:235	Instrument Flight Training	2
AVI:244	Commercial Pilot Flight Training	2
AVI:260	Commercial Pilot Ground School	2
AVI:305	Advanced Rating Ground School	4
AVI:306	Advanced Rating Flight Training	1

BANKING

Clinton, Muscatine, & Scott Community Colleges   (A.A.)

General Education Requirements

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

		Credits
Social Sciences:		
ECN:120	Principles of Macroeconomics	3
ECN:130	Principles of Microeconomics	3
Math:		
MAT:156	Statistics	3

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

Natural Sciences: Life	**Credits**
BIO:114 Biology IA	4

Natural Sciences: Physical	
CHM:165/166 General Chemistry I	4-5

Mathematics:	
MAT:210 Calculus I	4

Computer Skills:	
CSC:110 Introduction to Computers	3

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges   (A.S.)

General Education Requirements

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

Natural Sciences	**Credits**
BIO:114 Biology IA	4
BIO:115 Biology IIA	4
CHM:165/166 General Chemistry I	4-5
CHM:175/176 General Chemistry II	4-5
CHM:261/263 Organic Chemistry I	4-5

Mathematics:	
MAT:210 Calculus I	4

Computer Skills:	
CSC:110 Introduction to Computers	3

Concentration Electives

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

Recommended Electives

MAT:156	Statistics	3
PHY:162	College Physics I	4
AND		
PHY:172	College Physics II	4
OR		
PHY:212	Classical Physics I	5
AND		
PHY:222	Classical Physics II	5

BUSINESS ADMINISTRATION/ACCOUNTING

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

ACC:142	Financial Accounting	3
ACC:146	Managerial Accounting	3
ACC:221	Cost Accounting	3
ACC:269	Taxation	3
BUS:102	Introduction to Business	3
BUS:180	Business Ethics	3
BUS:185	Business Law I	3
MGT:101	Principles of Management	3

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

Natural Sciences: Physical	**Credits**
CHM:165/166 General Chemistry I	4-5

Mathematics:	
MAT:210 Calculus I	4

Computer Skills:	
CSC:110 Introduction to Computers	3

Concentration Electives

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

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

Clinton, Muscatine & Scott Community Colleges   (A.S.)

General Education Requirements

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

Natural Sciences: Physical	**Credits**
CHM:165/166 General Chemistry I	4-5
CHM:175/176 General Chemistry II	4-5
CHM:261/263 Organic Chemistry I	4-5
CHM:271/273 Organic Chemistry II	4-5

Mathematics:	
MAT:210 Calculus I	4
MAT:216 Calculus II	4
MAT:219 Calculus III	4

Computer Skills:	
CSC:110 Introduction to Computers	3

Concentration Electives

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

Recommended Electives	
PHY:162 College Physics I	4
AND	
PHY:172 College Physics II	4
OR	
PHY:212 Classical Physics I	5
AND	
PHY:222 Classical Physics II	5

CONSERVATION

Muscatine Community College

(A.S.)

This program is especially designed to prepare the student either for transfer to a four-year college or university or for entry-level employment in the conservation field.

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

CRIMINAL JUSTICE

Clinton, Muscatine & Scott Community Colleges

(A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Math:

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

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

Concentration Electives

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

Recommended Electives

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

ENGLISH

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives
Choose a minimum of three courses

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

ENVIRONMENTAL SCIENCE

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

Natural Sciences: Life | | **Credits**
ENV:111	Environmental Science	4

Natural Sciences: Physical
CHM:165/166	General Chemistry I	4-5

Mathematics:
MAT:210	Calculus I	4

Computer Skills:
CSC:110	Introduction to Computers	3

Concentration Electives

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

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

ENVIRONMENTAL SCIENCE

Clinton, Muscatine & Scott Community Colleges   (A.S.)

General Education Requirements

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

Natural Sciences: | | **Credits**
BIO:114	General Biology IA	4
CHM:132	Introduction to Organic & Biochemistry	4
CHM:165/166	General Chemistry I	4-5
ENV:111	Environmental Science	4
PHS:172	Physical Geology	4

Mathematics:
MAT:210	Calculus I	4

Computer Skills:
CSC:110	Introduction to Computers	3

Concentration Electives

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

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

Clinton, Muscatine & Scott Community Colleges   **(A.A.)**

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Muscatine & Scott Community Colleges   **(A.A.)**

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

FINE ARTS - MUSIC

Muscatine Community College

(A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges

(A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges

(A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

COM:140	Introduction to Mass Media	3
JOU:120	Beginning Newswriting	3
JOU:123	Intermediate Newswriting	3
JOU:129	News Processing	3
JOU:171	Introduction to Photography	3
JOU:941	Practicum in Communication	1-3

LIBERAL ARTS

Clinton, Muscatine & Scott Community Colleges   (A.A.)

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

General Education Requirements

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

Communications (9 credits required)

Credits

Select one of these courses:
ENG:105	Composition I	3
ENG:107	Composition I: Technical Writing	3

Select one of these courses:
ENG:106	Composition II	3
ENG:108	Composition II: Technical Writing	3

Select one of these courses:
SPC:112	Public Speaking	3
SPC:170	Professional Communication	3

Arts and Humanities (9 credits required)

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

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

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

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

Cultural/Historical Perspectives (6 credits required)

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

Select one course from an International perspective or language:
ANT:105	Cultural Anthropology	3
CLS:150	Latin American History and Culture	3
FLX:____	One Semester of a Foreign Language	3/4
GEO:121	World Regional Geography	3
GLS:100	Contemporary World Issues	3
HIS:211	Modern Asia History	3
HIS:231	Contemporary World Affairs	3

Social Sciences (6 credits required)

Select one Economics or Political Science course:
ECN:120	Principles of Macroeconomics	3
ECN:130	Principles of Microeconomics	3
POL:111	American National Government	3

Select one Psychology or Sociology course:
PSY:111	Introduction to Psychology	3
SOC:110	Introduction to Sociology	3

Clinton, Muscatine & Scott Community Colleges   (A.A.)

Natural Sciences (8 credits required)

Select one course in the Life Sciences:

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

Select one course in the Physical Sciences:

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

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

Mathematics (3 credits required)

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

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

Computer Skills (3 credits or demonstrated proficiency required)

CSC:110	Introduction to Computers	3

Electives (Up to 19 credits required)

Students choose electives according to their needs and interests and the requirements of their intended transfer college to complete the 62 credit hours required of an 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

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Strongly Recommended Electives

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

MARKETING

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Strongly Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges (A.A./A.S.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

MAT:216	Calculus II	4
MAT:219	Calculus III	4
MAT:227	Differential Equations	4

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

EDU:110	Exploring Teaching	3
EDU:212	Educational Foundations	3
PSY:281	Educational Psychology	3

PHYSICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

Natural Sciences: Physical		Credits
CHM:165/166 General Chemistry I		4-5

Mathematics:

MAT:128	Precalculus	4
OR		
MAT:210	Calculus I	4

Computer Skills:

CSC:110	Introduction to Computers	3

Concentration Electives

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

Recommended Electives

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

PHYSICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges   (A.S.)

General Education Requirements

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

Natural Sciences: Physical		Credits
CHM:165/166 General Chemistry I		4-5
CHM:175/176 General Chemistry II		4-5
PHS:172	Physical Geology	4
PHY:162	College Physics I	4
PHY:172	College Physics II	4

Mathematics:

MAT:210	Calculus I	4

Computer Skills:

CSC:110	Introduction to Computers	3

Concentration Electives

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

Recommended Electives

MAT:216	Calculus II	4

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

Natural Sciences: Physical		Credits
PHY:212	Classical Physics I	5

Mathematics:		
MAT:210	Calculus I	4

Computer Skills:		
CSC:110	Introduction to Computers	3

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges   (A.S.)

General Education Requirements

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

Natural Sciences:		Credits
CHM:165/166 General Chemistry I		4-5
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5

Mathematics:		
MAT:210	Calculus I	4
MAT:216	Calculus II	4
MAT:219	Calculus III	4

Computer Skills:		
CSC:110	Introduction to Computers	3

Concentration Electives

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

Recommended Electives

CHM:175/176 General Chemistry II		4-5

POLITICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges

(A.A./A.S.)

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

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

BIO:163	Essentials of Anatomy and Physiology	4
BIO:168	Human Anatomy and Physiology I w/Lab	4
BIO:173	Human Anatomy and Physiology II w/Lab	4
BIO:255	Neuroanatomy	3
CHM:175/176	General Chemistry II (if not CHM:179)	4-5
CHM:279	Principles of Organic Chemistry	6
OR		
CHM:261/263	Organic Chemistry I	4-5
AND		
CHM:271/273	Organic Chemistry II	4-5
PHY:110	Survey of Physics I	3
AND		
PHY:111	Survey of Physics II	3
OR		
PHY:162	College Physics I	4
AND		
PHY:172	College Physics II	4

Clinton, Muscatine & Scott Community Colleges

(A.S.)

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

General Education Requirements

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

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

Concentration Electives

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

EGR:170	Material Science	3
EGR:180	Engineering Statics	3
EGR:280	Dynamics	3
EGR:285	Introduction to Electrical Science	3
EGR:290	Thermodynamics	3
PSY:111	Introduction to Psychology	3
SOC:115	Social Problems	3

PRE-HEALTH PROFESSIONAL

Clinton, Muscatine & Scott Community Colleges   (A.A./A.S.)

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

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

PRE-LAW

Clinton, Muscatine & Scott Community Colleges   (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Other Psychology or Sociology electives as recommended by advisors.

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

SOCIOLOGY

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

SPEECH

Clinton, Muscatine & Scott Community Colleges (A.A.)

General Education Requirements

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

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

Concentration Electives

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

Recommended Electives

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

Career
Technology

START
HERE

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ◆ MUSCATINE ◆ SCOTT

Career Technology Concentration Areas	Award	College(s)
Accounting Management	AAS Degree, Diploma	CCC, MCC, SCC
Administrative and Office Support	AAS Degree	CCC, MCC, SCC
Administrative Support	Diploma	CCC
Microcomputer Application		
Software Specialist	Diploma	SCC
Office Assistant	Diploma	MCC
Accounting Assistant	Certificate	MCC
Clerk Receptionist	Certificate	MCC
Computer Applications for the Office	Certificate	CCC
Office Support	Certificate	CCC, SCC
Software Applications Specialist	Certificate	MCC
Auto Collision Repair Technology	AAS Degree, Diploma, Certificate	SCC
Automotive Technology	AAS Degree, Diploma, Certificate	SCC
Basic Service	Certificate	SCC
General Service	Certificate	SCC
Business Management	AAS Degree, Certificates	CCC, MCC, SCC
Entrepreneurship	Certificate	CCC, MCC, SCC
Management/Supervision	Certificate	CCC, MCC, SCC
Marketing	Certificate	CCC, MCC, SCC
Small Business Management	Certificate	CCC, MCC, SCC
Cancer Information Management	AAS Degree, Diploma	SCC
CNC/Machining	AAS Degree	SCC
CNC Programming	Certificate	SCC
Manual Machining	Certificate	SCC
Culinary Arts Apprenticeship	AAS Degree	SCC
Culinary Arts Assistant	Certificate	SCC
Baking	Certificate	SCC
Dental Assisting	A.A.S., Diploma	SCC
Diesel Technology	AAS Degree	SCC
Early Childhood Education	AAS Degree, Diploma, Certificate	SCC
	Diploma, Certificate	MCC
Electromechanical Studies	AAS Degree, Diploma, Certificate	SCC
Applied Electricity	Certificate	SCC
Electrical Systems	Certificate	SCC
Hydraulic/Pneumatic Systems	Certificate	SCC
Electroneurodiagnostic Technology	AAS Degree	SCC
Emergency Medical Services	AAS Degree	CCC, MCC, SCC
EMT	Certificate	CCC, MCC, SCC
Advanced EMT	Certificate	CCC, MCC, SCC
Equestrian Science	AAS Degree	CCC, MCC, SCC/BHC*
Farm Management	AAS Degree,	MCC
Feed and Fertilizer Marketing	AAS Degree	MCC
Fire Service Officer	AAS Degree	CCC, MCC, SCC/BHC*
Graphic Arts Technology	AAS Degree, Diploma	CCC
Health Information Technology	AAS Degree, Diploma	CCC, MCC, SCC
Health, Safety and Environmental Technology	AAS Degree, Certificate	CCC, MCC, SCC
Heating, Ventilation and Air Conditioning	AAS Degree, Diploma, Certificate	SCC
Horse Science Technology	AAS Degree, Certificate	CCC, MCC, SCC/BHC*
Horticulture	AAS Degree	MCC
Hospitality Management	AAS Degree	SCC
Event Management	Certificate	SCC

Information Technology . . . . .AAS Degree, Certificate . . . . CCC, MCC, SCC
    Networking . . . . .AAS Degree . . . . .CCC, MCC, SCC
    Software Development . . . . .AAS Degree . . . . .MCC, SCC
    Game Development . . . . .AAS Degree . . . . .SCC
    A+ Preparation . . . . .Certificate .CCC, MCC, SCC
    CISCO Networking (CCNA) . . . . .Certificate . . . . CCC, MCC
    CISCO Networking . . . . .Certificate . . . . .SCC
    Computer Repair and Help Desk Support . . .Certificate .CCC, MCC, SCC
    Network+ Preparation . . . . .Certificate .CCC, MCC, SCC
    Web Design . . . . .Certificate . . . . .MCC, SCC
    Web Game Development . . . . .Certificate . . . . SCC
    Wireless LAN . . . . .Certificate .CCC, MCC, SCC
Interior Design & Apparel Merchandising . . . . . .AAS Degree, Diploma, Certificate . . . . .SCC
International Trade . . . . .Certificate . . . . .CCC, MCC, SCC/BHC*
Interpreter Training Program . . . . .AAS Degree . . . . .SCC
Law Enforcement . . . . .AAS Degree, Certificate. . . . . .CCC, MCC, SCC/BHC*
    Law Enforcement .Certificate . . . . .CCC, MCC, SCC/BHC*
    Private Security Officer . . . . .Certificate . . . . .CCC, MCC, SCC/BHC*
Logistics . . . . .AAS Degree, Diploma, Certificate . .CCC, MCC, SCC
    Radio Frequency Identification (RFID) . . . .Certificate . . . . .MCC, SCC
    Logistics . . . . .Certificate . . . . .MCC, SCC
Manufacturing Maintenance . . . . .AAS Degree, Certificate .MCC
Manufacturing Technology . . . . .AAS Degree, Certificate .MCC
    Process Control . . . . .Certificate . . . . .MCC
Massage Therapy and Body Work . . . . .Certificate . . . . .CCC,MCC,SCC/BHC*
Mechanical Design Technology . . . . .AAS Degree, Diploma, Certificate . . .CCC,MCC,SCC
    CAD/PRO Engineer . . . . .AAS Degree, Diploma, Certificate . . .CCC,MCC,SCC
    PRO Engineer/Solid Modeling . . . . .Certificate . . . . .CCC,MCC,SCC
Mechatronics Technology . . . . .AAS Degree, Diploma CCC
Nursing
    Associate Degree Nursing . . . . .AAS Degree . . . . .CCC,SCC
    Practical Nursing . . . . .Diploma . . . . .CCC,MCC,SCC
Physical Therapist Assistant . . . . .AAS Degree . . . . .CCC,MCC,SCC/BHC*
Radiologic Technology .AAS Degree . . . . .SCC
Renewable Energy Systems . . . . .AAS Degree . . . . .SCC
Respiratory Care . . . . .AAS Degree . . . . .CCC/MCC/SCC/NICC****
Restaurant Management . . . . .AAS Degree . . . . .SCC
Surgical Technology . . . . .AAS Degree, Diploma . . . . .SCC
    Sterile Processing and Distribution . . . . . . .Certificate . . . . .SCC
Technical Drafting and Computer Aided Design .AAS Degree CCC
    Geographic Information Systems . . . . .Certificate CCC
Technical Studies . . . . .AAS Degree .CCC,MCC,SCC
Truck Driving . . . . .Certificate . . . . .SCC
Veterinary Technician . . . . .AAS Degree . . . . .MCC
Welding . . . . .AAS Degree, Diploma . . . . .SCC
    Basic Welding . . . . .Certificate . . . . .MCC, SCC
    General Maintenance . . . . .Certificate . . . . .SCC
    Production Welding . . . . .Certificate . . . . .CCC, SCC
    Structural Welding .Certificate . . . . .SCC

*   Black Hawk College Cooperative Programs, Moline, Illinois
*** Kirkwood Community College Cooperative Program, Cedar Rapids, Iowa
**** Northeast Iowa Community College Cooperative Program, Peosta, Iowa

GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

Associate in Applied Science

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

Diploma

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

Certificate

There are no specific general education requirements for certificates.

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Diploma**

ACCOUNTING MANAGEMENT A.A.S. DEGREE

FIRST SEMESTER

ACC:121	Principles of Accounting I*	3
Communications Course - Select one:		
ADM:157	Business English OR	3
COM:102	Communication Skills OR	
ENG:105	Composition I	
BUS:102	Introduction to Business*	3
SPC:170	Professional Communication*	3
	Technical or Business Skill Course Elective**	3
		15

SECOND SEMESTER

ACC:146	Managerial Accounting*	3
Math Course - Select one:		
BUS:110	Business Math & Calculators OR	3-4
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
BUS:185	Business Law I*	3
General Education Course - Select one:		
HUM:110	Changes and Choices OR	3
HUM:105	Working in America OR	
SOC:110	Introduction to Sociology	
MKT:110	Principles of Marketing*	3
	Technical or Business Skill Course Elective**	3
		18-19

SUMMER SEMESTER

	Accounting Elective (ACC:312 Recommended)***	2-4
		2-4

THIRD SEMESTER

ACC:237	Intermediate Accounting*	4
CSC:110	Introduction to Computers*	3
ECN:110	Introduction to Economics*	3
MGT:101	Principles of Management*	3
	Accounting Elective***	2-4
		15-17

FOURTH SEMESTER

ACC:221	Cost Accounting*	3
BUS:106	Employment Strategy*	2
BUS:161	Human Relations*	3
BUS:180	Business Ethics*	3
	Accounting Elective ***	2-4
		13-15

A.A.S. TOTAL 65-69

* Denotes required core course.

**Approved Technical or Business Skill Courses - complete 6 credits:

ADM:102	Telephone and Mailing Tech	2
ADM:122	Document Formatting	2
ADM:123	Document Formatting	3
ADM:141	Desktop Publishing	2
ADM:171	Records Management	2
ADM:179	Records Management	3
ADM:223	Office Procedures	4
ADM:279	Meeting and Conference Planning	2
BCA:129	Basic Word Processing	2
BCA:134	Word Processing	3
BCA:146	Basic Spreadsheets	1
BCA:147	Basic Spreadsheets	2
BCA:159	Database Applications	2
BCA:164	Basic Databases	1
BCA:207	PowerPoint/Outlook	2
BCA:220	Integrated Computer Bus Apps	2
BCA:226	Integrated Applications	3
BCA:250	Desktop Publishing	3
BCA:711	PowerPoint Presentations	1
BCA:732	Outlook Software Applications	1
MKT:181	Customer Service Strategies	2

*** Approved Accounting Elective Courses - complete 3 courses:

ACC:161	Payroll Accounting	3
ACC:265	Income Tax Accounting	4
ACC:312	Computer Accounting	4
ACC:332	Computer Accounting - QuickBooks I	2
BUS:908	Cooperative Education	3

ACCOUNTING DIPLOMA

FIRST SEMESTER

ACC:121	Principles of Accounting I	3
BUS:185	Business Law I	3
CSC:110	Introduction to Computers	3
BUS:110	Business Mathematics & Calculators OR Mathematics Elective	3
	Accounting Elective ***	3
		15

SECOND SEMESTER

ACC:146	Managerial Accounting	3
ACC:161	Payroll Accounting	3
ACC:265	Income Tax Accounting	4
SPC:170	Professional Communication	3
ADM:157	Business English OR English/Communications Elective	3
		16

SUMMER SESSION

ACC:312	Computer Accounting	4
		4

DIPLOMA TOTAL 35

*** Select one course from the approved accounting elective courses listed above.

ADMINISTRATIVE AND OFFICE SUPPORT

Clinton Community College   **A.A.S., Diploma, Certificate**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
ADM:123	Document Formatting	3
ADM:157	Business English	3
ADM:179	Records Management	3
BUS:161	Human Relations	3
CSC:110	Introduction to Computers	3
		15

SECOND SEMESTER

ADM:130	Intermediate Document Formatting	3
ADM:133	Business Math and Calculators	3
ADM:154	Business Communication	3
ADM:223	Office Procedures	4
ADM:940	Office Leadership Seminar	2
BCA:134	Word Processing	3
		18

THIRD SEMESTER

ACC:111	Introduction to Accounting	3
ADM:127	Advanced Document Formatting	3
ADM:149	Transcription	3
BCA:250	Desktop Publishing	3
SPC:112	Public Speaking	3
		15

FOURTH SEMESTER

ADM:941	Administration and Office Support Practicum	4
BCA:226	Integrated Software Applications	3
HUM:110	Changes and Choices	3
	Approved Electives	6
		16

A.A.S. TOTAL **64**

ADMINISTRATIVE SUPPORT DIPLOMA

FIRST SEMESTER

ADM:123	Document Formatting	3
ADM:157	Business English	3
ADM:179	Records Management	3
BUS:161	Human Relations	3
CSC:110	Introduction to Computers	3
		15

SECOND SEMESTER

ADM:130	Intermediate Document Formatting	3
ADM:133	Business Math and Calculators	3
ADM:154	Business Communication	3
ADM:223	Office Procedures	4
ADM:940	Office Leadership Seminar	2
BCA:134	Word Processing	3
		18

THIRD SEMESTER

ACC:111	Introduction to Accounting	3
ADM:127	Advanced Document Formatting	3
ADM:149	Transcription	3
BCA:250	Desktop Publishing	3
SPC:112	Public Speaking	3
		15

DIPLOMA TOTAL **48**

OFFICE SUPPORT CERTIFICATE

FIRST SEMESTER

ADM:123	Document Formatting	3
ADM:157	Business English	3
ADM:179	Records Management	3
BUS:161	Human Relations	3
CSC:110	Introduction to Computers	3
		15

SECOND SEMESTER

ADM:130	Intermediate Document Formatting	3
ADM:133	Business Math and Calculators	3
ADM:154	Business Communication	3
ADM:223	Office Procedures	4
ADM:940	Office Leadership Seminar	2
BCA:134	Word Processing	3
		18

CERTIFICATE TOTAL **33**

COMPUTER APPLICATIONS FOR THE OFFICE

CCC (CERTIFICATE)

FIRST SEMESTER

ADM:141	Desktop Publishing	2
BCA:129	Basic Word Processing	2
		4

SECOND SEMESTER

BCA:147	Basic Spreadsheets	2
BCA:164	Basic Databases	1
BCA:711	Introduction to Microsoft PowerPoint	1
		4

CERTIFICATE TOTAL **8**

Muscatine Community College

<div align="right">

A.A.S., Diploma, Certificate

</div>

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
ADM:105	Introduction to Keyboarding	1
ADM:122	Document Formatting	2
ADM:155	Essentials of Business English I	2
ADM:156	Essentials of Business English II	2
ADM:171	Records Management	2
ADM:254	Business Professionalism	1
BCA:106	Windows Operating System	1
BCA:129	Basic Word Processing	2
BCA:130	Advanced Word Processing	2
MKT:181	Customer Service Strategies	2
		17

SECOND SEMESTER

ADM:158	Effective Business Writing	2
ADM:255	Business Professionalism II	1
ADM:257	Professionalism in the Workplace	2
ADM:270	Introduction to Speech Recognition	1
BCA:147	Basic Spreadsheets	2
BCA:148	Advanced Spreadsheets	2
BCA:207	PowerPoint/Outlook	2
BUS:161	Human Relations	3
		15

THIRD SEMESTER

ADM:132	Business Math and Calculators	2
ADM:141	Desktop Publishing	2
ADM:279	Meeting and Conference Planning	2
BCA:159	Database Applications	2
ECN:120	Principles of Macroeconomics OR	3
ECN:130	Principles of Microeconomics	
SPC:170	Professional Communication	3
	Approved Elective	2
		16

FOURTH SEMESTER

ACC:109	Introduction to Accounting	2
ACC:110	Introduction to Accounting II	2
ACC:332	Computer Accounting-Quickbooks I	2
ADM:148	Transcription	2
ADM:936	Occupational Experience	3
BCA:220	Integrated Computer Business Applications	2
	Approved Elective	3
		16

A.A.S. TOTAL **64**

OFFICE ASSISTANT DIPLOMA

FIRST SEMESTER

ADM:105	Introduction to Keyboarding	1
ADM:132	Business Math and Calculators	2
ADM:155	Essentials of Business English I	2
ADM:156	Essentials of Business English II	2
BCA:106	Windows Operating System	1
BCA:129	Basic Word Processing	2
BCA:130	Advanced Word Processing	2
BCA:159	Database Applications	2
MKT:181	Customer Service Strategies	2
		16

SECOND SEMESTER

ACC:109	Introduction to Accounting	2
ACC:110	Introduction to Accounting II	2
ADM:122	Document Formatting	2
ADM:158	Effective Business Writing	2
ADM:257	Professionalism in the Workplace	2
BCA:147	Basic Spreadsheets	2
BCA:207	PowerPoint/Outlook	2
BUS:161	Human Relations	3
		17

THIRD SEMESTER

ADM:148	Transcription	2
ADM:171	Records Management	2
ADM:936	Occupational Experience	3
		7

DIPLOMA TOTAL **40**

ACCOUNTING ASSISTANT CERTIFICATE

ACC:109	Introduction to Accounting	2
ACC:110	Introduction to Accounting II	2
ACC:332	Computer Accounting-Quickbooks I	2
ADM:132	Business Math and Calculators	2

CERTIFICATE TOTAL **8**

ADMINISTRATIVE AND OFFICE SUPPORT

Muscatine & Scott Community Colleges   **A.A.S., Diploma, Certificate**

CLERK RECEPTIONIST CERTIFICATE   MCC

FIRST SEMESTER

ADM:105	Introduction to Keyboarding	1
ADM:122	Document Formatting	2
ADM:171	Records Management	2
BCA:106	Windows Operating System	1
BCA:129	Basic Word Processing	2
BCA:130	Advanced Word Processing	2
MKT:181	Customer Service Strategies	2
		12

SECOND SEMESTER

ADM:155	Essentials of Business English I	2
ADM:156	Essentials of Business English II	2
ADM:257	Professionalism in the Workplace	2
BCA:147	Basic Spreadsheets	2
		8

CERTIFICATE TOTAL **20**

SOFTWARE APPLICATIONS SPECIALIST CERTIFICATE   MCC

FIRST SEMESTER

ADM:105	Introduction to Keyboarding	1
ADM:141	Desktop Publishing	2
BCA:106	Windows Operating System	1
BCA:129	BasicWord Processing	2
BCA:130	Advanced Word Processing	2
BCA:159	Database Applications	2
		10

SECOND SEMESTER

ADM:122	Document Formatting	2
ADM:270	Introduction to Speech Recognition	1
BCA:147	Basic Spreadsheets	2
BCA:148	Advanced Spreadsheets	2
BCA:207	PowerPoint/Outlook	2
		9

CERTIFICATE TOTAL **19**

A.A.S. DEGREE   SCC

FIRST SEMESTER

		CREDITS
ADM:102	Telephone and Mailing Techniques	1
ADM:122	Document Formatting	2
ADM:157	Business English	3
ADM:171	Records Management	2
BCA:106	Windows Operating System	1
BCA:118	Introduction to the PC	1
BCA:711	Introduction to Microsoft PowerPoint	1
BCA:722	Introduction to the Internet	1
BCA:732	Getting Organized with Outlook	1
BUS:161	Human Relations	3
MKT:181	Customer Service Strategies	2
		18

SECOND SEMESTER

BCA:134	Word Processing Applications	3
BCA:146	Basic Spreadsheets	1
BCA:149	Spreadsheets II	1
BCA:153	Spreadsheets III	1
BCA:156	Intermediate Databases	1
BCA:164	Basic Databases	1
BCA:169	Advanced Databases	1
BUS:110	Business Math and Calculators	3
HUM:110	Changes and Choices	3
		15

THIRD SEMESTER

ADM:125	Document Formatting II	2
ADM:148	Transcription	2
BCA:220	Integrated Computer Business Applications	2
BCA:250	Desktop Publishing	3
BUS:106	Employment Strategy	2
SPC:170	Professional Communication	3
	Business or Management Elective	3
		17

FOURTH SEMESTER

ACC:121	Principles of Accounting I	3
ADM:222	Career Capstone	3
MGT:130	Principles of Supervision	3
MGT:151	Management Communication I	3
ACC:332	Computer Accounting Quickbooks OR	2-3
	Business or Management Elective	
		14-15

A.A.S. TOTAL **64-65**

Scott Community College   A.A.S., Diploma, Certificate

MICROCOMPUTER APPLICATION SOFTWARE SPECIALIST DIPLOMA

FIRST SEMESTER

		CREDITS
ADM:102	Telephone and Mailing Techniques	1
ADM:122	Document Formatting	2
ADM:157	Business English	3
ADM:171	Records Management	2
BCA:106	Windows Operating System	1
BCA:118	Introduction to the PC	1
BCA:711	Introduction to Microsoft PowerPoint	1
BCA:722	Introduction to the Internet	1
BCA:732	Getting Organized with Outlook	1
MKT:181	Customer Service Strategies	2
		15

SECOND SEMESTER

BCA:134	Word Processing	3
BCA:146	Basic Spreadsheets	1
BCA:149	Spreadsheets II	1
BCA:153	Spreadsheets III	1
BCA:156	Intermediate Databases	1
BCA:164	Basic Databases	1
BCA:169	Advanced Database	1
BUS:110	Business Math and Calculators	3
		12

THIRD SEMESTER

ADM:125	Document Formatting II	2
BCA:220	Integrated Computer Business Applications	2
BCA:250	Desktop Publishing	3
BUS:106	Employment Strategy	2
BUS:161	Human Relations	3
		12

DIPLOMA TOTAL **39**

OFFICE SUPPORT CERTIFICATE

FIRST SEMESTER

		CREDITS
ADM:102	Telephone and Mailing Techniques	1
ADM:122	Document Formatting	2
ADM:157	Business English	3
ADM:171	Records Management	2
BCA:106	Windows Operating System	1
BCA:118	Introduction to the PC	1
BCA:722	Introduction to the Internet	1
BCA:732	Getting Organized with Outlook	1
		12

SECOND SEMESTER

BCA:134	Word Processing	3
BCA:146	Basic Spreadsheets	1
BCA:164	Basic Databases	1
BUS:106	Employment Strategy	2
BUS:161	Human Relations	3
MKT:181	Customer Service Strategies	2
		12

CERTIFICATE TOTAL **24**

AUTO COLLISION REPAIR TECHNOLOGY

Scott Community College   **A.A.S., Diploma**

A.A.S. DEGREE
Fall Start

FIRST SEMESTER - FALL
		CREDITS
COM:102	Communication Skills OR	
ENG:105	Composition I	3
CRR:113	Welding Survey	2
CRR:140	Orientation and Safety	3
CRR:322	Basic Metal Bumping and Repair	5
CRR:452	Trim and Component Panel Services	2
CRR:801	Refinishing I	3
		18

SECOND SEMESTER - SPRING
CRR:114	Welding Systems and Techniques	2
CRR:200	Plastic Repair	1
CRR:405	Non-Structural Panel Repair and Replacement	5
CRR:825	Refinishing Principles	5
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts	3
		16

SUMMER SESSION
CRR:799	Spray Techniques & Surface Coatings II	1
CRR:842	Color Matching Concepts	5
		6

***AUTO COLLISION REPAIR TECHNOLOGY
DIPLOMA AWARDED TOTAL***   ***40***

THIRD SEMESTER - FALL
BCA:188	Computer Fundamentals for Technicians OR	
BUS:102	Introduction to Business	3
CRR:115	Advanced Welding Techniques	1
CRR:507	Structural Panel Repair and Replacement	5
CRR:612	Steering/Suspension	3
CRR:878	Advanced Refinishing Techniques	2
HUM:105	Working in America OR	
PSY:213	Industrial & Organizational Psychology	3
		17

FOURTH SEMESTER - SPRING
CRR:370	Collision Lab**	Variable
CRR:605	Mechanical Service	3
CRR:674	Electrical Service	4
CRR:743	Estimating	3
CRR:908	Cooperative Education*	3
		13

A.A.S. TOTAL 70

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

Spring Start

FIRST SEMESTER - SPRING
CRR:140	Orientation and Safety	3
CRR:452	Trim and Component Panel Services	2
CRR:605	Mechanical Service	3
CRR:674	Electrical Service	4
CRR:743	Estimating	3
		15

SUMMER SESSION 1
CRR:113	Welding Survey	2
CRR:322	Basic Metal Bumping and Repair	5
		7

SECOND SEMESTER - FALL
BCA:188	Computer Fundamentals for Technicians OR	
BUS:102	Introduction to Business	3
CRR:115	Advanced Welding Techniques	1
CRR:507	Structural Panel Repair and Replacement	5
CRR:612	Steering/Suspension	3
CRR:801	Refinishing I	3
		15

THIRD SEMESTER - SPRING
CRR:114	Welding Systems and Techniques	2
CRR:200	Plastic Repair	1
CRR:405	Non-Structural Panel Repair and Replacement	5
CRR:825	Refinishing Principles	5
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts	3
		16

SUMMER SESSION 2
CRR:799	Spray Techniques & Surface Coatings II	1
CRR:842	Color-Matching	5
		6

FOURTH SEMESTER - FALL
COM:102	Communication Skills OR	
ENG:105	Composition I	3
CRR:370	Collision Lab**	Variable
CRR:878	Advanced Refinishing Techniques	2
CRR:908	Cooperative Education*	3
HUM:105	Working in America OR	
PSY:213	Industrial & Organizational Psychology	3
		11

A.A.S. TOTAL 70

**CRR:370 is not a requirement. It is only required in the event of an incomplete in any of the lab courses.

Scott Community College   **A.A.S., Diploma, Certificate**

CERTIFICATE

Fall Start Only

FIRST SEMESTER - FALL

		CREDITS
CRR:113	Welding Survey	2
CRR:140	Orientation and Safety	3
CRR:322	Basic Metal Bumping and Repair	5
CRR:452	Trim and Component Panel Services	2
CRR:801	Refinishing I	3
		15

SECOND SEMESTER - SPRING

CRR:114 Welding Systems and Techniques	2
CRR:200 Plastic Repair	1
CRR:405 Non-Structural Panel Repair and Replacement	5
CRR:799 Spray Techniques & Surface Coatings II	1
CRR:825 Refinishing Principles	5
	14

CERTIFICATE TOTAL **29**

Scott Community College

A.A.S. DEGREE

Fall Start

FIRST SEMESTER - Fall

		CREDITS
AUT:115	Automotive Shop Safety	1
AUT:164	Automotive Engine Repair	4
AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
COM:102	Communication Skills OR	
ENG:105	Composition I	3
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts	3
		17

SECOND SEMESTER - Spring

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

SUMMER SESSION

AUT:404	Automotive Suspension and Steering	4
AUT:704	Automotive Heating and Air Conditioning	4
		8

AUTOMOTIVE TECHNOLOGY
DIPLOMA AWARDED TOTAL   *39*

THIRD SEMESTER - Fall

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

FOURTH SEMESTER - Spring

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

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

Spring Start

FIRST SEMESTER - SPRING

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

SUMMER SESSION 1

AUT:811	Engine Performance II	4
AUT:817	Automotive Engine Performance III	3
		7

SECOND SEMESTER - Fall

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

THIRD SEMESTER - Spring

AUT:304	Automotive Manual Drive Train and Axles	4
AUT:524	Automotive Brake Systems and Service	4
AUT:656	Automotive Electrical II	4
		12

SUMMER SESSION 2

AUT:404	Automotive Suspension and Steering	4
AUT:704	Automotive Heating and Air Conditioning	4
		8

FOURTH SEMESTER - Fall

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

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

Scott Community College   A.A.S., Diploma, Certificate

AUTOMOTIVE TECHNOLOGY BASIC SERVICE CERTIFICATE

FALL START COURSE SEQUENCE

FIRST SEMESTER - FALL

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

SECOND SEMESTER - SPRING

AUT:524	Automotive Brake Systems and Service	4

SUMMER SESSION

AUT:404	Automotive Suspension and Steering	4
		8

CERTIFICATE TOTAL **18**

SPRING START COURSE SEQUENCE

FIRST SEMESTER - SPRING

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

SUMMER SESSION - FALL

AUT:404	Automotive Suspension and Steering	4
		4

CERTIFICATE TOTAL **18**

AUTOMOTIVE TECHNOLOGY GENERAL SERVICE CERTIFICATE

FIRST SEMESTER - FALL

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

SECOND SEMESTER - SPRING

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

SUMMER SESSION

AUT:404	Automotive Suspension and Steering	4
AUT:704	Automotive Heating and Air Conditioning	4
		8

CERTIFICATE TOTAL **36**

BUSINESS MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

There are 3 parts to the Business Management Curriculum: Common Core Courses, Business Skill Courses and Business Specialty Courses. All students must complete the 44 credit hours of Common Core Courses. For the Business Skill Courses component, students take 6 credit hours of courses designed to enhance students understanding of business skills in the workplace. The last segment of the degree allows students to personalize their learning experience by giving students the opportunity to choose 5 business specialty courses which completes the degree. Students will graduate from the program with 65 total credit hours of coursework.

FIRST SEMESTER

CREDITS

Communications Course - Select one:

ADM 157	Business English OR	3
COM:102	Communication Skills OR	
ENG:105	Composition I	
BUS:102	Introduction to Business*	3
CSC:110	Introduction to Computers*	3
MGT:101	Principles of Management*	3
	Business Specialty Course**	3
		15

SECOND SEMESTER

Math Course - Select one:

BUS:110	Business Math & Calculators OR	3-4
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
BUS:161	Human Relations*	3
BUS:180	Business Ethics*	3
MKT:110	Principles of Marketing*	3
	Business Specialty Course**	3
		15

SUMMER SEMESTER

	Business Specialty Course**	3
		3

THIRD SEMESTER

ACC:121	Principles of Accounting I*	3
ECN:110	Introduction to Economics*	3
SPC:170	Professional Communication*	3
	Business Specialty Course **	3
	Business Skill Course***	3
		15

FOURTH SEMESTER

ACC:146	Managerial Accounting*	3
BUS:106	Employment Strategy*	2
BUS:185	Business Law*	3

General Education Course - Select One:

HUM:105	Working in America OR	3
HUM:110	Changes and Choices OR	
SOC:110	Introduction to Sociology	
	Business Specialty Course**	3
	Business Skill Course***	3
		17

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

Denotes Required Core Course

**Approved Business Specialty Courses - complete 5 courses:

BUS:130	Introduction to Entrepreneurship	3
BUS:135	Managing the Entrepreneurship	3
BUS:147	The Successful Entrepreneur	3
BUS:186	Business Law II	3
BUS:908	Cooperative Education	3
FIN:121	Personal Finance	3
MGT:110	Small Business Management	3
MGT:130	Principles of Supervision	3
MGT:151	Management Communications	3
MGT:165	Principles of Quality	3
MGT:210	Management Decision Making	3
MKT:140	Principles of Selling	3
MKT:150	Principles of Advertising	3
MKT:160	Principles of Retailing	3

***Approved Business Skill Courses - complete 6 credits:

ACC:332	Computer Accounting - QuickBooks I	2
ADM:102	Telephone and Mailing Tech	2
ADM:122	Document Formatting	2
ADM:123	Document Formatting	3
ADM:141	Desktop Publishing	2
ADM:171	Records Management	2
ADM:179	Records Management	3
ADM:223	Office Procedures	4
ADM:279	Meeting and Conference Planning	2
BCA:129	Basic Word Processing	2
BCA:134	Word Processing	3
BCA:146	Basic Spreadsheets	1
BCA:147	Basic Spreadsheets	2
BCA:159	Database Applications	2
BCA:164	Basic Databases	1
BCA:207	PowerPoint/Outlook	2
BCA:220	Integrated Computer Bus Apps	2
BCA:226	Integrated Applications	3
BCA:250	Desktop Publishing	3
BCA:711	PowerPoint Presentations	1
BCA:732	Outlook Software Applications	1
MKT:181	Customer Service Strategies	2

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Certificate**

MANAGEMENT SUPERVISION CERTIFICATE

MGT 101	Principles of Management	3
MGT 130	Principles of Supervision	3
MGT 165	Principles of Quality	3
MGT 210	Management Decision Making	3
	Business Specialty Course**	3
CERTIFICATE TOTAL **15**		

MARKETING CERTIFICATE

MKT 110	Principles of Marketing	3
MKT 140	Principles of Selling	3
MKT 150	Principles of Advertising	3
MKT 160	Principles of Retailing	3
	Business Specialty Course**	3
CERTIFICATE TOTAL **15**		

SMALL BUSINESS MANAGEMENT CERTIFICATE

ACC:121	Principles of Accounting I	3
BUS:102	Introduction to Business	3
BUS:185	Business Law I	3
MGT:110	Small Business Management	3
	Business Specialty Course **	3
CERTIFICATE TOTAL **15**		

*** See list of approved business specialty courses on page 101.*

ENTREPRENEURSHIP CERTIFICATE

BUS:130	Introduction to Entrepreneurship	3
BUS:135	Managing the Entrepreneurship Venture	3
BUS:147	The Successful Entrepreneur	3
CERTIFICATE TOTAL **9**		

CANCER INFORMATION MANAGEMENT

Scott Community College   **A.A.S., Diploma**

A.A.S. DEGREE

FIRST SEMESTER

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

SECOND SEMESTER

BIO:173	Human Anatomy & Physiology II w/Lab*	4
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	3
HIT:120	Pharmacology for HIT*	1
HIT:150	Principles of Disease I*	2
HIT:250	Coding I	3
General Education Course - Select one:		
ART:101	Art Appreciation OR	
HUM:110	Changes & Choices OR	
PHI:101	Introduction to Philosophy OR	
PHI:110	Introduction to Logic	3
		16

SUMMER SESSION

BUS:180	Business Ethics	3
HIT:160	Principles of Disease II*	3
		6

THIRD SEMESTER

CIM:200	Registry Organization & Operation*	3
CIM:210	Oncology Coding & Staging System*	4
CIM:215	Abstracting Principles & Practices I*	2
CIM:240	Cancer Patient Follow-Up*	2
CIM:250	Cancer Statistics & Epidemiology*	3
HIT:312	Health Informatics and Information Management Systems	3
HIT:420	Legal Aspects of Health Information	2
		19

FOURTH SEMESTER

CIM:220	Abstracting Principles & Practices II*	2
CIM:260	CIM Seminar*	1
CIM:270	Cancer Registry Practicum*	4
HIT:440	Quality Management	3
SPC:112	Public Speaking	3
		13

A.A.S TOTAL **72**

This program is approved by the National Cancer Registrars Association (NCRA) and provides eligibility to sit for CTR examination under NCRA Route A.

DIPLOMA TOTAL **46**

Courses required for the CIM Diploma

Scott Community College

MACHINING/CNC A.A.S. DEGREE

SESSION I
		CREDITS
MAT:733	Math for Manufacturing Technologies A	1.5
MFG:105	Machine Shop Measuring	3
MFG:116	Carbide Tooling	1
MFG:186	Plant Safety	1
		6.5

SESSION II
MAT:734	Math for Manufacturing Technologies B	1.5
MFG:112	Drills and Saws	2
MFG:192	Blueprint Reading	3
		6.5

SESSION III
CSC:112	Computer Fundamentals for Technology I/A	2
MFG:113	Vertical/Horizontal Mills	5.5
		7.5

SESSION IV
CSC:113	Computer Fundamentals for Technology I/B	2
MFG:115	Lathe Work	4.5
MFG:140	Geometric Dimensioning and Tolerances	1
		7.5

SESSION V
EGT:116	Continuous Quality Management	3
MFG:111	Machinery Handbook	1
MFG:117	Cylindrical Grinding	1.5
MFG:190	Metallurgy	2
		7.5

SESSION VI
ENG:107	Composition I: Technical Writing (16 wk. class)	3
MFG:151	CNC Fundamentals	2
PHY:173	Applied Physics I/A	1.75
		6.75

SESSION VII
MFG:118	Machine Tool Project	4
MFG:124	Surface Grinding	2.75
PHY:174	Applied Physics I/B	1.75
		8.5

SESSION VIII
MFG:201	CNC Turning Operator	2
MFG:221	CNC Milling Operator	2
MFG:223	CAD/CAM	2
MFG:224	Coordinate Measuring Machine	1
		7

SESSION IX
MFG:205	Milling Programming	2
MFG:229	CNC Project	4
MFG:239	Lathe Programming	2
		8

A.A.S. TOTAL **65.75**

MANUAL MACHINING CERTIFICATE

		CREDITS
MAT:733	Math for Manufacturing Technologies A	1.5
MAT:734	Math for Manufacturing Technologies B	1.5
MFG:105	Precision Measurement	3
MFG:112	Drills and Saws	2
MFG:113	Vertical/Horizontal Mills	5.5
MFG:114	Surface Grinding	2.75
MFG:115	Lathe Work	4.5
MFG:116	Carbide Tooling	1
MFG:117	Cylindrical Grinding	1.5
MFG:118	Machine Tool Project	4
MFG:186	Plant Safety	1
MFG:192	Blueprint Reading	3

CERTIFICATE TOTAL **31.25**

CNC PROGRAMMING CERTIFICATE

		CREDITS
MAT:733	Math for Manufacturing Technologies A	1.5
MAT:734	Math for Manufacturing Technologies B	1.5
MFG:105	Machine Shop Measuring	3
MFG:116	Carbide Tooling	1
MFG:140	Geometric Dimensioning and Tolerances	1
MFG:151	CNC Fundamentals	2
MFG:186	Plant Safety	1
MFG:192	Blueprint Reading	3
MFG:201	CNC Turning Operator	2
MFG:205	Milling Programming	2
MFG:221	CNC Milling Operator	2
MFG:223	CAD/CAM	2
MFG:224	Coordinate Measuring Machine	1
MFG:229	CNC Project	4
MFG:239	Lathe Programming	2

CERTIFICATE TOTAL **29**

CULINARY ARTS APPRENTICESHIP

Scott Community College   **A.A.S., Certificate**

A.A.S. DEGREE

FIRST SEMESTER (FALL OR SPRING START)
CREDITS

HCM:100	Sanitation and Safety	2
HCM:154	Basic Food Preparation	2
HCM:180	Food Fundamentals	2
HCM:501	Culinary Practicum I	3
		9

SECOND SEMESTER
CSC:110	Introduction to Computers	3
HCM:233	Menu Planning and Nutrition	3
HCM:502	Culinary Practicum II	3
MAT:104	Applied Math Topics	3
		12

SUMMER
HCM:255	Purchasing	3
HCM:503	Culinary Practicum III	1.5
		4.5

THIRD SEMESTER
HCM:156	Intermediate Food Preparation	3
HCM:241	Menu Planning and Sales Promotion	3
HCM:280	Food Cost Accounting	3
HCM:504	Culinary Practicum IV	3
		12

FOURTH SEMESTER
HCM:116	Fundamentals of Baking	3
HCM:160	Advanced Food Preparation	3
HCM:301	Beverage Control	3
HCM:505	Culinary Practicum V	3
		12

SUMMER
HCM:155	Garde Manger	3
HCM:212	Industry Management	3
HCM:506	Culinary Practicum VI	1.5
		7.5

FIFTH SEMESTER
HCM:507	Culinary Practicum VII	3
HUM:105	Working in America OR	
HUM:110	Changes and Choices	3
		6

SIXTH SEMESTER
HCM:508	Culinary Practicum VIII	3
COM:102	Communication Skills OR	
SPC:112	Public Speaking	3
		6

SUMMER
HCM:509	Culinary Practicum IX	1.5
		1.5

A.A.S. TOTAL 70.5

CULINARY ARTS ASSISTANT CERTIFICATE

FIRST SEMESTER
HCM:100	Sanitation and Safety	2
HCM:180	Food Fundamentals	2
HCM:501	Culinary Practicum I	3
		7

SECOND SEMESTER
HCM:116	Fundamentals of Baking	3
HCM:154	Basic Food Preparation	2
HCM:502	Culinary Practicum II	3
		8

SUMMER
HCM:212	Industry Management	3
HCM:503	Culinary Practicum III	1.5
		4.5

CERTIFICATE TOTAL 19.5

BAKING CERTIFICATE

FIRST SEMESTER

HCM:100	Sanitation and Safety	2
HCM:116	Fundamentals of Baking	2
HCM:180	Food Fundamentals	<u>3</u>
		7

SUMMER

HCM:182	Intermediate Baking	3
HCM:224	Artisan Bread Baking	<u>2</u>
		5

SECOND SEMESTER

HCM:125	Basic Cake Decorating	1
HCM:183	Advanced Baking	3
HCM:280	Food Cost Accounting	<u>3</u>
		7

CERTIFICATE TOTAL **19**

DENTAL ASSISTING

Scott Community College

A.A.S., Diploma

A.A.S.

FALL START OPTION:

FIRST SEMESTER

DEA:201	Head and Neck Anatomy	1
DEA:257	Dental Anatomy	3
DEA:293	Microbiology and Infection Control	2
DEA:304	Dental Radiography	1
DEA:305	Dental Radiography Lab	3
DEA:422	Dental Materials	2
DEA:425	Dental Materials Lab	2
DEA:520	Dental Assisting I	2
DEA:521	Dental Assisting I Lab	2
		18

SECOND SEMESTER

DEA:215	Preventive Dentistry and Nutrition	2
DEA:268	Pharmacy and Emergency Procedures	2
DEA:285	Oral Pathology for Dental Assisting	1
DEA:522	Dental Assisting II Lab	2
DEA:576	Dental Assisting Clinic I	3
DEA:605	Dental Specialties	4
*ENG:105	English Composition I	3
		17

THIRD SEMESTER

DEA:577	Dental Assisting Clinic II	4
DEA:592	Seminar Dental Assisting	1
DEA:702	Dental Office Procedures	2
*PSY:111	Introduction to Psychology	3
		10

FOUR SEMESTER

DEA:810	RDA Expanded Function I	2
DEA:820	RDA Expanded Function II	1
DEA:830	RDA Monitoring Nitrous Oxide	1
BUS:110	Business Math and Calculators	3
BUS:161	Human Relations OR	3-4
FLS: 141	Elementary Spanish	
CSC:110	Microcomputer Application	3
ART:101	Art Appreciation OR	
HUM:110	Changes and Choices OR	
PHI:105	Introduction to Ethics	3
SPC:122	Interpersonal Communication OR	3
SPC:170	Professional Communication	
		19

A.A.S. TOTAL . . . . **.64**

Scott Community College

Curriculum Change Pending Department of Education Approval

DIPLOMA

FALL START OPTION:

FIRST SEMESTER - FALL		CREDITS
DEA:201	Head and Neck Anatomy	1
DEA:257	Dental Anatomy	3
DEA:293	Microbiology and Infection Control	2
DEA:304	Dental Radiography	2
DEA:305	Dental Radiography Lab	2
DEA:421	Dental Materials	2
DEA:425	Dental Materials Lab	2
DEA:520	Dental Assisting I	2
DEA:521	Dental Assisting I Lab	2
		18

SECOND SEMESTER - SPRING		
DEA:215	Preventive Dentistry and Nutrition	2
DEA:268	Pharmacology & Emergency	2
DEA:285	Oral Pathology for Dental Assisting	1
DEA:522	Dental Assisting II Lab	2
DEA:576	Dental Assisting Clinic I	3
DEA:605	Dental Specialties	4
ENG:105	Composition I* OR	
COM:102	Communications Skills	3
		17

THIRD SEMESTER - SUMMER		
DEA:577	Dental Assisting Clinic II	4
DEA:592	Seminar Dental Assisting	1
DEA:702	Dental Office Procedures	2
PSY:111	Introduction to Psychology*	3
		10

DIPLOMA TOTAL **45**

* Courses may be completed prior to starting program.

SPRING START OPTION

FIRST SEMESTER - SPRING		
DEA:201	Head and Neck Anatomy	1
DEA:257	Dental Anatomy	3
DEA:293	Microbiology and Infection Control	2
DEA:304	Dental Radiography	2
DEA:305	Dental Radiography Lab	2
DEA:421	Dental Materials	2
DEA:425	Dental Materials Lab	2
DEA:520	Dental Assisting I	2
DEA:521	Dental Assisting I Lab	2
		18

SECOND SEMESTER - SUMMER		
DEA:576	Dental Assisting Clinic I	3
DEA:605	Dental Specialties	4
DEA:702	Dental Office Procedures	2
PSY:111	Introduction to Psychology*	3
		12

THIRD SEMESTER - FALL		
DEA:215	Preventive Dentistry and Nutrition	2
DEA:268	Pharmacology & Emergency	2
DEA:285	Oral Pathology for Dental Assisting	1
DEA:522	Dental Assisting II Lab	2
DEA:577	Dental Assisting Clinic II	4
DEA:592	Seminar Dental Assisting	1
ENG:105	Composition I* OR	3
COM:102	Communications Skills	3
		15

DIPLOMA TOTAL **45**

DIESEL TECHNOLOGY

Scott Community College   **A.A.S.**

A.A.S. DEGREE

FALL START:
FIRST SEMESTER - Fall

		CREDITS
AUT:115	Automotive Shop Safety	1
AUT:164	Automotive Engine Repair	4
COM:102	Communication Skills OR	
ENG:105	Composition I	3
DSL:505	Heavy Duty Drive Train I	3
DSL:507	Heavy Duty Drive Train II	3
DSL:603	Hydraulics	2
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts	3
		19

SECOND SEMESTER - Spring

AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
DSL:151	Truck Electrical Systems	2
DSL:435	Diesel Fuel Systems I	3
DSL:437	Diesel Fuel Systems II	4
DSL:815	Preventive Maintenance	1
		16

SUMMER SESSION

DSL:340	Diesel Engine Repair	5
DSL:625	Heavy Duty Alignment	3
		8

THIRD SEMESTER - Fall

DSL:201	Basic Gas Engine Performance	2
DSL:629	Heavy Duty Brakes and Service	3
DSL:905	Cooperative Experience	2
HUM:105	Working in America OR	
PSY:213	Industrial & Organizational Psychology	3
WEL:331	Welding Fundamentals	2
		12

FOURTH SEMESTER - Spring

BCA:188	Computer Fundamentals for Technicians OR	
BUS:102	Introduction to Business	3
DSL:519	Automatic Drive Train	4
DSL:710	Heating, A/C and Refrigeration	4
DSL:905	Cooperative Experience	2
		13

A.A.S. TOTAL **68**

SPRING START:
FIRST SEMESTER - Spring

		CREDITS
AUT:115	Automotive Shop Safety**	1
AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
DSL:151	Truck Electrical Systems	2
DSL:435	Diesel Fuel Systems I	3
DSL:437	Diesel Fuel Systems II	4
DSL:815	Preventive Maintenance	1
		17

SUMMER SESSION

DSL:340	Diesel Engine Repair	5
DSL:625	Heavy Duty Alignment	3
		8

SECOND SEMESTER - Fall

AUT:115	Automotive Shop Safety**	1
AUT:164	Automotive Engine Repair	4
COM:102	Communication Skills OR	
ENG:105	Composition I	3
DSL:505	Heavy Duty Drive Train I	3
DSL:507	Heavy Duty Drive Train II	3
DSL:603	Hydraulics	2
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts	3
		19

THIRD SEMESTER-SPRING

BCA:188	Computer Fundamentals for Technicians OR	
BUS:102	Introduction to Business	3
DSL:519	Automatic Drive Train	4
DSL:710	Heating, A/C and Refrigeration	4
DSL:905	Cooperative Experience	2
		13

FOURTH SEMESTER-FALL

DSL:201	Basic Gas Engine Performance	2
DSL:629	Heavy Duty Brakes and Service	3
DSL:905	Cooperative Experience	2
HUM:105	Working in America OR	
PSY:213	Industrial & Organizational Psychology	3
WEL:331	Welding Fundamentals	2
		12

A.A.S. TOTAL **68**

*** Spring start students may take AUT:115 in the spring or fall semester of the first year.*

Muscatine & Scott Community Colleges   **A.A.S., Diploma, Certificate**

A.A.S. DEGREE

FIRST SEMESTER

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

CERTIFICATE AWARDED (MCC & SCC)

SECOND SEMESTER

ECE:159	Early Childhood Curriculum II*	3
EDU:220	Human Relations for the Classroom Teacher	3
EDU:245	Exceptional Learner	3
LIT:105	Children's Literature	3

General Education Course - Select one:

HUM:105	Working in America OR	
HUM:287	Leadership Development Studies OR	
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	3
		15

DIPLOMA AWARDED TOTAL (MCC & SCC) 33

SUMMER SESSION:

ECE:920	Field Experience/ ECE**	2
		2

THIRD SEMESTER

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

FOURTH SEMESTER:

ECE:221	Infant/Toddler Care and Education	3
ECE:290	Early Childhood Program Administration	3
ECE:920	Field Experience/ ECE**	2
Approved	Early Childhood Electives	6
		14

A.A.S. (SCC) **66-67**

CDA Certification Coursework

**Students may be subject to release of information and criminal background check by each cooperative site prior to beginning their work cooperative experience.*

Approved Early Childhood Elective Courses:

BUS:102	Introduction to Business	3
ECE:168	Math and Science for Young Children	3
EDU:125	Making a Difference	3
EDU:212	Educational Foundations	3
EDU:255	Technology in the Classroom	3
PSY:121	Developmental Psychology	3
SDV:114	Strategies for Academic Success	3

ELECTROMECHANICAL STUDIES

Scott Community Colleges   **A.A.S., Diploma, Certificate**

ELECTROMECHANICAL STUDIES

SCC (A.A.S.)

SESSION I

ELE:101	Industrial Safety	1
ELE:115	Basic Electricity I	2
ELE:124	Tools/Adapters/Instruments	2
ENG:107	Composition I: Technical Writing (16-week class)	3
		8

SESSION II

EGT:133	Hydraulics/Pneumatics I	2
ELE:116	Blueprint Reading	1
ELE:127	Troubleshooting	1
ELE:131	Basic Electricity II	2
	Technical Writing (cont.)	
		6

SESSION III

CSC:112	Computer Fundamentals for Technicians I/A	2
ELE:128	Electrical Systems I	3
ELE:144	Basic Electronics I/A	1.5
MAT:722	Industrial Math/Measurement I/A	1.5
		8

SESSION IV

CSC:113	Computer Fundamentals for Technicians I/B	2
EGT:134	Hydraulics/Pneumatics II	4
ELE:145	Basic Electronics I/B	1.5
MAT:723	Industrial Math/Measurement I/B	1.5
		9

**ELECTRICALMECHANICAL STUDIES
DIPLOMA AWARDED TOTAL 31**

SESSION V

EGT:116	Continuous Quality Management	3
ELE:129	Electrical Systems II	3
PHY:173	Applied Physics I/A	1.75
	General Education Elective	3
		10.75

SESSION VI

EGT:135	Hydraulics/Pneumatics III	3
ELE:133	Electrical Systems III	3
PHY:174	Applied Physics I/B	1.75
		7.75

SESSION VII

EGT:137	Hydraulics/Pneumatics IV	4
ELE:134	Electrical System Controls	3
	General Education Elective	3
		10

SESSION VIII

EGT:145	Hydraulics/Pneumatics V	4
ELE:139	Electrical Systems Analysis	3
		7

A.A.S. TOTAL 66.5

Scott Community Colleges   **A.A.S., Certificate**

APPLIED ELECTRICITY

SCC (CERTIFICATE)

SESSION I

ELE:101	Industrial Safety	1
ELE:115	Basic Electricity I	2
ELE:124	Tools/Adapters/Instrumentation	2
		5

SESSION II

ELE:116	Blueprint Reading	1
ELE:127	Troubleshooting	1
ELE:131	Basic Electricity II	2
		4

SESSION III

ELE:144	Basic Electronics I/A	1.5
EGT:133	Hydraulics/Pneumatics I	2
PHY:173	Applied Physics I/A	1.75
		5.25

SESSION IV

ELE:145	Basic Electronics	1.5
PHY:174	Applied Physics I/B	1.75
		3.25

CERTIFICATE TOTAL **17.5**

ELECTRICAL SYSTEMS*

SCC (CERTIFICATE)

SESSION I

ELE:128	Electrical Systems I	3
ELE:129	Electrical Systems II	3
		6

SESSION II

ELE:133	Electrical Systems III	3
ELE:134	Electrical System Controls	3
		6

SESSION III

ELE:139	Electrical Systems Analysis	**3**

CERTIFICATE TOTAL **15**

*Must meet prerequisites.

HYDRAULICS/PNEUMATICS SYSTEMS*

SCC (CERTIFICATE)

SESSION I

EGT:133	Hydraulics/Pneumatics I	2
EGT:134	Hydraulics/Pneumatics II	4
		6

SESSION II

EGT:135	Hydraulics/Pneumatics III	3
EGT:137	Hydraulics/Pneumatics IV	4
		7

SESSION III

EGT:145	Hydraulics/Pneumatics V	**4**

CERTIFICATE TOTAL **17**

*Must meet prerequisites.

ELECTRONEURODIAGNOSTIC TECHNOLOGY (END)

Scott Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER
BIO:168	Human Anatomy and Physiology I w/Lab	4
END:111	Introduction to Electroneurodiagnostics	6
END:210	Electronics and Instrumentation	3
HSC:113	Medical Terminology	2
		15

SECOND SEMESTER
BIO:173	Human Anatomy and Physiology II w/Lab	4
END:301	Electroneurodiagnostics I	6
END:800	Clinical Practicum I	4
PSY:111	Introduction to Psychology	3
		17

SUMMER SESSION
END:320	Electroneurodiagnostics II	2
END:331	Neuroanatomy for END	2
END:820	Clinical Practicum II	4
		6

THIRD SEMESTER
END:340	Electroneurodiagnostics III	3
END:840	Clinical Practicum III	4
ENG:105	Composition I	3
HIT:120	Legal Aspects of Health Information	2
		12

FOURTH SEMESTER
END:510	Polysomnography	4
END:860	Clinical Practicum IV	8
SPC:112	Public Speaking	3
		15

SUMMER SESSION
END:410	Evoked Potentials	2
END:880	Clinical Practicum V	4
		6

A.A.S. TOTAL **73**

NOTE: Enrollment is limited and entrance is restricted to the fall semester. In addition to the general admission requirements of the college, applicants must meet specific program admission criteria.

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
EMS:202	Emergency Medical Technician	9.5
ENG:105	Composition I OR	3
ENG:107	Composition I: Technical Writing	
HCS:113	Medical Terminology	2
MAT	Elective (Above 100 level)	3
		17.5

SECOND SEMESTER

BIO:168	Human Anatomy & Physiology I w/Lab	4
BUS:102	Introduction to Business	3
BUS:161	Human Relations	3
PNN:210	Principles of Pharmacology-Module A	1
PNN:211	Principles of Pharmacology-Module B	1
PSY:121	Developmental Psychology	3
		15

THIRD SEMESTER

EMS:238	Advanced Emergency Medical Technician	15
		15

FOURTH SEMESTER

CSC:110	Introduction to Computers	3
EMS:810	Advanced Cardiac Life Support	1
EMS:815	Advanced Pediatric Life Support	1
EMS:816	Pediatric Education for Pre-Hospital Professionals	1
EMS:817	BLS Instructor	1
EMS:818	Neonatal Resuscitation	1
EMS:820	Pre-Hospital Trauma Life Support	1
SOC:110	Introduction to Sociology	3
SPC:112	Public Speaking	3
		15

A.A.S. TOTAL 62.5

EMT CERTIFICATE

EMS:202	Emergency Medical Technician	9.5
CERTIFICATE TOTAL **9.5**		

ADVANCED EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

EMS:202	Emergency Medical Technician	9.5
EMS:238	Advanced Emergency Medical Technician	15

CERTIFICATE TOTAL **26.5**

EQUESTRIAN SCIENCE

Clinton, Muscatine & Scott Community Colleges/Black Hawk College   A.A.S.

This is a cooperative contract program taught at Black Hawk College (BHC) in Kewanee, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

A.A.S. DEGREE

FIRST SEMESTER

AGC:105	Computers in Agriculture	1
AGE:118	Horse Evaluation I	1
AGE:155	Western Horsemanship	4
AGE:171	Horse Production and Management	4
AGE:945	Seminar	1
AGS:118	Animal Science	4
PEH:140	First Aid	1
	Communications Elective	3
		19

SECOND SEMESTER

AGE:119	Horse Evaluation II	1
AGE:189	Horse Equipment & Facilities	3
AGE:223	Fundamentals of Horse Handling & Training	3
AGE:907	Advanced Agriculture Work Experience	7
AGE:945	Seminar	1
	Mathematics Elective	3
		18

THIRD SEMESTER

AGB:102 OR	Ag Economics	
AGB:101	Ag Economics	3 or 4
AGE:156	English Equitation	4
AGE:159	Methods of Teaching Horsemanship	2
AGE:262	Farrier Science	2
AGS:319	Animal Nutrition	3
	Equine Science or Agriculture Electives	3 or 4
		18

FOURTH SEMESTER

AGB:336	Agricultural Salesmanship	3
AGC:103 OR	Computer Applications in Agriculture	3
AGC:107 OR	Microcomputer Skills for Agriculture	
CSC:110	Introduction to Computers	
AGE:238	Show Horse Training	4
AGE:251	Horse Show Preparation & Management	2
	Equine Science or Agriculture Electives	3
		15

A.A.S. TOTAL 70

Muscatine Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS

SWINE OPTION

AGB:231	Futures and Options	1.5
AGB:301	Applied Accounting for Farm Management I	1.5
AGC:861	Farm Experience I	3
AGC:901	Seminar I	.5
AGS:315	Principles of Animal Nutrition	3
AGS:352	Genetics	1.5
AGS:401	Swine Production	3
COM:105	Communication Skills I	2
		16

NO SWINE OPTION

AGA:881	Grain Science	1.75
AGB:103	Agricultural Economics	1.5
AGB:231	Futures and Options	1.5
AGB:301	Applied Accounting for Farm Management I	1.5
AGC:861	Farm Experience I	3
AGC:901	Seminar I	.5
AGS:315	Principles of Animal Nutrition	3
AGS:352	Genetics	1.5
COM:105	Communication Skills I	2
		16.25

SECOND SEMESTER

AGA:210	Corn and Soybean Production	3
AGA:285	Crop Protection	3.5
AGB:302	Applied Accounting for Farm Management II	1.5
AGC:862	Farm Experience II	3.5
AGC:902	Seminar II	.5
COM:107	Communication Skills II	1
MAT:104	Applied Math Topics	3
SPC:111	Public Speaking	2
		18

SUMMER SESSION

AGA:336	Forage Production	1.5
AGA:373	Integrated Crop Management	2
AGM:160	Farm Structures	1.5
		5

THIRD SEMESTER

AGA:351	Soil Science	1.5
AGA:890	Soil Chemistry	1.5
AGA:901	Seed Science	1.5
AGB:299	Farm Record Analysis	1.5
AGB:304	Agricultural Credit	1.5
AGB:305	Agricultural Law	1.5
AGC:864	Farm Experience III	3
AGC:903	Seminar III	.5
CSC:110	Introduction to Computers	3
		15.5

FOURTH SEMESTER

AGA:349	Fertilizers	1.5
AGB:232	Livestock and Grain Marketing	3
AGB:306	Risk Management	1.5
AGC:865	Farm Experience IV	3.5
AGC:904	Seminar IV	.5
AGM:157	Machinery Management	3
AGP:243	Precision Agricultural Applications	3
ENV:115	Environmental Science	3
		19

A.A.S. TOTAL 73.25-73.75

FEED AND FERTILIZER MARKETING

Muscatine Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER

AGA:881	Grain Science	1.75
AGB:103	Agricultural Economics	1.5
AGB:105	Business Principles for Agriculture I	1.75
AGB:108	Human Relations I	1.5
AGB:141	Applied Agribusiness Accounting I	1.25
AGB:191	Agricultural Sales I	1.5
AGC:910	Alpha Mu Sigma I	.5
AGC:941	Employment Experience I	3
AGS:315	Principles of Animal Nutrition	3
COM:105	Communication Skills I	2
		17.75

SECOND SEMESTER

AGA:210	Corn and Soybean Production	3
AGA:285	Crop Protection	3.5
AGB:112	Human Relations II	1.75
AGB:192	Agricultural Sales II	1.75
AGC:911	Alpha Mu Sigma II	.5
AGC:942	Employment Experience II	3.5
COM:107	Communication Skills II	1
SPC:111	Public Speaking	2
		17

SUMMER SESSION

AGB:142	Applied Agribusiness Accounting II	1
AGB:351	Principles of Marketing and Retailing for Agriculture	1.75
AGS:119	Livestock Management	2
AGS:881	Feeds	1.75
		6.5

THIRD SEMESTER

AGA:351	Soil Science	1.5
AGA:890	Soil Chemistry	1.5
AGA:901	Seed Science	1.5
AGB:106	Business Principles for Agriculture II	1.75
AGB:280	Business Law for Agriculture	1.5
AGC:912	Alpha Mu Sigma III	.5
AGC:943	Employment Experience III	3
AGS:352	Genetics	1.5
MAT:104	Applied Math Topics	3
		15.75

FOURTH SEMESTER

AGA:349	Fertilizers	1.5
AGB:193	Agricultural Sales III	1.25
AGC:913	Alpha Mu Sigma IV	.5
AGC:944	Employment Experience IV	3.5
AGP:243	Precision Agricultural Applications	3
CSC:110	Introduction to Computers	3
ENV:115	Environmental Science	3
		15.75

A.A.S. TOTAL **72.75**

Clinton, Muscatine & Scott Community Colleges/Black Hawk College **A.A.S.**

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, IL. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

FIRE SERVICE OFFICER A.A.S. DEGREE

FIRST SEMESTER

ENG:105	Composition I	3
FIR:331	Command Officer Management I	3
FIR:335	Fire Service Instructor I	3
	Humanities Elective	3
	Elective	4
		16

SECOND SEMESTER

ENG :106	Composition II	3
OR		
ENG:107	Composition I: Technical Writing	
FIR:147	Tactics & Strategies I	3
FIR:221	Fire Prevention	3
FIR :332	Command Officer Management II	3
	Humanities Elective	3
	Elective	1
		16

THIRD SEMESTER

FIR:151	Fire Fighting Tactics & Strategies II	3
FIR:333	Command Officer Management III	3
PSY:111	Introduction to Psychology	3
	Speech Elective	3
	Science Elective	4
		16

FOURTH SEMESTER

FIR:334	Command Officer Management IV	3
FIR:336	Fire Service Instructor II	3
SOC:110	Principles of Sociology	3
	Mathematics Elective	3
	Science Elective	4
		16

A.A.S. TOTAL **64**

GRAPHIC ARTS TECHNOLOGY

Clinton Community College   **A.A.S., Diploma**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
ART:120	2-D Design	3
GRA:103	Introduction to MacIntosh	1
GRT:108	Introduction to Graphic Arts Technology	4
GRT:130	Quality Concepts and Regulations for the Graphic Arts	2
GRT:169	Color Theory	2
GRT:220	Electronic Color Control	3

Technical Elective (optional)   (3)
JOU:171 Introduction to Photography

15

SECOND SEMESTER

GRA:150	Introduction to Web Design	3
GRT:110	Calculations & Measurements for Graphic Arts	3
GRT:121	Electronic Publishing	3
GRT:250	Electronic Imaging	3

General Education Course
(Select one of the following)   3

ENG:105	Composition I OR
ENG:107	Composition I: Technical Writing

Technical Course   3
(Select one of the following)

ART:133	Drawing
CSC:110	Introduction to Computers
GRT:163	Multimedia and the Internet
GRT:215	Advanced Pre-Press Techniques
JOU:171	Introduction to Photography
JOU:172	Intermediate Photography
JOU:941	Practicum in Communication
NET:303	Windows Workstation Operating System

18

DIPLOMA TOTAL **33**

THIRD SEMESTER

GRT:245	Issues in Graphic Arts Technology	3

General Education Course   3
(Select one of the following)

PSY:111	Introduction to Psychology
SOC:110	Principles of Sociology

General Education Course   3
(Select one of the following)

ART:101	Art Appreciation
MUS:100	Music Appreciation

Technical Courses   6
(Select two of the following)

ART:133	Drawing
CIS:307	Introduction to Databases
CIS:606	Visual Basic NET I
GRT:160	Electronic Pre-Press
GRT:165	Multimedia & the Internet II
GRT:230	Advanced Electronic Color Control
GRT:264	Authoring & Web Design II
JOU:120	Beginning Newswriting
JOU:171	Introduction to Photography
JOU:172	Intermediate Photography
JOU:941	Practicum in Communication
NET:107	Hardware/Software Installation & Troubleshooting

15

FOURTH SEMESTER

GRA:900	Special Projects in Graphic Arts Technology	3
GRT:222	Digital Output for Graphic Management	3
GRT:266	Technology Changes in the Graphic Arts	2
GRT:805	Graphic Arts Process Production Co-op	5
MKT:110	Principles of Marketing OR	
BUS:102	Introduction to Business	3

16

A.A.S. TOTAL **64**

Clinton, Muscatine & Scott Community Colleges   A.A.S./Diploma

A.A.S. DEGREE

FIRST SEMESTER

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

SECOND SEMESTER

BIO:173	Human Anatomy and Physiology II w/Lab	4
HIT:120	Pharmacology for HIT	1
HIT:150	Principles of Disease I	2
HIT:250	Coding I	3
HIT:380	Health Records in Alternative Care Settings	3
HIT:601	Medical Transcription (Optional)	(2)
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	3
		16

SUMMER

HIT:160	Principles of Disease II	3
HIT:596	Health Information Technology Practicum	2
HIT:620	Advanced Medical Transcription (Optional)	(1)
		5

DIPLOMA TOTAL **39**

THIRD SEMESTER

BUS:180	Business Ethics	3
HIT:251	Coding II	3
HIT:312	Health Informatics and Information Management Systems	3
HIT:420	Legal Aspects of Health Information	2
HIT:451	Allied Health Statistics	3
HIT:485	Medical Billing and Reimbursement Systems	3
		17

FOURTH SEMESTER

HIT:252	Coding III	3
HIT:440	Quality Management	3
HIT:597	Health Information Technology Practicum II	4
HIT:946	Seminar	1
ART:101	Art Appreciation OR	
HUM:110	Changes and Choices OR	
PHI:101	Introduction to Philosophy OR	
PHI:110	Introduction to Logic	3
		14

A.A.S. TOTAL **70**

The Health Information Technology Associate degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Graduates of the two year program are eligible to write for the national certification exam (Registered Health Information Technician-RHIT) given by the American Health Information Management Association.

HEALTH, SAFETY AND ENVIRONMENTAL TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

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

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
CHM:122	Introduction to General Chemistry	4
ENG:107	Composition I:Technical Writing OR	
ENG:105	Composition I	3
HSE:100	Occupational Safety	3
HSE:200	Waste & Remediation	3
MAT:104	Applied Math Topics OR	
	Any 100 level or higher math	3
		16

SECOND SEMESTER

CHM:132	Introduction to Organic and Biochemistry	4
ENG:106	Composition II OR	
ENG:108	Composition II: Technical Writing	3
ENV:111	Environmental Science	4
HSE:110	Industrial Processes	3
SPC:112	Public Speaking	3
		17

THIRD SEMESTER

HSE:105	Characteristics of Hazardous Materials	3
HSE:205	Air and Water Quality	3
HSE:225	Legal Aspects of Occupational Safety and Health	3
HSE:230	Transportation of Hazardous Materials	3
HUM:110	Changes and Choices OR	
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	3
		15

FOURTH SEMESTER

HSE:211	Contingency Planning/Incident Mgt.	4
HSE:250	Special Topics (Fire Prevention/ Ergonomics) OR	4
HSE:270	Sampling and Monitoring Procedures	
HSE:275	Worker Compensation / Incident Investigation	3
HSE:280	Hazardous Materials Health Effects	3
HSE:285	Industrial Hygiene	3
		17

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

HEALTH, SAFETY & ENVIRONMENTAL TECHNOLOGY CERTIFICATE

The HSET Certificate program is appropriate for students who have prior education and experience in a related field. The most likely candidates for the certificate program are those with an industrial background and a college degree.

Students may choose certificates with either an environmental or a safety emphasis with the assistance from their advisor to reach the required 18 semester hours for their personalized certificate; or choose a combination of courses that meets the student's needs.

		CREDITS
CORE COURSES (Required)		
HSE:100	Occupational Safety	3
HSE:225	Legal Aspects of Occupational Safety and Health	3
HSE:285	Industrial Hygiene	3
		9

SAFETY EMPHASIS (9 Hours Required)		
HSE:105	Characteristics of Hazardous Materials	3
HSE:211	Contingency Planning / Incident Management	4
HSE:230	Transportation of Hazardous Materials	3
HSE:250	Special Topics (Fire Prevention/Ergonomics)	4
HSE:275	Worker Compensation/ Incident Investigation	3

ENVIRONMENTAL EMPHASIS (9 Hours Required)		
HSE:110	Industrial Processes	3
HSE:200	Waste and Remediation	3
HSE:205	Air and Water Quality	3
HSE:270	Sampling and Monitoring Procedures	4
HSE:280	Hazardous Materials Health Effects	3

CERTIFICATE TOTAL **18**

Students may automatically receive the certificates they earn as they complete the requirements for an A.A.S. degree.

HEATING, VENTILATION AND AIR CONDITIONING

Scott Community College   **A.A.S., Diploma, Certificate**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
HCR:260	HVAC Trade Skills (I)	3
HCR:308	Refrigeration Fundamentals	5
HCR:405	Basic Electricity for HVAC Technicians	5
COM:102	Communication Skills OR	
ENG:105	Composition I OR	
SPC:122	Interpersonal Communication	3
		16

SECOND SEMESTER

HCR:116	Domestic Heating	5
HCR:441	HVAC Controls and Circuitry	5
HCR:851	HVAC-R Industrial Safety	2
MAT:104	Applied Math Topics OR	
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	3
		15

SUMMER SESSION

HCR:271	Advanced Domestic Heating and Air Conditioning	5
HCR:880	Industry Competency Exam (ICE)-Residential	1
		6

DIPLOMA TOTAL **37**

THIRD SEMESTER

HCR:291	Commercial Systems	3
HCR:802	Control Systems for HVAC	4
HCR:860	HVAC Management and Business Fundamentals	3
	HVAC Elective*	3
HUM:105	Working in America OR	
HUM:110	Changes and Choices	3
		16

FOURTH SEMESTER

HCR:320	Light Commercial Refrigeration	6
HCR:805	Environmental Controls and Equipment	5
HCR:811	Computer-Aided Control System Design	3
HCR:885	Light Commercial Competency Exam	1
SOC:110	Introduction to Sociology OR	
PSY:111	Introduction to Psychology	3
		18

A.A.S. TOTAL **71**

*HVAC Electives: (3 credit hours required):

HCR:525	Welding for HVAC	3
HCR:261	HVAC Trade Skills	3
WEL:126	Shielded Metal Arc Welding	4.75
WEL:129	Gas Metal Arc Welding-Basic	4.25
CON:170	Building Construction Techniques	6
EGT:400	Introduction to Engineering Design	3

HEATING, VENTILATION AND AIR CONDITIONING CERTIFICATE

FIRST SEMESTER

		CREDITS
HCR:308	Refrigeration Fundamentals	5
HCR:405	Basic Electricity for HVAC Technicians	5
HCR:851	HVAC-R Industrial Safety	2
		12

SECOND SEMESTER

HCR:116	Domestic Heating	5
HCR:441	HVAC Controls and Circuitry	5
		10

CERTIFICATE TOTAL **22**

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION APPRENTICESHIP CERTIFICATE

FIRST YEAR

HCR:406	Basic Electricity /Apprenticeship	3
HCR:442	HVAC Controls and Circuitry / Apprenticeship	3
HCR:851	HVAC/R Industry Safety	2
		8

SECOND YEAR

HCR:309	Refrigeration Fundamentals/ Apprenticeship	3
HCR:118	Domestic Heating/Apprenticeship	3
		6

THIRD YEAR

HCR:804	Controls for HVAC/Apprenticeship	3
HCR:812	Environmental Controls & Equipment / Apprenticeship	3
		6

FOURTH YEAR

HCR:292	Commercial Systems / Apprenticeship	2
HCR:321	Light Commercial Refrigeration/ Apprenticeship	4
		6

CERTIFICATE TOTAL **26**

HORSE SCIENCE TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges/Black Hawk College A.A.S., Certificate

This is a cooperative contract program taught at Black Hawk College (BHC) in Kewanee, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

A.A.S. DEGREE

FIRST SEMESTER

AGC:105	Computers in Agriculture	1
AGE:118	Horse Evaluation I	1
AGE:155	Western Horsemanship	4
AGE:171	Horse Production and Management	4
AGE:945	Seminar	1
AGS:118	Animal Science	4
PEH:140	First Aid	1
	Communications Elective*	3
		19

SECOND SEMESTER

AGA: 335	Forage Crops	3
AGE:119	Horse Evaluation II	1
AGE:189	Horse Equipment & Facilities	3
AGE:907	Horse Science Work Experience	8
AGE:945	Seminar	1
	Mathematics Elective*	3
		19

THIRD SEMESTER

AGB:101	Ag Economics	
OR		
AGB:102	Ag Economics	3 or 4
AGE:131	Horse Health Care	4
AGE:201	Stable Management	3
AGS:319	Animal Nutrition	3
	Equestrian/Agriculture Electives*	4
		17-18

FOURTH SEMESTER

AGB:336	Agricultural Salesmanship	3
AGC:103	Computer Applications in Agriculture	3
AGE:907	Horse Science Work Experience	5
AGE:945	Seminar	1
	Equestrian/Agriculture Electives*	3
		15

A.A.S. TOTAL **70**

*Consult with an advisor regarding approved electives.

HORSE SCIENCE TECHNOLOGY CERTIFICATE

FIRST SEMESTER

AGE:131	Horse Health Care	4
AGE:155	Western Horsemanship	4
AGE:171	Horse Production and Management	4
AGE:201	Stable Management	3
AGS:118	Animal Science	4
AGS:319	Animal Nutrition	3
	Equestrian/Agriculture Electives*	1
		23

SECOND SEMESTER

AGA: 335	Forage Crops	3
AGE:189	Horse Equipment & Facilities	3
	Equestrian/Agriculture Electives*	1
		8

CERTIFICATE TOTAL **30**

*Consult with an advisor regarding approved electives.

Muscatine Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
AGB:105	Business Principles for Agriculture I	1.75
AGB:108	Human Relations I	1.5
AGB:191	Agricultural Sales I	1.5
AGF:120	Floral Plant Identification and Care I	2
AGF:139	Floral Design I	2
AGH:235	Plant Genetics	2
AGH:294	Small Business for Horticulture	2
AGH:450	Horticulture Leadership I	.75
COM:105	Communication Skills I	2
		15.5

SECOND SEMESTER

AGH:131	Greenhouse Management	3
AGH:143	Equipment Repair	3
AGH:237	Plant Identification and Care II	2.5
AGH:452	Horticulture Leadership II	.5
AGH:805	Horticulture Internship I	2.5
COM:107	Communications Skills II	1
MAT:104	Applied Math Topics	3
SPC:111	Public Speaking	2
		17.5

SUMMER SEMESTER

AGH:815	Horticulture Internship II	4

THIRD SEMESTER

AGA:351	Soil Science	1.5
AGA:890	Soil Chemistry	1.5
AGH:115	Turf Management	2
AGH:152	Landscape Design Techniques	3
AGH:254	Pest Management	2
AGH:274	Nursery Management	2
AGH:339	Athletic Field Maintenance	1
AGH:454	Horticulture Leadership III	.75
CSC:110	Intro to Computers	3
		16.75

FOURTH SEMESTER

AGA:349	Fertilizers	1.5
AGB:112	Human Relations II	1.75
AGB:192	Agricultural Sales II	1.75
AGH:149	Drawing and Design	2
AGH:405	Golf Course Maintenance	3
AGH:455	Horticulture Leadership IV	.5
AGH:827	Horticulture Employment Experience III	3.5
BIO:125	Plant Biology	4
		18

A.A.S. TOTAL **71.75**

HOSPITALITY MANAGEMENT

Scott Community College   A.A.S., Certificate

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
HCM:100	Sanitation and Safety	2
HCM:106	Hospitality Management Information Systems	3
HCM:319	Introduction to Hospitality Field	3
HCM:957	Hospitality Lab I	2
HCM:960	Hospitality Practicum I	3
		13

SECOND SEMESTER

COM:102	Communication Skills	3
HCM:331	Workplace Human Relations	3
HCM:606	Hospitality Management Practices	3
HCM:958	Hospitality Lab II	2
HCM:961	Hospitality Practicum II	3
		14

THIRD SEMESTER

HCM:265	Mathematics for Hospitality	3
HCM:962	Hospitality Practicum III	3
PSY:213	Industrial & Organizational Psychology	3
		9

FOURTH SEMESTER

HCM:279	Hospitality Accounting	3
HCM:330	Hospitality Personnel Management	3
HCM:963	Hospitality Practicum IV	3
	General Education Course	3
		12

FIFTH SEMESTER

HCM:310	Hospitality Law	3
HCM:316	Hotel/Restaurant Operations	3
HCM:328	Conversational Spanish for Hospitality	3
HCM:959	Hospitality Lab III	3
HCM:964	Hospitality Practicum V	3
		15

SIXTH SEMESTER

HCM:611	Hospitality Sales and Marketing	2
HCM:965	Hospitality Practicum VI	3
		5

A.A.S. TOTAL **68**

EVENT MANAGEMENT CERTIFICATE PROGRAM

FIRST SEMESTER

HCM:100	Sanitation and Safety	2
HCM:335	Introduction to Event Planning	3
HCM:932	Event Management Internship	1
		6

SECOND SEMESTER

COM:102	Communication Skills	3
HCM:265	Mathematics for Hospitality	3
HCM:932	Event Management Internship	1
HCM:958	Hospitality Lab II	2
		9

SUMMER SESSION

HCM:932	Event Management Internship	2.5
PSY:213	Industrial & Organizational Psychology	3
		5.5

CERTIFICATE TOTAL **20.5**

Clinton, Muscatine & Scott Community Colleges   A.A.S., Certificate

SOFTWARE DEVELOPMENT CONCENTRATION

MCC & SCC (A.A.S.)
FIRST SEMESTER

CIS:121	Introduction to Programming Logic	3
CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts	3
NET:114	Foundations of Information Technology	3

Communications Course - Select one:

ENG:105	Composition I OR	
ENG:107	Composition I: Technical Writing OR	
SPC:112	Public Speaking	3
		15

SECOND SEMESTER

NET:303	Windows Workstation Operating Systems	3
CIS:210	Web Development I	3
CIS:606	Visual Basic.NET I	3
	IT Electives*	6
		15

THIRD SEMESTER

CIS:307	Introduction to Databases	3
CIS:607	Visual Basic.NET II	3

General Education Course - Select one:

PHI:105	Introduction to Ethics OR	
SOC:110	Introduction to Sociology OR	
PSY:111	Introduction to Psychology OR	
HUM:110	Changes and Choices	3
	IT Electives*	6
		15

FOURTH SEMESTER

CIS:171	Java	3
CIS:608	Visual Basic.NET III	3
NET:851	Innovations in Technology	3
	IT Electives*	5
	Elective	3
		17

A.A.S. TOTAL 62

Approved IT Elective Courses for Software Development.

ADM:254	Business Professionalism	1
ADM:255	Business Professionalism II	1
CFR:100	Introduction to Computer Forensics	3
CIS:138	Introduction to PC Programming	2
CIS:140	Introduction to Game Design	3
CIS:159	Programming with Alice	3
CIS:161	C++	3
CIS:164	C++ Advanced	3
CIS:211	Web Development II	3
CIS:251	Fundamentals of Web Design I	3
CIS:274	e-Commerce Design	3
CIS:341	Advanced Databases	3
CIS:394	Introduction to Game Programming	3
CIS:397	Gaming Physics	4
CIS:402	COBOL	3
CIS:504	Systems Structural Analysis	3
CIS:704	UNIX/Linux	3
CIS:710	Flash Game Development	3
CIS:711	Audio Programming for Games	3
CIS:712	AI for Game Programming	3
CIS:713	Advanced Game Programming	3
CIS:929	IT Special Projects	3
CSC:112	Computer Fundamentals for Technicians I/A	2
CSC:113	Computer Fundamentals for Technicians I/B	2
GRT:220	Electronic Color Control	3
NET:104	IT Essentials I: PC Hardware and Software	4
NET:105	Printer Maintenance and Repair	3
NET:107	Hardware/Software Installation and Troubleshooting	3
NET:155	Introduction to Wireless Networks	3
NET:214	CISCO Networking (Networking Fundamentals)	5
NET:224	CISCO Routers (Routing Protocols and Concepts)	5
NET:234	CISCO Switches (LAN Switching and Wireless)	5
NET:244	CISCO WAN (Accessing the WAN)	5
NET:255	Networking for Home and Small Business	5
NET:256	Networking at a Small to Medium Business or ISP	5
NET:257	Introducing Routing and Switching in the Enterprise	5
NET:258	Designing and Supporting Computer Networks	5
NET:300	IP Telephony (VoIP)	3
NET:305	Introduction to Network Operating Systems	3
NET:313	Windows Servers	3
NET:487	Network+ ExamPreparation	1
NET:489	A+ Exam Preparation	1
NET:679	TCP/IP and Subnetting	1
NET:785	Fundamentals of Desktop Support	3
NET:910	Cooperative Work Experience	3

INFORMATION TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges　　　　　**A.A.S., Certificate**

NETWORKING CONCENTRATION

CCC, MCC & SCC (A.A.S.)

FIRST SEMESTER
CIS:121	Introduction to Programming Logic	3
CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts	3
NET:114	Foundations of Information Technology	3

Communications Course - Select one:
ENG:105	Composition I OR	
ENG:107	Composition I: Technical Writing OR	
SPC:112	Public Speaking	3
		15

SECOND SEMESTER
NET:214	CISCO Networking	
OR		
NET:255	Networking for Home & Small Business	5
NET:224	CISCO Routers	
OR		
NET:256	Networking at a Small to Medium Business or ISP	5
NET:303	Windows Workstation Operating System	3
	IT Elective**	3
		16

THIRD SEMESTER:
NET:234	CISCO Switches	
OR		
NET:257	Introducing Routing & Switching in the Enterprise	5
NET:244	CISCO Wide Area Networks (WAN)	
OR		
NET:258	Designing & Supporting Computer Networks	5
	IT Electives**	3

General Education Course - Select one:
PHI:105	Introduction to Ethics OR	
SOC:110	Introduction to Sociology OR	
PSY:111	Introduction to Psychology OR	
HUM:110	Changes and Choices	3
		16

FOURTH SEMESTER:
NET:851	Innovations in Technology	3
	IT Electives**	9
	Elective	3
		15

A.A.S. TOTAL **62**

** *Approved IT Elective Courses for Networking:*
ADM:254	Business Professionalism	1
ADM:255	Business Professionalism II	1
CFR:100	Introduction to Computer Forensics	3
CIS:138	Introduction to PC Programming	2
CIS:140	Introduction to Game Design	3
CIS:159	Programming with Alice	3
CIS:161	C++	3
CIS:164	C++ Advanced	3
CIS:171	Java	3
CIS:210	Web Development I	3
CIS:211	Web Development II	3
CIS:251	Fundamentals of Web Design 1	3
CIS:274	e-Commerce Design	3
CIS:307	Introduction to Databases	3
CIS:341	Advanced Databases	3
CIS:394	Introduction to Game Programming	3
CIS:397	Gaming Physics	4
CIS:402	COBOL	3
CIS:504	Systems Structural Analysis	3
CIS:606	Visual Basic.NET 1	3
CIS:607	Visual Basic.NET II	3
CIS:608	Visual Basic.NET III	3
CIS:704	UNIX/Linux	3
CIS:710	Flash Game Development	3
CIS:711	Audio Programming for Games	3
CIS:712	AI for Game Programming	3
CIS:713	Advanced Game Programming	3
CIS:929	IT Special Projects	1
CSC:112	Computer Fundamentals for Technicians I/A	2
CSC:113	Computer Fundamentals for Technicians I/B	2
GRT:220	Electronic Color Control	3
NET:104	IT Essentials I: PC Hardware and Software	4
NET:105	Printer Maintenance and Repair	3
NET:107	Hardware/Software Installation and Troubleshooting	3
NET:155	Introduction to Wireless Networks	3
NET:300	IP Telephony (VoIP)	3
NET:305	Introduction to Network Operating Systems	3
NET:313	Windows Servers	3
NET:487	Network+ Exam Preparation	1
NET:489	A+ Exam Preparation	1
NET:612	Fundamentals of Network Security	3
NET:679	TCP/IP and Subnetting	1
NET:785	Fundamentals of Desktop Support	3
NET:910	Cooperative Work Experience	3

Clinton, Muscatine & Scott Community Colleges   A.A.S., Certificate

CISCO NETWORKING (CCNA)

CCC & MCC (CERTIFICATE)

NET:255	Networking for Home & Small Business	5
NET:256	Networking at a Small to Medium Business or ISP	5
NET:257	Introducing Routing & Switching in the Enterprise	5
NET:258	Designing & Supporting Computer Networks	5

CERTIFICATE TOTAL **20**

GAME DEVELOPMENT CONCENTRATION

SCC (A.A.S.)

FIRST SUMMER

CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts	3
		6

FIRST SEMESTER

CIS:140	Introduction to Game Design	3
CIS:159	Programming with Alice OR	
CIS:121	Intro to Programming Logic	3
ENG:105	Composition I OR	
SPC:112	Public Speaking	3
GRT:220	Electronic Color Control	3
		12

SECOND SEMESTER

CIS:710	Flash Game Development	3
CIS:388	Creative Writing for Games	3
NET:303	Windows Workstation Operating System	3
CIS:161	C++	3
		12

SECOND SUMMER

General Education Course - Select one:

SOC:110	Introduction to Sociology OR	
PHI:105	Introduction to Ethics OR	
PSY:111	Introduction to Psychology	3
MKT110	Principles of Marketing	3
		6

THIRD SEMESTER

CIS:164	Advanced C++	3
PHY:162	College Physics I OR	
CIS:397	Gaming Physics	4
CIS:394	Introduction to Game Programming	3
CIS:711	Audio Programming for Games	3
		13

FOURTH SEMESTER

CIS:712	AI for Game Programming	3
CIS:713	Advanced Game Programming	3
NET:851	Innovations in Technology	3
NET:910	Cooperative Work Experience	2-3
	Elective	3
		14

A.A.S. TOTAL **63**

CISCO NETWORKING - CCNA

SCC (CERTIFICATE)

NET:214	CISCO Networking	5
NET:224	CISCO Routers	5
NET:234	CISCO Switches	5
NET:244	CISCO Wide Area Networks (WAN)	5

CERTIFICATE TOTAL **20**

WEB DESIGN

MCC & SCC (CERTIFICATE)

FIRST SEMESTER

CSC:110	Introduction to Computers	3
CIS:307	Introduction to Databases OR	
CIS:161	C+ +	3
CIS:210	Web Development I	3
CIS:606	Visual Basic Net I	3
		12

SECOND SEMESTER

CIS:251	Fundamentals of Web Design I	3
CIS:211	Web Development II OR	3
CIS:341	Advanced Databases & SQL Administration	3
CIS:171	Java OR	
CIS:607	Visual Basic Net II	3
NET:910	Cooperative Work Experience OR IT Elective*	3
		12

CERTIFICATE TOTAL **24**

* Select from approved IT elective courses for software development found on page 127.

INFORMATION TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Certificate**

A+ PREPARATION

CCC, MCC & SCC (CERTIFICATE)

SPRING SEMESTER

NET:107	Hardware/Software Installation and Troubleshooting OR	3-4
NET:104	IT Essentials I: PC Hardware and Software	
NET:114	Foundations of Information Technology	3
NET:303	Windows Workstation Operating Systems	3
		9

FALL SEMESTER

ENG:105	Composition I OR	3
ENG:107	Composition I: Technical Writing	
NET:105	Printer Maintenance and Repair	3
NET:489	A+ Exam Preparation	1
NET:910	Cooperative Work Experience OR IT Elective**	3
		10

CERTIFICATE TOTAL 19

** Select from approved IT elective courses for networking found on page 128.

WEB GAME DEVELOPMENT

SCC (CERTIFICATE)

FIRST SEMESTER

CIS:140	Introduction to Game Design	3
CIS:159	Programming with Alice	3
CIS:210	Web Development I	3
ENG:105	Composition I	3
		12

SECOND SEMESTER

CIS:710	Flash Game Development	3
CIS:388	Creative Writing for Games	3
GRT:220	Electronic Color Control	3
CIS:211	Web Development II	3
CIS:251	Fundamentals of Web Design I	3
		15

CERTIFICATE TOTAL 27

COMPUTER REPAIR AND HELP DESK SUPPORT

CCC, MCC & SCC (CERTIFICATE)

FALL START

FALL SEMESTER

NET:107	Hardware/Software Installation and Troubleshooting OR	3-4
NET:104	IT Essentials I: PC Hardware and Software	
NET:114	Foundations of Information Technology	3
NET:303	Windows Workstation Operating Systems	3
NET:305	Introduction to Network Operating Systems	3
		12

SPRING SEMESTER

CIS:121	Introduction to Programming Logic	3
ENG:105	Composition I OR	3
ENG:107	Composition I: Technical Writing	
NET:785	Fundamentals of Desktop Support	3
NET:910	Cooperative Work Experience OR IT Elective**	3
		12

CERTIFICATE TOTAL 24

** Select from approved IT elective courses for networking found on page 128.

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Certificate**

WIRELESS LAN CERTIFICATION

CCC, MCC & SCC (CERTIFICATE)

SPRING SEMESTER

ENG:105	Composition I OR	3
ENG:107	Composition I: Technical Writing	
NET:255	Networking for Home & Small Business OR	5
NET:214	CISCO Networking	
NET:303	Windows Workstation Operating System	3
NET:679	TCP/IP and Subnetting	1
		12

FALL SEMESTER

NET:155	Introduction to Wireless Networks	3
NET:313	Windows Servers OR	3
CIS:704	UNIX/Linux	
NET:910	Cooperative Work Experience or IT Elective**	6
		12

CERTIFICATE TOTAL 24

** Select from approved IT elective courses for networking found on page 128.

NETWORK+ PREPARATION

CCC, MCC & SCC (CERTIFICATE)

FALL SEMESTER

ENG:107	Composition I: Technical Writing OR	
ENG:105	Composition I	3
NET:114	Foundations of Information Technology	3
NET:305	Introduction to Network Operating Systems	3
NET:679	TCP/IP and Subnetting	1
		10

SPRING SEMESTER

NET:255	Networking for Home & Small Business OR	
NET:214	CISCO Networking (Networking Fundamentals)	5
NET:303	Windows Workstation Operating Systems	3
NET:487	Network+ Exam Preparation	1
NET:910	Cooperative Work Experience or IT Elective**	3
		12

CERTIFICATE TOTAL 22

INTERIOR DESIGN & APPAREL MERCHANDISING

Scott Community College   A.A.S., Diploma, Certificate

INTERIOR DESIGN
A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
INT:116	Materials I	4
INT:301	Design Fundamentals	3
INT:302	Color Theory	3
INT:310	Architectural Graphics	4
General Education Course:		
MAT:110	Math for Liberal Arts OR	
MAT:156	Statistics	3
		17

SECOND SEMESTER

INT:120	Materials II	3
INT:127	History of Decorative Arts I	3
INT:131	Interiors I	4
INT:134	Marketing for Interior Designers OR	3
MKT:110	Principles of Marketing	
INT:140	Presentation Graphics	3
		16

SUMMER SESSION

INT:920	Field Experience	4
General Education Course:		
SPC:112	Public Speaking	3
		7

THIRD SEMESTER

INT:205	Kitchen and Bath Design and Lighting	4
INT:209	CAD for Interior Designers	3
INT:210	Interiors II	3
INT:228	History of Decorative Arts II	3
General Education Course:		
COM:102	Communication Skills OR	
ENG:105	Composition I	3
		16

FOURTH SEMESTER

INT:215	History of 20th Century Art and Architecture	4
INT:230	Interiors III	3
INT:261	Codes for Interiors	2
INT:313	Contract Design	4
General Education Course:		
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	3
		16

A.A.S. TOTAL **72**

APPAREL MERCHANDISING CERTIFICATE
FALL SEMESTER

		CREDITS
INT:116	Materials I	4
INT:301	Design Fundamentals	3
INT:302	Color Theory	3
		10

SPRING SEMESTER

APP:170	Fashion Trends & Consumer Analysis	3
BUS:102	Introduction to Business OR	
MKT:110	Principles of Marketing	3
MKT:140	Principles of Selling OR	
MKT:160	Principles of Retailing	3
		9

CERTIFICATE TOTAL **19**

APPAREL MERCHANDISING DIPLOMA
FALL SEMESTER

		CREDITS
INT:116	Materials I	4
INT:301	Design Fundamentals	3
INT:302	Color Theory	3
COM:102	Communication Skills OR	
SPC:170	Professional Communication	3
BUS:102	Introduction to Business OR	
MKT:110	Principles of Marketing	3
		16

SPRING SEMESTER

APP:120	Apparel Visual Merchandising	3
APP:140	Fashion History	3
APP:170	Fashion Trends & Consumer Analysis	3
MKT:140	Principles of Selling OR	
MKT:160	Principles of Retailing	3
	Humanities Elective	3
		15

SUMMER SEMESTER

APP:907	Cooperative Work Experience	4
		4

DIPLOMA TOTAL **35**

INTERNATIONAL TRADE

Clinton, Muscatine & Scott Community Colleges/Black Hawk College   **Certificate**

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

INTERNATIONAL TRADE CERTIFICATE

FIRST SEMESTER

		CREDITS
BUS:102	Introduction to Business	3
BUS:112	Business Math	3
BUS:220	Introduction to International Business	3
CSC:110	Introduction to Computers	3
SPC:120	Interncultural Communication	3
		15

SECOND SEMESTER

BUS:151	Introduction to E-Commerce OR	3
GEO:123	Introduction to Regional Geography	
BUS:221	International Business Cultures	3
BUS:295	International Seminar	1
BUS:933	International Internship	3
MKT:110	Principles of Marketing	3
MKT:190	International Marketing	3
		16

CERTIFICATE TOTAL **31**

INTERPRETER TRAINING PROGRAM

Scott Community College   **A.A.S.**

A.A.S. DEGREE

PREREQUISITE YEAR

FIRST SEMESTER

		CREDITS
ASL:151	ASL I	5
ITP:129	Deaf Studies	4
ENG:105	English Composition I	3
		12

SECOND SEMESTER

ASL:181	ASL II	5
ITP:131	Social Aspects of Deaf Culture	4
PHI:101	Introduction To Ethics OR	
ANT:105	Cultural Anthropology	3
		12

THIRD SEMESTER

ASL:251	ASL III	5
DRA:130	Acting I	3
ITP:141	English Vocabulary/Grammar for Interpreters	4
		12

FOURTH SEMESTER

ASL:281	ASL IV	4
ITP:121	Introduction to Interpreting	4
ITP:135	Introduction to Language	3
ITP:209	Interpreting Skills Lab	1
		12

SUMMER SESSION

MAT:110	Math for Liberal Arts	3
PSY:121	Developmental Psychology	3
		6

FIFTH SEMESTER

ASL:296	ASL V	4
ITP:124	Introduction to Interpreting II	3
ITP:209	Interpreting Skills Lab	1
ITP:230	Transliteration I	4
ITP:253	Practical Issues	3
		15

SIXTH SEMESTER

ASL:297	ASL VI	4
ITP:209	Interpreting Skills Lab	1
ITP:231	Transliteration II	3
ITP:256	Interpreting Certification Preparation	2
ITP:941	Practicum	2
		12

A.A.S. TOTAL **81**

LAW ENFORCEMENT

Clinton, Muscatine & Scott Community Colleges/Black Hawk College A.A.S., Certificate

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

A.A.S. DEGREE
FIRST SEMESTER

		CREDITS
COM:102 *	Communication Skills	3
CRJ:100	Criminal Justice System	3
CRJ:125	Police Organization & Administration I	3
PEH:100	Living in a Changing World	2
SOC:110	Principles of Sociology	3
	Elective	1
		15

SECOND SEMESTER

ENG:107*	Composition I: Technical Writing	3
CRJ:126	Police Community Relations	3
CRJ :201	Criminology and Delinquent Behavior	3
MAT:110	Mathematics for Liberal Arts	3
	Law Enforcement Elective	3
		15

THIRD SEMESTER

CRJ:130	Criminal Law I	3
CRJ:141	Criminal Investigation	3
POL:111	American National Government	3
OR		
	Humanities or Fine Arts Elective	
PSY:111	Introduction to Psychology	3
	Law Enforcement Elective	3
		15

FOURTH SEMESTER

CRJ:127	Police Ethics	3
POL :112	State and Local Government	3
SPC:170*	Professional Communication	3
	200 Level Psychology**	3
	Elective	3
		15

A.A.S. TOTAL 60

*ENG:105, ENG:106 and SPC:112 may be substituted for students planning to transfer to a four-year school.

**PSY:241 Abnormal Psychology recommended.

LAW ENFORCEMENT CERTIFICATE

FIRST SEMESTER

		CREDITS
COM:102*	Communication Skills	3
CRJ:100	Criminal Justice System	3
CRJ:125	Police Organization and Administration I	3
CRJ:130	Criminal Law I	3
CRJ:141	Criminal Investigation	3
		15

SECOND SEMESTER

ENG:107*	Technical Writing I	3
CRJ:126	Police Community Relations	3
CRJ :201	Criminology and Delinquent Behavior	3
CRJ:127	Police Ethics	3
	Law Enforcement Elective	3
		15

CERTIFICATE TOTAL 30

*ENG:105 or ENG:106 may be substituted.

Clinton, Muscatine & Scott Community Colleges/Black Hawk College A.A.S., Certificate

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

PRIVATE SECURITY CERTIFICATE

FIRST SEMESTER

		CREDITS
COM:102*	Communication Skills	3
CRJ:100	Criminal Justice System	3
CRJ:141	Criminal Investigation	3
CRJ:130	Criminal Law I	3
CRJ:205	Physical Security Concepts I	3
		15

SECOND SEMESTER

ENG:107*	Composition I: Technical Writing	3
CRJ:201	Criminology and Delinquent Behavior	3
CRJ:127	Police Ethics	3
CRJ:235	Physical Security Concepts II	3
	Law Enforcement or Security Elective	3
		15

CERTIFICATE TOTAL **30**

*ENG:105 or ENG:106 may be substituted.

LOGISTICS

Clinton, Muscatine & Scott Community Colleges   A.A.S., Diploma, Certificate

LOGISTICS A.A.S. DEGREE

SESSION I
BUS:293	Principles of Workforce Competitive Advantage	3
MAT:142	Technical Math I	1.5
MGT:260	Introduction to Business Logistics	3
		7.5

SESSION II
HSE:261	Regulation and Compliance - Warehousing & Distribution	3
MAT:143	Technical Math II	1.5
MGT:261	Principles of Transportation Management	3
		7.5

SESSION III
MAT:144	Technical Math III	1.5
CSC:112	Computer Fundamentals for Technicians I/A	2
MGT:265	International Transportation & Logistics	3
ENG:107	Composition I: Technical Writing	3
		9.5

SESSION IV
MAT:145	Technical Math IV	1.5
CSC:113	Computer Fundamentals for Technicians I/B	2
ENG:107	Composition I: Technical Writing (Cont.)	
	Technical Elective*	3
		6.5

SESSION V
BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:267	Principles of Cargo Security	3
	Technical Elective*	3
		9

SESSION VI
BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software	3
	Technical Elective*	3
		9

SESSION VII
MGT:269	Introduction to Inventory Management	3
	Humanities/Social Sciences General Education Required	3
	Technical Elective*	3
		9

SESSION VIII
MGT:268	Principles of Logistics Operations Management	3
MGT:928	Independent Study: Special Projects in Logistics & the Supply Chain	3
		6

A.A.S. TOTAL **64**

LOGISTICS DIPLOMA

SESSION I
BUS:293	Principles of Workforce Competitive Advantage	3
ENG:107	Composition I: Technical Writing	3
MAT:142	Technical Math I	1.5
MGT:260	Introduction to Business Logistics	3
		10.5

SESSION II
ENG:107	Composition I: Technical Writing (Cont.)	
MAT:143	Technical Math II	1.5
MGT:261	Principles of Transportation Management	3
		4.5

SESSION III
BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:265	International Transportation & Logistics	3
MGT:269	Introduction to Inventory Management	3
		9

SESSION IV
BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software	3
HSE:261	Regulation and Compliance - Warehousing & Distribution	3
		9

DIPLOMA TOTAL **33**

*Approved Technical Elective Courses
ACC:142	Financial Accounting	3
ACC:146	Managerial Accounting	3
BUS:102	Introduction to Business	3
BUS:161	Human Relations	3
BUS:180	Business Ethics	3
BUS:185	Business Law 1	3
MGT:101	Principles of Management	3
MGT:110	Small Business Management	3
MGT:130	Principles of Supervision	3
MGT:165	Principles of Quality	3
MKT:110	Principles of Marketing	3

RADIO FREQUENCY IDENTIFICATION (RFID) CERTIFICATE

SESSION I

BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:260	Introduction to Business Logistics	3
		6

SESSION II

BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software	3
		6

CERTIFICATE TOTAL **12**

LOGISTICS CERTIFICATE

SESSION I

BUS:293	Principles of Workforce Competitive Advantage	3
MGT:260	Introduction to Business Logistics	3
		6

SESSION II

HSE:261	Regulation and Compliance - Warehousing & Distribution	3
MGT:261	Principles of Transportation Management	3
		6

SESSION III

MGT:265	International Transportation & Logistics	3
MGT:269	Introduction to Inventory Management	3
		6

CERTIFICATE TOTAL **18**

MANUFACTURING MAINTENANCE

Muscatine Community College

A.A.S., Certificate

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
ELT:134	Electrical Circuits and Components I	4
ENG:105	Composition I	3
IND:102	Manufacturing Processes	3
IND:134	Print Reading	2
MAT:720	Industrial Math and Measurement I	3
PHY:181	Applied Physics I	3
		18

SECOND SEMESTER

CSC:110	Introduction to Computers OR	3
EGT/EGR:400	Introduction to Engineering Design	
ELT:121	Basic Electronics	5
ELT:275	Electro-Mechanical Controls	3
IND:146	Hydraulic Power Systems	2
IND:159	Bearings and Lubrication	2
MAT:721	Industrial Math and Measurement II	3
		18

THIRD SEMESTER

EGT/EGR:420	Digital Electronics OR	3
ELT:154	Industrial Electronics	
IND:147	Pneumatic Power Systems	2
IND:158	Sheet Metal Fabrication	3
IND:222	Geometric Tolerancing and Dimensioning	3
SPC:112	Public Speaking OR	3
SPC:170	Professional Communications	
	Manufacturing Elective*	3
		17

FOURTH SEMESTER

ATR:122	Automated Manufacturing Technology	4
BUS:161	Human Relations	3
ELE:210	Programmable Controllers	4
WEL:124	Maintenance Welding	3
	Manufacturing Elective*	3
		17

A.A.S. TOTAL **70**

MANUFACTURING MAINTENANCE CERTIFICATE

FALL

		CREDITS
DSL:603	Hydraulics	2
ENG:105	English Composition I	3
IND:134	Print Reading	2
MAT:720	Industrial Math and Measurement I	3
WEL:124	Maintenance Welding	3
		13

SPRING

CSC:110	Introduction to Computers OR	3
EGT/EGR:400	Introduction to Engineering Design	
ELT:134	Electrical Circuits and Components I	4
MAT:721	Industrial Math and Measurement II	3
SPC:112	Public Speaking OR	3
SPC:170	Professional Communications	
	Social Science Elective	3
		16

CERTIFICATE TOTAL **29**

* Manufacturing Maintenance Elective Course Options:

IND:129	Interpreting Pneumatics and Hydraulics Drawings	1
IND:136	Process Control I	3
MFG:151	CNC Fundamentals	2
MFG:201	CNC Turning Operator	2
MFG:221	CNC Milling Operator	2
WEL:949	Special Topics - Welding	3
EGT/EGR:450	Computer Integrated Manufacturing	3

Muscatine Community College   **A.A.S., Certificate**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
CSC:110	Introduction to Computers OR	3
EGT/EGR:400	Introduction to Engineering Design	
IND:134	Print Reading	2
IND:159	Bearings and Lubrication	2
MAT:720	Industrial Math and Measurement I	3
SPC:112	Public Speaking OR	3
SPC:170	Professional Communication	
	Social Science Elective	3
		16

SECOND SEMESTER

ELT:275	Electro-Mechanical Controls	3
ENG:105	Composition I	3
IND:146	Hydraulic Power Systems	2
MAT:721	Industrial Math and Measurement II	3
WEL:124	Maintenance Welding	3
		14

THIRD SEMESTER

CHM:122	Introduction to General Chemistry	4
ENG:106	Composition II	3
ENV:111	Environmental Science	4
MAT:121	College Algebra	4
EGT/EGR:450	Computer Integrated Manufacturing OR	
	Manufacturing Elective*	3
		18

FOURTH SEMESTER

BUS:102	Introduction to Business	3
BUS:161	Human Relations	3
ELT:121	Basic Electronics	5
IND:102	Manufacturing Process	3
	Manufacturing Elective	3
		17

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

PROCESS CONTROL CERTIFICATE (MCC)

FIRST SEMESTER

CAD:228	Applied Physics I	3
CHM:110	Intro to Chemistry	3
ELT:121	Basic Electronics	5
IND:136	Process Control I	3
MAT:720	Industrial Math and Measurement I	3
		17

SECOND SEMESTER

CAD:229	Applied Physics II	3
ELT:154	Industrial Electronics	3
ELT:275	Electro-Mechanical Controls	3
IND:137	Process Control II	3
		12

CERTIFICATE TOTAL **29**

Clinton, Muscatine & Scott Community Colleges/Black Hawk College   **Certificate**

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students but take courses at BHC.

MASSAGE THERAPY & BODYWORK CERTIFICATE

FIRST SEMESTER

		CREDITS
MST:118	Musculoskeletal Anatomy/Kinesiology	5
MST:173	Therapy Theory I	10
		15

SECOND SEMESTER

MST:107	Human Anatomy & Physiology	5
MST:170	Therapeutic Massage I	5
MST:171	Therapeutic Massage II	5
		15

THIRD SEMESTER

MST:111	Pathology	3
MST:257	Therapy Theory & Practice	3
MST:811	Massage Therapy Clinical	4
		10

CERTIFICATE TOTAL **40**

MECHANICAL DESIGN TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Diploma, Certificate**

CAD/PRO ENGINEER A.A.S. DEGREE

SESSION I

DRF:114	Basic Drafting I/A	2.5
MAT:142	Technical Mathematics I	1.5
CAD:211	Fundamentals of AutoCAD	4
		8

SESSION II

CSC:112	Computer Fundamentals OR For Technicians 1/A	2
EGT/EGR:400 Introduction to Engineering Design		
DRF:115	Basic Drafting I/B	2.5
MAT:143	Technical Mathematics II	1.5
		6

SESSION III

DRF:130	Industrial Drafting Applications I	3.5
MAT:144	Technical Mathematics III	1.5
PHY:130	Applied Physics I	2
		7

SESSION IV

DRF:135 Industrial Drafting Applications II		3.5
MAT:145 Technical Mathematics IV		1.5
PHY:135 Applied Physics II		2
		7

SESSION V

CAD Specialty Course**		4
CAD:225 Descriptive Geometry		2
ENG:107 Composition I: Technical Writing		3
		9

SESSION VI

CAD Specialty Course**		4
IND:222 Geometric Tolerancing/Dimensioning		3
EGT:161 Strength of Material I/A		1.5
		8.5

SESSION VII

CAD Specialty Course**		4
EGT:162 Strength of Material I/B		1.5
Social Science or Humanities General Education Requirement		3
		8.5

SESSION VIII

CAD Specialty Course**		4
*DRF:148 Project Design I		1.5
EGT:163 Strength of Material II/A		1.5
		7

SESSION IX

CAD Specialty Course**		4
*DRF:149 Project Design II		1.5
EGT:164 Strength of Material II/B		1.5
		7

A.A.S. TOTAL **68**

*EGT/EGR:470 Engineering Design and Development may be substituted for DRF:148 and DRF:149.

**Complete 5 of the following CAD specialty courses:
CAD:231 Pro Engineer - Basic Modeling
CAD:261 Solid Works Basic Modeling
CAD:241 Pro Engineer Advanced Modeling
CAD:262 Solid Works Advanced Modeling
CAD:251 Pro Engineer-Assemblies
CAD:263 Solid Works Assembly
CAD:233 Pro Engineer Basic Detailing
CAD:264 Solid Works Basic Detailing
CAD:256 Pro Engineer Sheet Metal
CAD:265 Solid Works Sheet Metal   **7**

A.A.S. TOTAL **68**

MECHANICAL DESIGN TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges   **A.A.S., Diploma, Certificate**

CAD/PRO ENGINEER DIPLOMA

SESSION I
CSC:112	Computer Fundamentals for Technicians I/A OR	2
EGT/EGR:400	Introduction to Engineering Design	
DRF:114	Basic Drafting I/A	2.5
ENG:107	Composition I: Technical Writing	3
MAT:142	Technical Mathematics I	<u>1.5</u>
		9

SESSION II
CAD:225	Descriptive Geometry	2
DRF:115	Basic Drafting I/B	2.5
MAT:143	Technical Mathematics II	<u>1.5</u>
		6

SESSION III
DRF:130	Industrial Drafting Applications I	3.5
IND:222	Geometric Tolerancing/Dimensioning	3
MAT:144	Technical Mathematics III	<u>1.5</u>
		8

SESSION IV
CAD:211	Fundamentals of AutoCAD	4
DRF:135	Industrial Drafting Applications II	3.5
MAT:145	Technical Mathematics IV	<u>1.5</u>
		9

SESSION V
CAD:231	Pro Engineer Basic Modeling	4
	Social Science or Humanities General Education Requirement	<u>3</u>
		7

DIPLOMA TOTAL 39

CAD/PRO ENGINEER CERTIFICATE

SESSION I
CSC:112	Computer Fundamentals For Technicians I/A	2
DRF:114	Basic Drafting I/A	2.5
ENG:107	Composition I: Technical Writing	3
MAT:142	Technical Mathematics I	<u>1.5</u>
		9

SESSION II
CAD:225	Descriptive Geometry	2
DRF:115	Basic Drafting I/B	2.5
MAT:143	Technical Mathematics II	<u>1.5</u>
		6

SESSION III
DRF:130	Industrial Drafting Applications I	3.5
IND:222	Geometric Tolerancing/Dimensioning	3
MAT:144	Technical Mathematics III	<u>1.5</u>
		8

SESSION IV
CAD:260	Fundamentals of AutoCAD	4
DRF:135	Industrial Drafting Applications II	3.5
MAT:145	Technical Mathematics IV	<u>1.5</u>
		9

CERTIFICATE TOTAL 32

PRO ENGINEER/SOLID MODELING CERTIFICATE

Complete 5 of the following CAD courses:

CAD:231 Pro Engineer - Basic Modeling	4
CAD:261 Solid Works Basic Modeling	4
CAD:241 Pro Engineer Advanced Modeling	4
CAD:262 Solid Works Advanced Modeling	4
CAD:251 Pro Engineer-Assemblies	4
CAD:263 Solid Works Assembly	4
CAD:233 Pro Engineer Basic Detailing	4
CAD:264 Solid Works Basic Detailing	4
CAD:256 Pro Engineer Sheet Metal	4
CAD:265 Solid Works Sheet Metal	4
CERTIFICATE TOTAL 20	

MECHATRONICS TECHNOLOGY

Clinton Community College   **A.A.S., Diploma**

A.A.S. DEGREE
FIRST SEMESTER

		CREDITS
CAD:114	AutoCAD I	2
ELE:141	DC & AC Circuits	4
ELT:174	Digital Circuits OR	3
EGT/EGR:420	Digital Electronics	
IND:111	Industrial Safety Mechanical Systems	1
MAT:743	Technical Math	3
		13

SECOND SEMESTER

ELT:153	Electronics	4
IND:136	Process Control I	3
IND:143	Motors & Drives	3
IND:149	Applied Mechanics	3
MAT:748	Technical Math II	3
		16

DIPLOMA TOTAL **29**

THIRD SEMESTER

ELT:123	Programmable Controllers	3
ELT:175	Computer Programming	3
ELT:176	Instrumentation	3
IND:137	Process Control II	3
IND:148	Mechanisms	3
		15

FOURTH SEMESTER

ATR:123	Automation Technology	3
ATR:276	Networking for Industry	3
ELT:177	Microcontrollers	3
ENG:107	Composition I: Technical Writing	3
IND:188	Mechatronic Applications	3
		15

SUGGESTED ELECTIVES

CSC:110	Introduction to Computers OR	3
EGT/EGR:400	Introduction to Engineering Design	
PSY:213	Industrial and Organizational	
	Psychology	3
	(or other social science elective)	**6**

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

Clinton, Muscatine & Scott Community Colleges

A.A.S. DEGREE

FIRST SEMESTER*

		CREDITS
BIO:168	Human Anatomy and Physiology I w/Lab	4
PNN:210	Principles of Pharmacology Module A	1
PNN:211	Principles of Pharmacology Module B	1
PNN:165	Nursing Fundamentals Module A	5
PNN:166	Nursing Fundamentals Module B	5
PSY:111	Introduction to Psychology	3
		19

SECOND SEMESTER*

BIO:151	Nutrition	3
BIO:173	Human Anatomy and Physiology II w/Lab	4
PNN:511	Concepts in Clinical Nursing Module A	4
PNN:512	Concepts in Clinical Nursing Module B	5
PSY:121	Developmental Psychology	3
		19

SUMMER SESSION-PN

ENG:105	Composition I	3
PNN:641	Transition to Practice	6
		9

**PRACTICAL NURSING DIPLOMA TOTAL 47

SUMMER SESSION - ADN

ENG:105	Composition I	3

Choose One Course:

ADN:432	Nursing the Childbearing Family OR	5
ADN:442	Nursing of Children and Families OR	5
ADN:473	Nursing in Mental Health	5
		8

THIRD SEMESTER

BIO:186	Microbiology	4
SOC:110	Introduction to Sociology	3

Choose Two Courses:

ADN:432	Nursing the Childbearing Family OR	5
ADN:442	Nursing of Children and Families	5
ADN:473	Nursing in Mental Health OR	5
		17

FOURTH SEMESTER

ADN:541	Concepts in Clinical Nursing Module 2A	6
ADN:542	Concepts in Clinical Nursing Module 2B	7
		13

SUMMER SESSION (5 WEEKS)

ADN:811	Comprehensive Nursing	5
		5

***ASSOCIATE DEGREE NURSING

A.A.S. TOTAL 81

*Nursing courses in the first two semesters can be taken at Muscatine Community College.

**Graduates will be eligible to make application for the National Council Licensure Examination for Practical Nurses.

***Graduates will be eligible to make application for the National Council Licensure Examination for Registered Nurses.

NOTE: Acceptance into the programs is required.

PHYSICAL THERAPIST ASSISTANT

Clinton, Muscatine & Scott Community Colleges/Black Hawk College   A.A.S.

This is a cooperative contract program taught at Black Hawk College (BHC) in Moline, Illinois. Students enroll as Clinton, Muscatine or Scott Community College students, but take courses at BHC.

A.A.S. DEGREE
FIRST SEMESTER

		CREDITS
BIO:168	Anatomy and Physiology I	4
ENG:105	Composition I	3
HSC:114	Medical Terminology	3
PTA:102	Introduction to PTA	3
PTA:112	Physical Rehabilitative Techniques	3
PTA:187	Physical Agents I	2
		18

SECOND SEMESTER

BIO:173	Anatomy and Physiology II	4
PSY:111	Introduction to Psychology	3
PTA:122	Kinesiology	4
PTA:149	Pathology	2
PTA:179	Practicum I	3
PTA:199	Massage	1
		17

THIRD SEMESTER

PSY:121	Human Growth and Development	3
PTA:167	Physical Therapy Science	2
PTA:180	Practicum II	3
PTA:200	Therapeutic Exercise I	3
SPC:122	Interpersonal Communication	3
		14

FOURTH SEMESTER

MAT:156	Statistics OR	3
CSC:110	Introduction to Computers	
PTA:188	Physical Agents II	3
PTA:209	Therapeutic Exercise II	4
PTA:282	Clinical Seminar	2
SPC:120	Intercultural Communication	3
		15

FIFTH SEMESTER

PTA:303	Clinical Internship I	4
PTA:304	Clinical Internship II	4
		8

A.A.S. TOTAL **72**

The curriculum for Physical Therapist Assistant is career oriented and accredited by the American Physical Therapy Association.

ADMISSION REQUIREMENTS:
Each applicant must meet the following requirements:

- High school graduation or equivalent.
- A physical examination prior to any clinical experience.
- Interview with PTA faculty - the interview is part of a written and oral selection process (held in the spring prior to the start of fall classes.)
- Minimum of "C" average in courses previously completed at Black Hawk College and any courses transferred from other colleges.
- Students must achieve a grade of "C" or above in all PTA courses to continue in the program.
- Any developmental course that is required as determined by COMPASS scores and program faculty.
- All prerequisites need to be completed for required courses with a grade of "C" or above (science classes within last five years.)

APPLICATION PROCESS:
Students are strongly encouraged to get their application in early, as this selection process begins in January and is very competitive. Applicants are interviewed and reviewed for selection in the order in which the program received their application.

Applications will be accepted starting September 1st and no longer accepted after June 1st.

Criminal background checks and healthcare history will be required for all accepted PTA students.

For more information: www.bhc.edu/PTA

Scott Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
BIO:168	Human Anatomy and Physiology I w/Lab*	4
RAD:100	Introduction to Radiography and Patient Care	5
RAD:123	Radiographic Procedures I	5
RAD:350	Imaging	3
		17

SECOND SEMESTER

BIO:173	Human Anatomy & Physiology II w/Lab*	4
HSC:113	Medical Terminology*	2
RAD:143	Radiographic Procedures II	5
RAD:210	Clinical Education I	4
RAD:300	Radiographic Exposure	4
		19

SUMMER SESSION

RAD:183	Special Procedures	3
RAD:220	Clinical Education II	3
		6

THIRD SEMESTER

PSY:111	Introduction to Psychology* OR	
SOC:110	Introduction to Sociology*	3
RAD:500	Clinical Education III	6
RAD:761	Film Evaluation I	3
RAD:800	Physics for Radiographers	3
		15

FOURTH SEMESTER

RAD:510	Clinical Education IV	6
RAD:750	Radiographic Pathology	3
RAD:790	Film Evaluation II	2
RAD:850	Radiation Protection and Biology	3
SPC:112	Public Speaking* OR	3
ENG:105	Composition I*	
		17

SUMMER SESSION

RAD:540	Clinical Education V	3
RAD:890	Quality Assurance	1
RAD:946	Seminar	2
		6

A.A.S. TOTAL 80

NOTE: Enrollment is limited and entrance is restricted to the fall semester. In addition to the general admission requirements of the college, applicants must meet specific program admission criteria.

*Courses may be taken while waiting to enter the program.

RENEWABLE ENERGY SYSTEMS SPECIALIST

Scott Community College   **A.A.S.**

A.A.S. DEGREE

SESSION I

ELE:101	Industrial Safety	1
ELE:115	Basic Electricity I	2
ELE:124	Tools/Adapters/Instruments	2
ENG:107	Composition I: Technical Writing	3
		8

SESSION II

EGT:133	Hydraulics/Pneumatics I	2
ELE:116	Blueprint Reading	1
ELE:127	Troubleshooting	1
ELE:131	Basic Electricity II	2
ENG:107	Composition I: Technical Writing (Cont.)	
		6

SESSION III

CSC:112	Computer Fundamentals for Technicians I/A	2
ELE:128	Electrical Systems I	3
ELE:144	Basic Electronics I/A	1.5
MAT:722	Industrial Math & Measurement I/A	1.5
		8

SESSION IV

CSC:113	Computer Fundamentals for Technicians I/B	2
EGT:134	Hydraulics/Pneumatics II	4
ELE:145	Basic Electronics I/B	1.5
MAT:723	Industrial Math & Measurement I/B	1.5
		9

SESSION V

ELE:129	Electrical Systems II	3
PHY:173	Applied Physics I/A	1.75
SER:100	Intro. to Renewable Energy Applications	2
SER:102	History of Power Generation	3
		9.75

SESSION VI

ELE:134	Electrical Systems Controls	3
PHY:174	Applied Physics I/B	1.75
SER:103	Renewable Energy Site Assessment	3
		7.75

SESSION VII

SER:104	Residential Renewable Energy Power Systems	3
SER:105	Residential Renewable Energy Mounting and Tower Systems	3
SER:108	Inverters, Chargers and Storage Devices	3
		9

SESSION VIII

EGT:116	Continuous Quality Management	3
ELE:139	Electrical Systems Analysis	3
SER:109	Monitoring and Maintenance	3
		9

A.A.S. TOTAL **66.5**

Clinton, Muscatine & Scott Community Colleges/Northeast Iowa Community College

This program is available as a result of a cooperative partnership with Northeast Iowa Community College in Peosta/Dubuque, Iowa. Our partnership with NICC provides you the opportunity to take some of your classes (24 credits) through Eastern Iowa Community Colleges. Once accepted into the Northeast Iowa program, you will take your Respiratory Care classes in Peosta/Dubuque and may be placed in your practicum sites in the Eastern Iowa/Iowa City area.

BIO:168	Human Anatomy & Physiology w/Lab I	4
BIO:173	Human Anatomy & Physiology w/Lab II	4
BIO:186	Microbiology	4
CSC:110	Introduction to Computers	3
ENG:105	Composition I	3
MAT:041	Basic Math Skills OR Higher level math course	3
PSY:111	Introduction to Psychology	3
		24

Terms at Northeast Iowa Community College

FIRST TERM
RCP:270	Respiratory Therapy Techniques I**	8
RCP:320	Respiratory Therapy Science I	3.5
		11.5

SECOND TERM
RCP:460	Respiratory Science II	3.5
RCP:540	Respiratory Therapy Techniques II	8
		11.5

THIRD TERM
RCP:350	Pulmonary Pathology	3
RCP:490	Respiratory Therapy Science III	6
		9

FOURTH TERM
RCP:600	Neonatal/Pediatric Respiratory Therapy	3
RCP:820	Respiratory Therapy Techniques IV	7.5
		10.5

FIFTH TERM
HSC:136	Advanced Life Support (ACLS/PALS)	1.5
RCP:830	Respiratory Therapy V	12
RCP:840	Innovations in Respiratory Care	5.5
		19

A.A.S. TOTAL **85.5**

** Must have CPR Certification - Health Care Provider Level.

Note that NICC requires a minimum grade of C- in each course.

RESTAURANT MANAGEMENT

Scott Community College   **A.A.S.**

SPRING

HCM:100	Sanitation & Safety	2
HCM:154	Basic Food Preparation	2
HCM:180	Food Fundamentals	2
HCM:233	Menu Planning and Nutrition	3
HCM:316	Hotel/Restaurant Operations	3
HCM:589	Introduction to Restaurant Management	<u>3</u>
		15

SUMMER

HCM:255	Purchasing	3
HCM:611	Hospitality Sales and Marketing	2
CSC:110	Introduction to Computers	<u>3</u>
		8

FALL

HCM:330	Hospitality Personnel Management	3
HCM:510	Work Experience	3
HUM:110	Changes and Choices	3
COM:102	Communication Skills OR	
SPC:112	Public Speaking	<u>3</u>
		12

SPRING

HCM:193	Dining Room Techniques	1
HCM:196	Dining Room Techniques	4
HCM:310	Hospitality Law	3
HCM:328	Conversational Spanish for Hospitality Management	
MAT:104	Applied Math Topic	<u>3</u>
		14

FALL

HCM:279	Hospitality Accounting	3
HCM:301	Beverage Control	3
HCM:331	Workplace Human Relations	3
HCM:511	Food Technology Internship	3
MKT:181	Customer Service Strategies	<u>2</u>
		14

A.A.S. Total **63**

SURGICAL TECHNOLOGY AND STERILE PROCESSING AND DISTRIBUTION TECHNICIAN

Scott Community College   **A.A.S., Diploma, Certificate**

FIRST SEMESTER

BIO:168	Human Anatomy and Physiology I	4
CSC:110	Introduction to Computers	3
CSP:110	Infection Control/Health Regulations	2
ENG:105	Composition I	3
HSC:113	Medical Terminology	2
SUR:122	Introduction to Surgical Technology	4
		18

SECOND SEMESTER

BIO:173	Human Anatomy and Phys. II	4
BIO:186	Microbiology	4
PSY:111	Introduction to Psychology	3
SUR:225	Surgical Technology II	4
SUR:421	Surgical Tech Pharmacology	1
SUR:518	Surgical Technology Practicum I	2.5
		18.5

THIRD SEMESTER

SUR:330	Surgical Technology Specialties	3
SUR:524	Surgical Technology Advanced Practicum II	6.5
		9.5

FOURTH SEMESTER

BUS:161	Human Relations	3
FLS:141	Elementary Spanish or Humanities Elective	3-4
MAT:110	Math for Liberal Arts	3
SPC:112	Public Speaking	3
SUR:450	Advanced Concepts in Surg. Tech.	4
		16 -17

A.A.S. TOTAL. . . . . **62 - 63**

SURGICAL TECHNOLOGY DIPLOMA

FIRST SEMESTER

BIO:168	Human Anatomy and Phys. I	4
CSC:110	Introduction to Computers	3
CSP:110	Infection Control/Health Regulations	2
ENG:105	Composition I	3
HSC:113	Medical Terminology	2
SUR:122	Introduction to Surgical Technology	4
		18

SECOND SEMESTER

BIO:173	Human Anatomy and Phys. II	4
BIO:186	Microbiology	4
PSY:111	Introduction to Psychology	3
SUR:225	Surgical Technology II	4
SUR:421	Surgical Technology Pharmacology	1
SUR:518	Surgical Technology Practicum I	2.5
		18.5

THIRD SEMESTER

SUR:330	Surgical Technology Specialties	3
SUR:524	Surgical Technology Advanced Practicum II	6.5
		9.5

DIPLOMA TOTAL **46**

STERILE PROCESSING AND DISTRIBUTION TECHNICIAN CERTIFICATE

FIRST SEMESTER

BIO:114	General Biology IA	4
CHM:110	Introduction to Chemistry	3
CSC:110	Introduction to Computers	3
CSP:110	Infection Control/Health Regulations	2
HSC:113	Medical Terminology	2
		14

SECOND SEMESTER

BIO:157	Human Biology	4
BIO:186	Microbiology	4
CSP:115	Instrument Use, Care, & Handling	3
CSP:120	Sterile Processing & Distribution	3
		14

THIRD SEMESTER

CSP:210	Clinical Practicum	2
		2

CERTIFICATE TOTAL **30**

***To be admitted to the Surgical Technology program students must have the following prerequisite courses completed: CHM:110, BIO:114, and MAT:047. Students must also have a current BCLS card.

TECHNICAL DRAFTING & COMPUTER-AIDED DESIGN (CAD)

Clinton Community College

<div align="right">A.A.S., Certificate</div>

A.A.S. DEGREE

FIRST SEMESTER

		CREDITS
CAD:113	AutoCAD I	3
CAD:271	Introduction to GIS	3
CSC:110	Introduction to Computers	3
EGR:112	Engineering Drawing I	3
MAT:743	Technical Math	3
		15

SECOND SEMESTER

CAD:140	Parametric Solid Modeling I	3
CAD:273	Advanced GIS	3
ENG:107	Composition I: Technical Writing	3
EGR:113	Engineering Drawing II	3
MAT:748	Technical Math II	3
		15

SUMMER SEMESTER

CAD:160	Plane Surveying	3
CAD:235	Strength of Materials	4
		7

THIRD SEMESTER

CAD:130	Applied Drafting	3
CAD:196	Architectural Drafting	3
CAD:272	Cartography	3
PHY:162	College Physics I	4
PSY:213	Industrial and Organizational Psychology	
(or Humanities/Social Science Elective)		3
		16

FOURTH SEMESTER

CAD:161	Architectural Modeling & Rendering	3
CAD:274	Remote Sensing	3
DRF:161	Applied Descriptive Geometry I	3
PHY:172	College Physics II	4
		13

A.A.S. TOTAL **66**

GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

CAD:271	Introduction to GIS	3
CAD:272	Cartography	3
CAD:273	Advanced GIS	3
CAD:274	Remote Sensing	3
		12

CERTIFICATE TOTAL **12**

Clinton, Muscatine & Scott Community Colleges   A.A.S.

The Technical Studies program will provide Associate of Applied Science degree students with the opportunity to customize and personalize a specific technical course of study that meets their own individual employment needs.

The program incorporates a common core of general education course work, combined with a core concentration of technical courses and elective courses from other technical program offerings. The A.A.S. Degree in Technical Studies consists of 64 credits. Some of these credits may be acquired by assessing Credit for Prior Learning. A maximum of 46 credit hours may be earned toward the Technical Studies Degree through Credit for Prior Learning. This may include successful completion of 8,000 hours of any approved Bureau of Apprenticeship Training program.

Students must work with an academic advisor to complete and file an educational course of study plan with the registrar's office.

CORE CONCENTRATION:
24 credit hours of this degree program must come from one program-specific area.

ELECTIVE COURSES:
22 credit hours of this degree program can be selected from any of the current career program (A.A.S.) courses offered at the colleges.

GENERAL EDUCATION:
18 credit hours required from the following areas:

English or Communications	3
Math or Science	3
Microcomputer Applications	3
Arts and Humanities	3
Cultural/Historical Perspectives	3
Social Sciences	3
	18

FIRST SEMESTER
Technical Studies Core Courses	9
Math or Science Elective	3
Communication Elective	3
	15

SECOND SEMESTER
	Technical Studies Core Courses	12
CSC:110	Introduction to Computers	3
	Cultural/Historical Perspective Elective	3
		18

THIRD SEMESTER
Technical Studies Core Courses	3
Technical Studies Electives	9
Arts and Humanities Elective	3
	15

FOURTH SEMESTER
Technical Studies Electives	13
Social Science Elective	3
	16

A.A.S. Total 64

TRUCK DRIVING

TRUCK DRIVING CERTIFICATE - DAY

| TDT:111 | Commercial Drivers License Regulations | 3 |
| TDT:130 | Commercial Vehicle Operation | 7 |

CERTIFICATE TOTAL **10**

TRUCK DRIVING CERTIFICATE - EVENING

| TDT:112 | Commercial Drivers License Regulations | 2.5 |
| TDT:131 | Commercial Vehicle Operation | 5 |

CERTIFICATE TOTAL **7.5**

Day sessions start every seven weeks beginning in February and ending in November. Evening sessions are offered in April and July.

THE PROGRAM INCLUDES:

Commercial Drivers License Requirements, First Aid, Mapping and Freight Billings, Truck Maintenance/ Inspection, Emergency Maneuvers, Dock Operations, City and Highway Driving, U.S. DOT Rules and Regulations.

TO SIGN UP:

1. Send a completed application to Scott Community College.

2. You must take the Department of Transportation physical, eye exam and drug test prior to the start of classes. Give the exam form to your doctor to complete and sign. Return the signed form to the Scott Community College Admissions Office. Note: The form is used for college purposes. It is not to be used for company hiring.

3. You are guaranteed a seat only after all tuition and fees have been paid.

Muscatine Community College   **A.A.S.**

A.A.S. DEGREE

FIRST SEMESTER:

AGV:119	Veterinary Medical Terminology	3
AGV:130	Clinical Technology I	3
BIO:114	General Biology IA	4
CHM:110	Introduction to Chemistry	3
MAT:104	Applied Math Topics	3
		16

SECOND SEMESTER

AGV:118	Animal Anatomy & Physiology I	4
AGV:131	Clinical Technology II	3
AGV:133	Veterinary Clinic Pathology I	3
ENG:105	Composition I	3
SPC:170	Professional Communication	3
		16

THIRD SEMESTER: (SUMMER SESSION)

AGV:182	Diagnostic Imaging	3
AGV:184	Lab Animal Medicine	2
AGV:953	Veterinary Work Experience	1
BUS:161	Human Relations	3
HUM:110	Changes & Choices	3
		12

FOURTH SEMESTER

AGV:127	Animal Anatomy & Physiology II	4
AGV:132	Clinical Technology III	3
AGV:134	Veterinary Clinic Pathology II	3
AGV:140	Veterinary Pharmacology	3
AGV:159	Surgical Nursing	3
		16

FIFTH SEMESTER

AGV:146	Large Animal Care	3
AGV:170	Veterinary Anesthesiology	3
AGV:932	Internship	4
		10

A.A.S. TOTAL **70**

WELDING

A.A.S. DEGREE

SESSION I

MAT:733	Math for Technologies A	1.5
MFG:186	Plant Safety	1
WEL:126	Shielded Metal Arc Welding - Basic	4.75
		7.25

SESSION II

MAT:734	Math for Technologies B	1.5
MFG:192	Blueprint Reading	3
WEL:129	Gas Metal Arc Welding - Basic	4.25
		8.75

SESSION III

CSC:112	Computer Fundamentals for Technicians I/A	2
WEL:137	Oxy-Acetylene Welding Modules	.5
		2.5

SESSION IV

CSC:113	Computer Fundamentals for Technicians I/B	2
WEL:132	Flux Core Arc Welding	2.25
WEL:133	Gas Tungsten Arc Welding	2.5
		6.75

SESSION V

EGT:116	Continuous Quality Management	3
WEL:215	Shielded Metal Arc Welding Advanced I	5
		8

SESSION VI

ENG:107	Composition I: Technical Writing	3
WEL:216	Shielded Metal Arc Welding Advanced II	4.5
WEL:217	Gas Metal Arc Welding Advanced	1.25
		8.75

SESSION VII

ENG:107	Composition I: Technical Writing	
WEL:219	Layout & Fabrication	3
	Technical/Career Education Elective*	4.25
		7.25

SESSION VIII

Cultural/Historical Perspectives Gen. Ed.	3
Social Science Gen. Ed.	3
Technical/Career Education Elective*	4
	10

SESSION IX

Cultural/Historical Perspectives Gen. Ed. OR	
Social Science Gen. Ed. OR	
Technical/Career Education Elective*	3
	3

A.A.S. TOTAL 62.25**

Technical/Career Education Course Options*:

MFG:105	Machine Shop Measuring	3
MFG:190	Metallurgy	2
MFG:116	Carbide Tooling	1
MFG:111	Machinery Handbook	1
MFG:112	Drills and Saws	2
ELE:115	Basic Electricity I	2
ELE:124	Tools, Adapters, Instrumentation	2
DRF:114	Basic Drafting I/A	2.5
DRF:115	Basic Drafting I/B	2.5
CAD:211	Fundamentals of AutoCAD	4

*Students complete a minimum of 11.25 Technical/Career Education Course credits. Please see your advisor for assistance in selecting courses.

**Total number of credit hours may vary depending on Technical/Career Education electives selected. The total minimum credits required for an A.A.S. in Welding is 62.25.

WELDING DIPLOMA

SESSION I

MAT:733	Math for Technologies A	1.5
MFG:186	Plant Safety	1
WEL:126	Shielded Metal Arc Welding - Basic	4.75
		7.25

SESSION II

MAT:734	Math for Technologies B	1.5
MFG:190	Metallurgy	2
MFG:192	Blueprint Reading	3
WEL:129	Gas Metal Arc Welding - Basic	4.25
		10.75

SESSION III

ENG:107	Composition I: Technical Writing	3
WEL:132	Flux Core Arc Welding	2.25
WEL:215	Shielded Metal Arc Welding - Advanced I	5
WEL:217	Gas Metal Arc Welding - Advanced	1.25
		11.5

SESSION IV

EGT:116	Continuous Quality Management	3
WEL:133	Gas Tungsten Arc Welding	2.5
WEL:137	Oxy-Acetylene Welding Modules	.5
WEL:216	Shielded Metal Arc Welding - Advanced II	4.5
WEL:219	Layout and Fabrication	3
		13.5

DIPLOMA TOTAL 43

Clinton, Muscatine & Scott Community Colleges   **Certificate**

BASIC WELDING CERTIFICATE
MCC & SCC

SESSION I

MFG:186	Plant Safety	1
MFG:192	Blueprint Reading	3
WEL:126	Shielded Metal Arc Welding - Basic	4.75
		8.75

SESSION II

WEL:129	Gas Metal Arc Welding - Basic	4.25
WEL:137	Oxy-Acetylene Welding Modules	.5
		4.75

SESSION III

WEL:132	Flux Core Arc Welding	2.25
WEL:133	Gas Tungsten Arc Welding	2.5
		4.75

CERTIFICATE TOTAL 18.25

PRODUCTION WELDING CERTIFICATE
CCC & SCC

SESSION I

MAT:733	Math for Technologies A	1.5
MFG:186	Plant Safety	1
MFG:190	Metallurgy	2
WEL:129	Gas Metal Arc Welding - Basic	4.25
		8.75

SESSION II

MAT:734	Math for Technologies B	1.5
MFG:192	Blueprint Reading	3
WEL:127	Shielded Metal Arc Welding - Modules	1.25
WEL:137	Oxy-Acetylene Welding - Modules	.5
		6.25

SESSION III

WEL:132	Flux Core Arc Welding	2.25
WEL:217	Gas Metal Arc Welding - Advanced	1.25
		3.5

CERTIFICATE TOTAL 18.5

STRUCTURAL WELDING CERTIFICATE
SCC

SESSION I

MAT:733	Math for Technologies A	1.5
MFG:186	Plant Safety	1
WEL:126	Shielded Metal Arc Welding - Basic	4.75
		7.25

SESSION II

MAT:734	Math for Technologies B	1.5
MFG:190	Metallurgy	2
MFG:192	Blueprint Reading	3
WEL:137	Oxy-Acetylene Welding - Modules	.5
		7

SESSION III

WEL:132	Flux Core Welding	2.25
WEL:215	Shielded Metal Arc Welding - Advanced I	5
WEL:216	Shielded Metal Arc Welding - Advanced II	4.5
		11.75

CERTIFICATE TOTAL 26

GENERAL MAINTENANCE WELDING CERTIFICATE
SCC

SESSION I

CSC:112	Computer Fundamentals for Technicians I/A	2
ELE:101	Industrial Safety	1
MAT:733	Math for Technologies A	1.5
WEL:126	Shielded Metal Arc Welding - Basic	4.75
		9.25

SESSION II

CSC:113	Computer Fundamentals for Technicians I/B	2
MAT:734	Math for Technologies B	1.5
MFG:192	Blueprint Reading	3
WEL:129	Gas Metal Arc Welding - Basic	4.25
		10.75

SESSION III

EGT:133	Hydraulics/Pneumatics I	2
ELE:115	Basic Electricity I	2
WEL:136	Oxy-Acetylene Welding and Cutting	4.25
		8.25

CERTIFICATE TOTAL 28.25

START
HERE

Course
Descriptions

EASTERN IOWA COMMUNITY COLLEGES

CLINTON ♦ MUSCATINE ♦ SCOTT

COURSE DESCRIPTIONS

Here is an example to aid in understanding the course description designations:

1) ACC: 2)146 3)Managerial Accounting   4) 3 cr.

5) A continuation of Principles of Accounting I, this course introduces corporate structures related to accounting for

6) (59.4 Lec. Hrs.)

7) Prerequisite: ACC:142 or permission of instructor.

8) Co-requisite:

1) Academic area prefix:
   Example: ACC is Accounting.
2) Course number:
   If the first number is less than 100, the course is for internal college credit only.
3) Course title.
4) Number of credit hours the course is worth.
5) Description of course content.
6) Designates the number of 50-minute contact hours per semester spent in lecture (Lec. Hrs.) and/or laboratory setting (Lab. Hrs.) and/or clinical setting (Clinical Hrs.) and/or cooperative learning setting (Co-op. Hrs.).
7) Prerequisites are courses that must be successfully completed or other qualifications that must be met prior to enrolling in the listed course.
8) Co-requisites are courses that must be taken before or at the same time as the listed course.

Not all courses are available on all campuses each semester.

ACCOUNTING

ACC:109 Introduction to Accounting   2 cr.
This course is an introduction to accounting concepts and is designed for non-accounting majors. Students will learn the accounting cycle and will become familiar with the financial records usually maintained by small service businesses and professional offices. Concepts will be reinforced by completing accounting exercises, problems, and an introductory-level simulation.
(39.6 Lec. Hrs.)

ACC:110 Introduction to Accounting II   2 cr.
This course is a continuation of ACC:109. The students will learn the generally accepted principles of accounting for a merchandising business. Students will learn to use special journals and subsidiary ledgers, to prepare financial statements for a merchandising business, and to perform basic financial statement analysis. Concepts will be reinforced by completing accounting exercises, problems, and a simulation.
(39.6 Lec. Hrs.)
Prerequisite: ACC:109.

ACC:111 Introduction to Accounting   3 cr.
Designed for the student who has not had high school bookkeeping or for the student desiring to enter office employment. Emphasis is placed on learning the accounting cycle, structured systems, and records usually incorporated by small businesses and professional offices. A practice simulation provides an opportunity for students to apply those concepts learned throughout the course and also indicates to the instructor that competencies have been met.
(59.4 Lec. Hrs.)
Prerequisites: MAT:041 or minimum math placement score based on college assessment.

ACC:121 Principles of Accounting I   3 cr.
An introduction to accounting terminology and concepts and accepted accounting practices of analyzing, recording, summarizing, presenting, and interpreting business financial transactions of sole proprietorships and partnerships. Significant emphasis is placed upon practice and application.
(59.4 Lec. Hrs.)

ACC:142 Financial Accounting 3 cr.
An introduction to the use of accounting in the decision making process. Information will be presented with a bias toward user orientation as opposed to preparer orientation. Course competencies will be developed in the areas of identifying the role of accounting in society, basic accounting and business terminology, concepts behind financial information, accepted accounting practices, analysis and interpretation of financial statements of sole proprietorships and corporations.
(59.4 Lec. Hrs.)
Prerequisite: RDG:032 and MAT:041 or minimum Reading and Math scores based on college assessment.

ACC:146 Managerial Accounting   3 cr.
A continuation of Financial Accounting, this course emphasizes financial statement analysis, including the reporting of cash flows, and managerial accounting as it relates to decision-making and to the manufacturing environment. This course serves as a foundation for other accounting courses for students planning careers in accounting, as well as providing for the needs for students in business administration.
(59.4 Lec. Hrs.)
Prerequisite: Students pursuing an A.A.S. may fulfill the prerequisite with ACC:121 or ACC:142.

ACC:161 Payroll Accounting   3 cr.
This introductory course covers the processes of payroll accounting. Topics include methods of computing compensations, state and federal laws affecting payroll, mandatory and voluntary payroll deductions, methods of keeping payroll records, and preparation of internal and governmental reports.
(59.4 Lec. Hrs.)
Prerequisite: ACC:121.

ACC:211 Intermediate Accounting I   3 cr.
The study of financial accounting theory and practices. Topics covered include financial statements, inventories, current assets and current liabilities.
(59.4 Lec. Hrs.)
Prerequisite: ACC:146 or permission of the instructor.

ACC:221 Cost Accounting   3 cr.
A study of basic cost accounting concepts and product cost accumulation procedures emphasizing differences between job order, process and standard costing. Emphasis is placed on the managerial accounting activities of controlling costs, cost analysis and decision making.
(59.4 Lec. Hrs.)
Prerequisite: ACC:146.

ACC:237 Intermediate Accounting   4 cr.
The in-depth study of selected financial accounting theory and practices. Topics may include professional organization structures, financial statements, the time-value of money, inventories, other current and non-current assets and liabilities. As time permits some other specialty topics, such as the statement of cash flows, accounting for leases, and revenue recognition principles are introduced.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ACC:146.

ACC:251 Governmental and Nonprofit Accounting   3 cr.
The purpose of this course is to give the student a basic background in accounting principles and practices for governmental units and other nonprofit organizations.
(59.4 Lec. Hrs.)

ACC:265 Income Tax Accounting   4 cr.
Covers federal income taxes as they apply to the individual, partnerships and business. Major emphasis is placed on the individual return including supporting schedules and statements. Considerable effort is expended in actual form completion and understanding of IRS requirements.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ACC:121 or ACC:142.

COURSE DESCRIPTIONS

ACC:269 Taxation　　　**3 cr.**

Covers (1) taxable income, exclusions, inclusions, recognition of gain or loss, dividends; (2) deductions, expenses, interest, taxes, depreciation, depletion, losses; (3) filing returns; (4) social security, estate and gift taxes; and (5) state income tax. (59.4 Lec. Hrs.)

ACC:311　Computer Accounting　　　**3 cr.**

Transfers manual accounting skills to a microcomputer operation. In addition to learning computer operation procedures, accounting units covered are the general ledger, special journals, vouchers, financial statement analysis, depreciation, inventory, payroll and Lotus 1-2-3. Simulations of business activities are processed through an entire accounting cycle and various reports are generated. Student will also learn to create an entire computerized accounting system.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ACC:121.

ACC:312 Computer Accounting　　　**4 cr.**

This course is designed to develop accounting and problem solving skills on microcomputers. Students will complete the accounting cycle through financial statement preparation using integrated accounting software packages. Use of electronic spreadsheet capabilities will be explored.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ACC:146.

ACC:332 Computer Accounting-QuickBooks I　　　**2 cr.**

Students apply accounting concepts to keep financial records for small service and merchandising companies using the accounting software QuickBooks. Topics include setting up a company, creating a chart of accounts, recording customer and vendor transactions, processing payroll, printing financial reports, and recording adjusting entries.
(39.6 Lec. Hrs.)
Prerequisite: ACC:110 or instructor permission.

ADMINISTRATIVE ASSISTANT

ADM:102 Telephone and Mailing Techniques　　　**1 cr.**

Students will learn how to use the telephone as an effective communication tool by learning how to speak clearly, correctly and convincingly. Students will also have an opportunity to gain hands-on experience by developing, practicing and making simulated calls covering a wide variety of topics and situations.
(19.8 Lec. Hrs.)

ADM:105 Introduction to Keyboarding　　　**1 cr.**

This course is designed for the student with no prior keyboarding experience. The major objective is to develop touch control of the keyboard with speed and accuracy through proper keyboarding techniques.
(39.6 Lab Hrs.)

ADM:122 Document Formatting　　　**2 cr.**

A course designed for the student with minimal keyboarding experience. The major objectives are to develop touch control of the keyboard with speed and accuracy through proper keyboarding techniques and to learn proper formatting of letters, simple tables, short reports, and memorandums.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

ADM:123 Document Formatting　　　**3 cr.**

A course designed for the student with little or no prior keyboarding experience. The major objectives are to develop touch control of the keyboard with speed and accuracy through proper keyboarding techniques and to learn proper formatting of letters, simple tables, short reports and memorandums.
(19.8 Lec. Hrs./79.2 Lab Hrs.)

ADM:125 Document Formatting II　　　**2 cr.**

An intermediate level document formatting class designed for the student who can demonstrate basic keyboarding and formatting skills. The student will learn correct formatting of business correspondence for different situations, complex tables, multi-page reports and a variety of business forms. Emphasis is placed on efficient and accurate production of documents from unarranged and rough-draft copy. Continued improvement of keyboarding speed and accuracy is integrated into the class through skill development drills and exercises.
Test Out Available.
(39.6 Lec. Hrs.)
Prerequisite: ADM:123 or ADM:122.

ADM:127 Advanced Document Formatting　　　**3 cr.**

An advanced level course requiring students to demonstrate a high level of keyboarding and formatting skills. Emphasis is placed on production of office-quality documents with minimal direction under a variety of simulated business environments. Continued improvement of keyboarding speed and accuracy is integrated into the class through skill development drills and exercises.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: ADM:123 and ADM:130.

ADM:130 Intermediate Document Formatting　　　**3 cr.**

An intermediate level document formatting class designed for the student who can demonstrate basic keyboarding and formatting skills. The student will learn correct formatting of business correspondence for different situations, complex tables, multi-page reports and a variety of business forms. Emphasis is placed on efficient and accurate production of documents from unarranged and rough-draft copy. Continued improvement of keyboarding speed and accuracy is integrated into the class through skill development drills and exercises. A report project is included in this class.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: ADM:123.

ADM:132 Business Math and Calculators 2 cr.

This course is designed to advance the student's knowledge of the fundamentals of mathematics and to apply these fundamentals to business situations. Students will develop speed and accuracy in using the touch method of entry on electronic calculators. Topics covered include addition, subtraction, multiplication, division, fractions, percentages, simple interest, discounts, and payroll taxes.
(39.6 Lec. Hrs.)

ADM:133 Business Math and Calculators 3 cr.

Designed to refresh the student's knowledge of mathematics fundamentals and applications of these fundamentals to business and office occupations. Topics covered include addition, subtraction, multiplication, division, fractions, percentages, interest, discounts, payroll taxes, insurance, bank reconciliation, installment loans, stocks and bonds.
(59.4 Lec. Hrs.)
Prerequisite: MAT:041 or minimum math placement score based on college assessment.

ADM:141 Desktop Publishing 2 cr.

This course gives the student knowledge and practice in desktop publishing using Microsoft Publisher software. Desktop publishing is the integration of graphics, text, and design to create such documents as flyers, letterhead, business cards, newsletters, brochures, web pages, etc. Decision-making skills will be used to complete desktop publishing projects.
(39.6 Lec. Hrs.)

ADM:148 Transcription 2 cr.

This course is designed to help students develop machine transcription skill. Students will learn to transcribe business documents accurately and efficiently from taped dictation. As the course progresses, the dictation becomes more complex, giving the students many opportunities to make formatting, spelling, grammar, punctuation, word usage, and style decisions. Good word processing and business English skills are necessary for success.
(39.6 Lec. Hrs.)
Prerequisites: ADM:156 and BCA:129 or instructor permission.

ADM:149 Transcription 3cr.

This course emphasizes the development of efficient transcription skills. Throughout this course, students are challenged to spell correctly and use proper punctuation while transcribing documents from taped dictation. The exercises gradually become more complex, giving the students many opportunities to make formatting, grammar, punctuation, usage, and style decisions.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: ADM:123 and ADM:157.

ADM:154 Business Communication 3 cr.

This course is designed to develop proficiency in writing business letters and other types of communications used in business. Verbal communication and listening skills, reports, communications theory, semantics, human behavior, and possible dictation of letters may be included. Various types of business communications will be analyzed and practical applications written. A review of business English skills and proofreading will also be included.
(59.4 Lec. Hrs.)
Prerequisites: ADM:157 and ADM:123 or ADM:122.

ADM:155 Essentials of Business English I 2 cr.

This course is designed to help students improve their verbal and written communication skills. Students will receive comprehensive, up-to-date, and relevant instruction in the correct use of English grammar. In addition, students will have the opportunity to improve their spelling and proofreading skills.
(39.6 Lec. Hrs.)

ADM:156 Essentials of Business English II 2 cr.

This course is a continuation of Essentials of Business English I. Students will have the opportunity to improve their abilities in the areas of punctuation, capitalization, number style, and editing. In addition, students will continue to improve their abilities in the areas of grammar and word usage, spelling, and proofreading. The course is also designed to introduce students to basic composition skills, such as sentence structure, paragraph development, and message organization.
(39.6 Lec. Hrs.)
Prerequisite: ADM:155.

ADM:157 Business English 3 cr.

This course is designed to help the students sharpen their communication skills. The students will study and upgrade their skills in the basic areas of grammar and usage, punctuation, spelling, proofreading and editing.
(59.4 Lec. Hrs.)

ADM:158 Effective Business Writing 2 cr.

This course is designed to provide for the development of written communication skills that allow students to plan and create effective and professional documents in the work place. The students will use critical thinking skills to determine the appropriate approach to use in the preparation of various business messages. Different types of business communications are analyzed for style and effectiveness. A review of business English skills may be included.
(39.6 Lec. Hrs.)
Prerequisites: ADM:156 and BCA:129 or instructor permission.

ADM:162 Office Procedures 3 cr.

Focuses on a variety of knowledge and skills needed to function in a business environment. Topics may include, but are not limited to, customer service concepts, professional telephone skills and the use of other forms of electronic communication, services of the U.S. Postal Service, acquisition of supplies and equipment, time and stress management, professional appearance and image, domestic and international travel considerations, and preparation and follow-up for meetings and/or conferences.
(59.4 Lec. Hrs.)
Prerequisites: ADM:171, ADM:179, ADM:123 or ADM:122 and ADM:157.

COURSE DESCRIPTIONS

ADM:171/179 Records Management   2-3 cr.

This course is designed for the student to learn and apply the indexing and filing rules that are applicable to the four major filing systems: alphabetic, geographic, numeric and subject filing. Numerous records management supplies, equipment, computer database information, etc., are also integrated into this course.
(39.6 - 59.4 Lec. Hrs.)

ADM:195 Legal Terminology   1 cr.

This course is designed to develop a general basic background in legal terms. The definition, correct spelling and pronunciation of common legal terms will be emphasized.
(19.8 Lec. Hrs.)

ADM:222 Career Capstone   3 cr.

This course is designed to be a capstone in the Administrative and Office Support program. The courses will provide a hands-on production setting.
(59.4 Lec. Hrs.)
Prerequisite: Completion of the diploma.

ADM:223 Office Procedures   4 cr.

This course focuses on a variety of knowledge and skills needed to function in a business environment. Topics may include, but are not limited to, customer service concepts, professional telephone skills and use of other forms of electronic communication, services of the U.S. Postal Service, acquisition of supplies and equipment, time and stress management, professional appearance and image, domestic and international travel considerations, and preparation and follow-up for meetings and/or conferences.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: ADM:123 and ADM:157.
Co-requisite: ADM:133.

ADM:254 Business Professionalism   1 cr.

This course is designed to develop professional growth in the areas of leadership, community service, cooperation, patriotism and business knowledge through membership and participation in a professional organization. This course may be repeated for a total of eight credits.
(19.8 Lec. Hrs.)

ADM:255 Business Professionalism II   1 cr.

This course is designed to continue the professional growth of the students in the areas of leadership, community service, cooperation, patriotism and business knowledge through continued membership and participation in a professional organization. This course may be repeated for a total of eight credits.
(19.8 Lec. Hrs.)

ADM:257 Professionalism at the Workplace   2 cr.

This course is designed to help students develop the skills, attitudes, and knowledge to work effectively in a variety of professional business environments. Some of the topics to be included are personal appearance, health and well-being, professional attire, manners and etiquette, ethics, professional certifications, professional growth, and job advancement.
(39.6 Lec. Hrs.)

ADM:270 Introduction to Speech Recognition Software   1 cr.

Speech-recognition software is revolutionizing legal, medical, dental, government, and business offices everywhere. In this course you will master speech-recognition fundamentals as you work through 50 basic skill lessons to achieve speech writing proficiency of 110-150 words per minute with 97-99% accuracy. This course will also help you achieve speech writing proficiency and learn essential voice formatting communication skills in order to succeed in today's speech-driven world.
(19.8 Lec. Hrs.)

ADM:279 Meeting and Conference Planning   2 cr.

Meetings play an important role in the communication of information in every kind of business. This course is designed to provide guidelines for planning and conducting informal and formal business meetings, conferences, and conventions. Note taking techniques and the basics of parliamentary procedure will be presented. Students will learn to complete the follow-up activities associated with the event, such as preparation of minutes, resolutions, correspondence, and expense reports.
(39.6 Lec. Hrs.)
Prerequisite: BCA:129.

ADM:361 Administrative Project Management II   3 cr.

This course is a two-semester course and is designed to be a capstone in the Administrative and Office Support program. The courses will provide a hands-on production setting.
(59.4 Lec. Hrs.)
Prerequisite: Completion of the diploma.

ADM:936 Occupational Experience   3 cr.

This course is designed to provide students with the opportunity to receive practical office-related work experience through on-the-job training. While at work, students apply knowledge and skills learned in the classroom to complete the tasks and responsibilities of their positions. Students are guided by the coordinated efforts of the employer and the occupational experience coordinator.
(237.6 Co-op. Hrs.)
Prerequisite: Completion of approximately half of the credit hours required for graduation in the student's major program or consent of instructor, and a grade point average of 2.0 or higher.

ADM:940 Office Leadership Seminar   2 cr.

This course is designed to develop self and professional growth in the area of leadership. The course will provide a base for students to build and increase self-esteem, discover the components of leadership, become aware of leadership issues, participate in a service project and develop their own leadership style.
(39.6 Lec. Hrs.)

ADM:941 Administrative and Office Support Practicum   4 cr.

This is a realistic approach to management support training for the advanced student who is an Associate Degree candidate. All skill courses in the AOS program must have been completed prior to taking this course. The student will have direct involvement with a series of high-level, long-range assignments patterned as closely as possible to business problems that are faced by administrative assistants today.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: Completion of the diploma.

AGRICULTURE - AGRONOMY

AGA:154 Fundamentals of Soil Science   3 cr.

Introduction to physical, chemical and biological properties of soils, their formation, classification and distribution.
(59.4 Lec. Hrs.)

AGA:210 Corn and Soybean Production   3 cr.

This course covers the principles of corn and soybean production relative to managerial decisions needed to produce maximum economic yield. Topics to include: crop enterprise budgets and budget troubleshooting, partial budgeting, cost analysis and control, physiology of plant development, factors affecting yield, variety and cultivar selection, plant population, fertility management, insect, weed, and disease identification, and control concerns, harvesting, safe storage, and basic managerial decision making regarding producing corn and soybeans in the U.S. Corn Belt. 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.
(60 Lec. Hrs.)

AGA:270 Principles of Crop Management   3 cr.

Covers the general scope of agronomy. Topics include plant anatomy, physiology, climate, soil, weeds and seeds.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

AGA:285 Crop Protection   3.5 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.
(69.3 Lec. Hrs.)

AGA:336 Forage Production 1.5 cr.

Deals with current recommended practices and economics of oats, wheat and forage production including varieties, seeding, control of weeds, harvesting and storage of legumes and grasses.
(30 Lec. Hrs.)

AGA:349 Fertilizers   1.5 cr.

The manufacture and kinds of lime and fertilizer materials, the economical and efficient use of lime and fertilizer materials, and the impact of lime and fertilizer material on the environment with practical application to production. Agriculture and horticulture soil and fertilizer management will be discussed.
(30 Lec. Hrs.)
Prerequisite: AGA:351 and AGA:890.

AGA:351 Soil Science   1.5 cr.

The nature of soils including soil formation, soil physical properties, biological properties, and soil stewardship with practical application to production agriculture and horticulture soil and fertilizer management will be addressed.
(30 Lec. Hrs.)
Prerequisite: AGC:942

AGA:373 Integrated Crop Management   2 cr.

The integrated approach to management of weeds, insects, diseases, and disorders common to corn, soybeans, wheat, and alfalfa will be discussed and observed in the field environment.
(21.6 Lec. Hrs./32.4 Lab Hrs.)

AGA:881 Grain Science   1.75 cr.

Study of grain grading, discounts, pricing, drying, storage and insects. Various equipment and proper use including sampling and testing will be emphasized. Practices used in grain handling at elevator and grain terminal businesses will be explained.
(30 Lec. Hrs.)
Prerequisite: AGC:941.

AGA:890 Soil Chemistry   1.5 cr.

Soil chemical properties, including clay mineralogy, cation exchange, pH, and availabilities of nitrogen, phosphorus, potassium, and micronutrients in the soil with practical application to production agriculture and horticulture soil and fertilizer management will be discussed.
(30 Lec. Hrs.)
Prerequisite: AGA:351

AGA:901 Seed Science   1.5 cr.

Study of crop conditioning and handling. Various methods of handling and drying grain will be emphasized. Changes within the grain will be discussed. The economics of storage and drying systems along with grain quality will be emphasized.
(30 Lec. Hrs.)
Prerequisite: AGC:943 or instructor permission.

AGRICULTURE - FARM MANAGEMENT

AGB:103 Agricultural Economics   1.5 cr.

This course deals with economic principles applied to the feed, grain, seed, fertilizer, and production agribusiness industries. Topics include supply, demand, economic returns, opportunity costs, prices, business regulations, microeconomics, macroeconomics, farm programs and finance.
(30 Lec. Hrs.)

AGB:105 Business Principles for Agriculture I   1.75 cr.

Introductory retail agribusiness course designed to enable students to learn and explore American agriculture, free enterprise systems, managerial functions, and business decision making.
(36 Lec. Hrs.)

AGB:106 Business Principles for Agriculture II   1.75 cr.

A study of the overall operation of the retail agribusiness sector of American agriculture. Students will be assigned a project on establishing a business enterprise. Course emphasis shall be placed on financial management, location analysis, service analysis and getting the most out of the human and financial resources employed by a retail agribusiness firm.
(36 Lec. Hrs.)
Prerequisite: ABG:105

COURSE DESCRIPTIONS

AGB:108 Human Relations I 1.5 cr.

Designed to help the student prepare for employment, satisfactory work performance, co-worker relations, employer-employee relations, work habits and attitudes and the procedures for applying and interviewing for a job.
(30 Lec. Hrs.)

AGB:112 Human Relations II   1.75 cr.

This course will help the student understand how the study of human relations will help them achieve career success and increased work/life balance. Students will learn the nature, purpose, and importance of human relations in an organizational setting. The student will be able to identify major developments in the workplace that have given new importance to human relations and identify some basic themes that serve as a foundation for effective human relations.
(36 Lec. Hrs.)

AGB:141 Applied Agribusiness Accounting I   1.25 cr.

An introduction to the accrual accounting system. Emphasis is also given to the accounting cycle and basic accounting principles and practices used by many companies in the input/supply sector of the agriculture industry.
(24 Lec. Hrs.)

AGB:142 Applied Agribusiness Accounting II   1 cr.

This is the second of a two-course series of double entry, accrual accounting. Major emphasis of this course focuses on payroll accounting and the accounting practices of a merchandising business as found in retail agribusiness.
(20.4 Lec. Hrs.)

AGB:191 Agricultural Sales I 1.5 cr.

Investigates selling as a career, preparing for the selling process, and selling and the behavioral sciences. Selling techniques and procedures will also be studied.
(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 Lec. Hrs.)
Prerequisite: AGB:191.

AGB:193 Agricultural Sales III   1.25 cr.

A continuation of AGB:191 and AGB:192 with emphasis on sales to agricultural customers. The total scope of the duties of a salesperson is emphasized. Use of the phone in sales is covered.
(24 Lec. Hrs.)
Prerequisites: AGB:191 and AGB:192

AGB:231 Futures and Options   1.5 cr.

A basic study of the principles of futures and options will be covered. Subjects included will be the futures market, trading mechanics, hedging and speculating, arbitrage, fundamental and technical analysis and following futures and options. Attention is given to show where hedging and/or the use of options may fit the agribusiness.
(30 Lec. Hrs.)
Prerequisite: AGC:861.

AGB:232 Livestock and Grain Marketing   3 cr.

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.
(60 Lec. Hrs.)
Prerequisite: ABG:231 or consent of instructor.

AGB:280 Business Law for Agriculture   1.5 cr.

Students will learn and apply business law to the retail agribusiness setting. The course will focus on the legal and social environment of business, contracts, personal property and bailments, sales and leases of personal property, negotiable instruments, debtor-creditor relations and risk management, agency and employment, business organizations, and real property. This course will also address the legal, liability, risk management and security issues of a modern corporate or retail agribusiness.
(30 Lec. Hrs.)

AGB:299 Farm Record Analysis   1.5 cr.

Deals with the various crop and livestock budgets, cash flow, whole farm budgeting, rental and leasing agreements. Each student must make his/her own management decisions in regard to purchasing equipment, choosing crop and livestock operations and keeping complete records. Weather, prices and market information are given as the year progresses.
(30 Lec. Hrs.)
Prerequisite: AGC:864.

AGB:301 Applied Accounting for Farm Management I   1.5 cr.

Emphasis is placed on the importance of farm recordkeeping as an essential management tool. Topics include inventory, depreciation, receipts and expenses, cash and accrual methods of accounting, net farm income statements and net worth statements. Students gain experience by working a practical recordkeeping problem.
(30 Lec. Hrs.)
Prerequisites: AGC:861.

AGB:302 Applied Accounting for Farm Management II   1.5 cr.

This course will develop the student's understanding of income tax management, depreciation, capital gains, setting up cash flows, net farm income statements, and net worth statements to help the student analyze the farm business.
(30 Lec. Hrs.)
Prerequisite: AGB:301.

AGB:304 Agricultural Credit 1.5 cr.

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.
(30 Lec. Hrs.)

AGB:305 Agricultural Law 1.5 cr.

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.
(30 Lec. Hrs.)

AGB:306 Risk Management 1.5 cr.

This course deals with the principles of insurance coverage used in the farm business and other risk management tools available to production agribusiness professionals. This course also deals with the fundamental principles and strategies of a diverse risk management portfolio including crop insurance, liability issues and personal finance.
(30 Lec. Hrs.)
Prerequisite: AGC:865.

AGB:351 Principles of Marketing & Retailing for Agriculture 1.75 cr.

Provides students with a general knowledge of the function and importance of marketing in domestic and international environments.
(36 Lec. Hrs.)

AGRICULTURE - COMPREHENSIVE

AGC:861 Farm Experience I 3 cr.
Students select an employment center (their home farm or other) to gain practical farm experience.
(237.6 Co-op Hrs.)
Prerequisite: Consent of instructor and enrollment in Farm Management program.

AGC:862 Farm Experience II 3.5 cr.
Students select an employment center (their home farm or other) to gain practical farm experience.
(277.2 Co-op Hrs.)
Prerequisite: Consent of instructor and enrollment in Farm Management program.

AGC:864 Farm Experience III 3 cr.
Students select an employment center (their home farm or other) to gain practical farm experience.
(237.6 Co-op Hrs.)
Prerequisite: Consent of instructor and enrollment in Farm Management program.

AGC:865 Farm Experience IV 3.5 cr.
Students select an employment center (their home farm or other) to gain practical farm experience.
(277.2 Co-op Hrs.)
Prerequisites: Consent of instructor and enrollment in Farm Management program.

AGC:901 Seminar I .5 cr.
Designed to give the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current classes, hear speakers and discuss questions pertaining to Extension meetings. Instructors will guide students' discussion and attempt to provide conclusions and attitudes conducive to successful farm operation.
(9.9 Lec. Hrs.)

AGC:902 Seminar II .5 cr.
Designed to give the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current classes, hear speakers and discuss questions pertaining to Extension meetings. Instructors will guide students' discussion and attempt to provide conclusions and attitudes conducive to successful farm operation.
(9.9 Lec. Hrs.)

AGC:903 Seminar III .5 cr.

Designed to give the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current classes, hear speakers and discuss questions pertaining to Extension meetings. Instructors will guide students' discussion and attempt to provide conclusions and attitudes conducive to successful farm operation.
(9.9 Lec. Hrs.)

AGC:904 Seminar IV .5 cr.

Designed to give the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current classes, hear speakers and discuss questions pertaining to Extension meetings. Instructors will guide students' discussion and attempt to provide conclusions and attitudes conducive to successful farm operation.
(9.9 Lec. Hrs.)

AGC:910 Alpha Mu Sigma I .5 cr.

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level.
(9.9 Lec. Hrs.)
Co-requisite: Must be a student in the Feed and Fertilizer Marketing program or have instructor consent.

AGC:911 Alpha Mu Sigma II .5 cr.

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level.
(9.9 Lec. Hrs.)
Co-requisite: Must be a student in the Feed and Fertilizer Marketing program or have instructor consent.

COURSE DESCRIPTIONS

AGC:912 Alpha Mu Sigma III   .5 cr.

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level.
(9.9 Lec. Hrs.)
Co-requisite: Must be a student in the Feed and Fertilizer Marketing program or have instructor consent.

AGC:913 Alpha Mu Sigma IV   .5 cr.

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level.
(9.9 Lec. Hrs.)
Co-requisite: Must be a student in the Feed and Fertilizer Marketing program or have instructor consent.

AGC:924 Honors Project   1 cr.

A research project requiring individual initiative and research exploring a problem area relative to the business during the employment experience. The report is to be in acceptable form, preferably typed, may include pictures and charts, and is signed by the employer. Topic must be different than other research writing course.
(60 Lab Hrs.)
Co-requisite: AGC:943.

AGC:941 Employment Experience I   3 cr.

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods.
(237.6 Co-op Hrs.)
Co-requisite: Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

AGC:942 Employment Experience II   3.5 cr.

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods.
(277.2 Co-op Hrs.)
Prerequisite: AGC:941.
Co-requisites: Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

AGC:943 Employment Experience III   3 cr.

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods.
(237.6 Co-op Hrs.)
Prerequisite: AGC:942.
Co-requisites: Consent of instructor and enrollment in Feed and Fertilizer Marketing 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 going wages during these periods.
(277.2 Co-op Hrs.)
Prerequisite: AGC:943.
Co-requisites: Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

AGRICULTURE - FLORAL

AGF:120 Floral Plant Identification and Care I   2 cr.

Introduces the student to the study of garden and house flowering and foliage plants. Topics will include production, culture, propagations and materials necessary for the growth of annuals, perennials, bulbs, ground cover, ferns, exotic and tropical plants, shrubs and roses.
(42 Lec. Hrs.)

AGF:139 Floral Design I   2 cr.

Introduces the student to design theory. Emphasis is placed on the development of special techniques in basic design as it applies to flowers, foliages and accessories. Hands on work with floral design is completed in the three medias of fresh, silk and dried.
(39.6 Lec. Hrs.)

AGRICULTURE - HORTICULTURE

AGH:115 Turf Management   2 cr.

This course introduces the types of grass species and their uses; their growth habits, and development as a unique plant species. Proper culture and establishment procedures are studied as well as their importance to the environment.
(39.6 Lec. Hrs.)

AGH:143 Equipment Repair   3 cr.

An introductory course in basic horticulture equipment maintenance. Areas to be covered will include safety, basic tools, air-cooled engine technology, fuel and lubrication, electrical systems, governor systems, failure analysis, and engine disassembly and inspection, maintenance schedules and basic repairs.
(48 Lec. Hrs./24 Lab Hrs.)

AGH:149 Drawing and Design   2 cr.

This course provides students with the skills necessary to design residential landscapes. Attention will be given to choosing plant materials, design surfaces and site analysis. This course is specifically designed to allow students to go through the steps involved in residential site design.
(39.6 Lec. Hrs.)

AGH:152 Landscape and Design 3 cr.

Studies the theory and principles of landscape design as they are applied to selected problems in landscape development. The use of trees, shrubs, and planting in the public, living and service area of the home will be included. (59.4 Lec. Hrs.)

AGH:221 Principles of Horticulture 3 cr.

This course is a study in horticulture. The goal of this course is to provide the basic knowledge in horticulture science and clearly illustrate how that knowledge is applied in both home and production agriculture.
(Lec. 59.4)

AGH:235 Plant Genetics 2 cr.

An introductory genetics class for students majoring in Horticulture Science. This course will provide insight into many aspects of plant genetics, including inheritance in conjunction with methods for the isolation and detection of specific gene fragments so that the student can understand the detection of genetic diseases and identification of individual (DNA fingerprinting). Students can discover how genes are organized, how they reproduce and how they affect the next generation of cells. Recombination, structure and replication of DNA, and gene expression will be major topics of study.
(39.6 Lec. Hrs.)

AGH:237 Plant Identification and Care II 2.5 cr.

This course builds on the study of garden, house flowering and foliage plants. Topics covered will include history, origin, classification and propagation of a variety of plant materials. This will include annuals, perennials, bulbs, ground covers, ferns, tropical plants, shrubs and roses.
(49.5 Lec. Hrs.)

AGH:254 Pest Management 2 cr.

This course provides basic knowledge of the weeds, diseases and insects that commonly affect or attach to ornamental plants. The structure, function and life cycles of these pests will be studied. A collection of pests will help students with the identification process.
(42 Lec. Hrs.)

AGH:274 Nursery Management 2 cr.

This course will focus on the administration and culture of the nursery business. This will include retail garden centers and nurseries. Specifics will include fertilization, Irrigation, plant growth and long-term nursery production cycles.
(24 Lec. Hrs./18 Lab Hrs.)

AGH:339 Athletic Field Maintenance 1 cr.

A study of specific sport facilities utilizing turfgrasses including football, soccer, field hockey, baseball and softball fields. Techniques of operation, management, maintenance, budgets, construction and irrigation will be covered.
(19.2 Lec. Hrs./4.8 Lab Hrs.)

AGH:450 Horticultural Leadership I .75 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.
(18 Lec. Hrs.)

AGH:452 Horticultural Leadership II .5 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.
(12 Lec. Hrs.)

AGH:454 Horticultural Leadership III .75 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.
(18 Lec. Hrs.)

AGH:455 Horticultural Leadership IV .5 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.
(12 Lec. Hrs.)

AGH:805 Horticulture Internship I 2.5 cr.

This course provides on-the-job experience in a commercial horticulture business. Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.
(186.7 Co-op. Hrs.)

AGH:815 Horticulture Internship II 4 cr.

This course provides on-the-job experience in a commercial horticulture business. Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.
(300 Co-op. Hrs.)

AGH:827 Horticulture Internship III 3.5 cr.

This course provides on-the-job experience in a commercial horticulture business. Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.
(262.5 Co-op. Hrs.)

AGRICULTURE - MECHANICS

AGM:130 Farm Electrification 1.25 cr.

A study in basic electrical planning including farmstead distribution planning, layout of circuits, electrical code and selection of electric motors. Emphasis is placed on wiring skills.
(24 Lec. Hrs./6 Lab Hrs.)
Prerequisite: AGC:861.

AGM:157 Machinery Management 3 cr.

The economics of machinery selection and use will receive major emphasis. Management decisions concerning size of machine, purchasing, and the operation of major farm machines will also be topics for class consideration.
(59.4 Lec. Hrs.)

COURSE DESCRIPTIONS

AGM:160 Farm Structures   1.5 cr.

Deals with building material and planning, providing the student with knowledge needed in selecting economical, flexible and highly useful farm buildings. Emphasis is placed on structure trends, types, building materials and plan reading.
(30 Lec. Hrs.)
Prerequisite: AGC:865.

AGRICULTURE - PRECISION AG

AGP:243 Precision Agricultural Applications   3 cr.

This introductory 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); exploration of various tools for Variable Rate Technology (VRT) and Variable Rate Application (VRA); remote sensing as a diagnostic tool for managerial decisions. This course is designed to help retail students assist agricultural producers become more profitable and preserve non-renewable resources: identify computer hardware and software needs: and make recommendations to producers based on agronomic and economic data.
(59.4 Lec. Hrs.)

AGRICULTURE - ANIMAL SCIENCE

AGS:109 Animal Science I   3 cr.

Designed to provide the student with an understanding of the practices, management programs, management and labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control problems and background knowledge needed to comprehensively advise livestock producers on their livestock production enterprises.
(59.4 Lec. Hrs.)

AGS:119 Livestock Management   2 cr.

Designed to provide the student with an understanding of the practices, management programs, labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control problems of livestock management as well as the background knowledge needed to comprehensively advise livestock producers on their livestock production enterprises.
(39.6 Lec. Hrs.)

AGS:180 Sheep Production   1.5 cr.

Students will gain the basic production principles necessary for raising sheep such as genetics, reproduction, health, nutrition and management.
(29.7 Lec. Hrs.)
Prerequisite: AGC:865.

AGS:315 Principles of Animal Nutrition   3 cr.

A study of the digestive systems of farm livestock, the basic food nutrients, how and why they are needed by the animals and the individual nutrient requirements of each farm animal depending on stage of growth, development or function. It will also cover topics such as selection of feeds for feeding farm animals and the procedures used to determine what feeds to use. We will also select the proper feed rations to use and learn to formulate balanced feed rations.
(59.4 Lec. Hrs.)

AGS:318 Feed Formulation 1.75 cr.

This course examines the feeding standards and tables used to calculate feed rations for all classes of livestock. Students will use mathematical formulas and calculations to formulate livestock rations and diets. Algebraic, Pearson Square and substitution methods are used to formulate rations for feeding and premixing rations.
(36 Lec. Hrs.)
Prerequisite: AGS:317 and MAT:041 or minimum math placement score based on college assessment.

AGS:324 Dairy Production   1.5 cr.

Designed to teach the student how to manage a dairy herd profitably. Consideration is given to rations, feeding practices, care of replacements and use of records.
(29.7 Lec. Hrs.)
Prerequisite: AGC:864.

AGS:352 Genetics   1.5 cr.

Deals with the basic genetics in both livestock and crop science. Topics include breeding systems and selection, breeding animals based on individual type, progeny testing and genetic improvement. Seed selection based on hybrid characteristics and basic biotechnical advances will be discussed.
(30 Lec. Hrs.)
Prerequisite: AGC:861.

AGS:401 Swine Production   3 cr.

This is the first of two courses that together give a basic foundation for one planning to operate a profitable swine enterprise. Swine facilities from past to present are analyzed with special emphasis on the economic, social, environmental and physical demands of sustainability. Included are the fundamentals of swine care, selection, breeding, reproduction, management and disease prevention and control.
(59.4 Lec. Hrs.)

AGS:410 Swine Production II 1.5 cr.

This course offers a basic foundation for one planning to operate or become employed by a swine enterprise. Swine facilities are analyzed with special emphasis on the economic, social, environmental, and physical demands of sustainability. Other major topics include the fundamentals of swine care in the grow-finish phase, comprehensive management, disease prevention and disease control, applications and evaluation of swine, feeding, housing management, sanitation, biosecurity, and disease prevention practices that optimize production efficiency and animal well-being.
(30 Lec. Hrs.)
Prerequisite: AGC:865.

AGS:554 Beef Production 3 cr.

This course is designed to explore the principles and concepts of the various beef production enterprises in the Midwest including commercial cow calf, purebred cow calf and feedlot production centers, including stocker and feeder operations. Major emphasis of the course is placed on the topics of breeds, selection and genetics; cow calf investment, profitability and risk management; EPDs, reproductive management and efficiency; health management, nutritional management, facilities, and handling and marketing of beef cattle.
(59.4 Lec. Hrs.)
Prerequisite: AGB:302.

AGS:881 Feeds 1.75 cr.

A course dealing primarily with the composition of feeds. Grain and grain by-products, roughages, pasture forages, silage, feed palatability, feed commercial laws and feed additives will be covered.
(36 Lec. Hrs.)

AGRICULTURE - VETERINARY TECHNOLOGY

AGV:118 Animal Anatomy and Physiology I 4 cr.

This course introduces the student to the basic concepts of an animal's form, structure, and function. These concepts are then used to study the gross anatomy, microscopic anatomy, and physiology of the animal body. The lab section of the class will give the student an in depth look at the gross anatomy of tissue types and organ systems to help them understand how the body works as a machine.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: BIO:114 and AGV:119.

AGV:119 Veterinary Medical Terminology 3 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.
(59.4 Lec. Hrs.)

AGV:127 Animal Anatomy and Physiology II 4 cr.

This course is a continuation of Animal Anatomy & Physiology I. It will give the student a more detailed look at the gross anatomy and physiology of the various organ systems including the cardiovascular, respiratory, digestive, nervous, endocrine, urinary, and reproductive systems. We will also explore a more detailed look at the sense organs, pregnancy, development, and lactation, as well as a small section on avian and exotic anatomy & physiology.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: BIO:114, AGV:119, CHM:110 and AGV:118.

AGV:130 Clinical Technology I 3 cr.

This course highlights communication within the veterinary medical team as well as provides an introduction to veterinary technology as a career. This course covers common names for species, general animal care and restraint, basic principles of a proper physical exam, nutrition, diagnostic techniques, and wound management.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

AGV:131 Clinical Technology II 3 cr.

This course is designed to acquaint the students with common business procedures that the veterinary technician may be responsible for, as well as fundamental record keeping procedures, and computer utilization. There will be a presentation on veterinary careers, including a discussion on job placement, and interviewing. Veterinary ethics will also be discussed.
(59.4 Lec. Hrs.)
Prerequisite: AGV:119 and AGV:130.

AGV:132 Clinical Technology III 3 cr.

This course is a continuation of Clinical Technology I & II. It will include Information on preventative medicine, pathology and response to diseases, fluid therapy and blood transfusions, dentistry, and emergency and critical care. In addition to new information, the student will also be able to review techniques in order to prepare for the upcoming national exam.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: AGV:118, AGV:131 and AGV:133.

AGV:133 Veterinary Clinic Pathology I 3 cr.

In this course, students have the opportunity to learn the techniques used to identify the various forms of microorganisms and the drugs to which they are sensitive, and the various animal internal and external parasites, their life cycles and methods of detection. Students will learn history, terminology, equipment, structure, and classification of the various veterinary organisms. It will acquaint the student with the microscope, laboratory facility, and various preparation techniques available.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: BIO:114, CHM:110, and AGV:119.

AGV:134 Veterinary Clinic Pathology II 3 cr.

This course is designed to familiarize students with the part of the laboratory that is devoted to analyzing blood, urine, cytology smears, and cytology preparation. It will acquaint the students with laboratory equipment, reagents, and techniques required to utilize blood samples and other bodily fluids as a diagnostic aid.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: AGV:118 and AGV:133.

AGV:140 Veterinary Pharmacology 3 cr.

This course covers the study of drugs and other pharmaceuticals used in veterinary medicine. Emphasis will be on drug usage, client education, calculations, measurement, administration, inventory, and storage. This course will give a detailed outline of the technician's role and responsibility in the pharmacy.
(59.4 Lec. Hrs.)
Prerequisite: AGV:130, AGV:131, AGV:133, AGV:118, AGV:146, AGV:159, and AGV:170.

AGV:146 Large Animal Nursing 3 cr.

More detailed information will be given regarding large animal diseases and the management of herd health. Discussions will include restraint, diagnostic testing, bandaging, diagnostic imaging, surgery and anesthesia, fluid therapy, medical and surgical nursing by body system, and euthanasia and necropsy.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: AGV:118, AGV:127, AGV:159, and AGV:140.

COURSE DESCRIPTIONS

AGV:159 Surgical Nursing   3 cr.

Introduces the student to the methods and mechanics of the sterilization process. Course covers the technician's role in the surgery room as well as patient prep, sterile techniques, surgical instrument identification, pack preparation, and surgical nursing care.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: AGV:130, AGV:131, and AGV:118.

AGV:170 Veterinary Anesthesiology   3 cr.

This course involves the study of pharmacology, application of anesthetic agents, the physiological effects and means of monitoring them, principles and administration of inhalant anesthetics, and a broad overview of anesthetic protocol and care. Emphasis will be on anesthetic practical skills and anesthesia equipment.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: AGV:133, AGV:134, AGV:118, AGV:127, and AGV:140.

AGV:182 Diagnostic Imaging   3 cr.

This course is designed to familiarize the student with the x-ray machine, darkroom, troubleshooting techniques, and radiation safety. Areas of emphasis will include technique failures, positioning, and standard diagnostic procedures. It will also introduce the student to digital radiography and ultrasound technologies.
(59.4 Lec. Hrs.)
Prerequisite: AGV:130 and AGV:118.

AGV:184 Lab Animal Medicine   2 cr.

This course is designed to give the student a broad overview of laboratory animal medicine and technology. It will show the student how to utilize and manage various species in a research environment. Emphasis will be on the laboratory setting, regulatory guidelines, and ethical considerations, as well as information on handling, behavior, nutrition, lab, and treatment procedures.
(39.6 Lec. Hrs.)
Prerequisite: BIO:114 and AGV:119.

AGV:932 Veterinary Technician Internship   4 cr.

This is the final phase of the Veterinary Technician Program. At the end of the program each student will be assigned to complete his or her internship at an approved animal hospital under the supervision of a licensed veterinarian, where he or she will spend 198 hours practicing and applying the skills the student has learned. Each student will be given a skills checklist to complete during this time. This course must be passed in order to graduate from the veterinary technician program.
(237.6 Clinical Hrs.)
Prerequisite: All other courses of the Veterinary Technician Program and instructor permission.

AGV:953 Veterinary Technician Work Experience   1 cr.

This course will consist of the student volunteering at an animal hospital/clinic in the area, which the instructor will coordinate. The student will be required to log 49.5 hours. This curriculum is an opportunity for students to observe veterinary technology professionals and a veterinary hospital working environment.
(59.4 Clinical Hrs.)
Prerequisite: AGV:118, AGV:119, AGV:131 and AGV:133.

AMERICAN SIGN LANGUAGE

ASL:151 American Sign Language I   5 cr.

This is an introductory level course which is designed with a sequenced series of readiness activities in the language of American signs. The course emphasizes vocabulary building, sign principles and development of expressive and receptive signing skills. The students participate in exercises that develop a comprehension of sign vocabulary and grammatical patterns of ASL.
(79.2 Lec. Hrs./59.4 Clinical Hrs.)

ASL:181 American Sign Language II   5 cr.

This course is designed for students to continue to study American Sign Language (ASL). The students will participate in various exercises that will increase their receptive skills as well as expressive skills. The students will also be signing more, along with the full use of body language, facial expression, pantomime and gesture. The students will continue their awareness and developmental patterns and tendencies of ASL.
(79.2 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ASL:151.

ASL:251 American Sign Language III   5 cr.

Expands on previously learned grammatical structures and lexical items of the target language. The student learns to control the language in a variety of conversational settings through directed conversations and group discussion.
(79.2 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ASL:181.

ASL:281 American Sign Language IV   4 cr.

Expands on previously learned grammatical structures and lexical items of the target language. The student learns to control the language in a variety of conversational settings through directed conversations and group discussion.
(59.4 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ASL:251.

ANTHROPOLOGY

ANT:105 Cultural Anthropology   3 cr.

A comparative study of culture and social organization and the study of the effect and influence of language.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

ANT:943 Readings in Anthropology   1-2 cr.

Provides the student with additional reading in anthropology, allowing the student to obtain a greater understanding in various problem areas in the discipline. The student has the opportunity to earn one or two credits. This course may be repeated twice for additional credits.
(39.6-79.2 Lab Hrs.)

ART

ART:101 Art Appreciation   3 cr.

Introduction to the world of paintings, sculpture and architecture. Emphasis is on the appreciation of well-known works of art in a variety of media. The artist and the creative process are explored.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)

ART:120 2-D Design   3 cr.

An introduction to the principles and procedures which guide the way images and objects are created. Provides a valuable basis for other subsequent fine art studio pursuits as well as for those who wish to progress into commercial applications of graphic and product design.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

ART:123 3-D Design   3 cr.

This course will develop skills in design and control of three-dimensional space. A variety of mediums will be used.
(39.6 Lec. Hrs./79.2)

ART:133 Drawing   3 cr.

An introductory drawing course investigating traditional drawing techniques and materials. This class focuses on the realistic depiction of observed forms and objects. Using basic drawing materials, students will concentrate on the construction of still life objects, landscape and the human figure. Perspective, line, value and composition will be examined. Additionally, students will develop their knowledge of Master works and critical arts movements.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

ART:134 Drawing II   3 cr.

An intermediate level drawing course that further explores the use of traditional drawing materials, along with use of some non-traditional materials. This class continues with the study of observed forms and objects with expanded subject matter and development of personal expression through drawing. Development of strong compositional skills will be emphasized. Students in this second-level course will apply some study of human anatomy as it relates to drawing. Students will continue to increase and apply their knowledge of Master works, contemporary artists and critical arts movements to their course work.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ART:133 or equivalent.

ART:143 Painting   3 cr.

A study of artistic principles in the various major paint media. Includes the selection, preparation and use of various surfaces employed. Designed to stress proper selection, usage and maintenance of tools, brushes and palettes. Exercises will teach the student the principles of art, good technical habits and cover special effects in the paint media. Students should demonstrate a working understanding of the properties of paint, color mixing and application, and will gain familiarity with painting terminology. The ability to paint directly from observation will be emphasized.
(59.4 Lec. Hrs./19.8 Lab Hrs.)

ART:144 Painting II   3 cr.

Permits individual experiences with any of the various 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 problems is presented.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ART:143 or equivalent.

ART:157 Printmaking   3 cr.

Introductory printing course with emphasis in basic printmaking techniques and processes. Printing proficiency in wood block serigraph and/or intaglio prints will be pursued. Students will be expected to print a minimum of one hour per week outside the class.
(59.4 Lec. Hrs.)

ART:158 Printmaking II   3 cr.

A course designed to provide the advanced art student opportunity to explore in greater depth the processes and techniques of traditional printmaking. The general goals of Printmaking II are: to generate the artistic vision and growth of each student as he/she discovers a uniquely personal mode of expression in the medium; strengthen the quality of his/her portfolio; enable the student to gain more self-esteem.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: ART:157.

ART:163 Sculpture   3 cr.

This studio course explores traditional and contemporary sculpture materials and processes. Emphasis is on both additive and subtractive methods of working. Goals include acquiring technical skills, understanding the physical and expressive possibilities of diverse materials, and learning safe, appropriate use of tools and materials.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

ART:164 Sculpture II   3 cr.

A course designed to provide the intermediate art student opportunity to explore in greater depth the processes and techniques of the beginning sculpture course. The general goals of Sculpture II are to generate the artistic vision and the technical ability of each student, work in an individualized and supportive class environment; and strengthen the quality of the student's portfolio.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ART:163.

ART:173 Ceramics   3 cr.

Introductory ceramics course with emphasis on ceramics as a creative art. The student will work with the basic elements of forming, glazing and firing clay. Awareness of three-dimensional qualities and the effects of glaze, color and texture will be stressed.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

ART:174 Ceramics II   3 cr.

A continuation of the basic elements of forming, glazing and firing clay. Awareness of three-dimensional qualities and the effects of glaze, color and texture will be stressed.
(39.6 Lec.Hrs./39.6 Lab Hrs.)
Prerequisite: ART:173 or equivalent.

COURSE DESCRIPTIONS

ART:186 Digital Photography   3 cr.

Digital Photography is designed for the Communications Media majors who focus on the visual arts. It is highly recommended for those who concentrate their studies in video productions and web graphics. The focus of the class is the manipulation of digital images using Adobe's Photoshop software. Although some basic principles of photography will be discussed, a previous photography course is not a prerequisite for enrollment. Students must be familiar with Microsoft146s Windows operating system software.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

ART:203 Art History I   3 cr.

Investigates the visual arts from earliest prehistoric times through the Middle Ages and the thinking of the people responsible for creating the art. Emphasis in lecture and class discussion will focus on the world's visual creative development from the caves of France through the Middle Ages.
(59.4 Lec. Hrs.)

ART:204 Art History II   3 cr.

Studies the significant works of art from the late Gothic period to the present and the thinking of the people responsible for creating the art. Emphasis in lecture and class discussion will focus on the world's visual creative development.
(59.4 Lec. Hrs.)

ART:949 Special Topics - Art   2 cr.

This is a special topic course offered at discretion of the instructor. Students will be able to explore in greater detail a subject which does not normally fall within the scope of the current curriculum for Art but is related to the topic Art. The description for this course will be determined on a case by case basis as appropriate to the content. This course may be repeated twice for additional credits.
(79.2 Lab Hrs.)

ASSOCIATE DEGREE NURSING

ADN:432 Nursing the Childbearing Family   5 cr.

Nursing the Childbearing Family is one of three courses which allow a student to articulate to the associate degree level of nursing education. The course is designed as a family-centered approach to caring for childbearing clients and families. The student will build on prior learning to apply critical thinking principles while caring for the childbearing family. The concepts of caring, health, environment, person and nursing are closely re-examined as they relate to the childbearing family. Emphasis is placed on concepts such as bonding, parenting and the family. Also, patient/client and family teaching are introduced as related to the childbearing years and the neonatal period. The various roles of the professional maternity nurse team member are examined.
(59.4 Lec. Hrs./118.8 Clinical Hrs.)
Prerequisites: BIO:151, BIO:173, BIO:168, PSY:111, PSY:121, PNN:165 & 166, PNN:210 & 211, PNN:511& 512.
Co-requisites: BIO:186, ENG:105 and SOC:110.

ADN:442 Nursing of Children and Families   5 cr.

Nursing of Children and Families is one of three courses which allow a student to articulate to the associate degree level of nursing education. This course focuses on a family-centered approach in the promotion of child and family health. The previously taught concepts are reexamined as related to disorders of children. Emphasis is placed on meeting children's health needs through the concepts of play, parenting and client-family teaching. The various roles of a pediatric professional nurse team member are examined.
(59.4 Lec. Hrs./118.8 Clinical Hrs.)
Prerequisites: BIO:151, BIO:173, BIO:168, PSY:111, PSY:121, PNN:165 & 166, PNN:210 & 211, PNN:511& 512.
Co-requisites: BIO:186, ENG:105 and SOC:110.

ADN:473 Nursing in Mental Health   5 cr.

Mental Health Nursing is one of three courses which allow a student to articulate to the associate degree level of nursing education. The course focuses on the maladaptive neuro-biological and behavioral responses of individuals to developmental and situational events throughout the life span. Theoretical concepts are presented to assist the student in developing self awareness, as well as understanding the meaning of behavior of others. The basic philosophical approach emphasizes the intrinsic worth and dignity of all individuals. Mental health nursing principles are presented with emphasis on the concept of caring, therapeutic use of self and the practice of therapeutic communication skills. The focus is on holistic nursing, and because mental health nursing is applicable to every nurse's individual practice, the concepts discussed in this course may be utilized in all clinical nursing settings. Application of specific mental health nursing principles and practice is determined by the nursing diagnosis of the client's psychosocial and behavioral problems. The mental health nursing clinical experience provides an opportunity for the student to utilize the nursing process in a variety of mental health care facilities.
(59.4 Lec. Hrs./118.8 Clinical Hrs.)
Prerequisites: BIO:151, BIO:168, BIO:173, PNN:210, PNN:211, PNN:165, PNN:511, PNN:512, PSY:111, PNN:166 and PSY:121.
Co-requisites: BIO:186, ENG:105 and SOC:110.

ADN:541/542 Concepts in Clinical Nursing II Modules A and B   13 cr.

(ADN:541 - 6 cr.; ADN:542 - 7 cr.) Focuses on the utilization of the nursing process and therapeutic communication in the care of individuals/groups with a variety of complex health problems. Theoretical concepts and principles underlying health problems during various developmental phases are explored. The nursing student will utilize critical thinking skills to analyze and synthesize previous and concurrent knowledge in the use of the nursing process. Clinical experiences are offered in a variety of environmental settings in which a registered nurse may practice. In each area, the role of the registered nurse will be emphasized. This course is offered in two modules. (89.1 Lec. Hrs./118.8 Clinical Hrs. per Module)
Prerequisites: BIO:168, BIO:173, BIO:151, BIO:186, PSY:111, PSY:121, PNN:210, PNN:211, PNN:165, PNN:166, PNN:511, PNN:512, ADN:473, ADN:432, ADN:442, ENG:105, and SOC:110.

ADN:811 Comprehensive Nursing   5 cr.

This is an exit course for associate degree nursing students which builds on concepts taught in previous nursing courses. The concepts of caring, health, environment, person and nursing are closely examined. Emphasis is placed on the use of the nursing process to meet the health needs of individuals and groups across the life span, focusing particularly on the unique needs of elderly clients. Current patient care management philosophies along with varying leadership styles are presented. The student is provided an opportunity to examine ethical, legal and moral principles that relate to the delivery of nursing care through the examination of current trends and legislation affecting the health care industry. Specific strategies to meet the challenges of role transition from student to professional practitioner are discussed. (51.0 Lec. Hrs./72.0 Clinical Hrs.)
Prerequisites: BIO:168, BIO:173, BIO:151, BIO:186, PSY:111, PSY:121, PNN:210, PNN:211, PNN:165, PNN:166, PNN:511, PNN:512, ADN:473, ADN:432, ADN:442, ADN:541, ADN:542, ENG:105, and SOC:110.

AUTOMATION TECHNOLOGY AND ROBOTICS

ATR:122 Automated Manufacturing Technology   4 cr.

A beginning course in robotics and automation designed to give students the fundamentals needed to complete further coursework in robotics. Topics covered will include computer usage, keyboarding, programming using LOGO, robot systems, computer aided design, robot geometry, analog and digital devices, logic circuits and machine vision. (39.6 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: MAT:720 and IND:102.

ATR:123 Automation Technology   3 cr.

This course introduces various devices used in the manufacturing environment, including advanced programmable logic controllers (PLCs) using Allen-Bradley ContolLogix PLCs. The students also will study HMI devices and their applications. (39.6 Lec. Hrs./39.6 Lab Hrs)
Prerequisite: ELT:123.

ATR:276 Networking for Industry   3 cr.

This course gives the student experiences with common types of networks used in industrial locations. The student will learn computer communication techniques and gain hands-on experience with RS 232, RS 422 and Ethernet networks. (39.6 Lec. Hrs./39.6 Lab Hrs.)

AUTO TECHNOLOGY

AUT:103 Survey of Auto Technology   1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the automotive technology repair field. Topics will include basic maintenance and electrical service, engine performance service, brake and tire & wheel service and gasoline engine operation and repair. (59.4 Lab. Hrs.)
Co-requisite: AUT:115

AUT:115 Automotive Shop Safety   1 cr.

This course is designed to acquaint the student with the proper personnel and shop safety procedures needed to function in an automotive or truck shop. The course will begin with an orientation of department and school policies and procedures. Students will learn general safety rules and work place safety including "Right to Know" and OSHA Regulations. (19.8 Lec. Hrs.)

AUT:164 Automotive Engine Repair   4 cr.

Basic theory of two-cycle and four-cycle gasoline engines and their application will be introduced. Disassembly, inspection and reassembly competencies will be experienced as well as cooling, lubrication, induction, exhaust, compression and valve systems. Students will develop competencies in precision measuring and services procedures. (39.6 Lec. Hrs./118.8 Lab Hrs.)
Perquisite or Co-requisite: AUT:115.

AUT:232 Automotive Transmissions I   3 cr.

This course is designed to provide basic knowledge in the diagnosis and repair of the automatic transmission. The student will develop skills necessary to perform in-car automatic transmission service. The student will also develop an understanding of the operation and service of torque converters, planetary gear trains and hydraulic components used in automatic transmissions. In-car service, as well as, removal-installation and overhaul procedures will be stressed in the lab portion of this course. (39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite or Co-requisite: AUT:115.

AUT:233 Automotive Transmissions II   3 cr.

This course is designed to provide advanced knowledge and skills in the diagnosis and repair of automatic transmissions and transaxles. The student will develop skills in reading transmission hydraulic control circuit schematic, perform diagnosis of electronically controlled automatic transmissions and transaxles and dis-assemble and re-assemble an automatic overdrive transaxle. The use of pressure gauges, scan tools and other test equipment will be practiced. (34.65 Lec. Hrs./74.25 Lab Hrs.)
Prerequisites: AUT:115 and AUT:232

COURSE DESCRIPTIONS

AUT:304 Automotive Manual Drive Train and Axles   4 cr.

Provides basic knowledge in automotive clutches, standard transmissions, transaxles and differential. Basic theory, diagnosis and service procedures are covered. Students will be able to correctly disassemble and reassemble standard transmissions, transaxles and differential in accordance with manufacturers' guidelines. (49.5 Lec. Hrs./89.1 Lab Hrs.)
Prerequisite or Co-requisite: AUT:115.

AUT:404 Automotive Suspension and Steering   4 cr.

This course deals specifically with automobile suspension and steering systems. Specific skills needed for the development of competencies will be taught. Competencies that are developed in this course are aimed at entry-level skills as a suspension and steering specialist. (49.5 Lec. Hrs./89.1 Lab Hrs.)
Prerequisite or Co-requisite: AUT:115.

AUT:524 Automotive Brake Systems and Service   4 cr.

This course is designed to allow the student to begin the mastery of the brake systems used on today's cars and light trucks. This course deals specifically with disc and drum brakes, power and conventional braking systems and emergency braking systems. Topics also include hydraulic and electro-hydraulic brake components, basic diagnosis and anti-lock braking systems. The use of measuring tools, brake lathes and ABS scantools will be stressed. Students will develop competencies aimed at entry-level skills as a brake specialist. (49.5 Lec. Hrs./89.1 Lab Hrs.)
Prerequisite: AUT:115.

AUT:606 Basic Automotive Electricity/Electronics   3 cr.

In this course the student is introduced to basic electrical and electronics principles. The basics are applied to automotive electrical circuits. What electricity is and how it works is covered in detail. Lab sessions are spent turning theory into hands-on practice with meters and basic circuits. (39.6 Lec. Hrs./59.4 Lab Hrs.)

AUT:614 Automotive Electrical I   3 cr.

In this course the student is introduced to basic automotive battery, charging   and starting systems. The operating principles will be discussed during the lecture/ discussion sessions. Lab sessions are spent practicing testing, diagnosis and repair. (39.6 Lec. Hrs./59.4 Lab Hrs.)
Co-requisite: AUT:115 and AUT:606.

AUT:656 Automotive Electrical II   4 cr.

This course deals specifically with the automobile chassis electrical systems. The student will be taught how automobile circuits are wired and how they operate. Troubleshooting and repair of the systems will be stressed. Upon completion the student should be able to demonstrate an understanding of the operation and design of the following types of chassis electrical systems: lighting systems, horn, wiper/washer, cooling fan, instruments and warning devices, speed control, anti-lock brake and traction control, HVAC, heated windows and mirrors, power accessories, and passive restraint systems. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites or Co-requisites: AUT:614 and AUT:606.

AUT:704 Automotive Heating and Air Conditioning   4 cr.

Provides basic knowledge in automotive heating and air conditioning. Basic theory, system diagnosis and service procedures are covered. Students are able to troubleshoot, purge, evacuate, charge and performance test an automobile or truck air conditioning system after completing this course. (59.4 Lec. Hrs./59.4 Lab Hrs.)

AUT:802 Engine Performance I   3 cr.

This course is designed to train the student in engine mechanical testing and ignition system theory and testing . Basic ignition system theory, operation and diagnosis will be covered. Electronic (EI) and distributor (DI) ignition systems will be discussed. Lab time will be used to learn the use of diagnostic equipment in troubleshooting and repair of engine mechanical and ignition systems as they relate to drivability issues. (39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite or Co-requisite: AUT:115, AUT:606.

AUT:811 Engine Performance II   4 cr.

This course is designed to give students an understanding of electronic fuel injection and the use of computer controls in today's automobiles. The course will present Electronic Fuel Injection theory and component operation as well as automotive computer operation, sensor inputs and actuator outputs. Diagnosis and testing of these systems will be discussed and practiced. Similarities and differences of various Original Equipment Manufacturer systems will be discussed. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: AUT:802.

AUT:817 Automotive Engine Performance III   3 cr.

The course will present automotive emissions, emission control devices and 5-gas analysis. This course is designed to help the student improve his/her ability to diagnose driveability problems. Diagnosis and testing will be discussed and practiced. A review of fuel, ignition and computer system testing will also   be included. (34.65 Lec. Hrs./74.25 Lab Hrs.)
Prerequisite: AUT:811.

AUT:911 Co-operative/ Internship   4 cr.

Co-operative Education Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled on-campus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. (316.8 Co-op. Hrs.)
Prerequisite: Consent of instructor.

AVIATION

AVI:130 Private Pilot Ground School   3 cr.

A comprehensive study of the aeronautical subjects necessary to support flight training for the FAA examination for the Private Pilot Certificate. Subjects covered include FAA regulations; the rules of the National Transportation Safety Board pertaining to accident reporting; the use of pilotage, dead reckoning and radio aids; recognition of critical weather situations and the use of weather reports; and safe and efficient operations principles of airplanes.
(59.4 Lec. Hrs.)
Prerequisite: Second Class Physical.
Co-requisite: AVI:172

AVI:172 Private Pilot Flight Training   2 cr.

Dual and supervised solo flight instruction necessary to qualify for the FAA Private Pilot Certificate. Areas covered in flight training include preflight operations, flight maneuvering by reference to ground objects, flight at critically slow air speeds and recover from stalls, takeoffs and landings, control and maneuvering an aircraft, cross-country flying, night flying and emergency operation.
(79.2 Lab Hrs.)
Prerequisites: Second Class Physical; completion of or concurrent registration in AVI:130.

AVI:210 Instrument Ground School   2 cr.

A comprehensive study of the aeronautical subjects necessary for the FAA Instrument Pilot Examination. Subjects covered include FAA regulations related to IFR conditions; the IFR air traffic system and procedures; the provisions of the Airman's Information Manual pertinent to IFR flight; dead reckoning appropriate to IFR navigation; IFR navigation by radio aids using the VOR, ADF and ILS systems; the use of IFR charts and instrument approach procedures charts; the procurement and use of weather information; and the function, use and limitations of flight instruments.
(39.6 Lec. Hrs.)
Prerequisites: Second Class Physical; FAA Private Pilot Certification.

AVI:235 Instrument Flight Training   2 cr.

Instrument flight instruction necessary to qualify for the FAA Instrument Rating Exam. Areas covered include control and maneuvering of aircraft by reference to flight instruments; IFR navigation by the use of VOR and ADF systems; cross-country flying in IFR conditions; and emergency procedures appropriate to the maneuvering of an airplane solely by reference to flight instruments.
(79.2 Lab Hrs.)
Prerequisites: Second Class Physical; FAA Private Pilot Certification; completion of or concurrent registration in AVI:210.

AVI:244 Commercial Pilot Flight Training   2 cr.

Dual and supervised solo flight instruction necessary to qualify for the FAA Commercial Pilot Certificate. Areas covered include flying an aircraft with retractable gear, flaps, controllable propeller and engine powered by at least 180 horsepower; night flying; take-offs and landings; and emergency procedures appropriate to VFR and IFR flight and the operation of complex airplane systems.
(79.2 Lab Hrs.)
Prerequisites: Second Class Physical; FAA Instrument Rating; completion of or concurrent registration in AVI:260.

AVI:260 Commercial Pilot Ground School   2 cr.

A comprehensive study of the aeronautical subjects necessary to qualify for the Commercial Pilot Certificate. Subjects covered include FAA regulations; basic aerodynamics; safety operations; high altitude operations and physiological considerations; loading computations; airplane performance speeds; runway and obstacle clearance; and cruise control.
(39.6 Lec. Hrs.)
Prerequisites: Second Class Physical; FAA Instrument Rating.

AVI:305 Advanced Rating Ground School   4 cr.

A comprehensive study of the aeronautical subjects necessary for the FAA Certified Flight Instructor Examination. Subjects covered include FAA regulations; instructional management and teaching techniques; aerodynamics; aeromedical information; multi-engine rating; integrated method of flight instruction; flight training syllabus; flight training maneuvers and procedures; weather information; engine and flight instrument operation; and safety principles.
(79.2 Lec. Hrs.)
Prerequisites: Second Class Physical; FAA Commercial Pilot Certificate.

AVI:306 Advanced Rating Flight Training   1 cr.

Flight instruction necessary to qualify for the FAA Certified Flight Instructor Examination and multi-engine rating. Areas covered include practice in the explanation, analysis and demonstration of flight procedures and maneuvers; multi-engine operations and in-flight application of teaching methods.
(39.6 Lab. Hrs.)
Prerequisites: Second Class Physical; FAA Commercial Pilot certificate; completion of or concurrent registration in AVI:305.

BIOLOGY

BIO:105 Introductory Biology   4 cr.

An introduction to the science of biology. Topics include scientific method, ecology, basic chemistry, cells (structure, function, energy and reproduction), genetics, DNA applications, classification and characteristics of organisms, and evolution. This course is designed for students who are not majoring in biology or health-related fields. *This course satisfies a general education requirement in the Natural Sciences Area.*
This course is not intended to replace or substitute for BIO:114 or BIO:115.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 or minimum reading scores based on college assessment.

COURSE DESCRIPTIONS

BIO:114 General Biology IA   4 cr.
Introduction to basic principles of biology. Topics include chemical applications in biology, cellular biology, bioenergetics, cell division and genetics.*This course satisfies a general education requirement in the Natural Sciences Area.*
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 and MAT:041 or MAT:047 or minimum reading and math placement scores based on college assessment. Successful completion of CHM:122 or one year high school chemistry is recommended.
(59.4 Lec. Hrs./39.6 Lab Hrs.)

BIO:115 General Biology IIA 4 cr.
Continuation of BIO:114. Topics include evolution, survey of organisms and ecology.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: BIO:114.

BIO:125 Plant Biology   4 cr.
An introduction to the study of plants, emphasizing structure, function, reproduction and diversity. Topics include basic plant anatomy and physiology and the evolution of plant diversity. *This course satisfies a general education requirement in the Natural Sciences Area.*
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ENG:013 and MAT:041 or minimum English and math scores based on college assessment.

BIO:133 Ecology 3 cr.
Introduction to ecological concepts: interdependence of organisms, the totality and patterns of relations between organisms and their environment.
(59.4 Lec. Hrs.)

BIO:136-139 Field Ecology 1-4 cr.
A survey of the flora and fauna of various habitats including classification, life history data and ecology. Emphasis is on field observations and techniques useful in analysis of natural populations.
(19.8-39.6 Lec. Hrs./0-79.2 Lab Hrs.)

BIO:151 Nutrition   3 cr.
Surveys the normal nutritional needs for all individuals. Emphasizes identifying the various essential nutrients and their functions. Diets and their components are discussed as well as food protection and preservation. American and international food patterns are discussed and evaluated.
(59.4 Lec. Hrs.)
Prerequisite: RDG:032/033 or minimum reading placement score based on college assessment. BIO:114 or BIO:168 is recommended.

BIO:157 Human Biology 4 cr.
Human Biology is an introductory course in biological science that focuses on the general concepts of life as demonstrated by the human body through its chemistry, organization and continuity. This course will introduce the structure and function of the human body. Students will study major systems of the human body - with applications to health, disease, genetics, nutrition and wellness. This course is not equivalent to or intended to replace BIO:114 or BIO:168.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 or minimum reading scores based on college assessment.

BIO:163 Essentials of Anatomy and Physiology   4 cr.
A one-semester course covering the fundamentals of human anatomy and physiology. Units of study include cell chemistry and structure and systems of the body (integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, urinary, reproductive and sensory).
This course is not equivalent to or intended to replace BIO:168 and/or BIO:173.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab Hrs.)

BIO:168 Human Anatomy and Physiology I with Lab   4 cr.
A study of the structure and function of the human body. The study begins at the cellular level and proceeds through selected organ systems: integumentary, skeletal, muscular, nervous, and endocrine. This course is the first course of a two-semester sequence.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: BIO:114 or one year of high school biology within the last five years and CHM:110, 122, 165, 179 or one year of high school chemistry within the last five years.

BIO:173 Human Anatomy and Physiology II with Lab   4 cr.
The second course in a two-semester sequence. The content includes the completion of the study of the organ systems: cardiovascular, lymphatic/ immune, respiratory, urinary, digestive / metabolism, and reproductive.
(59.4 Lec. Hrs./39.6 Lab Hrs)
Prerequisite: BIO:168.

BIO:186 Microbiology   4 cr.
An in-depth examination of the microbial world with emphasis on classification, reproduction, genetics, physiology, infectious disease and control. Laboratory exercises will be directed toward the use of equipment and identification of clinically and economically important organisms.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: BIO:114 or BIO:168.

BIO:255 Neuroanatomy   3 cr.
The gross anatomy of the brain and spinal cord will be discussed. Emphasis will be placed on clinical applications of the functional anatomy of the nervous system. Topics will include the structure and function of the sensory and motor pathways, basal ganglia, cranial nerves, ventricular system, vascular system and peripheral nervous system.
(59.4 Lec. Hrs.)
Prerequisites: BIO:168 and BIO:173.

BIO:280/281 Biology Projects 1-2 cr.

Study of special problems and research into a specific area of biology. This course may be repeated twice for additional credits. (39.6-79.2 Lab Hrs.)
Prerequisite: Consent of instructor.

BIO:282 Biology Projects II 1 cr.

A continuation of BIO:280/281. (39.6 Lab Hrs.)
Prerequisite: Consent of instructor.

BUSINESS

BUS:102 Introduction to Business 3 cr.

Introduces the student to American contemporary business, its nature and environment. A survey course providing exposure to social responsibilities of business, management, production, human resources, marketing, finance, quantitative methods, world business and business law. (59.4 Lec. Hrs.)

BUS:106 Employment Strategy 2 cr.

Students will complete assignments focused on their individual and career targets, while developing successful lifetime job search skills and career management tools. Students will also learn job search techniques, such as completing employment applications, preparing letters of application and resumes and participating in a mock interview. (39.6 Lec. Hrs.)
Prerequisites: ADM:105 and ADM:157.

BUS:110 Business Mathematics and Calculators 3 cr.

Review of math fundamentals and their application to business. Topics covered include multiplication, division, fractions, percentages, interest, discounts, etc., on an electronic calculator. The student will be able to operate proficiently by the touch system. (59.4 Lec. Hrs.)

BUS:130 Introduction to Entrepreneurship 3 cr.

This course is designed for the student interested in developing knowledge in the area of small business management and entrepreneurship. Emphasis is on the essential concepts and techniques related to the start up of a small firm. (59.4 Lec. Hrs.)
Prerequisite: RDG-045, ENG-013 and MAT-063 or minimum reading, English and math placement scores based on college assessment.

BUS:135 Managing the Entrepreneurial Venture 3 cr.

This course will introduce the student to contemporary business, its nature and environment. Also, this course will provide exposure to managerial functions such as planning, decision making, staffing, organizing and directing. The student will develop a basic understanding of financial accounting concepts and systems. This course also provides a comprehensive introduction to the diversified services offered by the banking industry. (59.4 Lec. Hrs.)
Prerequisite: BUS:147.

BUS:147 The Successful Entrepreneur 3 cr.

This course will provide an integrated, analytical and managerial approach to the study of marketing. Legal issues, financial and economic forces are also analyzed as relative to becoming a successful entrepreneur. (59.4 Lec. Hrs.)
Prerequisite: BUS:130.

BUS:161 Human Relations 3 cr.

Provides a foundation of accepted personal and business behavior in professional working relationships. Personality characteristics with relation to fellow employees and business associates are an integral part of the course. Topics include motivation of individuals and groups, contribution to a desirable working atmosphere, adjustment to the job, stress management techniques and other areas of human relations. (59.4 Lec. Hrs.)

BUS:180 Business Ethics 3 cr.

Study of ethical principles and the application of ethical principles to situations relevant to decision-making in the professional and business world. (59.4 Lec. Hrs.)

BUS:185 Business Law I 3 cr.

Provides the student with a basic understanding of business law. Includes an introduction to the legal environment (including ethics, property and computer law); contracts; sales; employer/employee relations (including agency); consumer protection and product liability; property and wills. (59.4 Lec. Hrs.)
Prerequisite: RDG:032/033 and ENG-013 or minimum reading and writing placement scores based on college assessment.

BUS:186 Business Law II 3 cr.

Continuation of BUS:185. Topics may include personal property and bailments, criminal procedure, partnerships, authority of partners, duties, rights and remedies, corporations, real properties, estates and bankruptcy, labor and environmental law, landlord/tenant relationships and other selected topics. (59.4 Lec. Hrs.)
Prerequisite: BUS:185.

BUS:210 Business Statistics 3 cr.

This course will provide a case study and problem-solving approach to the fundamentals of descriptive and inferential statistics. Students will be presented with practical problems which can only be solved by data sampling, data description and data analysis. This course also will expand the tools and techniques of statistical analysis that are applicable to the business environment. (59.4 Lec. Hrs.)
Prerequisite: MAT:156.

COURSE DESCRIPTIONS

BUS:293 Principles of Workforce Competitive Advantage   3 cr.

This course focuses on developing basic professional skills to maximize productivity in the workplace and increase an individual's competitive edge. The emphasis is placed on the student's ability to be prepared for the challenges of everyday situations in the workplace. Major topics include work ethics, workplace values promoted by employers, self-reflection and willingness to make changes as needed, business etiquette, effective communication, teamwork, problem solving, diversity in the workplace and stress management.
(59.4 Lec. Hrs.)

BUS:300 Introduction to Radio Frequency Identification   3 cr.

Covers Radio Frequency Identification (RFID) concepts and fundamentals, and how emerging electronic product code (EPCglobal) standards are influencing adoption. Content includes RFID capabilities, current applications of RFID in businesses, and practical ways to articulate applications and uses of this technology to potential employers and peers.
(59.4 Lec. Hrs.)
Prerequisite: CSC:110 or CSC:112 or consent of instructor.

BUS:301 The Impact of RFID on the Supply Chain   3 cr.

Surveys case studies on how Radio Frequency Identification (RFID) has been used in the supply chain. Examples from the retail, pharmaceutical, defense, manufacturing and logistic industries will demonstrate how companies have gained competitive advantages by implementing this new technology. Topics will emphasize the impact on business processes, security of transmitted data, and financial analysis.
(59.4 Lec. Hrs.)
Prerequisite: BUS:300 and MGT:260 or consent of instructor.

BUS:302 RFID Software   3 cr.

This course covers all aspects of Radio Frequency Identification (RFID) software as well as the hardware that is utilized in RFID technology. Specifically students will learn how to install, configure and implement various applications and uses found in the supply chain. Topics include an understanding of the capabilities of the solution and how various applications and uses influence read rates and reliability.
(59.4 Lec. Hrs.)
Prerequisite: BUS:300.

BUS:908 Co-operative Education   Variable cr.

Co-operative Education Experience will integrate classroom theory with on-the job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled oncampus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area.
(Variable Co-op. Hrs.)
Prerequisite: Consent of instructor.

BUSINESS COMPUTER APPLICATIONS

BCA:106 Windows Operating Systems   1 cr.

Students will learn about user interfaces, Windows, Windows Explorer and each Office Suite application. Topics include using the mouse, minimizing, maximizing and restoring windows, sizing and scrolling windows, launching and quitting an application, displaying the contents of a folder, creating a folder, selecting and copying a group of files, renaming and deleting a file and a folder, using the Windows Help menu and shutting down the Windows system. A brief overview of the following software will also be given: Word, Excel, Access, PowerPoint and Outlook. Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:118.

BCA:118 Introduction to the PC   1 cr.

Students taking this course will have had little experience with computers. The class will cover computer hardware and software concepts to consider when purchasing, installing or maintaining a personal computer.
Test Out Available.
(19.8 Lec. Hrs.)

BCA:129 Basic Word Processing   2 cr.

This course is designed to give the student an introductory knowledge of an industry-standard word processing software. Topics to be covered include creating, printing, and editing documents; formatting characters and paragraphs; formatting documents and sections; printing envelopes and labels; cutting and pasting text within and between documents; formatting text into newspaper columns; and creating headers, footers, and footnotes and endnotes in reports.
(39.6 Lec. Hrs.)
Prerequisite: ADM:105

BCA:130 Advanced Word Processing 2 cr.

In this course, the student will learn the advanced features of an industry-standard word processing software. Topics include merging documents, creating tables, inserting graphics and clip art, creating styles, sorting text, selecting records, and creating fill-in forms.
(39.6 Lec. Hrs.)
Prerequisites: BCA:129

BCA:134 Word Processing 3 cr.

This course is designed to give the student an in-depth knowledge of an industry-standard word processing software. Topics to be covered may include the basics of producing documents by creating, formatting, editing, saving and printing along with advanced commands used for mail merge, tables, macros, columns and graphics.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ADM:123 or ADM:122.

BCA:146 Basic Spreadsheets 1 cr.

Students are introduced to Excel terminology, the Excel window and the basic characteristics of a worksheet and workbook. Topics include starting and quitting Excel, entering text and numbers, selecting a range, using the AutoSum button, copying using the fill handle, changing font size, formatting in bold, centering across columns, using the AutoFormat command, charting using the ChartWizard, saving and opening a workbook, editing a worksheet, using the Auto Calculate area and using the Excel Help system.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisites: BCA:118 and BCA:106.

BCA:147 Basic Spreadsheets 2 cr.

This course offers the student the opportunity to learn the fundamentals of Microsoft Excel, to be exposed to practical examples of the computer as a useful tool, and to become acquainted with the proper procedures to create worksheets suitable for course work, professional purposes, and personal use. The student will learn to write formulas and use built-in functions, answer what-if questions, format spreadsheets, create graphs, and use database functions of spreadsheets.
(39.6 Lec. Hrs.)

BCA:148 Advanced Spreadsheets 2 cr.

This class is designed to take students beyond the fundamentals of spreadsheets and to give them the opportunity to learn how to solve complex spreadsheet problems. Some of the topics include financial functions, templates, 3-D references in formulas, macros, an introduction to Visual Basic for Applications (VBA) for Excel, the Solve command, and pivot charts and pivot tables.
(39.6 Lec. Hrs.)
Prerequisite: BCA:147.

BCA:149 Spreadsheets II 1 cr.

Students will use formulas and functions to build a worksheet and learn more about formatting and printing a worksheet. Topics include entering formulas, using functions, verifying formulas, formatting text, formatting numbers, conditional formatting, drawing borders and adding colors, changing the widths of columns and rows, spell checking, previewing a worksheet, printing a section of a worksheet and displaying and printing the formulas in a worksheet.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:146 or consent of instructor.

BCA:153 Spreadsheets III 1 cr.

Students will learn how to work with larger worksheets, how to create a worksheet based on assumptions, how to use the IF function and absolute cell references, charting techniques and how to perform what-if analysis. Topics include assigning global formats, rotating text, using the fill handle to create a series, deleting, inserting, copying and moving data on a worksheet, displaying and formatting the system date, displaying and docking toolbars, creating a 3-D pie chart on a chart sheet, enhancing a 3-D pie chart, freezing titles, changing the magnification of worksheets, displaying different parts of the worksheet using panes and completing simple what-if analysis and goal seeking.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:149.

BCA:156 Intermediate Databases 1 cr.

Students will learn to use queries to obtain information from the data in their databases. Topics include creating queries, running queries and printing the results. Specific query topics include displaying only selected fields, using character data in criteria, using wildcards, using numeric data in criteria, using various comparison operators and creating compound criteria. Other related topics include sorting, joining tables and restricting records in a join. Students will use computed fields, statistics and grouping.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:164.

BCA:158 Spreadsheet Applications 2 cr.

This course offers the student the opportunity to learn proficient use of a popular spreadsheet program, to set up formulas and use built-in functions, to answer what-if questions, to format spreadsheets, to create graphs and to perform sorts and queries. The student will build several spreadsheets, learning new commands with each one.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

BCA:159 Database Applications 2 cr.

This course provides basic training using Microsoft Access, a database management system. The term database describes a collection of data organized in a manner that allows access, retrieval, and use of that data. Using Access, students will create databases; add, change, and delete records in tables; establish relationships among tables; sort and index data; retrieve data using queries; and calculate statistics from the databases. In addition, students will create and edit forms for data entry and reports for more formal presentation of the data.
(39.6 Lec. Hrs.)

COURSE DESCRIPTIONS

BCA:164 Basic Databases   1 cr.

Students are introduced to the concept of a database and shown how to use Access to create a database. Topics include creating a database, creating a table, defining the fields in a table, opening a table, adding records to a table, closing a table and previewing and printing the contents of a table. Additional topics include using a form to view data, using the report Wizard to create a report and using the Access Help system. Students will learn how to design a database and eliminate redundancy.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:106 and BCA:118.

BCA:169 Advanced Database   1 cr.

Students learn the crucial skills involved in maintaining a database. These include using datasheet view and form view to add new records, change existing records, delete records and locate and filter records. Students learn the processes of changing the structure of a table, adding additional fields, changing characteristics of existing fields, creating a variety of validation rules and specifying referential integrity. Students will also perform mass changes and deletions using queries, create single-field and multiple-field indexes and use sub-datasheets to view related data.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:156.

BCA:188 Computer Fundamentals for Technicians   3 cr.

This course will cover microcomputer operating systems, hardware and application software. Spreadsheets, database management, word processing and 2-D graphics packages will be specific areas of coverage. Lab exercises will follow lecture and class discussion.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

BCA:207 PowerPoint/Outlook   2 cr.

Students will learn how to create business presentations using Microsoft PowerPoint, a presentation software application. They will also learn to use Microsoft Outlook, an integrated task, scheduling, and communications management program, to improve their ability to organize their time and stay abreast of correspondence in a business or personal environment.
(39.6 Lec. Hrs.)

BCA:220 Integrated Computer Business Applications   2 cr.

This course offers the student the opportunity to understand and apply OLE (object linking and embedding) concepts by creating documents using spreadsheet, word processing, database, and presentation software applications and then transferring data from one application to another. This is an office simulation that will allow students to utilize their decision-making and time management skills.
(39.6 Lec. Hrs.)
Prerequisite: BCA:130, BCA:147 and BCA:159 or instructor permission.

BCA:226 Integrated Software Applications   3 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.
(59.4 Lec. Hrs.)
Prerequisites: ADM:130, BCA:134 and CSC:110 or consent of instructor.

BCA:250 Desktop Publishing   3 cr.

This course takes the student beyond the basic commands of word processing while gaining knowledge and practice in desktop publishing. Desktop publishing is the integration of graphics and text. The student will learn advanced features of the word processing software, such as creating and applying styles, macros and master documents. Decision-making skills will be used to complete desktop publishing projects such as graphs, bulleted charts, newsletters and folded brochures.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: BCA:130.

BCA:711 Introduction to Microsoft PowerPoint   1 cr.

Students are introduced to PowerPoint terminology, the PowerPoint windows and the basics of creating a multi-level bulleted list presentation. Topics include selecting a design template, increasing font size, changing font style, ending a slide show with a black slide, saving a presentation, viewing the slides in a presentation, checking a presentation for spelling and style errors, changing line spacing on the slide master, printing copies of the slides and using the PowerPoint Help system.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:106 and BCA:118.

BCA:722 Introduction to the Internet   1 cr.

Students are introduced to the World Wide Web and its components. They will explore the World Wide Web and learn how the Web is organized, URLs, browsing Web pages, Web page management techniques and saving and printing material obtained from a Web site. In addition, they will learn techniques for searching the vast amount of material using search engines.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:106 and BCA:118.

BCA:732 Getting Organized with Outlook   1 cr.

Students will discover the benefits of using a powerful desktop information management program. They will learn how this program can assist in organizing a busy schedule, keeping track of files and communicating with others. Students will learn how individuals and work groups can organize, find, view and share information easily. Students will receive hands-on experience entering both on-time and recurring appointments and events. Other topics include sending e-mail messages, generating and managing daily, weekly and monthly schedules, printing and saving a calendar, generating a list of contacts, creating and printing tasks and creating, importing and exporting personal subfolders.
Test Out Available.
(19.8 Lec. Hrs.)
Prerequisite: BCA:106 and BCA:118.

CANCER INFORMATION MANAGEMENT

CIM:200 Registry Organization & Operations   3 cr.

Students will develop an understanding of the regulatory requirements for an approved cancer program. Emphasis will be given to the requirements outlined by the Commission on Cancer (CoC) of the American College of Surgeons (ACoS), data standards set by the North American Association of Central Cancer Registries (NAACCR), data standards set by the National Cancer Institute (NCI) in its Surveillance, Epidemiology and End Results (SEER) program, data standards set by the World Health Organization (WHO) and other organizations. Legal, ethical and confidentiality issues in both the internal and external settings will be addressed. Students will obtain an overview of the relationships between a registry and other departments within a facility. Basic daily operational tasks, reference resources and computer hardware and software needs will be introduced.
(59.4 Lec. Hrs.)
Prerequisites: Completion of HIT diploma, CIM first year coursework or instructor permission.

CIM:210 Oncology Coding and Staging Systems   4 cr.

This course will focus on the basic concepts of coding and staging of malignant neoplasms. It will provide a general overview of the *International Classification of Disease for Oncology*, 3rd Ed. topography codes and *International Classification of Disease*, 9th Ed. morphology nomenclature and classification systems. American Joint Committee on Cancer (AJCC) staging, SEER Summary staging, and extent of disease concepts used by physicians and cancer surveillance organizations to determine treatment and survival will be emphasized.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: Completion of HIT diploma, CIM first year coursework, or instructor permission.
Co-requisite: CIM:200.

CIM:215 Abstracting Principles & Practice I   2 cr.

Students will be introduced to the principles of cancer registry abstracting. Identification and selection of appropriate clinical information from medical records in a manner consistent with cancer registry regulatory core data item requirements will be emphasized. Recording accurate coding and staging of site-specific cancer information and use of CNExT cancer registry software from C/NET Solutions will be introduced.
(79.2 Lab. Hrs.)
Prerequisites: Completion of HIT diploma or instructor permission and CIM:200 & CIM:210.

CIM:220 Abstracting Principles & Practice II   2 cr.

This course further applies the principles of cancer registry abstracting. Identification and selection of appropriate clinical information from medical records in a manner consistent with cancer registry regulatory core data item requirements; recording, coding and stating site-specific cancer information; and using accuracy, timeliness and completeness of data.
(79.2 Lab. Hrs.)
Prerequisite: CIM:215.

CIM:240 Cancer Patient Follow-up   2 cr.

This course will cover follow-up methodology, confidentiality and ethical issues; identification of second primaries, recurrence, spread of disease and survival data. Physician, patient and other follow-up resources and activities will be introduced.
(39.6 Lec.Hrs.)
Prerequisites: Completion of HIT diploma, CIM first year coursework or instructor permission.

CIM:250 Cancer Statistics & Epidemiology   3 cr.

This course will introduce the student to cancer statistics, principles of epidemiology, cancer surveillance, annual report preparation, presentation of cancer data and special studies. Use of cancer statistical data for marketing and strategic planning will also be studied.
(59.4 Lec. Hrs.)
Prerequisites: Completion of HIT diploma, CIM first year coursework or instructor permission.

CIM:260 CIM Seminar   1 cr.

This course provides a comprehensive discussion of all topics common to the cancer registry profession. Emphasis is placed on application of professional competencies, job search tools and preparation for the certification exam.
(19.8 Lec. Hrs.)
Prerequisites: Instructor permission.

CIM:270 Cancer Registry Practicum   4 cr.

Students must have student health forms completed and on file. This course will provide students with hands-on experience in all aspects of registry organization and operation. A total of 198 hours under the supervision of a CTR will be spent by the student abstracting and experiencing all the tasks of a full-time cancer registrar.
(237.6 Clinical Hrs.)
Prerequisite: Completion of all other CIM coursework or instructor permission.

CENTRAL STERILE PROCESSING

CSP:110 Infection Control/ Health Regulations   2 cr.

This course introduces basic patient care skills of infection control techniques such as hand washing. Additionally the course provides an overview of the health industry as it relates to health and safety regulations based on Occupational Safety and Health Administration (OSHA) and Center for Disease Control (CDC) guidelines.
(39.6 Lec. Hrs.)
Co-requisite: SUR:122.

CSP:115 Instrument Use, Care & Handling   3 cr.

This course gives the basics of instrument types, uses and correct handling. The learner will have a better understanding of the instruments uses to better understand how to care for them.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CSP:110 and MAT:047 or minimum math placement score based on college assessment.
Co-requisite: CSP:120

COURSE DESCRIPTIONS

CSP:120 Sterile Processing and Distribution   3 cr.

This course gives the basics of Sterile Processing and Distribution preparing the learner for a career in the field of Sterile processing.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CSP:110 and MAT:047 or minimum math placement score based on college assessment.
Co-requisite: CSP:115.

CSP:210 Clinical Practicum   2 cr.

This course gives the student hands on experience in a sterile processing department. The student must pass a skill evaluation done by the clinical preceptor to pass the course.
(118.8 Clin. Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, CSP:110, CSP:115 and CSP:120.

CHEMISTRY

CHM:110 Introduction to Chemistry   3 cr.

Designed for the student with no high school chemistry background. A study of chemistry in our lives and chemical principles preparatory to CHM:122 or CHM:165. An introduction to the composition and properties of matter, bond types, acids and bases, pH and a description of the major branches of chemistry.
(59.4 Lec. Hrs.)
Prerequisite: MAT:041 or minimum math placement score based on college assessment.

CHM:122 Introduction to General Chemistry   4 cr.

An elementary approach to chemical principles and laboratory practices. Emphasizes the nature of matter, bonding, nomenclature, equations, acids and bases and chemistry as applied to everyday life. Intended primarily to fulfill laboratory science requirements and to fulfill chemistry requirements for nursing, dental hygiene, or some home economics and agricultural programs. *This course satisfies a general education requirement in the Natural Sciences Area.*
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:041 or minimum math placement score based on college assessment.

CHM:132 Introduction to Organic and Biochemistry   4 cr.

A continuation of CHM:122. Study of aliphatic and aromatic compounds, their chemistry and uses in consumer products such as polymers, drugs and foods. Attention is also given to biologically important compounds: proteins, nucleic acids, carbohydrates and lipids and the chemistry of these molecules in the living organism.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CHM:122 or CHM:165/166 or permission of instructor.

CHM:165/166 General Chemistry I   4-5 cr.

The first course in a sequence of two general chemistry courses for students in pre-med, pre-chiro, pre-vet, pre-dental, pre-pharmacy, pre-engineering, other physical or biological sciences, or liberal arts. Topics include calculation methods, stoichiometry, gases, atomic structure and periodicity, solutions and chemical bonding. The five credit hour course also covers nuclear chemistry. *This course satisfies a general education requirement in the Natural Sciences Area.*
(59.4-79.2 Lec. Hrs.-39.6-59.4 Lab Hrs.)
Prerequisites: CHM:110 or CHM:122 or high school chemistry, and MAT:073 or two years of high school algebra or minimum math placement score based on college assessment, or permission of instructor.

CHM:175/176 General Chemistry II   4-5 cr.

A continuation of CHM:165/166. Topics include kinetics, equilibrium, acid-base, thermochemistry, thermodynamics, electrochemistry and solubility equilibrium. The five credit hour course also covers organic chemistry, descriptive chemistry and qualitative analysis. These three topics as well as nuclear chemistry may be covered as enrichment topics (in the four credit hour course.) A project may be included in the 5-credit course.
(59.4-79.2 Lec. Hrs./39.6-59.4 Lab Hrs.)
Prerequisite: CHM:165/166 or permission of instructor. MAT:121 is recommended.

CHM:179 Principles of General Chemistry   6 cr.

Presents the structure of the atom and how different elements combine, mathematical relationships involving chemical equations, chemical bonding, the gas laws, solutions, chemical equilibriums, acid-base solutions and thermodynamics. This course will fulfill the chemistry requirement of pre-chiropractic students.
This course satisfies a general education requirement in the Natural Sciences Area.
(79.2 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CHM:110 or CHM:122 or high school chemistry, and MAT:073, minimum math scores based on college assessment, two years of high school algebra or permission of instructor.

CHM:261/263 Organic Chemistry I   4-5 cr.

Study includes the classes of organic compounds: aliphatic hydrocarbons, (aromatic hydrocarbons) alcohols, and alkyl halides (phenols). Attention to methods of instrumental analysis including IR, NMR and mass spectrometry. A functional group approach with emphasis on nomenclature, structure and bonding, physical properties, basic synthetic reactions and mechanism.
(59.4 Lec. Hrs.-39.6-79.2 Lab Hrs.)
Prerequisite: CHM:175/176 or CHM:179 or permission of instructor.

CHM:271/273 Organic Chemistry II   4-5 cr.

A continuation of CHM:261/263. Covers topics on (alkyl halides) aromatic hydrocarbons, phenols, ketones and aldehydes, ethers, carboxylic acids, amines and other selected topics in biochemistry.
(59.4 Lec Hrs./39.6-79.2 Lab Hrs.)
Prerequisite: CHM:279 or CHM:261/263 or permission of instructor.

CHM:279 Principles of Organic Chemistry 6 cr.

A one-semester lecture and laboratory course organized by a functional group approach. Nomenclature, structure, reactions and mechanisms of several functional groups are covered. The groups covered include aliphatic, aromatic hydrocarbons, alcohols, phenols, ethers, halogen derivatives, aldehydes, ketones, carboxylic acids and amines. (79.2 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CHM:175/176 or CHM:179 or permission of instructor.

CHM:281-282 Chemistry Projects 1-2 cr.

An individual chemical project, laboratory-oriented, with a written report required at end of semester unless taken as a year-long project. May be used to supplement CHM:165/166 or CHM:261/263. This course may be repeated twice for additional credits. (39.6-79.2 Lab Hrs.)

COLLISION REPAIR/REFINISH

CRR:103 Survey of Auto Collision Repair 1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the automotive collision repair field. Topics to be explored include detailing, metal finishing, panel alignment, and refinishing.
(59.4 Lab. Hrs.)
Co-requisite: AUT:115

CRR:113 Welding Survey 2 cr.

This course is designed to acquaint the student with the fundamentals in MIG and oxy-acetylene welding as they pertain to the auto collision repair industry. Instruction will be given in equipment, setup, safety and application in the oxy-acetylene and MIG processes, with an emphasis on safety. The lab will be correlated with the lecture to provide the student with practical hands-on experience.
(19.8 Lec. Hrs./59.4 Lab Hrs.)
Co-requisite: CRR:140.

CRR:114 Welding Systems and Techniques 2 cr.

This course is designed to increase the student's proficiency with basic welding concepts and to further knowledge and skills of other welding processes used in auto collision repair. Topics covered include resistance and spot welding, aluminum and flux core welding, TIG welding, plasma cutting and the equipment used for these operations.
(19.8 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: CRR:113 or comparable experience.

CRR:115 Advanced Welding Techniques 1 cr.

A lab course which is designed to enhance the student's skills with all the welding concepts typically used in the auto 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 certification tests.
(59.4 Lab Hrs.)
Prerequisite: CRR:114.
Co-requisite: CRR:507.

CRR:140 Orientation and Safety 3 cr.

This course is an orientation to the college and departmental activities, functions and regulations and an overall safety program. It covers all areas of shop and tool safety and includes topics pertinent to the ACR industry regarding employee and community right-to-know and the laws and regulations governing the handling of hazardous materials.
(59.4 Lec. Hrs.)

CRR:200 Plastic Repair 1 cr.

This course is designed to acquaint the student with the methods and techniques used to identify and repair plastics commonly used on 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.
(59.4 Lab Hrs.)
Co-requisite: CRR:140.

CRR:322 Basic Metal Bumping and Repair 5 cr.

This course is designed to acquaint the student with the tools, equipment and techniques utilized for repairing minor collision damage. Emphasis will be placed on damage identification and analysis and formulating an appropriate repair plan.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Co-requisites: CRR:140.

CRR:370 Collision Lab 1-3 cr.

This lab course will give the student an opportunity to complete any unfinished requirements they did not complete in any one of the courses for which they had registered. The student may enroll for this course more than one time.
(59.4-178.2 Lab Hrs.)

CRR:405 Non-Structural Panel Repair and Replacement 5 cr.

This course will provide training in the repair and replacement of metallic and composite non-structural component and stationary parts. Topics covered in the course include pre-replacement roughing and aligning, force application analysis, glass service and replacement and the alignment of all adjustable panels.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: CRR:322 and CRR:113.
Co-requisite: CRR:114.

CRR:452 Trim and Component Panel Service 2 cr.

This course will address all facets of the final detailing of the interior and exterior trim and accessories as required for vehicle's pre-delivery prep. It also includes servicing all door and window mechanisms, removal and replacement of all interior and exterior trim components, and adjusting all exterior component panels.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

COURSE DESCRIPTIONS

CRR:507 Structural Panel Repair and Replacement   5 cr.

This course is designed to provide the student with the skills necessary to repair the undercarriage on severely damaged vehicles. It will include an in-depth study of measuring and tracking systems commonly used to analyze, isolate and repair damage on the undercarriage and other structural parts of collision damaged vehicles. Replacement and corrosion protection of said parts will also be included as part of the repairs.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: CRR:114 and CRR:405.
Co-requisite: CRR:612.

CRR:605 Mechanical Service   3 cr.

This course is designed to help the student identify and repair the mechanical problems and failures that typically occur as a result of an automobile accident. The course will include diagnosing and repairing problems with the brake system, drive train, exhaust system and other mechanical components typically damaged in a collision situation. The course will also include instruction in diagnosing and repairing problems with the vehicle's A/C cooling system and the regulations governing the handling and use of CFC gases.
(19.8 Lec. Hrs./118.8 Lab Hrs.)

CRR:612 Steering/Suspension 3 cr.

This course is designed to acquaint the student with the suspension and steering systems, and how they are affected by a collision. It will include instruction in the diagnosis and repair of problems affecting the drivability of a vehicle after it has been involved in a collision. It also includes a study of the steering geometry, alignment principles, tracking and replacement procedures for damaged components. The interrelation of each part to the overall handling of the vehicle are all included.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

CRR:674 Electrical Service   4 cr.

This course will acquaint the student with the methods utilized to diagnose and troubleshoot electrical problems that affect the operation of various electrically integrated parts of the vehicle. It will include energy production, electrical theory, interpreting wiring diagrams, electrical measuring and testing equipment as they are used in the repair of damaged passive and active restraint systems, air bags, anti-lock braking systems and other electrical problems which typically occur as a result of a collision.
(59.4 Lec. Hrs./59.4 Lab Hrs.)

CRR:743 Estimating   3 cr.

This course is designed to acquaint the student with the methods and techniques used to analyze and identify the damage sustained by a vehicle involved in a collision. It will also include an in-depth study of the collision and specification manuals typically used in writing an automobile damage report. A survey of the day-to-day activities performed by shop personnel such as scheduling, customer relations and inventory control will also be included.
(59.4 Lec. Hrs.)
Co-requisite: Math elective-math above 100 level.

CRR:798 Spray Techniques & Surface Coating I   2 cr.

This is an entry level course for individuals seeking to become employed as spray painters in industry. The course is designed to acquaint the student with 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. The course will also include instruction in the OSHA hazard communication and all applicable employee right-to-know requirements.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

CRR:799 Spray Techniques & Surface Coatings II   1 cr.

This course is designed for the experienced painters seeking to upgrade their skills and become more proficient with the mechanics of the spray gun and application techniques. The course will provide the student with a more in-depth analysis of the principles and concepts utilized for applying various automotive, commercial and industrial surface coatings using both the virtual painting system and conventional spray painting equipment. Emphasis will be placed on proper equipment selection, setup, manipulation and maintenance.
(39.6 Lab Hrs.)

CRR:801 Refinishing I   3 cr.

This is an introductory course designed to acquaint the student with all phases of surface removal and the preparation required for application of fillers, paint and primer coatings. Proper substrate preparation and basecoat application will be emphasized. Other topics will include pre-cleaning, surface removal, abrasives, fillers, basecoat selection, masking and proper spray application.
(19.8 Lec. Hrs./118.8 Lab Hrs.)
Co-requisite: CRR:140.

CRR:825 Refinishing Principles   5 cr.

This course will prepare the student to select and apply basecoats and topcoats that are compatible with the existing finish and substrates. Topics covered will include methods used to identify existing finishes, selecting and applying the proper basecoats, top coats, solvent and additive selection and maintenance on all air supply and spray equipment. VOC tracking regulations and applications will also be introduced.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisite: CRR:801.

CRR:842 Color Matching   5 cr.

This course is an in-depth study of   color and its makeup and the proper techniques utilized for tinting and shading paint to accomplish a color match on a vehicle. Spot repairing and blending techniques to obtain a color match on direct gloss, two and three stage finishes will also be included. The students will also be trained and evaluated using the spray technique analysis and research (star) criteria.
(39.6 Lec. Hrs./178.2 Lab Hrs.)
Prerequisite: CRR:825.

CRR:878 Advanced Refinishing 2 cr.

This is the last in a series of refinishing courses which is designed to acquaint   the student with diagnosing and   repairing various paint problems and failures and repairing them using a systems approach. In-depth study and comparative analysis will be conducted on various paint manufacturers' products and how they are to be used in resolving the various paint failures. A VOC analysis will be completed for several   of the products used. (19.8 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: CRR:842.

CRR:908 Co-operative Education Variable cr.

Co-operative Education Experience will integrate classroom theory with on-the job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled on campus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. This course may be repeated for additional credit.
(Variable Co-op. Hrs.)
Prerequisite: Consent of instructor.

COMMUNICATIONS

COM:102 Communication Skills 3 cr.

The purpose of this course is to prepare the student to communicate effectively   in business and professional situations. The major emphasis is on improving interpersonal skills, on using standard English in writing and speaking, on gaining proficiency in listening and   on composing specific types of   business communications.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

COM:105 Communication Skills I 2 cr.

Designed to provide a general background in communication skills concentrating on telephone, employment applications, business letters and basic writing techniques.
(39.6 Lec. Hrs.)

COM:107 Communication Skills II 1 cr.

A continuation of COM:105. Includes a speech component and selected writing skills for various technical programs.
(19.8 Lec. Hrs.)
Prerequisite: COM:105.

COM:140 Introduction to Mass Media 3 cr.

Introductory course examining the history, evolution and relationships of the media in and the effects on our society. Course includes both the print and electronic media as well as ethics, advertising and public relations. Recommended for students majoring in communication, journalism or U.S. culture.
(59.4 Lec. Hrs.)

COM:142 Writing for Media 3 cr.

This course addresses the variety of writing styles used in the media. Through regular assignments students will compare, contrast, and practice the writing styles of print journalism, advertising copy, public relations, and broadcast copy. The circumstances for the use of objective and subjective voice will be emphasized. (59.4 Lec. Hrs.)

COMPUTER AIDED DRAFTING

CAD:104 Computer Aided Drafting 3 cr.

This course introduces students to the foundations of drafting and descriptive geometry. The course will develop student skills in the areas of computer generated drawings, geometric constructions, sketching and shape description, multiview projections, sectional views, auxiliary views, dimensioning and axonometric projections. Emphasis will be placed on machine drafting concepts while utilizing proper computer aided design (CAD) techniques and methods.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

CAD:113 AutoCAD I 3 cr.

Designed to familiarize users of CAD systems with all of the tools necessary for the efficient production of drawings. Topics that will be covered include starting and ending commands, two-dimensional drawing commands, drawing management (layers and system settings), editing and viewing commands, text commands, dimensioning techniques and styles, and symbols (blocks and external references).
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CAD:114 AutoCAD I 2 cr.

This is a basic course covering the fundamentals of two-dimensional AutoCAD. Students begin with basic shapes and work through multi-view drawings in a series of extensive lessons. During the course students will cover: lines and essential tools; circles and drawing aids; layers, colors, and linetypes; templates, copies, and arrays; arcs and polar arrays; object snaps; text; and dimensions.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

COURSE DESCRIPTIONS

CAD:127 and CAD:128 Intermediate AutoCAD 2000 I/A And I/B   **2 cr. each**

This course is a follow up to CAD:115 and CAD:116, where students use the various principles to complete more complex mechanical drawings and electrical and piping diagrams. This course will include the use of AutoCAD 2000 training software/hardware that is comparable to equipment used in regional industry.
(39.6 Lec. Hrs./79.2 Lab Hrs. each course)
Prerequisites: CAD:115, CAD:116, and CAD:128-CAD:127.

CAD:130 Applied Drafting 3 cr.

Designed to assist the student in the completion of a set of drafting plans as they may pertain to the indicated special skills of drafting. The student may complete a set of specified drawings/problems that could be used in the actual engineering area. Nomenclature, computation, symbols, and schematic relevant to the indicated industrial area will be utilized.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CAD:113

CAD:140 Parametric Solid Modeling I   **3 cr.**

Designed to use parametric solid modeling programs such as Mechanical Desktop or Autodesk Inventor to create mechanically engineered parts. Topics that will be covered include: parametric modeling fundamentals, part modeling, assembly modeling, advanced modeling techniques, sheet metal modeling and creating engineering drawings.
(39.6 Lec. Hrs/39.6 Lab Hrs.)
Prerequisite: CAD:175.

CAD:160 Plane Surveying   **3 cr.**

Introductory course that covers basic surveying operations which include measuring horizontal and vertical distances and angles. Will cover the various survey methods which are common practice and introduce the various types of field surveying.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:743.

CAD:161 Architectural Modeling and Rendering   **3 cr.**

Designed to use programs such as Architectural Desktop or 3d Studio Viz to create three-dimensional architectural forms and layouts. Topics include: 3-D space modeling, 2-D plan development, document creation, importing data, material properties, setting up cameras, setting up lights and animations.
(39.6 Lec. Hrs/39.6 Lab Hrs.)
Prerequisites: CAD:175 and CAD:196.

CAD:164 Solid Modeling   **2 cr.**

Designed to use both AutoCAD's ACIS solid modeler as well as other parametric solid modeling programs to create mechanically engineered parts. Topics that will be covered include 2-D regions, 3-D solid primitives, extruded 3-D solids, revolved solids, Boolean operations, slicing, hiding, shading and rendering 3-D models, sketching profiles, using constraints, sketch planes, work planes, features, multi-view layouts, parametric dimensioning, editing, and paths and sweeps.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

CAD:175 Advanced AutoCAD   **2 cr.**

Designed to focus on some of AutoCAD's productivity tools that can increase efficiency and productivity. Topics that will be covered include review of 2-D drafting techniques, advanced use of blocks, attributes, labels and tags, external reference files, advanced drawing techniques, model and paper space, 3-D viewing commands, viewports, 3-D wire frame modeling, solid modeling and miscellaneous techniques for customizing.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

CAD:196 Architectural Drafting   **3 cr.**

An introduction to architectural drawing which includes: basic house design, room planning, foundation plans, floor plans, elevations, electrical plans, plumbing plans, HVAC plans and presentation drawings. The student will be provided enough information to prepare a set of architectural working drawings.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CAD:114.

CAD:211 Fundamentals of AutoCAD   **4 cr.**

This is a basic course covering the fundamentals of two-dimensional AutoCAD. Students begin with basic shapes and work through multi-view drawings in a series of extensive lessons. During the course students will cover: lines and essential tools; circles and drawing aids; layers, colors, and linetypes; templates, copies, and arrays; arcs and polar arrays; object snaps; text; and dimensions.
(39.6 Lec. Hrs./79.2 Lab Hrs.)

CAD:212 Solid Works   **4 cr.**

This course covers the basics of Solid and Parametric modeling using SolidWorks. Students will learn the fundamentals of solid modeling with SolidWorks through a series of competency-based projects. Students will learn through a progressive approach from chapter to chapter. Beginning with extruded and revolved features students move through sweeps, lofts, ribs, and patterned features. Ending with sub-assemblies, assemblies, and finally fundamentals of drawing. As in most solid/parametric modeling packages parts, drawings, and assemblies have an associated relationship with each other.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:114 and DRF:115.

CAD:225 Descriptive Geometry   **2 cr.**

This course will introduce students to the basic principles of Descriptive Geometry. These principles are valuable for determining true shapes of planes, angles between two lines, angles between two planes, or the angle between a line and a plane. Problems are solved graphically by projecting points onto selected adjacent projection planes in an imaginary projection system. Major areas of concentration will be: points and lines in space; auxiliary views; lines; line characteristics; planes; and plane relationships.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: DRF:115.

CAD:226 Strength of Materials I   3 cr.

An introductory course in the area of structural mechanics including a complete review of statics, researching simple stresses in members and taking a look at the various structural properties of materials in design.
(59.4 Lec. Hrs.)
Prerequisite: MAT:748.

CAD:227 Strength of Materials II   3 cr.

An advanced course in the area of structural mechanics. The course includes an examination of mechanical connections, center of gravity, properties of sections, beam sizing and column sizing.
(59.4 Lec. Hrs.)
Prerequisite: CAD:226.

CAD:228 Applied Physics I   3 cr.

Standard physics concepts unified in four major systems - mechanical, fluid, electromagnetic and thermal. This unified technical concepts approach allows the student to learn physics in a hands-on atmosphere through extensive laboratory work and demonstrations. Special examples are used making this course pertinent to the drafting technician. The concepts covered are force, work, rate, momentum, resistance, energy and power.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: MAT:748.

CAD:229 Applied Physics II   3 cr.

A continuation of CAD:228 using the unified technical concepts approach to applied physics. Special examples are used making this course pertinent to the drafting technician. The concepts covered are force transformers, energy converters, transducers, vibrations and waves, exponential constants of linear systems, radiation and optics, and optical systems.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CAD:228.

CAD:231 Pro Engineer - Basic Modeling   4 cr.

This is a basic course teaching the fundamental operation of Pro Engineer. Students will learn the menu structure and command functionality to model basic parts using Pro Engineer. Students will gain an understanding of Parametric Modeling and the feature based design process. Use of the Intent Manager will be emphasized for creation of sketched features. Students will

understand the need for and application of datums during the modeling creation. Revolved Protrusions and Revolved Cuts will also be explored. Students will also learn to create Chamfers and Cosmetic Threads. A large part of the course will be devoted to editing and modifying existing models. Students will develop an understanding of and control references during the modeling process. Students will also demonstrate a clear understanding of the resolve mode during modeling.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:114 and DRF:115.

CAD:233 Basic Detailing   4 cr.

This is a course designed for technicians and designers who must use Pro Engineer's drawing functionality. Students will learn how to create orthographic views of part models to be used in detail drawings. Students will completely dimension drawings using title block formats, design tolerancing and GD and T. Students will also create assembly drawings and bill of materials using the table command. Multiple sheet drawings and multi-model drawings will also be created.
(39.6 Lec. Hrs./79.2 Lab Hrs.)

CAD:235 Strength of Materials 4 cr.

An introductory course in the area of structural mechanics including a complete review of statics, researching simple stresses in members, and taking a look at the various structural properties of materials in design. The course also includes an examination of mechanical connections, center of gravity, properties of sections, and beam sizing and column sizing.
(79.2 Lec. Hrs.)
Prerequisite: MAT:748.

CAD:241 Pro Engineer - Advanced Modeling   4 cr.

This course is a continuation of Pro Engineer - Basic Modeling. Students will use skills mastered in Basic Modeling to create models with advanced techniques. Commands such as Pattern and Group, Ribs and Relations, Draft, Suppress and Text Protrusions, Shell, Reorder, Insert, Sweeps, Blends and Splines, and Helical Sweeps and 3D Notes will be covered.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:231.

CAD:243 Advanced Pro Engineer Detailing   4 cr.

This course is designed for the user who creates and manipulates large or multiple sheet drawings. Students will use Pro Engineer's layer control and feature show capabilities to create advanced detail drawings. Exploded assemblies and tabulated drawings will be covered, as will simplified reps, the use of symbols, ordinate dimensions and created and shown dimensions.
(39.6 Lec. Hrs./79.2 Lab Hrs.)

CAD:251 Pro Engineer - Assemblies   4 cr.

This is a continuation of Pro Engineer Advanced Modeling. Students will use all of their modeling and design skills to create assemblies and sub-assemblies of parts. Assembly constraints and intent will be discussed to ensure proper assembly. Students will be challenged to use Pro Engineer's powerful functionality to create exploded view assemblies for manufacturing. Responsibility for proper part design will be emphasized in order to create accurate assembly information.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:241.

CAD:256 Pro Engineer - Sheet Metal   4 cr.

This course covers the sheet metal functionality of Pro Engineer. Students will create thin walled sheet metal parts on their own and in assemblies. Parts will be created in both their flat state and formed state. Parts can also be converted from solid parts into sheet metal parts. Bend tables will be created as well as using bend information from existing tables. Students will also create drawings from sheet metal parts and assemblies. This is like other Pro Engineer courses in that it is project oriented.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:114, DRF:115, CAD:231, CAD:233 and CAD:241.

CAD:261 SolidWorks - Basic Modeling 4 cr.

This course will introduce students to the basic parametric modeling concepts using SolidWorks. Coverage will also include customizing the SolidWorks environment, Parametric Equations and Design Tables. Students will follow tutorials in each chapter and will use the skills learned in the tutorials to complete assigned projects at the end of each chapter.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:114 and DRF:115.

CAD:262 SolidWorks - Advanced Modeling 4 cr.

This course will introduce students to the advanced parametric modeling concepts using SolidWorks. Topics will include lofts, sweeps, shelled parts, 2D layouts, vector mechanics, mechanism design and analysis and mold design.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:261.

CAD:263 SolidWorks - Assembly Modeling 4 cr.

This course will introduce students to the Assembly Modeling functionality of SolidWorks. Topics will include basic assembly functionality, sub-assemblies, creating features at the assembly level and exploded assemblies. Assembly Mates will be covered in order to create complex interconnected models.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:262.

CAD:264 SolidWorks - Detailing 4 cr.

This course will introduce students to the Detailing or 2D drawing creation functionality of SolidWorks. Students will use orthographic projection skills previously mastered to create multi-view drawings of 3D part models. Drawings will have full associality with the part models allowing automatic updates from part model to drawing and drawing to part model. Students will also use the SolidWorks drawing functionality to create 2D drawings of assembly models. Exploded assembly views will be created and bill of materials generated from the assembly model.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:263.

CAD:265 SolidWorks - Sheet Metal 4 cr.

This course will introduce students to the Sheet Metal modeling capabilities of SolidWorks. Students will use the knowledge gained from previous courses to create sheet metal parts using the Sheet Metal Module and Sheet Metal Tools. Real life sheet metal terminology will be used to create an environment similar to that of technicians in the sheet metal field.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: CAD:264.

CAD:271 Introduction to GIS 3 cr.

A Geographic Information System (GIS) is a computer-based tool for mapping and analyzing feature events on earth. This course introduces students to the tools and techniques of GIS including applications, components, mapping, topology, data, and data capture.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CAD:272 Cartography 3 cr.

Cartography covers the basic history of mapmaking and the various projections. This course provides a study of GIS applicable cartography including cartographic principles, data acquisition methods used in map production, and methods of base map development. Map projections, map scale, types of thematic maps, and map accuracy will also be covered.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CAD:273 Advanced GIS 3 cr.

A follow-up course to CAD:271 Introduction to GIS which studies advanced topics in spatial modeling, image processing, and GIS project management. Students will learn how to bring all of the pieces of GIS data together for advanced analysis and modeling.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CAD:271.

CAD:274 Remote Sensing 3 cr.

Remote Sensing is the theory and principles involved in the use of satellite imagery and aerial photogrammetry. This course will show students how to use remotely sensed imagery as data sources for GIS systems. Fundamentals of photogrammetry, basic image interpretation, and classification techniques will be covered.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CAD:272.

COMPUTER FORENSICS

CFR:100 Introduction to Computer Forensics 3 cr.

This course is designed to provide the student with a comprehensive understanding of Computer Forensics, Investigation Tools and Techniques. Students will learn how to set up an Investigator's office and Laboratory, as well as examine what computer forensic hardware and software available. Topics covered include procedures for identification, preservation, and extraction of electronic evidence, auditing and investigation of network and host intrusions and forensic tools.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: Advanced class standing and background security check.

COMPUTER NETWORKING

NET:104 IT Essentials I: PC Hardware and Software 4 cr.

This course presents an in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands-on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, an introduction to networking is included. This course helps students prepare for CompTIA's A+ certification.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: RDG:045 and MAT:041 or minimum reading and math scores based on college assessment.

NET:105 Printer Maintenance and Repair   3 cr.

This course will prepare the student to troubleshoot laser, inkjet and dot matrix printer failures, repair or replace the failing units, perform any required adjustments or alignments, and verify proper printer operation. Proper preventive maintenance techniques will also be covered.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: NET:104, NET:107, NET:114 or permission of instructor.

NET:106 IT Essentials II: Network Operating Systems   4 cr.

This is an intensive introduction to multi-user, multitasking networking operating systems. Characteristics of the Linux and Windows network operating systems will be discussed. Students will explore a variety of topics including installation procedures,
security issues, back-up procedures and remote access.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: NET:104.

NET:107 Hardware/Software Installation and Troubleshooting   3 cr.

This course provides students with "hands-on" experience installing PC hardware and software. Online resources and reference manuals will be utilized for troubleshooting hardware and software problems.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: NET:303.

NET:114 Foundations of Information Technology   3 cr.

This course is designed as an introduction to the general uses, concepts, application and implementation of information technology within business and industry. Topics include programming logic, number systems, basic hardware design and software concepts. Some hands-on experience will consist of working with hardware, operating systems and networking.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: RDG:045 and MAT:041 or minimum reading and math scores based on college assessment.

NET:155 Introduction to Wireless Networks   3 cr.

This course provides a hands-on guide to planning, designing, installing and configuring wireless LANs that prepares students for the Certified Wireless Network Administrator (CWNA) certification. The course provides an in-depth coverage of wireless networks with extensive coverage of IEEE 802.11b/a/g/pre-n implementation, design, security, and troubleshooting. The lecture is reinforced with hands-on projects.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ENG:013 and MAT:073or minimum English and math scores based on college assessment and NET:114 or NET:255 or permission of instructor.

NET:214 Cisco Networking   5 cr.

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: ENG:013, RDG:033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

NET:224 Cisco Routers   5 cr.

This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: NET:214.

NET:234 Cisco Switches   5 cr.

This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WWLAN in a small to medium network.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: NET:214.

NET:244 Cisco WAN   5 cr.

This course discusses the WAN technologies and network services required by converged applications in Enterprise Networks. The course uses the Cisco Enterprise Composite model (ECM) to introduce integrated network services and explains how to select the appropriate devices and technologies to meet ECM requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: NET:224 and NET:234.

NET:255 Networking for Home and Small Businesses   5 cr.

This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Instructors are encouraged to provide field trips and outside -the -classroom learning experiences. Labs include PC installation, Internet connectivity, wireless connectivity, file, and print sharing, and the installation of game consoles, scanners, and cameras.
(79.2 Lec. Hrs,/39.6 Lab Hrs.)

COURSE DESCRIPTIONS

NET:256 Working at a Small-to-Medium Business or ISP   5 cr.

This course prepares students for jobs as network technicians. It also helps students develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, web space, and authenticated access. Students also learn about soft skills required for help desk and customer service positions. Network monitoring and basic troubleshooting skills are taught in context. After completing this course the student will be prepared to take the CCENT entry level certification exam.
(79.2 Lec. Hrs,/39.6 Lab Hrs.)
Prerequisite: NET:255.

NET:257 Introducing Routing and Switching in the Enterprise   5 cr.

This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises include configuration, installation, and troubleshooting.
(79.2 Lec. Hrs,/39.6 Lab Hrs.)
Prerequisite: NET:256.

NET:258 Designing and Supporting Computer Networks   5 cr.

Learners progress through a variety of case studies and role-playing exercises, which include gathering requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks. In addition, lifecycle services, including upgrades, competitive analyses, and system integration, are presented in the context of pre-sale support. Upon 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 Installation of CAT 5e and Fiber Optic Cabling   5 cr.

This course is designed to prepare the student to take the CAT 5 and Fiber Cabling Certification tests. The course is broken down into three sections: Copper Connectivity, Fiber Optic Connectivity, and The Equipment Room.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ENG:013 and MAT:073 or minimum English and math placement scores based on college assessment, NET:114 and NET:107; or instructor approval.

NET:300 IP Telephony (VoIP)   3 cr.

This course provides an introduction to converged voice and data networks as well as the challenges faced by its various technologies. The course presents Cisco solutions and implementation considerations to address those challenges. In this course, students will learn about Cisco Call Manager Express (CME) architecture, components, functionality and features. They will also learn some Voice over Internet Protocol (VoIP) and Quality of Service (QoS) technologies and apply them to the CME environment. The focus of the course is: Call Manager Express, connecting to a PSTN network, connecting from one router across a WAN to another router running CME, and connecting from one CME enabled router to another CME enabled router.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032 or 033 or minimum reading placement score based on college assessment, NET:114, NET:303, and NET:244.

NET:303 Windows Workstation Operating Systems   3 cr.

This course prepares the student for supporting and using Windows Operating System Platform in a business setting. Topics of this course include installation, administration of resources, troubleshooting, networking, optimization and security.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 and MAT:073 or minimum reading and math scores based on college assessment.

NET:305 Introduction to Network Operating Systems   3 cr.

This course is designed to give students of varying experience a practical working knowledge of baseline IT skills and technologies, We will cover each of the major operating systems, including DOS, Windows 9x/NT/2000/XP and UNIX/Linux. Topics include: installation, administration of resources, troubleshooting, networking, optimization and security.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

NET:313 Windows Server   3cr.

This course is designed to give students a practical understanding of Windows Servers. Students will learn to plan, install, configure, mange, and troubleshoot windows servers using hands-on labs as well as group and individual projects. Topics covered include installing and configuring the server operating system, setting up hardware, configuring system resources, optimizing system performance, configuring server storage, configuring network connectivity, and implementing server security. This course may be taken more that once provided the server operating system being offered has changed. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: NET:114 and RDG:033/032 or minimum reading scores based on college assessment.

NET:487 Network+ Exam Preparation   1 cr.

The Network+ Test Preparation course will prepare the student to take the Network+ Certification Examination. Through hands-on training, students learn the vendor-independent network skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP client. The course also helps prepare students for two popular certification examinations: ComptTIA Network+ and Microsoft Networking Essentials.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Prerequisite: RDG:032/033 and MAT:073 or minimum reading and math scores based on college assessment.

NET:489 A+ Exam Preparation 1 cr.

The A+ Test Preparation course prepares the student to take the A+ Certification Examination. Topics include: computer architecture, microprocessors, memory, storage, video, modems, printers, LANs (Local Area Networks), device drivers, batch files, hard drives, MS-DOS and Windows Family Operating Systems.
(9.9 Lec. Hrs./19.8 Operating Lab Hrs.)
Prerequisite: RDG:032/033 and MAT:073 or minimum reading and math scores based on college assessment.

NET:612 Fundamentals of Network Security   3 cr.

This course provides the student with an overview of Information Technology (IT) Security and introduces the components necessary to secure network information systems. Topics include security policies, intrusion detection systems (IDS), firewalls, operating system security and network security basics. Students will also be introduced to current hacker techniques and log auditing processes. Current computer security issues will also be explored as class projects.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 or minimum reading scores based on college assessment and NET:214 or NET:258 or permission of instructor.

NET:679 TCP/IP and Subnetting 1cr.

This course is intended to provide the necessary information to understand the TCP/IP protocol Suite as well as IP Addressing and Subnetting. This course includes a discussion on the structure and purpose of an IP Address and the purpose for Subnetting. A thorough discussion on Subnetting Class A, B, & C networks, as well as, Variable Length Subnet Mask (VLSM), and Supernetting (Classless Internet Domain Routing) of multiple Class C Addresses is provided. Finally, an introduction to Internet Protocol Version 6 is provided.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Prerequisite: ENG:013 and MAT:073 or minimum English and math scores based on college assessment.

NET:728 Basic Home Networking   1 cr.

This course covers design, installation, management and troubleshooting of the home networks. This course is designed for electricians and professionals seeking to upgrade their skills, as well as the do-it-yourselfers. We will cover the concepts of building a home network, as well as the variety of networking hardware and cabling options available today. We will also cover configuring Microsoft Windows operating systems, using firewalls and other means of network security, and testing and troubleshooting using standard tools. Clear and concise explanations of network basics, such as mission-critical TCP/IP and NetBEUI protocols, are also covered as well as how information will travel through their network and out across the Internet. Finally, we will cover household appliances and digital phone systems that can be connected to the home network, as well as game systems that allow users to play with others within the network or across the Internet.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Prerequisite: ENG:013 and MAT:073 or minimum English and math placement scores based on college assessment.

NET:785 Fundamentals of Desktop Support   3cr.

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.)
Prerequisite: None.

NET:851 Innovations in Technology   3 cr.

The Information Technology profession demands constant professional updates. This course allows students to explore current trends in the information technology area and participate in other career-path professional development activities.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CSC:110, MAT:110 and NET:303.

NET:910 Cooperative Work Experience   Variable cr

Co-operative Education Experience will integrate classroom theory with on-the-job training. The college will assist a student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. This course may be repeated for up to a maximum of eight credit hours.
(79.2 Co-op Hrs./Cr. Hr.)
Prerequisite: Completion of at least 12 credit hours at a College(s) of EICC with at least two CIS or NET courses.

COMPUTER PROGRAMMING

CIS:121 Introduction to Programming Logic   3 cr.

Introduction to structured programming logic using a variety of methods to solve programming problems. Topics covered include flowcharting, pseudocode, hierarchy charts, truth tables, control breaks, arrays, logic constructs, object-oriented programming.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CIS:138 Introduction to PC Programming   2 cr.

Introduction to PC Programming is designed as a beginning programming course. The C++ language is used to teach the programming concepts of selection, iteration, arrays and classes.
(29.8 Lec. Hrs./19.8 Lab Hrs.)

COURSE DESCRIPTIONS

CIS:140 Introduction to Game Design   3 cr.

This course introduces game design theory, history of gaming, types of games, gaming platforms, major game components, and the gaming industry. Students will participate in designing games and develop prototypes using a variety of software tools.
(39.6 Lec Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:033/032 and MAT:073 or minimum math and reading scores based on college assessment.

CIS:159 Programming with Alice   3 cr.

Using the Alice programming system, students will create and manipulate three-dimensional computerized worlds. This graphic approach to programming will teach basic programming control structures; as well as object-oriented, event-driven programming concepts.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ENG:013 Basic Writing, RDG:033 Intro to College Reading and MAT:041 Basic Math or appropriate scores based on college assessment.

CIS:161 C++   3 cr.

This course is designed to give students a basic understanding of the C++ language. Topics covered include the Visual C++.NET environment, variables, calculations, loop structures, decision structures, pointers, arrays, functions and function templates.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: RDG:033/032 and MAT:073 or minimum math and reading scores based on college assessment.

CIS:164 C++ Advanced   3 cr.

This course is a continuation of C++. Topics covered include: the Visual C++.NET environment, classes, Inheritance, Windows Programming, Foundation Classes, File and Database access.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CIS:161.

CIS:170 Java   2 cr.

Java is a beginning programming course. The course covers Java classes, methods, and objects, decisions, looping, strings and string buffer, arrays, applets and graphics.
(29.8 Lec. Hrs./19.8 Lab Hrs.)

CIS:171 Java   3 cr.

This course provides an introduction to object-oriented programming using the Java programming language. The course covers methods, objects, and classes with the emphasis on modularity and reusable code. Students design programs demonstrating conditionals, iteration, array handling and event processing.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CIS:210.

CIS:210 Web Development I   3 cr.

Students will learn how to evaluate, design, construct and maintain Internet web pages and web sites. Topics include HTML, DTML, graphics, animation and FTP.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 or minimum reading scores based on college assessment.

CIS:211 Web Development II   3cr.

Students will learn how to evaluate, design, construct and maintain interactive Internet Web pages and Web sites using Dynamic Hyper Text Markup Language (DHTML). Topics include: JavaScript, server-side and client-side programs, variables, arrays, control structures, form validation, object properties, methods and event handlers, multimedia via Java applets and ColdFusion.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CIS:210.

CIS:251 Fundamentals of Web Design I   3 cr.

This course will focus on the overall production processes surrounding web site design with particular emphasis on design elements involving layout, navigation and interactivity.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CIS:210.

CIS:274 E-Commerce Design   3cr.

This course explores how the landscape of online commerce is changing and evolving. With balanced coverage of both the technological and the strategic aspects of successful e-commerce, students are able to tackle the real-world business cases included in each chapter. Reflecting changes in the economy and how businesses are responding, this course emphasizes revenue and transaction cost reduction models as an alternative to the older ideas of business

models. Topics covered include Technology Infrastructure: The Internet and the World Wide Web; Selling on the Web: Revenue Models and Building a Web Presence; Marketing on the Web; Business-to-Business Strategies: From Electronic Data Interchange to Electronic Commerce; and The Environment of Electronic Commerce: Legal, Ethical, and Tax Issues.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CIS:307 Introduction to Databases   3 cr.

This course provides the student with an overview of database management systems. The student will learn about database fundamentals, database modeling, Structured Query Language (SQL), database administration and current issues. Through hands-on exercises, students will develop databases on different platforms.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RDG:032/033 or minimum reading scores based on college assessment.

CIS:388 Creative Writing for Games   3 cr.

This course focuses on the specific aspect of writing for game development. Topics in this course include: techniques for brainstorming, storyboarding, storytelling principles, plot development, conflict, character development and dialog.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

CIS:402 COBOL   3 cr.

Introductory concepts of COBOL, the Common Business Oriented Language, will be presented in this course. Business problems will be solved using the structured approach to COBOL. Good style and design characteristics will be emphasized. This course will cover the basics of logic design, basic COBOL syntax, common COBOL verbs, arithmetic operations, report editing, techniques for comparing, and programming multiple levels of control for report formats.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite/Co-requisite: CIS:121, RDG:032/033 and MAT:073 or minimum math and reading placement scores based on college assessment.

CIS:504 Systems Structural Analysis   3 cr.

This course provides a broad yet specific treatment of the makeup, analysis, design and implementation of systems projects with emphasis on learning how to analyze existing systems applications and design better ones for computer processing. Object-oriented design techniques are discussed and good communication skills will be emphasized.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: At least two semesters of a programming language.

CIS:606 Visual Basic NET I   3 cr.

This hands-on course covers essential aspects of Visual Basic for Windows. Students will design applications; understand controls and properties; user variables, functions, and expressions; use statements and methods; use arrays; design menus; and access files.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: NET:303 is strongly recommended.

CIS:607 Visual Basic NET II   3 cr.

This course is a continuation of Visual Basic NET I. Topics covered in this course include using masks and data validation, advanced controls, error handling, reporting, advanced file handling and packaging and distribution of completed applications.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CIS:606.

CIS:608 Visual Basic III   3 cr.

Students continue to study advanced Visual Basic topics including class modules, multi-tier database applications, web forms and web services..
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CIS:607.

CIS:704 UNIX / Linux   3 cr.

This course is designed to give students a basic understanding of the UNIX operating system, commands, the word systems duties and system administrative duties required when using a UNIX-based system.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: NET:114 and NET:303.

CIS:710 Flash Game Development   3 cr.

Students will apply basic game design elements to create Flash-based games in this hands-on course.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: CIS:140 is recommended.
Co-requisite: CIS:161.

CIS:949 IT Special Topics   1 cr.

Courses of instruction involving material of timely, special or unusual interest not contained in the regular course offerings. These courses may be offered by faculty members with the approval of their Department Chair and the Dean of the College. These may be courses exploring areas of special interest to the proposing faculty member, department or to the students. This course may be repeated for additional credit.
(19.8 Lec. Hrs.)

COMPUTER SCIENCE

CSC:110 Introduction to Computers   3 cr.

An introduction to computers including database, word processing and spreadsheet applications. This is a beginning course designed primarily to develop computer skills and will include student computer projects.
This course satisfies a general education requirement for Computer Literacy.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

CSC:112 and CSC:113 Computer Fundamentals for Technicians I/A and I/B   2 cr. each

This course will cover microcomputer operating systems, hardware and application software. Spreadsheets, database management, word processing, graphs and operating Windows environment, Internet searches and power point presentations. Lab exercises will follow lecture and class discussion.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: CSC:112 - None. CSC:113 - CSC:112.

CONSERVATION

CNS:105 Conservation   2 cr.

A study of the historical and biological basis for the conservation of natural resources with an emphasis on biodiversity and a survey of current problems and issues.
(39.6 Lec. Hrs.)

CNS:131 Wildlife Habitat Management   2 cr.

Study of managing communities which provide habitat for wildlife. Primary emphasis is placed on manipulating vegetation to increase wildlife population.
(39.6 Lec. Hrs.)

CNS:132 Wildlife Management 2 cr.

Study of the application of wildlife, management techniques, censusing, capture and marking of wildlife, habitat evaluation, Iowa gaming laws, life history studies and the application of wildlife management principles related to important recreational resources.
(39.6 Lec. Hrs.)
Prerequisite: BIO:114 and BIO:133.

CNS:137 Fisheries Management   2 cr.

Study of the application of fish management principles. Topics include fish identification, population estimation techniques, age and growth studies, watershed evaluation and management, fish life history features and fish hatchery procedures.
(39.6 Lec. Hrs.)
Recommended: BIO:114 and BIO:133.

CNS:150 Conservation Occupations   1 cr.

Orientation to the careers/carrer opportunities in conservation and ecology.
(19.8 Lec. Hrs.)

CNS:901 Wilderness Experience   2 cr.

Provides the student with a living laboratory experience in a natural wilderness area to study biology, ecology, geology and related environmental conservation problems. The student will develop an appreciation of the wilderness environment and some basic skills of canoeing, water safety, camping, fishing, wilderness survival, map reading and the use of a compass. Additional fee will be charged.
(79.2 Lab. Hrs.)

COURSE DESCRIPTIONS

CNS:930 Employment Experience 1-4 cr.

Provides on-the-job training in the student's chosen area.
(79.2-316.8 Co-op. Hrs.)

CONSTRUCTION

CON:170 Building Construction Techniques I 6 cr.

Building Construction Technique I provides practical application of selected construction techniques. Students learn construction techniques in preparation of flat concrete work as well as fundamentals of block laying and brick laying techniques as they relate to basic construction. OSHA training, plumbing, framing, HVAC, roof sheathing and shingling will also be learned techniques.
(38.4 Lec. Hrs./ 230.4 Lab Hrs.)

CON:171 Building Construction Techniques II 6 cr.

Building Construction Techniques II provides practical application of selected construction techniques. Students learn construction techniques in floor, wall and ceiling systems, stair construction and interior finishing skills.
(38.4 Lec. Hrs./ 230.4 Lab Hrs.)
Prerequisite: CON:170.

CON:175 Residential Construction Applications 6 cr.

Students will apply advanced construction procedures on decks, walls, roofs, stairwells, and related structures. Durable design and application of proven methods will be emphasized, with the goal of building a house. The course relates to sustainable building practices.
(39.6 Lec. Hrs./79.2 Lab Hrs.)

CRIMINAL JUSTICE

CRJ:100 Introduction to Criminal Justice 3 cr.

An introduction to the criminal justice system: police, courts, corrections, the role of the criminal justice system in society and recommendations for reform. Discussion will include career opportunities.
(59.4 Lec. Hrs.)

CRJ:118 Law Enforcement 3 cr.

A survey course about the historical development of law enforcement, the functions of local, state and federal law enforcement agencies, police subculture, the function of patrol and other issues important to the field of policing. The use of police authority, police discretion, police violence and police corruption will be introduced.
(59.4 Lec. Hrs.)

CRJ:120 Introduction to Corrections 3 cr.

The development of corrections, the correctional process, correctional client, alternatives to incarceration, effects of institutionalization, correctional administration and future of corrections.
(59.4 Lec. Hrs.)

CRJ:130 Criminal Law I 3 cr.

A study of the substantive criminal law, its historical background and development, and the basic elements of criminal law, including criminal intent and criminal capacity.
(59.4 Lec. Hrs.)

CRJ:141 Criminal Investigation 3 cr.

An introduction to the art of criminal investigation and case preparation. Topics include interrogation, gathering of information and evidence, informants, homicide investigation, fingerprinting and other selected evidence.
(59.4 Lec. Hrs.)

CRJ:142 Criminalistics 3 cr.

Fundamentals of investigation, crime scene search and recording, collection and preservation of physical evidence, scientific aids, modus operandi, sources of information, interviews and interrogation, follow-up and case preparation.
(59.4 Lec. Hrs.)

CRJ:200 Criminology 3 cr.

The study of human behavior and crime, the development of corrections and criminology with sociological and cultural approaches to crime and the career criminal.
Same as SOC:240.
(59.4 Lec. Hrs.)

CRJ:201 Juvenile Delinquency 3 cr.

Introduces the causes of delinquency and the modification of such behavior by corrective institutions and individual therapy. Emphasis is placed on the study of the development of individual personality through inter-family relationships, antisocial aggressive acts from early abnormal family and social situations.
Same as SOC:230.
(59.4 Lec. Hrs.)

CRJ:208 Introduction to Private Security 3 cr.

This course considers the history, principles and management of private security, procedural security, personal protection, fire prevention and the prevention of losses due to natural and man-made disasters as applied in industrial, retail and institutional settings.
(59.4 Lec. Hrs.)

CRJ:209 Vice and Drug Control 3 cr.

This course will deal with the history and causes of drug abuse, gambling and prostitution. Additionally, the course will show how to plan the raid, deal with the intelligence function and investigate each of the above mentioned crimes. We will deal with preventive programs by law enforcement and also with employee assistance programs in the business community.
(59.4 Lec. Hrs.)

CRJ:230 Evidence 3 cr.

This course traces the nature and development of evidence law and its role in the criminal justice system. The student will be introduced to concepts such as direct and circumstantial evidence, relevancy, hearsay, character evidence and the various privileges that exist in evidence law. In addition, the student will learn how to present evidence in a courtroom both from a lawyer's examination and a witness' testimony.
(59.4 Lec. Hrs.)

CRJ:295 Contemporary Issues in Criminal Justice 3 cr.

Devoted to exploration and analysis of contemporary issues in criminal justice. Class discussions, lectures and reading in conjunction with an individual research paper. Guest speakers and field trips when appropriate.
(59.4 Lec. Hrs.)
Prerequisite: CRJ:200.

CRJ:928 Independent Study in Criminal Justice   3 cr.

Provides the student with an opportunity to explore an area(s) of individual interest within the criminal justice system. Individual readings and research paper required. This course may be repeated twice for additional credits. (118.8 Lab Hrs.)
Prerequisite: Minimum of 6 credits in Criminal Justice.

CRJ:941 Practicum in Criminal Justice   3 cr.

This course will provide practical experience in an area of criminal justice. This may include law enforcement, corrections, courts, juvenile justice, juvenile delinquency, juvenile corrections or some other substantive area of criminal justice. A term paper or research paper may be a requirement of the course.   May be repeated for up to 6 hours credit. (237.6 Field/Clinical Hrs.)
Prerequisite: Permission of instructor.

CULTURAL STUDIES

CLS:121 Studies in Non- Western Culture   3 cr.

This course is an interdisciplinary humanities course that will introduce students to selected regions and countries of the designated region. Emphases will be placed on cultural, historical and geographical perspectives and the arts, issues and events that help to define and shape that part of the world. This course may be repeated twice for additional credits.
(59.4 Lec. Hrs.)

CLS:150 Latin American History and Culture   3 cr.

This course is designed to introduce Latin America- a region encompassing Mexico, Central America, South America, and the Caribbean. Emphasizing Latin American geography, history, culture, and politics, the course explores the links between the region's complex past and present circumstances. Emphasis is placed on how Latin Americans view themselves and how their history and culture differ from those of the United States and Europe.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment. Prior courses in history and literature (high school or above) strongly recommended.

DENTAL ASSISTING

DEA:201 Head & Neck Anatomy   1 cr.

This course will include the basic study of structure and functions of the human body. Emphasis will be placed on head and neck anatomy.
(19.8 Lec. Hrs.)
Co-requisite: DEA:257.

DEA:211 Nutrition for Dental Assisting   1 cr.

This course is designed to give the student an overview of basic nutrition and its role in dentistry.
(19.8 Lec. Hrs.)

DEA:257 Dental Anatomy   3 cr.

This course introduces histology, embryology and gross anatomy of the deciduous and permanent teeth. This also includes the structure, function, and form of individual teeth and supportive tissue.
(59.4 Lec. Hrs.)
Co-requisite: DEA:201

DEA:268 Pharmacy and Emergency Procedures for Dental Assisting   2 cr.

This course is a study of the nature, action and uses of drugs seen in a dental setting. The student also will learn how to respond to the various emergencies that may occur in a dental office.
(39.6 Lec. Hrs.)

DEA:293 Microbiology and Infection Control   2 cr.

This course will acquaint the dental assisting student with a general knowledge of microbiology. Students will be presented the infection control procedures and protection protocols based on OSHA standards and CDC guidelines.
(39.6 Lec. Hrs.)
Background in biology is recommended.

DEA:311 Dental Radiography I   2 cr.

This course covers the history and theory of dental radiology. It includes radiation productions, equipment, exposure techniques, processing, mounting films and radiation safety for the patient and the dental assistant. The student   receives practical experience working with dental mannequins.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: DEA:201, DEA:293, DEA:406, DEA:504 and DEA:257.

DEA:321 Dental Radiography II   2 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 on mannequins and patients.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: All first semester Dental Assisting courses.
Co-requisites: DEA:211, DEA:268, DEA:604, DEA:592 and DEA:570.

DEA:406 Dental Materials   5 cr.

This course provides the student with the basic understanding of dental materials and the practical application of laboratory skills used in dentistry.
(79.2 Lec. Hrs./59.4 Lab Hrs.)
Co-requisites: DEA:504, DEA:293, DEA:201, DEA:311 and DEA:257.

COURSE DESCRIPTIONS

DEA:504 Principles of Dental Assisting   5 cr.

This course provides the fundamentals and skills of four-handed dentistry; chairside assisting procedures, instrumentation and patient care by lecture and laboratory experiences.
(59.4 Lec. Hrs./79.2 Lab Hrs.)
Co-requisites: DEA:293, DEA:406, DEA:201, DEA:311 and DEA:257.

DEA:570 Dental Assisting Clinic   5 cr.

This course provides the dental assisting student with experiences in chairside assisting, laboratory procedures and reception duties in various general and specialty dental offices.
(396.0 Clinical Hrs.)
Prerequisites: All first semester Dental Assisting courses.
Co-requisites: DEA:321, DEA:211, DEA:268, DEA:604, DEA:702, and DEA:592.

DEA:592 Seminar for Dental Assisting   1 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.
(19.8 Lec. Hrs.)
Prerequisites: All first semester Dental Assisting courses.
Co-requisites: DEA:321, DEA:211, DEA:268, DEA:604, DEA:702, and DEA:570.

DEA:604 Dental Specialties   3 cr.

This course will introduce the student to the specialty areas of dentistry which include endodontics, oral surgery, orthodontics, periodontics, prosthodontics, oral pathology, public health and pediatric dentistry. It will include instrumentation, procedures and the dental assistant's role in each specialty.
(59.4 Lec. Hrs.)
Prerequisites: All first semester Dental Assisting courses.
Co-requisites: DEA:321, DEA:211, DEA:268, DEA:702, DEA:570, and DEA:592.

DEA:702 Dental Office Procedures   2 cr.

Emphasizes procedures for office management in dental practices. Topics include: oral and written communication, appointment control, recall systems, resumes, supply inventory, records management, dental insurance preparation, financial arrangements, patient accounts, credit and collection, banking, salaries, tax forms, patient correspondence, legal and ethical conduct, and basic computer skills. A computer lab provides basic skills in computer use and utilization of the dental office software to perform office procedures.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: DEA:257

DEA:810 RDA Expanded Functions I   2 cr.

This course is designed to provide 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: 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 preliminary written assessment at 75% competency.

DEA:820 RDA Expanded Functions II   1 cr.

This course is designed to provide theoretical concepts and skills to expand the dental assistant's scope of practice to include applying cavity liners, bases, desensitizing agents, and bonding systems placement of periodontal dressing and testing pulp vitality.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: Student must be certified by the Dental Assistant National Board or have two years of documented clinical Iowa registered dental assisting experience and complete a preliminary written assessment at 75% competency.

DEA:830 RDA Nitrous Oxide Monitoring   1 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: 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 preliminary written assessment at 75% competency.

DIESEL TECHNOLOGY

DSL:103 Survey of Diesel Technology   1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the diesel technology repair field. Diesel engine repair and maintenance, as well as automatic transmission operation and service will be discussed and practiced.
(59.4 Lab. Hrs.)
Co-requisite: AUT:115

DSL:151 Truck Electrical Systems   2 cr.

This course deals specifically with truck electrical systems. Students will gain the knowledge and competencies needed to diagnose, and repair electrical systems and accessory circuits on today's trucks.
(19.8 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: AUT:115 and AUT:614.

DSL:201 Basic Gas Engine Performance   2 cr.

This course is designed as a basic gasoline engine systems course for diesel technology students. Theory and operation of ignition, fuel injection and emission control systems will be taught. Lab time will be used to learn the use of diagnostic equipment in troubleshooting and repair of ignition, fuel and emission control systems.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

DSL:340 Diesel Engine Repair 5 cr.

Acquaints the student with the modern diesel engine used in transportation and automotive industries. The course is divided into five sections. In each section, operation, overhaul and adjustments will be thoroughly covered for the diesel engine used in the transportation and the automotive diesel engine industry. Labs correlate with lectures to provide the student with practical hands-on experience.
(39.6 Lec. Hrs./178.2 Lab Hrs.)
Prerequisites: AUT:115 and AUT:164.

DSL:435 Diesel Fuel Systems I   3 cr.

This course acquaints the student with diesel fuel characteristics, fuel subsystems, overview of diesel fuel injection basics, and injector nozzles.
(59.4 Lec. Hrs.)
Prerequisites: AUT:115 and DSL:603.

DSL:437 Diesel Fuel Systems II

This course acquaints the student with operation testing and adjustments required to troubleshoot and repair diesel fuel systems. The course is broken down into different modules and includes: (A) Caterpillar Mechanical and Electronic Fuel Systems (B) Detroit Diesel Mechanical and Electronic Fuel System; (C) Cummins Manual Electronic Fuel Systems; (D) Roosa Mechanical Fuel Pumps (E) Robert Bosch VE Fuel Pumps (F) Mack and Volvo Fuel Systems (G) Common Rail and (H) Emissions.
(59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: DSL:435.

DSL:505 Heavy Duty Drive Train I   3 cr.

This course covers the theory and operation of heavy duty drive trains. Students will gain competencies in removal, installation and repair of clutches, heavy duty manual transmissions, power dividers, drive shafts and differential. Safety procedures will be stressed as well as basic maintenance and adjustment procedures.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: AUT:115 and MAT:104.

DSL:507 Heavy Duty Drive Train II   3 cr.

This course covers the theory of drive trains and axles. Students will gain competencies in removal, installation, repair and adjustment of drive shafts, power dividers, differential and axles. Safety procedures will be stressed as well as basic maintenance and adjustment procedures.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: DSL:505.

DSL:519 Automatic Drive Train   4 cr.

This course acquaints the student with the major components and operation of automatic transmissions. This course includes the functions and operation of truck transmissions, the functions and operations of the hydraulic system, lock-up type torque converter, and disassemble, rebuild and assembly procedures. Labs correlate with lectures to provide the student with practical hands-on experiences.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: AUT:115.

DSL:603 Hydraulics   2 cr.

This course will acquaint the student with basic hydraulic operation, pumps and cylinder controls. This course will acquaint the student with troubleshooting of hydraulic systems.
(19.8 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: MAT:104.

DSL:625 Heavy Duty Alignment   3 cr.

This course goes into the theory and procedures of front and rear alignment. It will include automotive through heavy duty applications. Lab time will be on testing and setting according to service procedures. Also included will be basic truck driving to provide students experience in moving trucks and trailers into the shop area.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: AUT:115.

DSL:629 Heavy Duty Brakes and Service   3 cr.

Acquaints the student with the principles of diagnosing and repairing truck brake systems. Included will be a study of hydraulic brake systems, air brake systems, brake components/brake adjustments as they pertain to heavy duty brake systems and preventative maintenance on brake systems as per NATEF. Labs correlate with lectures to provide the student with practical hands-on experience.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: AUT:115.

DSL:710 Heating, Air Conditioning and Refrigeration   4 cr.

This course is designed for the student to gain a basic understanding and working knowledge of truck and automobile heating and air conditioning systems as well as trailer refrigeration units. Students will gain entry-level competencies in the diagnosis and repair of common problems in these systems.
(59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite or Co-requisite: AUT:115.

DSL:815 Preventive Maintenance   1 cr.

Students will learn how to perform prevention maintenance (P.M.) inspection of the cab, electric and frame, and trailers.
(9.9 Lec. Hrs./29.7 Lab Hrs.)
Prerequisite: AUT:115 and AUT:614.

DSL:836 Basic Driving Techniques   3 cr.

Designed for Diesel students who want to learn the basic elements of tractor-trailer driving. Students who successfully complete this course will earn a CDL license.
(19.8 Lec. Hrs./118.8 Lab Hrs.)
Prerequisite: DOT physical exam, drug test and instructor approval. Must have current valid driver's license. This course is for graduated Diesel Tech students only. Instructor's signature required for registration.

COURSE DESCRIPTIONS

DSL:905 Cooperative Experience   2 cr.

Co-operative Education Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled oncampus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area.
(158.4 Co-op. Hrs.)
Prerequisite: Consent of instructor.

DRAFTING

DRF:114 Basic Drafting I/A   2.5 cr.

The first of a two course sequence covering the fundamentals and foundations of drafting and mechanical drawing. This course will develop student skills in the areas of lettering and sketching techniques as well as the use of drafting instruments. Major units of instruction will include: lettering; instrument drawing; geometric constructions; sketching; and multiview projections.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

DRF:115 Basic Drafting I/B   2.5 cr.

The second of a two course sequence covering the fundamentals and foundations of drafting and mechanical drawing. This course will develop student skills in the areas of lettering and sketching techniques as well as the use of drafting instruments. Major units of instruction will include: sectional views; auxiliary views; and dimensioning.
(19.8 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: DRF:114.

DRF:130 Industrial Drafting Applications I   3.5 cr.

The first of a two course sequence covering advanced applied industrial drafting topics. Students will get hands-on experience over the topics covered in this course during practical exercises. Major units of instruction will include: threads and fasteners; isometric drawing; welding representation; and intersections and developments.
(29.7 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:115.

DRF:135 Industrial Drafting Applications II   3.5 cr.

The second of a two course sequence covering advanced applied industrial drafting topics. Students will get hands-on experience over the topics covered in this course through practical exercises. Major units of instruction will include advanced dimensioning; tolerancing; and working drawings.
(29.7 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: DRF:130.

DRF:148 Project Design I   1.5 cr.

The first of a two course sequence which provides students insight into the design process. Students will be required to complete a set of two assigned projects during the course of the class.
(19.8 Lec. Hrs./19.8 Lab Hrs)
Prerequisite: EGT:162 and CAD:231 or CAD:261.

DRF:149 Project Design II   1.5 cr.

The second of a two course sequence which provides students insight into the design process. Students will be required to complete a set of two assigned projects during the course of the class.
(19.8 Lec. Hrs./19.8 Lab)
Prerequisite: EGT:162 and CAD:231 or CAD:261.

DRF:161 Applied Descriptive Geometry I   3 cr.

The fundamental concepts of descriptive geometry through an emphasis on logical reasoning, visualization and practical applications. Special emphasis will be placed on applying descriptive geometry to various engineering disciplines so students can see the value of the course as they apply the tools and techniques learned to practical problems.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

DRAMA

DRA:101 Introduction to Theatre   3 cr.

A survey of the elements of the theatre. The course covers units on audience/performer relationships, dramatic forms, dramatic literature, history of the theatre, dramatic theory and criticism, and technical theatre.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)

DRA:110 Introduction to Film   3 cr.

Designed to introduce the student to the history, evolution, philosophic, artistic and economic aspects of motion pictures and the filmmaking industry. Students will have the opportunity to examine the various genres of the movie industry - drama, film noir, western, fantasy, documentary, romantic comedy, horror, musicals, silent films, etc. Utilizing film excerpts and entire movies as tools, students will hone skills in film analysis, beginning with recognition. *This course satisfies a general education requirement in the Arts and Humanities or Fine Arts area, but not both.*
(59.4 Lec. Hrs.)

DRA:130 Acting I   3 cr.

A fundamental course in the physical, vocal and imaginative techniques in the art of acting. Final project will be performance of a scene in a recital.
(59.4 Lec. Hrs.)

DRA:131/132 Acting II   2-3 cr.

A continuation of DRA:130, exploring the techniques in the art of acting with special emphasis on movement and dramatic interpretation. (39.6-59.4 Lec. Hrs.)
Prerequisite: DRA:130 or permission of instructor.

DRA:136/137 Rehearsal and Performance   1-2 cr.

Preparation for participation in a major play production. Late registration permitted. May be repeated up to a total of four hours of credit.
(39.6-79.2 Lab Hrs.)
Prerequisite: Permission of instructor.

DRA:172/173 Technical Theatre Lab   1-2 cr.

Practical experience in all aspects of technical theatre while working on college productions. May be repeated for up to eight credits.
(39.6-79.2 Lab Hrs.)

DRA:237 Acting Lessons   1 cr.

Concentrated private coaching for the advanced acting student to strengthen and broaden skills as an all-around performer. May be repeated for up to three credits.
(19.8 Lec. Hrs.)

DRA:250 Directing   3 cr.

Designed to assist the student with practical experience in analyzing the audiences to be reached, planning the season and preparing the play. Class projects include directing experience and the preparation of production books.
(59.4 Lec. Hrs.)

EARLY CHILDHOOD EDUCATION

ECE:103 Introduction to Early Childhood Education   3 cr.

Gives students a historical and philosophical foundation of the field of early childhood education. Includes an overview of assessment and trends that influence best practices. Explores careers in the field. Addresses influences of families and diversity.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013, RDG:032/033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:133 Child Health, Safety and Nutrition   3 cr.

Focuses on current concepts in the field of health, safety and nutrition and their relationship to the growth and development of the young child ages birth to eight years. Blends current theory with practical applications and assessments. Includes the influences of families and diversity on health, safety and nutrition in early childhood settings.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013, RDG:032/033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:158 Early Childhood Curriculum I   3 cr.

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages 3-8. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: dramatic play, art, music, fine and gross motor play.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013, RDG:032/033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:159 Early Childhood Curriculum II   3 cr.

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages 3-8. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: math, science, technology, language arts and social studies.
(59.4 Lec. Hrs.)
Prerequisites: ECE:158

ECE:168 Science and Math Activities for Young Children   3 cr.

This course is designed for students in early childhood teacher training. Curriculum is presented in a developmental sequence designed to support young children's construction of the concepts and skills essential to a basic understanding of math and science.
(59.4 Lec. Hrs.)
Prerequisite: ECE:103, ECE:158, and ECE:159.

ECE:169 Art and Music Activities for Young Children   3 cr.

This course is designed to introduce students to a variety of media suitable for use with the young child. Emphasis will be placed on personal involvement in creative activities including creative movement, music, art and games that can be used with an integrated curriculum approach.
(59.4 Lec. Hrs.)
Prerequisites: ECE:243, ECE:158 and ECE:159.

ECE:170 Child Growth and Development   3 cr.

Reviews typical and atypical development of children from conception to adolescence in all developmental domains. Presents interactions between child, family and society within a variety of community and cultural contexts. Examines theories associated with understanding children.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013, RDG:033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:193 Dynamics of the Family   3 cr.

Explores the critical relationship of family members to one another and of the Child Care Associate to members of the family. Multicultural relationships will be explored as well as an introduction to the changing role and structure in modern society.
(59.4 Lec. Hrs.)
Prerequisite: ECE:103, ENG:013, RDG:033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:221 Infant/Toddler Care and Education   3 cr.

Focuses on care, education and assessment of children from birth to thirty-six months. Prepares students to utilize developmentally appropriate practices including responsive caregiving, routines as curriculum, importance of relationships with diverse families, and a focus on the whole child in inclusionary settings.
(59.4 Lec. Hrs.)
Prerequisite: ECE:103, ECE:133, and ECE:193.

COURSE DESCRIPTIONS

ECE:243 Early Childhood Guidance   3 cr.

Focuses on effective approaches and positive guidance strategies for supporting the development of all children. Emphasizes supportive interactions and developmentally appropriate environments. Development of self-control in children is stressed.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013, RDG:033 and MAT:041 or minimum English, reading and math placement scores based on college assessment.

ECE:290 Early Childhood Education Program Administration   3 cr.

Basic principles involved in setting up and administering an early childhood program. Emphasis placed on funding, enrollment procedures, curriculum planning, staff and parent relationships, problem solving and record keeping. State of Iowa day care center licensing standards and regulations are reviewed.
(59.4 Lec. Hrs.)
Prerequisites: ECE:158 and ECE:159.

ECE:920 Field Experience/ ECE   1 - 3 cr.

Supervised experience in selected early childhood settings serving children ages birth-eight. Includes integration of theory, research and reflective practices. Provides an understanding of developmentally appropriate practices and the developmental stages of diverse populations of young children and their families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning and program routines.
This course may be repeated up to three times for a total of six credits.
(0 - 19.8 Lec. Hrs./79.20-237.6 Coop Hrs.)
Prerequisite: ART:163.

ECONOMICS

ECN:110 Introduction to Economics   3 cr.

A one-semester presentation of the basic economic problem of scarcity. The course is a survey of micro-economics dealing with market behavior and macro-economics dealing with government stabilization policies in the U.S. International trade issues are included. (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 cr.

Discusses issues confronting society as a result of economic scarcity. 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 the importance of international trade for U.S. well-being.
This course satisfies a general education requirement in the Social Sciences Area.
(59.4 Lec. Hrs.)
Prerequisite: RDG:032/033 and MAT:041 or minimum reading and math scores based on college assessment.

ECN:130 Principles of Microeconomics   3 cr.

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, production cost and output in the short and long term, and the pricing and employment of resources. The impact of international trade on the above topics may also be discussed (instructor discretion).
This course satisfies a general education requirement in the Social Sciences Area.
(59.4 Lec. Hrs.)
Prerequisite: RDG:032/033 and MAT:041 or minimum reading and math scores based on college assessment.

ECN:943 Readings in Economics   1-2 cr.

Designed to provide additional readings in economics, allowing the student to obtain a greater understanding of the various problem areas of this discipline. This course may be repeated twice for additional credits.
(39.6-79.2 Lab Hrs.)
Prerequisite: ECN:120 or ECN:130.

EDUCATION

EDU:110 Exploring Teaching   3 cr.

Designed to provide guided observation and teacher-aide services in school classrooms. Emphasis is placed on the education theory taught in other teacher-training subjects. Local school systems provide a learning experience to the education/teaching student. Students qualifying for the program will be assigned to selected elementary and secondary schools for practical classroom experience.
(19.8 Lec. Hrs./84 Lab Hrs.)
Co-requisite: EDU:212 or instructor permission.

EDU:125 Making a Difference   3 cr.

The emphasis of this course is introducing the student to the careers related to education, particularly teacher and paraeducator as professionals. The course includes: human and legal rights of children with disabilities; introduction to human development; introduction to the classroom instruction process; discussion of instructional interventions as well as teaching strategies; and health and safety procedures in the classroom.
(59.4 Lec. Hrs.)

EDU:212 Educational Foundations 3 cr.

Study of the structure of American education, what is required for proper schooling and consideration of the role of the teacher. A broad foundation prepares the student for making career choices in school level and subject field.
(59.4 Lec. Hrs.)

EDU:220 Human Relations for the Classroom Teacher   3 cr.

Includes interpersonal and intergroup relations and contributes to the development of sensitivity to and understanding of the values, beliefs, life styles, and attitudes of individuals and the diverse groups found in a pluralistic society. The course is designed to emphasize development of one's self-concept, review and development of one's values and attitudes toward ethnic groups of our society, and involvement of class members in activities designed to improve communication and intergroup relations.
(59.4 Lec. Hrs.)

EDU:245 Exceptional Learner   3 cr.

An introductory course designed to provide the student with an overview of the field of special education and the policies and programs established for the education of exceptional students. It includes an analysis of the nature, incidence and characteristics of the physically and mentally handicapped, the behavior disordered, the talented and gifted and the learning disabled.
(59.4 Lec. Hrs.)

EDU:255 Technology in the Classroom 3 cr.

Technology in the Classroom introduces prospective teacher-prep candidates and other interested students to a variety of digital tools and Internet resources along with best practices in the use of tools and technologies for classroom related functions and issues.
(39.6 Lec Hrs./39.6 Lab Hrs.)

ELECTRICAL TECHNOLOGY

ELE:101 Industrial Safety   1 cr.

This is a course covering industrial safety. Materials presented cover aspects of safety in the work place such as mechanical, chemical, environmental and electrical topics. The roll of OSHA in the work place is covered along with forms such as Material Safety Data Sheets and the use of Personal Protective Equipment.
(9.9 Lec. Hrs/19.8 Lab. Hrs.)

ELE:115 Basic Electricity I   2 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.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Corequisite: ELE:124

ELE:116 Blueprint Reading   1 cr.

This course is an introduction to reading and interpreting mechanical, electrical, electronic, electromechanical, hydraulic and welding prints. Symbols, drawings and prints in each one of these categories are presented.
(9.9 Lec. Hrs./19.8 Lab Hrs.)

ELE:124 Tools/Adapters/ Instrumentation   2 cr.

This course covers the safe use and care of hand tools, conduit bending and soldering, use of analog and digital meters and oscilloscopes. High voltage testing of industrial devices is also presented.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: ELE:101, ELE:115 and ELE:131.

ELE:127 Troubleshooting   1 cr.

This is a modular course that covers troubleshooting concepts in electrical, electronic, mechanical and electromechanical systems.
(9.9 Lec. Hrs./19.8 Lab Hrs.)

ELE:128 Electrical Systems I   3 cr.

This course covers the concepts of three-phase systems, reading of electrical motor control diagrams, operation and maintenance of three-phase motors and motor controls. Use of instruments for troubleshooting is included in lab exercises.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: ELE:101, ELE:124, ELE:115 or their equivalents.

ELE:129 Electrical Systems II   3 cr.

This course presents principles of industrial programmable controllers. Concepts of logic, timing, counting and program control are presented. Also material covering PLC hardware, programming devices, memory and wiring are also included.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: ELE:115 or instructor permission.

ELE:131 Basic Electricity II   2 cr.

This course presents alternating current symbols and terminology, single phase power concepts, testing and measurement, capacitive and inductive loads, filters, DC motors and generators, single phase AC motors. Phase angle calculations and measurements are covered as well.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ELE:115.
Corequisite: ELE:124

ELE:133 Electrical Systems III 3 cr.

This course teaches applications of industrial electronics and programmable logic controllers used to control manufacturing processes. Students perform labs on sequential logic and both open and closed loop process control systems. Interfacing and troubleshooting of electronic sensing devices and control systems is included.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: ELE:101, ELE:124 and ELE:129.

ELE:134 Electrical System Controls   3 cr.

This course presents the principles of microprocessor-based 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.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: ELE:103 or equivalent.

ELE:139 Electrical Systems Analysis   3 cr.

This course focuses on analysis of installation, safe operation and maintenance of electrical systems. Rules and guidelines governing installation and operation of systems such as the National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA) are presented where they are relevant to electrical systems. Total Productive Maintenance (TPM) is also covered to include maintenance of electrically operated machines and systems.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: ELE:101, ELE:124 and ELE:129.

COURSE DESCRIPTIONS

ELE:141 DC & AC Circuits   4 cr.

Study of resistive circuits with DC and AC sources, emphasizing theorems and important methods of solution, followed by a study of reactive circuits. In the lab the principles learned in DC & AC circuits are applied. Proper lab procedure and the use of test instruments are taught.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Co-requisites: MAT:743.

ELE:144 Basic Electronics 1A   1.5 cr.

This course is the first course of a two course study of basic electronics and covers semiconductor devices, diodes, transistors, operational amplifiers and power supplies.
Prerequisites: ELE:115 and ELE:124.

ELE:145 Basic Electronics 1B   1.5 cr.

This course is the second of a two course study of basic electronics and covers logic concepts, digital devices, gates, flip/flops, timer integrated circuits, counters, decoders and multiplexers. An introduction to microcomputer ICs is included.
(19.8 Lec. Hrs./19.8 Lab Hrs.)
Prerequisites: ELE:115 and ELE:124.

ELE:169 Power Distribution   4 cr.

In industry today, maximum productivity is crucial for success. Advances in automated systems demand trained technicians for a high performance work environment. From documenting power quality problems to power quality troubleshooting tasks, test tool skills are a must for the up to date technician. This class covers both basic and advanced power quality principles and power distribution troubleshooting tasks.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ELT:134

ELE:210 Programmable Controllers   4 cr.

An introductory course covering electronic principles. No prior knowledge or experience in the field of electronics is necessary before enrolling in this course. The starting point is "what is electricity?" and the course develops from there to include the study of electric measuring units, basic circuit arrangements, DC fundamentals, AC fundamentals and semiconductor principles.
(39.6 Lec. Hrs./118.8 Lab Hrs.)

ELECTRONEURO-DIAGNOSTIC TECHNOLOGY

END:111 Introduction to Electroneurodiagnostics (END) 6 cr.

This is an introductory course to basic electroencephalographic concepts and techniques. Instrumentation is demonstrated in the classroom and hands-on experience is provided in the laboratory.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisite: ENG:013 or minimum English score based on college assessment.
Co-requisite: BIO:168 and END:210.

END:210 Electronics and Instrumentation   3 cr.

This course 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.
(59.4 Lec. Hrs.)
Co-requisite: END:111.

END:301 Electroneuro-diagnostics I   6 cr.

This course is a continuation of END:111 Introduction to END. Terminology will be expanded. EEG tracings will be reviewed and the student will learn to interpret normal and abnormal patterns. The student will learn how to classify EEG activity along with how to classify seizure activity and seizure first aid. Laboratory exercises will include additional training on 10/20 system for measurement, electrode application and performance recording.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: END:111, END:210 and BIO:168.
Co-requisites: END:800 and BIO:173.

END:320 Electroneuro-diagnostics II   2 cr.

This course will cover elements of electroneurodiagnostics (END) including medications and how they affect the electrical activity of the brain at both therapeutic and toxic levels, the different types of electrodes used in electroencephalography, various types of headaches and their relationship to the electroencephalogram (EEG), identification of electrocerebral silence (brain death) through specific EEG recording criteria and pattern recognition of the electro-cardiogram (EKG) on the EEG. Clinical records will be evaluated.
(39.6 Lec. Hrs.)
Prerequisites: END:301, END:800 and BIO:173.
Co-requisite: END:820.

END:331 Neuroanatomy for END   2 cr.

This course will focus on the structure, function and terminology of the nervous system with the principle focus on issues relevant to neurodiagnostic technology. Students will learn how various symptoms and neurological deficits affect areas of the central and peripheral nervous systems. In addition, students will learn about the development of the nervous system, and the structures and functions of the cerebrum, brainstem and cranial nerves.   Case studies will be used to reinforce the students understanding of how normal and abnormal functioning of the nervous system affect testing protocols and test results in neurodiagnostics.
(39.6 Lec. Hrs.)
Prerequisite: BIO:173, END:320 and END:820.
Co-requisite: END:340 and END:840.

END:340 Electroneuro-diagnostics III   3 cr.

This course studies specific neurological conditions such as brain tumors, toxic and metabolic disorders and cerebrovascular, infectious and degenerative diseases. Head trauma and psychological disorders will also be studied. Students will correlate EEG patterns with clinical conditions.
(59.4 Lec. Hrs.)
Prerequisites: END:320 and END:820.
Co-requisites: END:331 and END:840.

END:410 Evoked Potentials 2 cr.

This course will introduce students to evoked potentials as well as give students exposure to advanced testing procedures done in neurodiagnostic laboratories. (39.6 Lec. Hrs.)
Prerequisites: END:510 and END:860.
Co-requisite: END:880.

END:510 Polysomnography 4 cr.

This course provides an introduction to polysomnography or sleep studies. Students learn the technical aspects of running all-night sleep studies and the classification of sleep disorders that will be discussed during lecture. Students will practice monitor placement and scoring of studies. (79.2 Lec. Hrs.)
Prerequisites: END:340, END:840 and END:331.
Co-requisite: END:860.

END:800 Clinical Practicum I 4 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 simplified history taking. Students will interpret EEGs with a technologist and occasionally work with a neurologist. (237.6 Clinical Hrs.)
Prerequisite: END:111 and END:220.
Co-requisite: END:301 and BIO:168.

END:820 Clinical Practicum II 4 cr.

Students will be assigned to a clinical affiliate where they will gain more hands on experience in performing and interpreting electroencephalographic records. Students will review the electroencephalograph with a technologist and interpret it with a neurologist. (237.6 Clinical Hrs.)
Prerequisite: END:301, END:800 and BIO:173.
Co-requisite: END:320.

END:840 Clinical Practicum III 4 cr.

This course is a continuation of Clinical Practicums I and II. It will focus on the student performing EEGs more independently. The student will also work with more advanced EEG procedures such as surgical monitoring and extended/ continuous EEG. At the completion of this clinical practicum, the student will be able to measure for the 10/20 system in 10 minutes and apply electrodes in 35 minutes for a total hook-up time of 45 minutes. (237.6 Clinical Hrs.)
Prerequisites: END:320, END:820 and BIO:173.
Co-requisite: END:340 and END:331.

END:860 Clinical Practicum IV 8 cr.

This course will focus on the performance of polysomnography within the END laboratory and provide the students with the opportunity to continue to gain competency with EEG. The students will perform all-night sleep studies, analyze and compile data for physician interpretation. Opportunities for reinforcement of prior learning of EEGs will also be incorporated into this course. (475.2 Clinical Hrs.)
Prerequisites: END:340, END:840 and END:331.
Co-requisite: END:510.

END:880 Clinical Practicum V 4 cr.

This course will provide experience in evoked potentials as well as continue practice in EEG and the advanced END procedures performed in the lab. The students will be prepared for employment by involvement in scheduling, supervision of first-year students and observation of advanced procedures. (237.6 Clinical Hrs.)
Prerequisites: END:510 and END:860.
Co-requisite: END:410.

ELECTRONICS

ELT:121 Basic Electronics 5 cr.

An introductory course covering electronic principles. No prior knowledge or experience in the field of electronics is necessary before enrolling in this course. The starting point is "what is electricity?" and the course develops from there to include the study of electric measuring units, basic circuit arrangements, DC fundamentals, AC fundamentals and semiconductor principles. (59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisite: MAT:720.

ELT:123 Programmable Controllers 3 cr.

The student will learn the fundamentals of programmable logic controllers (PLCs). The topics will include ladder logic, the internal and external circuitry of PLCs, input-output capability of PLCs and PLC programming. Laboratory exercises will use the Allen-Bradley SLC 500 PLC and RS Logix 500 programming software in "read world" applications. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: IND:136.
Co-requisite: IND:137.

ELT:134 Electrical Circuits and Components I 4 cr.

The course covers basic electricity, direct current circuits, magnetism, electromagnetic induction, alternating current circuits, impedances, reactances, power and electrical energy. Emphasis is placed on electrical measurement, instruments and applications. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite or Co-requisite: MAT:720 or MAT:073 or MAT:121.

ELT:135 Electrical Circuits and Components II 4 cr.

The course places emphasis on alternating current circuits, impedances, reactances, power and electrical energy. Emphasis is placed on AC circuits, behavior, electrical measurement instruments and applications. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: ELT:134.

COURSE DESCRIPTIONS

ELT:153 Electronics — 4 cr.

A course covering solid state devices and their applications. The topics include diodes and bipolar transistors and their use in various circuits. Emphasis is placed on practical equivalent circuits and theory. In the lab the principles learned in DC & AC circuits are applied. Proper lab procedure and the use of test instruments are taught.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: MAT:743.
Co-requisites: MAT:748.

ELT:154 Industrial Electronics — 3 cr.

A continuation of Basic Electronics. The course will continue to study semiconductors and their applications in such circuits as transistor amplifiers, Op Amps, active filters, oscillators, timers, voltage regulators and phase locked loops.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: ELT:121.

ELT:174 Digital Circuits — 3 cr.

A course in digital logic with an emphasis on practical design techniques and circuit applications. Topics include gates, logic functions, mapping techniques, function minimization, flip-flops, counters, registers, IC family characteristics, encoders, decoders, multiplexers, de-multiplexers, A to D and D to A conversion techniques.
(39.6 Lec. Hrs./39.6 Lab Hrs)

ELT:175 Computer Programming — 3 cr.

This course covers beginning and advanced programming techniques needed by the technician. The course uses the C language. Emphasis is placed on both technical problem solving and the techniques of structured programming. The course includes beginning topics as well as the more advanced topics of structures, pointers and file I/O.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: MAT:743.

ELT:176 Instrumentation — 3 cr.

Applications of electronic and pneumatic instrumentation will be used to showcase various types of flow meters, level transmitters, differential pressure cells and other common instrumentation. The students will demonstrate the use of instrumentation in industrial systems.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: IND:136.
Prerequisites: IND:137.

ELT:177 Microcontrollers — 3 cr.

Introduction to the study of micro-controllers and their applications. Topics include microcontroller architecture and introductory programming and interfacing techniques.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: ELT:174, ELT:175.

ELT:275 Electro-Mechanical Controls — 3 cr.

A study of motor controls. Topics include single and three phase motor starters of varying primary and secondary voltages, and solid state vs. mechanical controls.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

ELT:280 PLC Troubleshooting — 3 cr.

This class reviews the concepts learned in Programmable Controllers using Allen-Bradley SLC PLC and RSLogix programming software. The class then teaches the student how to troubleshoot existing programs using hands-on learning experience.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: ELE:210.

EMERGENCY MEDICAL SERVICES

EMS:810 Advanced Cardiac Life Support - ACLS — 1 cr.

This intensive certification course is presented utilizing the American Heart Association Standards and Guidelines for the Advanced Cardiac Life support Provider (ACLS). This course is designed to expand the students' knowledge of Emergency Cardiovascular Care for the adult patient, and to formulate the correct treatment plan for given patient simulations. Upon successful course completion, the student will receive an American Heart Association ACLS Provider certification card for a two-year certification period.
(19.8 Lec. Hrs.)

EMS:815 Advanced Pediatric Life Support (PALS) — 1 cr.

This intensive certification course is presented utilizing the American Academy of Pediatrics and the American Heart Association Standards and Guidelines for the Pediatric Advanced Life Support Provider (PALS). This course is designed to expand the students' knowledge of Emergency Cardiovascular Care for the pediatric patient and to formulate the correct treatment plan for given patient simulations. Upon successful course completion the student will receive an American Heart Association PALS Provider certification card for a two-year certification period.
(19.8 Lec. Hrs.)

EMS:816 Pediatric Education for the Pre-Hospital Professionals (PEPP) — 1 cr.

The Pediatric Education for the Pre-Hospital Professionals course (PEPP) is an intensive course designed to expand the students' knowledge of Cardiac and Trauma Emergency Care for the pediatric patient. Participants will learn how to effectively assess and manage ill and injured children. This curriculum was developed by the American Academy of Pediatrics as a complete source of pre-hospital medical information for the emergent care of infants and children. Upon successful course completion the student will receive an American Academy of Pediatrics PEPP Provider certification card for a 4-year certification period.
(19.8 Lec. Hrs.)

EMS:818 Neonatal Resuscitation Provider (NRP) — 1 cr.

The Neonatal Resuscitation provider course is a certification program that utilizes the standards and guidelines of the American Academy of Pediatrics and the American Heart Association. This course is designed to be an intensive course where participants learn an evidence-based approach in resuscitation of the neonate. The causes, prevention and management of mild to severe neonatal asphyxia are carefully explained so health care professionals may develop optimal knowledge and skill in newborn resuscitation. Upon successful course completion the student will receive an American Academy of Pediatrics/American Heart Association NRP Provider certification card for a 2-year certification period.
(19.8 Lec. Hrs.)

EMS:820 Pre Hospital Trauma Life Support (PHTLS)   1 cr.

The Pre-Hospital Trauma Life Support course is presented utilizing the Standards and Guidelines for Emergency Trauma Care under the direction of the American College of Surgeons. This intensive hands-on program is a unique educational opportunity that was created in recognition for the real need in EMS education for additional training in the care of the trauma patient. This program is designed to enhance and increase knowledge and skills necessary in delivering critical care in the pre-hospital environment. Upon successful course completion the student will receive an American College of Surgeons PHTLS Provider certification for a 4-year certification period.
(19.8 Lec. Hrs.)

ENGINEERING

EGR:111 Basics of Engineering Drawing   3 cr.

An introductory course in engineering drawing dealing with geometric constructions, lettering, freehand sketching, sectional views, auxiliary views, orthographic projections, basic dimensioning and working drawings. Satisfies requirements for Industrial Technology. Recommended for students entering into engineering drawing without a drawing background.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

EGR:112 Engineering Drawing I   3 cr.

This course deals with the integration of freehand sketching and computer drawing of orthographic projection; theory of pictorial drawing, basic dimensioning and working drawings; the analysis and synthesis of theoretical and practical problems involving the size, shape and/or relative position of common geometric magnitudes as points, lines and planes.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

EGR:113 Engineering Drawing II   3 cr.

Continuation of EGR:112. Includes basic working drawings completed with AutoCAD software. AutoCAD problems are similar to the conventional problems from EGR:112. Key elements of engineering geometry, intersection and developments, engineering dimensioning, limits and fits, design drawings.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: EGR:112 or the equivalent.

EGR:160 Engineering I   3 cr.

Engineering 160 focuses on solving engineering problems while gaining an understanding of the engineering field and fundamental engineering topics. Engineering perspective and thinking will be gained while applying the problem solving process which involves analysis, documentation, and presentation of technical material. Problems will be solved using computer tools and as a team.
(59.4 Lec. Hrs.)
Prerequisite: MAT:121.
Co-requisite: ENG:105 and MAT:128.

EGR:170 Material Science   3 cr.

This course provides an introduction to the mechanics of solids with application to engineering. The primary focus is stress and strain in structural elements resulting from axial, torsional, flexural, and combined loading. Other major concepts include mechanical material properties used to relate stress and strain in common machine elements, beam stresses and deflections, column buckling, and an introduction to energy methods.
(59.4 Lec. Hrs.)
Prerequisites: EGR:180, MAT:210 and PHY:212.
Co-requisite: MAT:216.

EGR:180 Statics   3 cr.

The course focuses on the fundamental concepts of mechanics including vectors, forces, moments, free body diagrams, equilibrium of a particle, equilibrium of rigid bodies, and equivalent systems. Structural analysis, internal forces, centers of gravity, centroids, moments of inertia, and friction are also covered. Concepts are applied to structural and machine elements such as bars, trusses, frames, and composite mechanisms.
(59.6 Lec. Hrs.)
Prerequisite: MAT:210 and PHY:212.

EGR:280 Dynamics   3 cr.

The course focuses on particle and rigid body motion. Kinematics, kinetics, work-energy, and impulse-momentum principles are covered for particles and rigid bodies in one-dimension and two-dimensions. Three-dimensional rigid body kinematics and kinetics are introduced.
(59.6 Lec. Hrs.)
Prerequisite: EGR:180, MAT:210 and PHY:212.
Co-requisite: MAT:216.

EGR:285 Introduction to Electrical Science   3 cr.

This course covers electrical circuit analysis with the goal of developing electrical engineering fundamentals for any engineering discipline. This course consists of a lecture and laboratory session. The primary focus is basic circuit theory, circuit modeling, analytical methods, first-order circuits, basic second-order circuits, and steady state AC circuit analysis. Practical laboratory and engineering skills will be achieved through building various electric circuits and taking electrical measurements.
(59.4 Lec. Hrs.)
Prerequisites: MAT:210 and PHY:222.
Co-requisite: MAT:216.

EGR:290 Thermodynamics   3 cr.

The course focuses on the definitions, concepts, and laws of thermodynamics. Thermodynamic properties are defined that describe the behavior and state of systems. The first and second laws of thermo-dynamics are applied to control masses and control volumes. Analysis is applied to a variety of standard thermodynamic cycles. Analysis techniques are developed to systematically solve engineering problems involving thermodynamic systems and processes. Specific topics include work, heat, energy, ideal gases, the Carnot cycle, efficiency, entropy, exergy, vapor power cycles, gas power cycles, and refrigeration cycles.
(59.4 Lec. Hrs.)
Prerequisites: CHM:165, MAT:210 and PHY:212.
Co-requisite: MAT:216.

COURSE DESCRIPTIONS

ENGINEERING TECHNOLOGY

EGT:116 Continuous Quality Management   3 cr.

This is an introductory course which will lead the student into the world of quality and the quality process. Students will learn new ways to make decisions based on pertinent data gained through the use of many new tools. Students will be encouraged to use the tools and information they receive in everyday life as well as in their future careers.
(59.4 Lec. Hrs.)

EGT:133 Hydraulics/ Pneumatics I   2 cr.

This course presents the basic laws of fluid power systems and properties of fluids to explain the behavior of fluid power devices in fundamental applications. Fluid power components such as cylinders, motors, compressors, pumps, flow control valves and accumulators are studied as well as assembled in labs. Fluid power symbols are taught through example air and hydraulic diagrams.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

EGT:134 Hydraulics/ Pneumatics II   4 cr.

This course features fluid power devices in control applications. Fluid power cylinders and motors are presented in direction and speed control circuits
using flow controls, direction and pressure control valves. Also pressure intensifiers, air-over-oil systems, rotary actuators and flow dividers are presented in their applications.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: EGT:133 or instructor permission.

EGT:135 Hydraulics/ Pneumatics III   3 cr.

This course focuses on the proper selection of hydraulic and pneumatic components from guidelines provided. Students work out piping layout and sizing on example systems. Cylinders and motors are chosen from tables and charts based on criteria. Sizing of flow and pressure control devices such as pressure regulators or flow dividers as well as other components are covered.
(29.7 Lec. Hrs./59.9 Lab Hrs.)
Prerequisites: EGT:134 or instructor permission.

EGT:137 Hydraulics/ Pneumatics IV   4 cr.

This course focuses on electrical control of fluid power circuits. Control of pressure and flow by electrical means is covered in both hydraulic and pneumatic systems. Students wire circuits to control cylinder motions and pressures. Students implement both 'hardwired' and programmable logic circuits to demonstrate these principles. Hydraulic servo principles are also introduced.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: EGT:133 and ELE:129 or instructor permission.

EGT:145 Hydraulics/ Pneumatics V   4 cr.

This course covers three key areas of fluid power controls. Students are shown how to properly install belt, chain or direct-coupled drives that are used to power hydraulic pumps and motors. Students are then shown how to identify vibration frequencies of drive mechanisms and how to minimize their effects. Lastly, students disassemble, inspect and reassemble common fluid power components.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: EGT:137 or instructor permission.

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:197 Design I   4 cr.

The student is introduced to the design process utilized in the engineering approach to problem solving. Students participate in design projects which require research, creativity, analysis and synthesis for a solution.
(79.2 Lec. Hrs.)

EGT:400/EGR:400 PLTW - Introduction to Engineering Design   3 cr.

This course will expose students to the design process, engineering standards, research and analysis, technical documentation, global and human impacts, communication methods, and teamwork. Students will employ engineering and scientific concepts in the solution of engineering design problems. In addition, students will use Inventor, a 3D solid modeling design software package, to help them design solutions to solve proposed problems.
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement score based on college assessment.

EGT:410/EGR:410 PLTW - Principles of Engineering   3 cr.

A course that helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem-solving process to benefit people. The course also includes concerns about social and political consequences of technological change.
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement score based on college assessment.

EGT:420/EGR:420 PLTW - Digital Electronics   3 cr.

The major focus of the Digital Electronics course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Students will analyze, design and build digital electronic circuits. While implementing these designs, students will continually hone their interpersonal skills, creative abilities and understanding of the design process.
(59.4 Lec. Hrs.)
Prerequisites: MAT:073 or minimum math placement score based on college assessment and EGT:400 or EGT:410.

EGT:440/EGR:440 PLTW - Biotechnical Engineering   3 cr.

Using activities, projects and problems, students learn first-hand how engineers and technicians operate in the worlds of bio-technology and bio-engineering.
(59.4 Lec. Hrs.)
Prerequisites: MAT:073 or minimum math placement score based on college assessment and EGT:400 or EGT:410.

EGT:450/EGR:450 PLTW - Computer Integrated Manufacturing   3 cr.

This course builds on solid modeling skills. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design are included.
(59.4 Lec. Hrs.)
Prerequisites: MAT:073 or minimum math placement score based on college assessment and EGT:400 or EGT:410.

EGT:460/EGR:460 PLTW - Civil Engineering and Architecture   3 cr.

This course provides an overview of civil engineering and architecture emphasizing the inter relationship of both fields. Students are presented with real world problems and are given the opportunity to apply knowledge to project planning, site planning, and building design using state-of-the-art software.
(59.4 Lec. Hrs.)
Prerequisites: MAT:073 or minimum math placement score based on college assessment and EGT:400 or EGT:410.

EGT:470/EGR:470 PLTW - Engineering Design and Development   3 cr.

This is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles learned in prior required courses. Teams will defend their solution to the engineering problem.
(59.4 Lec. Hrs.)
Prerequisite: EGT:400, EGT:410 and EGT:420.

ENGLISH

ENG:013 Basic Writing   3 cr.

Introductory course designed to help the student who has difficulty in expressing thoughts clearly and effectively in written communication. Emphasis is on improving writing skills by constant practice. Grammar, sentence structures and paragraph structures are studied in the context of writing. This course is recommended for students whose diagnostic or assessment scores indicate a need for preparatory work in composition.
(59.4 Lec. Hrs.)

ENG:064 Language Skills   1-3 cr.

Introductory course designed to assist students in gaining language/reading skills and knowledge necessary to express thoughts clearly and effectively in written communication and to build the necessary foundation for higher levels of language development. Grammar, sentence structure, punctuation, and paragraph development are always studied in the context of writing. This course is recommended for students whose assessment scores indicate a need for supplemental work in composition.
(19.8-59.4 Lec. Hrs.)

ENG:105 Composition I   3 cr.

A writing and reading course designed to prepare the student for the types of written communication and thought essential to the academic and working world. The general goals of Composition I are to have students gain more confidence in their writing abilities and improve their proficiency in critical reading, exposition and persuasion.
(59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

ENG:106 Composition II   3 cr.

An advanced writing and reading course dealing with logic in thought and communication. Emphasis is on reasoning and argument, research skills and sophistication of style in writing. *This course satisfies a general education requirement in Communications.*
(59.4 Lec. Hrs.)
Prerequisite: ENG:107 or ENG:105.

ENG:107 Composition I: Technical Writing   3 cr.

A writing, speaking and reading course to prepare students for the types of communication and thought essential to the working world. The general goals of Technical Communication are that students gain more confidence in their writing abilities and improve their proficiency in critical reading and problem-solving, applied to practical situations. Students will also present material orally and visually, with assignments related to their content areas. Emphasis is on the writing process and learning the forms appropriate for technical communication purposes and audiences. This course is an alternative to EN:105 and is recommended for students in technical, business and science programs.
(59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

COURSE DESCRIPTIONS

ENG:108 Composition II: Technical Writing 3 cr.

An advanced course in technical writing for students in technical, business or science programs. Because students in technical fields need to become familiar with the complexities and constraints of on-the-job communication, this course offers practice in the kinds of technical writing, reading and oral communication encountered in the world of work. Students will analyze, evaluate and research complex communication situations and apply what they've learned, using collaborative, interpersonal and problem-solving skills and the essentials of style, formatting, documentation and graphics. Designed to help students acquire the rhetorical skills needed to respond to a variety of audiences in authoritative and convincing ways. (59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*
Prerequisite: ENG:107 or ENG:105.

ENG:221 Creative Writing 3 cr.

Advanced writing workshop designed for the student who likes to write. Emphasis is placed on self-expression, audience reaction, craftsmanship and the importance of meeting deadlines. Assignments will range from short sketches and poems to full-length short stories and essays. The learning experience is enhanced through class discussion and critical analysis of individual works.
(59.4 Lec. Hrs.)
Recommended: ENG:105 and a general education Literature course.

ENG:230 Creative Writing: Fiction 3 cr.

The study and practice of fiction. Emphasis is on writing the short story with practice and study of the proper elements of writing. These elements are also applicable to the writing of the novel.
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 and ENG:106 or ENG:107and ENG:108.

ENG:238 Creative Writing: Non-Fiction 3 cr.

The practice of creating non-fiction prose. Emphasis is on the magazine article and the feature story.
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 and ENG:106 or ENG:107 and ENG:108.

ENG:280 The Story of English 3 cr.

The Story of English travels the world to unravel the exciting story of how our common language has attained its current influence and how it may be poised to become our planet's first universal language. The course explores the origins, evolution and expansion of the language while focusing on the specific structure of the English language and on the concept that language is a reflection of society. This course presents the crucial role William Shakespeare played in the development of the language, discusses the use of English in America, explores how language functioned as an instrument of political control and considers the relationship of language to the British class system. Through the many varieties of English spoken today, the course will trace the history of a language which has become the most influential tongue the world has ever known.
(59.4 Lec. Hrs.)

ENGLISH AS A SECOND LANGUAGE

ESL:113 Basic ESL Grammar 2 cr.

This is an entry-level course in the acquisition of basic grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: ESL:121, 122, 123, 124 are recommended.

ESL:121 Basic ESL Writing 1 cr.

This is an entry-level course in the acquisition of basic writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:113, 122, 123, 124 are recommended.

ESL:122 Basic ESL Listening Comprehension 1 cr.

This is an entry-level course in the acquisition of basic aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:113, 121, 123, 124 are recommended.

ESL:123 Basic ESL Speaking 1 cr.

This is an entry-level course in the acquisition of basic oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:113, 121, 122, 124 are recommended.

ESL:124 Basic ESL Reading 1 cr.

This is an entry-level course in the acquisition of basic reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:113, 121, 122, 123 are recommended.

ESL:125 Low Intermediate ESL Grammar 2 cr.

This is a course in continuing the acquisition of basic grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: ESL:129, 126, 127, 128 are recommended.

ESL:126 Low Intermediate ESL Listening Comprehension   1 cr.

This is a course in continuing the acquisition of basic aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:120, 129, 127, 128 are recommended.

ESL:127 Low Intermediate ESL Speaking   1 cr.

This is a course in continuing the acquisition of basic oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:125, 129, 126, 128 are recommended.

ESL:128 Low Intermediate ESL Reading   1 cr.

This is a course in continuing the acquisition of basic reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:125, 129, 126, 127 are recommended.

ESL:129 Low Intermediate ESL Writing   1 cr.

This is a course in continuing the acquisition of basic writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:125, 126, 127, 128 are recommended.

ESL:130 Intermediate ESL Grammar   2 cr.

This is a course in continuing the acquisition of grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: ESL:134, 136, 137, 138 are recommended.

ESL:134 Intermediate ESL Writing   1 cr.

This is a course in continuing the acquisition of writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:130, 136, 137, 138 are recommended.

ESL:136 Intermediate ESL Listening Comprehension   1 cr.

This is a course in continuing the acquisition of aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:130, 134, 137, 138 are recommended.

ESL:137 Intermediate ESL Speaking   1 cr.

This is a course in continuing the acquisition of oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:130, 134, 136, 138 are recommended.

ESL:138 Intermediate ESL Reading   1 cr.

This is a course in continuing the acquisition of reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:130, 134, 136, 137 are recommended.

ESL:140 High Intermediate ESL Grammar   2 cr.

This is a course in continuing the acquisition of grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: ESL:144, 146, 147, 148 are recommended.

ESL:141 High Intermediate ESL Writing   1 cr.

This is a course in continuing the acquisition of writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:140, 146, 147, 148 are recommended.

ESL:146 High Intermediate ESL Listening Comprehension   1 cr.

This is a course in continuing the acquisition of aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:140, 144, 147, 148 are recommended.

COURSE DESCRIPTIONS

ESL:147 High Intermediate ESL Speaking   1 cr.

This is a course in continuing the acquisition of oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:140, 144, 146, 148 are recommended.

ESL:148 High Intermediate ESL Reading   1 cr.

This is a course in continuing the acquisition of reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)
Co-requisites: ESL:140, 144, 146, 147 are recommended.

ESL:240/241/242/243 Low Advanced ESL Communicative Competence   1-4 cr.

This is a course for non-native speakers to improve advanced language skills in academic reading, listening and speaking. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (9.9-79.2 Lec. Hrs./19.8-118.8 Lab Hrs.)

ESL:244 Low Advanced ESL Grammar/Writing   3 cr.

This is a course for non-native speakers in the acquisition of advanced grammatical structures and writing skills necessary for academic English. Emphasis is placed on practicing structure in context and writing fluently. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)

ESL:253 Advanced ESL Grammar/Writing   3 cr.

This is a course for non-native speakers to review and refine advanced grammatical structures and writing skills necessary for academic English. Emphasis is placed on practicing structure in context and writing fluently. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)

ESL:254/255/256 Advanced ESL Communicative Competence 1-4 cr.

This is a course for non-native speakers to refine advanced language skills in academic reading, listening and speaking. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (9.9-79.2 Lec. Hrs./19.8-118.8 Lab Hrs.)
Co-requisite: ESL:253 is recommended.

ESL:260 High Advanced ESL Grammar/Writing   3 cr.

This is a course for non-native speakers wishing to attain mastery of the most advanced grammatical structures and writing skills necessary for academic English. The writing component will include a research paper. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Co-requisite: ESL:261 or ESL:928 is recommended.

ESL:261/262/263 High Advanced ESL Communicative Competence   1-3 cr.

This is a course for non-native speakers wishing to attain mastery of the most advanced language skills in academic reading, listening and speaking. Course placement approval requires permission of program manager. (9.9-29.7 Lec. Hrs./19.8-59.4 Lab Hrs.)
Co-requisite: ESL:260 or ESL:928 is recommended.

ESL:928 ESL Independent Study   1-3 cr.

This course is an independent study lab for non-native speakers which will focus attention on specific areas of English as a Second Language through the use of individualized texts and other materials. This course may be repeated and can be taken for varied credit depending on need. Course placement approval requires permission of program manager. (39.6-118.8 Lab Hrs.)

ENVIRONMENTAL SCIENCE

ENV:115/111 Environmental Science   3-4 cr.

A general goal of this course is for students to become familiar with the application of scientific principles common to environmental problems. Also, it is important for students to become aware of the causes of, the consequences of, and the possible remedies for these problems, and for students to be able to objectively analyze the issues and arguments related to environmental concerns. *The four-credit-hour course with lab satisfies a general education requirement in the Natural Sciences Area. It may be counted as either Life Science or Physical Science, but not both.*
(59.4 Lec. Hrs./0-39.6 Lab Hrs.)
Pre-requisite: RDG:032/033 or minimum reading placement score based on college assessment.

ENV:137/138 Studies in Energy and the Environment   1-2 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. (19.8-39.6 Lec. Hrs.)

ENV:139 Energy and the Environment 4 cr.

The course is intended to introduce students to the scientific principles associated with energy transformation, collection, extraction, transmission and storage as they learn energy's significance in society and the effects of its use on the environment.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Pre-requisite: RDG:032/033 or minimum reading placement score based on college assessment.

ENV:145 Conservation Biology 4 cr.

This course examines the ecological principles used in the preservation of biological diversity. Some topics explored are population dynamics, conservation genetics, island biogeography, mathematical modeling of ecological systems, disturbance ecology, Geographic Information Systems (GIS), reserve theory and wildlife corridors. Laboratories will involve fieldwork, data analysis, computer work and research.
This course satisfies a general education requirement in the Natural Sciences area.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: ENV:111

FINANCE

FIN:106 AIB Principles of Banking 3 cr.

Provides a comprehensive introduction to the diversified services offered by the banking industry today. It includes new material on bank accounting, pricing and profitability, and expands the discussion on the personnel and security functions of the bank.
(59.4 Lec. Hrs.)

FIN:121 Personal Finance 3 cr.

Presents a general background in finance for successful applications in personal business decisions: money management, insurance, stocks and bonds, mutual funds, real estate, where to invest for safety, growth or income. Concludes with a tax session.
(59.4 Lec. Hrs.)

FIN:130 Principles of Finance 3 cr.

A study of how businesses use funds; their source, short- and long-term uses, capital structure, expansion, reorganization and public policy. Deals with a study of finance from the management point of view.
(59.4 Lec. Hrs.)

FIN:180 Introduction to Investments 3 cr.

A study of the theory of investment analysis and management and the preparation and development of an investment portfolio with attention to valuation regarding yield and risk.
(59.4 Lec. Hrs.)

FRENCH

FLF:141 Elementary French I 4 cr.

A foundation course which covers the fundamentals of French language and culture. The course is designed for the student with no knowledge of the language. The communication skills of reading, writing and speaking will be developed to aid the student in oral proficiency. Each unit will deal with specific aspects of French culture.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(79.2 Lec. Hrs.)

FLF:142 Elementary French II 4 cr.

Designed for the student who has some knowledge of French language and culture. Oral communication is stressed with further emphasis on grammar and selected readings in the history, literature and culture of France.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(79.2 Lec. Hrs.)
Prerequisite: FLF:141 or equivalent.

FLF:231/241 Intermediate French I 3-4 cr.

Provides a thorough review of the patterns of basic French grammar with emphasis on the development of speaking, writing and understanding the French language, literature and culture.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: FLF:142 or 2-3 years of high school French.

FLF:232 Intermediate French II 3 cr.

Provides a reinforcement of basic skills with emphasis on conversation, composition, literary readings, French culture and review of grammar as needed.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: FLF:231 or 3-4 years of high school French.

GEOGRAPHY

GEO:121 World Regional Geography 3 cr.

A survey course of basic geographical knowledge. Students will be introduced to geographical principles and ways of thinking thus providing them with the tools to study both physical and human geography.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

GERMAN

FLG:141 German I 4 cr.

Introduces the basic grammar and pronunciation of the German language. This is a course for students with little or no knowledge of the German language.
This course satisfies a general education requirement in the Cultural/Historical Perspectives area.
(79.2 Lec. Hrs.)

COURSE DESCRIPTIONS

FLG:142 German II   4 cr.

A continuation of German I. Review of basic material and pronunciation plus introduction of new grammatical structures.
This course satisfies a general education requirement in the Cultural/Historical Perspectives area.
(79.2 Lec. Hrs.)
Prerequisite: FLG:141 or 1-2 years of high school German.

GLOBAL STUDIES

GLS:100 Contemporary World Issues   3 cr.

An interdisciplinary approach to the study of issues affecting life in the modern world. Identifies topical areas to study as background to major contemporary issues. Typical areas of discussion will be ecology, world economy, resource utilization and comparative cultures. Instruction will be primarily discussion and will utilize guest lectures, outside reading and projects and limited lecture.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)

GLS:120 Education Experience Abroad   1-3 cr.

Exploration of world historic sites, cultural features and geography, combined with reading from applicable sources, will enable the student to draw conclusions about the significance of individual events in a context of a culture/civilization. This course provides a structured short-term study experience in a foreign country, preceded by preparatory study and followed by project completion after return from travel. Additional cost for travel. May be repeated up to two times for a total of 3 credits.
(19.8-59.4 Lec. Hrs.)
Prerequisite: ENG:013 and RDG:032/033 or minimum English and reading placement scores based on college assessment. Instructor permission required.

GRAPHIC COMMUNICATIONS

GRA:103 Introduction to Macintosh   1 cr.

This course is a prerequisite/co-requisite for all electronic publishing and multi-media courses. This specialized course is designed for students entering the graphic arts technology program and provides them with the basic operational knowledge of Macintosh and IBM-compatible computers. Topics covered include cross-platform explanation of the basic operating systems, how to work with memory, creating and saving files, how to work with publishing and graphics files on a network, electronic transfer across platforms, file maintenance, and troubleshooting.
(19.8 Lec. Hrs.)

GRA:150 Introduction to Web Design   3 cr.

This course will instruct students on planning, designing, and managing effective web sites. Focus is placed on developing manual HTML and CSS scripting skills as well as incorporating XML-ready and XHTML-ready script into the code. Throughout this class special consideration given to creating sites which are W3C and ADA compliant.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRA:103 and GRT:220
Co-requisites: GRT:110.

GRA:164 Digital 3-D and Animation   3 cr.

This specialization course will introduce the student to the basic steps for completing computer animation. Concepts to be explored include 3-D modeling, rendering, composting and special effects and recording of the animation sequence to video.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRT:162 and GRT:220.

GRA:900 Special Projects in Graphic Arts Technology   3 cr.

This course is designed by the student and members of the graphic arts technology faculty to provide a highly individualized learning experience within the areas of electronic pre-press, multi-media, webpage design, graphic design, animation, graphic arts management, or press operations. Specific advanced tasks and projects are identified and customized for the student for completion in one semester. Students will create a portfolio highlighting the skills they have developed throughout the program. This course may be repeated for additional credit.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: All courses from the first three semesters of the Graphic Arts program or instructor permission.

GRAPHIC TECHNOLOGIES

GRT:108 Introduction to Graphic Arts Technology   4 cr.

The objective of this course is to give students a complete introduction to the graphic communications industry. Students will cover safety, an introduction to graphic communications, history of the graphic arts, traditional and electronic pre-press procedures, press and finishing operations, Web development and multi-media. This course is an introduction to the graphic communications industry and students should be prepared for an intensive course of study.
(79.2 Lec. Hrs.)

GRT:110 Calculations and Measurements for Graphic Arts   3 cr.

The course is designed for students who will pursue a career in the graphic arts industry. It includes a complete study of basic math skills for pre-press, press, estimating and bindery.
(59.4 Lec. Hrs.)

GRT:121 Electronic Publishing 3 cr.

Participants will gain an in-depth working knowledge of Quark XPress, with an emphasis on technical skills. In addition they will learn about the basics of design and layout, typography and about the many tools and resources available. Participants will study and apply the design elements of emphasis, contrast, balance alignment, repetition, flow, use
of images, color and typography by completing specific projects designed to increase their understanding of each element and through class critiques of each project.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRA:103 and GRT:108.

GRT:130 Quality Concepts and Regulations for the Graphic Arts 2 cr.

This course will introduce the student to concepts being utilized throughout industry today. Techniques for team building, decision making and communication will be discussed and incorporated. The skills developed in
this course will be utilized throughout the program.
(39.6 Lec. Hrs.)

GRT:140 Press Operations 3 cr.

This specialized course will expose the printing technology student to a variety of methods for applying ink to a multitude of substrates. Lecture and lab will consist of the principles for operation in the areas of offset lithography, screen press operations, flexography and non-impact techniques. The student will spend extended periods during the semester in actual operations of the above principles.
(19.8 Lec. Hrs./79.2 Lab Hrs.)

GRT:160 Electronic Pre-Press 3 cr.

A continuation of Electronic Publishing. The course will involve the student in advanced functions on the computer formats. Exposure to layout software as well as various publication formats will be addressed.
(39.6 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRT:121.

GRT:162 Introduction to 3-D Modeling 3 cr.

This course will introduce students to basic and intermediate 3-D modeling concepts. Students will be given instruction on building simple to complex objects using points, polygons, primitives, and sophisticated advanced tools found in various software modeling packages. Students will learn how to prepare 3-D graphics for print, for Web, interactive software titles, and video.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRA:103.

GRT:163 Multimedia and the Internet 3 cr.

This course will explore the creation of advanced interactive Web sites based upon vector-based graphics and animation.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRT:130 and GRT:220.
Co-requisites: GRT:110 and GRT:250.

GRT:169 Color Theory 2 cr.

A basic course designed to increase the intellectual and visual awareness of the technical aspects of color, its manipulation and control. Basic color principles, terminology and applications will be discussed. We will experiment with the interaction of color and its implications. In addition, we will explore color harmony, how color interacts and its qualities and possible combinations.
(39.6 Lec. Hrs.)

GRT:206 Advanced Press/ Finishing Operations 3 cr.

This is a specialized course in press operations. The student will perform advanced work in lithography, screen and flexography processes. Concepts such as process color, ink trap, dot gain, impositions, press machines and troubleshooting will be highlighted. Advanced finishing operations will be performed detailing folding, cutting and binding techniques.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRT:140.

GRT:215 Advanced Pre-Press Techniques 3 cr.

An in-depth study of photomechanical techniques and processes detailing half-toning, duo tones and problem solving. This specialization course will also detail advanced film assembly and contacting operations. Other concepts explored will include densitometry, pin register systems and maintenance on various pre-press equipment.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRT:110.

GRT:220 Electronic Color Control 3 cr.

This specialization course will introduce the student to various means of image creation and manipulation. The principles of scanning, software systems and color control through means of composites will be addressed.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRT:160.

GRT:222 Digital Output for Graphic Management 3 cr.

Students will be introduced to the pre-flighting software available for preparing files to be printed to disk, film, paper and directly to the plate. Practical experience will be gained through the application of the pre-flight software to documents prepared in page layout software, including Quark Xpress and PageMaker. Experience with the management of files using the PostScript page description language will be stressed. Students will also learn about digital input devices, such as cameras, graphic pads, and scanners, as well as learn how to prepare files for electronic transfer to service bureaus.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: GRA:103 and GRT:160.

GRT:230 Advanced Electronic Color Control 3 cr.

As the graphic arts production process compresses more and more to the designer, graphic artists are expected to take on more of an active role in the capturing and manipulation of bitmap images for print. Students will explore advanced topics related to the creation and capture, manipulation and targeting of bitmap images for print and the Web.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: GRT:220.

COURSE DESCRIPTIONS

GRT:245 Issues in
Graphic Arts Technology   3 cr.

Students will cover a variety of business topics related to graphic communications, including professional relationships, business practices, pricing and trade customs, salaries, legal issues and professional and technology related issues. In addition forms and contracts will be covered. The course will cover graphic design, web design, illustration, animation and other areas of specialty.
(59.4 Lec. Hrs.)

GRT:250 Electronic Imaging   3 cr.

A continuation of Electronic Color Control, this course will involve the student in high-end scanning and output devices. Various networking configurations, as well as software and hardware associated with the process, will be covered in detail.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRT:160 and GRT:220.

GRT:264 Authoring and
Web Design II   3 cr.

This specialization course will introduce the student to advanced concepts in web development. Students will develop skills in scripting JavaScript and DHTML.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: GRT:110, GRA:103 and GRT:163.

GRT:266 Technology Changes
in the Graphic Arts   2 cr.

Seminar course on advances in graphic arts technology and how they may affect the industry and workplace. The Graphic Arts Technology Center will be utilized to demonstrate new advances in technology and environmental technology.
(39.6 Lec. Hrs.)
Prequisite: All core curriculum courses and technical electives for the first 3 semesters of the Graphic Arts Program.

GRT:268 Authoring   3 cr.

File sizes and download times of multimedia content often exceed what is generally considered acceptable for the Internet. In these situations thought needs to be given to distributing multimedia content on CD and DVD-based media. This course will explore the creation of interactive content for CDs and DVDs.
(19.8 Lec. Hrs./79.2 Lab Hrs.)

GRT:949 Special Topics   1 cr.

This is a special topic course offered at discretion of the instructor. Students will be able to explore in greater detail a subject that does not normally fall within the scope of the current curriculum for the Graphic Arts Technology program, but is related to the topic of Graphic Arts. The description for this course will be determined on a case by case basis as appropriate to the content. This course may be repeated for additional credit.
(39.6 Lab Hrs.)

HEALTH SCIENCES

HSC:106 Contemporary
Health Issues   3 cr.

Exploration of areas of human health. Topics include emotional health, chemical alteration of behavior, human sexuality, personal health care, disease and health in society.
(59.4 Lec. Hrs.)

HSC:113 Medical
Terminology   2 cr.

This course enables students to recognize and define medical terminology as well as identify medical words from Greek and Latin prefixes, suffixes, word roots and combining forms. This course is offered in three formats: classroom instruction, online instruction, or as an independent study.
(79.2 Lab Hrs.)

HEALTH INFORMATION TECHNOLOGY

HIT:120 Pharmacology for HIT 1 cr.

This course provides the student with an introduction to common drugs and drug therapies as they relate to the field of health information technology. It includes accurate identification of drug name spelling and indications for usage.
(19.8 Lec. Hrs.)

HIT:139 Math for Healthcare
Professions   3 cr.

Designed for allied health care profession majors. Covers general development of skills involving computations of fractions, decimals, percents, ratios, proportions, basic algebra equations, mean, median, & mode. Builds critical thinking skills for success in occupations that will later require algebra skills in understanding dosage calculations and conversions between metric, apothecary, household and other systems of measurement. Advanced topics will include: infection rate computations and survival statistics. The student will be introduced to variance, standard deviation, dispersion, data analysis, and interpretation. Applied topics such as patient accounts, Medicare and non-Medicare insurance billing, payroll, and computing FTE's in healthcare staffing will help build the applied math skills needed in healthcare supervision and management.
(59.4 Lec. Hrs.)
Co-requisite: CSC:110.

HIT:150 Principles of Disease I 2 cr.

This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology and principles of disease. This is an introduction to the pathophysiology of disease and covers common disorders of the body from the cellular level to the systemic.
(39.6 Lec. Hrs.)
Prerequisites: HSC:113, HIT:120.

HIT:160 Principles of
Disease II   3 cr.

This course is a continuation of HIT:150 Principles of Disease I and focuses in-depth on common disorders of the body by organ system involvement such as cardiovascular system, gastrointestinal system, urinary system, etc. Depth of study will focus on the five basic classifications of disease as manifested in each body organ system: signs and symptoms, diagnostic work-up, current disease management and prognosis as it pertains to each body system.
(59.4 Lec. Hrs.)
Prerequisite: HIT:150.

HIT:250 Coding I 3 cr.

This course is the first of a three-part series and it provides a foundation in basic diagnostic coding and classification systems in a variety of health care settings. Emphasis is placed on International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) coding conventions, rules, methodology, sequencing, data sets, documentation requirements, quality control and coding resources. Practical application of coding inpatient and outpatient records with ICD-9-CM classification system will be studied utilizing workbooks and various handouts. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: HSC:113, HIT:120, and BIO:168, or instructor's approval.
Co-requisites: BIO:173 and HIT:150.

HIT:251 Coding II 3 cr.

This course is a continuation of HIT:250 Coding I. Students are introduced to Current Procedural Terminology, 4th Ed. (CPT-4) as it relates to physician's offices/hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Payment System (APCs). Students will be working with actual medical records in the classroom lab. Emphasis is placed on practical application of coding outpatient/ambulatory records. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.

HIT:252 Coding III 3 cr.

This course is a continuation of a three-part coding sequence. It is designed to provide students the opportunity to become proficient coders. Students will apply coding guidelines, rules, and regulations. Case scenarios and actual medical records will be used to code ICD-9-CM diagnoses and CPT-4 procedures. Students will assign appropriate codes through chart documentation review and analysis, assign diagnosis-related groups (DRGs) and ambulatory payment classifications (APCs) utilizing 3M coding & reimbursement software. Students will learn valid reimbursement optimization techniques. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: All HIT first year courses, HIT:250 and HIT:251 or instructor's approval.

HIT:253 ICD-10-CM/Diagnosis Coding 1.5 cr.

Introduces use of the ICD-10-CM classification system with application of coding scenarios. ICD-10-CM is the diagnosis classification system developed by the Centers for Disease Control and Prevention for use in all U.S. health care treatment settings on Oct. 1, 2013. (29.7 Lec. Hrs.)
Prerequisite: HSC:113, HIT:120 and BIO:168 or instructor permission.

HIT:254 ICD-10-PCS/Procedural Coding 1.5 cr.

Introduces use of the ICD-10-PCS classification system with application of coding scenarios. ICD-10-PCS also will apply use of ICD-10-PCS coding for data collection and billing procedures. ICD-10-PCS is the procedural classification system developed by the Centers for Medicare & Medicaid Services (CMS) for use in the U.S. for inpatient hospital settings ONLY. (29.7 Lec. Hrs.)
Prerequisite: HIT:253 or instructor permission.

HIT:312 Health Informatics and Information Management Systems 3 cr.

This course should enable the student to describe the different types of code sets and classification systems used in healthcare. It should also enable the student to understand the basic steps in implementing an electronic health record and using the software Access for data collection. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.
Co-requisites: HIT:451

HIT:370 Health Records in Acute Care 3 cr.

This course introduces students to the Health Information Management profession. Topics include acute care health record content and usage, quantitative and qualitative analysis, record format, control, storage, retention policies and filing and numbering systems. (39.6 Lec. Hrs./39.6 Lab Hrs.)

HIT:380 Health Records in Alternative Care Settings 3 cr.

This course is a continuation of HIT:370 Health Records in Acute Care. Students will look at the entire continuum of health care delivery systems. Alternative care settings including ambulatory care, long-term care, home health, hospice and mental health will be studied along with their respective licensing and accrediting standards, documentation issues and reimbursement methodologies. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: HIT:370.

HIT:420 Legal Aspects of Health Information 2 cr.

This course covers in-depth the legal issues involved in health care information management. Students will gain an overview of the U.S. legal system, past and current healthcare legislation including Healthy Information Portability & Accountability Act (HIPAA). Topics will include use of the medical record as a legal document, informed consent, privacy and security regulations, and response to subpoena. Students will take a field trip to the local county courthouse to sit in on a trial in progress. (39.6 Lec. Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.

HIT:440 Quality Management 3 cr.

This course provides an overview of supervision and management activities in a health information department. Focus is placed on a team approach toward the achievement of both departmental and organizational goals. Students will participate in problem-solving activities, committee activities and development of technical writing skills. Emphasis is placed on activities relating to planning, organizing, directing, controlling and budgeting in an HIM department. Additional topics include performance improvement monitors, utilization management, risk management principles, and QA (Quality Assurance) activities pertaining to JCAHO (Joint Commission on Accreditation of Healthcare Organizations) accreditation survey. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.

COURSE DESCRIPTIONS

HIT:451 Allied Health Statistics 3 cr.

This course covers maintenance, compilation, analysis and presentation of health care statistics. Topics include basic statistical principles, morbidity, mortality, and commonly computed hospital rates; uniform reporting requirements; and selection and construction of data displays. Upon completion, students should be able to calculate morbidity, mortality, and commonly computed hospital rates, comply with uniform reporting requirements, analyze and present statistical data.
(59.4 Lec. Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.

HIT:485 Medical Billing and Reimbursement Systems   3 cr.

This course is designed to prepare students for jobs in medical office and hospital billing departments. Comprehensive coverage of every stage of the medical insurance claim cycle will be studied in a logical sequence. Basic concepts of medical coding, detailed information on various insurance payers and plans, including Medicare, Medicaid, disability plans, private indemnity plans, and managed care plans will be presented and studied. Students will obtain hands-on experience in completion of the CMS-1500 claim form and the UB-94 hospital claim form with step-by-step guidelines for data entry. Demonstration of current physician practice management software will be included. Additional emphasis will be placed on the security of information entered into computer databases in compliance with new Federal legislation requiring the use of electronic patient records.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: All HIT first year courses or instructor's approval.
Co-requisites: HIT:251.

HIT:596 Health Information Technology Practicum   2 cr.

This is a supervised 99-hour professional practice experience designed to introduce the student to the basic daily operations and functions of a health information department. The student will utilize knowledge and skills learned in the classroom, observe and, when appropriate, practice hands-on applications under the supervision of health information

department staff. Students will be required to meet certain goals and objectives, submit a written report of the learning experience and undergo a professional and technical skills evaluation. Although the acute care setting is a common setting for Practicum I, any healthcare setting may be appropriate. Site to be arranged by the instructor.
(118.8 Hrs. Clinical Practicum)
Prerequisites: CSC:110, HIT:370, and HSC:113 or instructor's approval.

HIT:597 Health Information Technology Practicum II   4 cr.

This is supervised 224-hour professional practice experience designed to give the student exposure to advanced level functions in various healthcare settings. Coding, transcribing, auditing, billing and QI activities will be emphasized. The student will be required to meet written goals and objectives, submit a written report on the learning experience and undergo a professional and technical skills evaluation. Practicum site to be arranged by the instructor.
(268.8 Hrs. Clinical Practicum)
Prerequisite: All HIT coursework prior to the 4th semester or instructor's approval.

HIT:601 Medical Transcription 2 cr.

This course provides opportunities to practice and develop basic skills in the use of transcription equipment, gain familiarity with common formats of medical reports and common medical terminologies. Reference sources are discussed and students receive laboratory experience in transcribing medical records and forms, case histories, consultation reports, operative records, and discharge summaries dictated by real physicians and encompassing all body systems.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: HSC:113, HIT:120, CSC:110.

HIT:620 Advanced Medical Transcription   1 cr.

This course is a continuation of HIT:601. In-depth medical reports dictated by real physicians are provided including radiology, pathology, orthopedic, cardiovascular and gastrointestinal operative reports. Emphasis is placed on accuracy of spelling and format. The SUM Program software for advanced students is utilized.
(39.6 Lab Hrs.)
Prerequisite: HIT:601.

HIT:946 Seminar   1 cr.

This is a capstone course designed to provide a comprehensive review of professional competencies, preparation for the RHIT certification exam, preparation of professional resume and job search tools. This course should be taken the last semester of the HIT Program.
(19.8 Lec. Hrs.)
Prerequisite: All HIT coursework prior to the 4th semester or instructor's approval.

HEALTH, SAFETY & ENVIRONMENTAL TECHNOLOGY

HSE:100 Occupational Safety 3 cr.

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations, with an emphasis on using specific approaches to providing a safe and healthful work environment. Additionally, through activities and exercises, students are introduced to procedures for conducting a chemical inventory, interpreting Material Safety Data Sheets (MSDSs), developing a written Hazard Communication (HAZCOM) program, and developing an effective HAZCOM training program.
(59.4 Lec. Hrs.)

HSE:105 Characteristics of Hazardous Materials   3 cr.

This course provides instruction in learning to recognize the physical and chemical characteristics of hazardous materials classes and how chemicals within those classes can harm humans and the environment. By applying basic chemistry, students will associate chemical names with particular health and safety hazards. Additionally, students will identify common trade names and/or synonyms for the chemicals.
(59.4 Lec. Hrs.)

HSE:110 Industrial Processes 3 cr.

In this course, the student is provided a nontechnical introduction to common general manufacturing processes that involve hazardous materials and wastes, with emphasis on: waste minimization/pollution prevention (P2) strategies, waste treatment methods, and common processes within facilities. Each student completes a major project in which he/she investigates and reports on a specific industry, especially its basic processes, materials flow, worker health and safety exposures, and waste reduction issues.
(59.4 Lec. Hrs.)
Co-requisites: CHM:122, HSE:100, and HSE:200.

HSE:200 Waste and Remediation 3 cr.

This course provides a study of the U.S. Environmental Protection Agency regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Students learn the steps in managing hazardous wastes from cradle to grave, which includes reading, interpreting, and applying sections from the Code of Federal Regulations.
(59.4 Lec. Hrs.)
Co-requisite: HSE:100 or demonstrated ability to use the Code of Federal Regulations.

HSE:205 Air and Water Quality 3 cr.

This course provides a study of the U.S. Environmental Protection Agency regulations pertaining to compliance with the Clean Air Act Amendments of 1990 and the Clean Water Act's National Pollutant Discharge Elimination System. Students learn how they may support professional personnel responsible for complying with the environmental regulations for air emissions and wastewater, as they are both discharged by industrial facilities.
(59.4 Lec. Hrs.)
Co-requisite: HSE:100 or ability to use the Code of Federal Regulations.

HSE:211 Contingency Planning/ Incident Management 4 cr.

This course provides instruction on how to develop an emergency response contingency plan for a facility or community. Students learn that the steps for emergency preparedness include analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency, and evaluating the effectiveness of the contingency plan. Students will develop and implement the "Incident Management System" through both practical and theoretical case scenarios.
(79.2 Lec. Hrs.)
Prerequisite: HSE:100 and HSE:200.

HSE:225 Legal Aspects of Occupational Safety and Health 3 cr.

This course provides a study of legal implications of legislation as it applies to health and safety in the workplace. Students concentrate on regulatory, common, and administrative law; mandatory and voluntary compliance to standards; applicable government agencies and their roles; and OSHA regulations. Additionally, students are introduced to the professional code of ethics of a safety person.
(59.4 Lec. Hrs.)
Prerequisite: HSE:100.

HSE:230 Transportation of Hazardous Materials 3 cr.

This course provides a detailed study of the U.S. Department of Transportation (USDOT) Hazardous Materials Regulations (49 CFR Parts 100 to 185). Through assigned readings and activities, students study the procedures for preparing hazardous materials packages for transport, reporting an accident and developing a written training program for HAZMAT employees. The course includes problems and case studies in which the student identifies and interprets applicable DOT hazardous materials regulations and recommends compliance strategies. Students learn how an environmental health and safety technician may support professional personnel responsible for compliance with the regulations for transportation of hazardous materials. Emphasis is placed on identifying, interpreting and applying sections from the Code of Federal Regulations (CFR).
(59.4 Lec. Hrs.)
Prerequisite: HSE:100 and HSE:200.

HSE:250 Special Topics (Fire Prevention and Ergonomics) 4 cr.
FIRE PREVENTION

The students will be introduced to different methods of fire prevention, how certain chemicals and materials burn, and what additional hazards these chemicals will produce. This course will also address fire detection and employee alarm systems. Resources will include the local fire departments, National Fire Protection Association (NFPA), and Federal Emergency Management Agency (FEMA).

ERGONOMICS

Ergonomics is the science of fitting the job to the worker. This course will address different means to reduce the number and severity of musculoskeletal disorders (MSDs) caused by exposure to risk factors in the workplace. Work-related musculoskeletal disorders (WMSDs) can result when there is a mismatch between the physical requirements of the job and the physical capacity of the worker.
(79.2 Lec. Hrs.)
Prerequisites: HSE:100 and CHM:132.

HSE:251 Ergonomics 2 cr.

Ergonomics is the science of fitting the job to the worker. This course will address different means to reduce the number and severity of musculoskeletal disorders or cumulative trauma disorders caused by exposure to risk factors in the workplace. Work-related musculoskeletal disorders can result when there is a mismatch between the physical requirements of the job and the physical capacity of the worker.
(39.6 Lec. Hrs.)
Prerequisite: HSE:100 and CHM:132.

HSE:252 Fire Prevention 2 cr.

The students will be introduced to different methods of fire prevention, how certain chemicals and materials burn, and what additional hazards these chemicals will produce. This course will also address fire detection and employee alarm systems. Resources will include the local fire departments, National Fire Protection Association, and Federal Emergency Management Agency.
(39.6 Lec. Hrs.)
Prerequisite: HSE:100 and CHM:132.

COURSE DESCRIPTIONS

HSE:261 Regulation & Compliance in Warehousing and Distribution　　3 cr.

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations, with an emphasis on using specific approaches to providing a safe and healthful work environment. The student will also study the legal implications of legislation as it applies to health and safety in the workplace. The third portion of the course will provide the student the background information needed to conduct an in-depth incident investigation. Material relevant in the Workers Compensation insurance aspect side of the post-incident will be covered.
(59.4 Lec. Hrs.)

HSE:270 Sampling and Monitoring Procedures　　4 cr.

This course introduces students to a variety of sampling procedures used in industrial settings and for emergency response. Topics to be covered include: sampling and monitoring devices; industrial hygiene monitoring; outside air sampling; surface water, groundwater, soil and waste sampling. Emphasis will be placed on collecting and preserving representative samples, interpreting laboratory results, and on complying with relevant federal regulations.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: MAT:073 or minimum math placement score based on college assessment, CHM:122, HSE:100, and HSE:200.
Co-requisite: CHM:132.

HSE:275 Worker Compensation/ Incident Investigation　　3 cr.

An accident is an unplanned event that results in personal injury or in property damage. Employers need to investigate all accidents regardless of the extent of injury or damage. The first part of this course will provide the students the background information needed to conduct an in-depth incident investigation. The second part will cover material relevant in the workers compensation insurance aspect side of the post incident. Students will learn what the actual cost of insurance is and how that is calculated, and how an effective safety program will reduce the cost of the company's insurance premiums and the actual workers compensation claims.
(59.4 Lec. Hrs.)
Prerequisite: HSE:100

HSE:280 Hazardous Materials Health Effects　　3 cr.

This course provides a review of human health effects from exposures to chemicals. Topics covered include determination of risk factors, routes of entry of hazardous materials and their effects on target organs, acute and chronic effects, and control measures.
(59.4 Lec. Hrs.)
Prerequisites: CHM:122, CHM:132, HSE:100, and HSE:105.

HSE:285 Industrial Hygiene　　3 cr.

This course provides a basic understanding of Industrial Hygiene concepts. The work environment is dynamic and like nature, contains hazards that may not be obvious to the casual observer. Industrial hygiene encompasses the following roles: investigating and examining the workplace for hazards and potential dangers with recommendations on improving safety; developing techniques to anticipate and control potentially dangerous situations in the workplace; training and education about job-related risks and proper health and safety procedures. The course will address the importance of history in the field of industrial hygiene. The emphasis will be on the anticipation, recognition and evaluation of basic industrial hygiene exposures in the workplace.
(59.4 Lec. Hrs.)
Prerequisite: CHM:122, CHM:132 and HSE:100.

HSE:905 Cooperative Career Experience - HSET　　1 - 8 cr.

Cooperative Work Experience will integrate classroom theory with on-the-job training. The college will assist a student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student will participate in job training experiences. Students may take Cooperative Work Experience for up to a maximum of eight credit hours.
(79.2 - 633.6 Co-op Hrs.)
Prerequisite: 2.0 Cumulative GPA.
Co-requisite: HSE-100.

HEATING AND AIR CONDITIONING

HCR:116 Domestic Heating　　5 cr.

This course covers installation, troubleshooting, maintainance and repair of gas, fuel oil, electric furnaces and heat pumps. The course will also cover temperature, humidity, air filtering and air movement for a complete home conditioning system.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: HCR:308 and HCR:405.
Co-requisite: HCR:441, HCR:851, and MAT:104, 140 or 121.

HCR:260 HVAC Trade Skills (I) 3 cr.

This course covers all types of tools pertaining to, but not restricted to, the HVAC profession. Included with the introduction of the student to the tools is the proper usage of these tools. The student will learn soldering and brazing, iron pipe cutting and threading, PVC solvent welding, all fittings, drilling, sawing and cutting sheet metal.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Co-requisite: HCR:405, HCR:308 and COM:102, ENG:105 or SPC:122.

HCR:261 HVAC Trade Skills   3 cr.

This course covers all types of tools pertaining to but not restricted to the HVAC profession. Included with the introduction of the student to the tools is the proper usage of these tools. The student will learn how to manufacture sheet metal fittings with the tools available. Included with the hand tools will be the different power tools that are common to sheet metal shops everywhere.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: HCR:308, HCR:405 and HCR:441.

HCR:271 Advanced Domestic Heating and Air Conditioning   5 cr.

This course covers all residential and light commercial high-efficiency heating and air conditioning equipment. Included with the instruction will be a hands-on, competency-based lab with high-efficiency equipment. This course will cover all 80-90% furnaces.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: HCR:260 and HCR:116.

HCR:291 Commercial Systems 3 cr.

This course covers all types of commercial heating and cooling systems. Systems included are air cooled and water cooled air conditioning systems, cooling towers, water chillers, gas and electric heating systems for heating air and water, industrial heating systems including direct fired make up air equipment. Commercial water heaters and controls will also be discussed.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: HCR:116, HCR:441, HCR:308, HCR:405.
Co-requisite: HCR:802.

HCR:308 Refrigeration Fundamentals   5 cr.

This course covers temperature/pressure relationships, basic refrigeration systems, refrigerants, metering devices, tool identification/usage and safety, basic refrigeration components and their use, refrigeration applications and methods of installation, maintenance, diagnosis and repair of refrigeration equipment.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Co-requisites: HCR:250, HCR:405 and COM:102, ENG:105 or SPC:122.

HCR:320 Light Commercial Refrigeration   6 cr.

This course covers 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 boilers, compressors, pumps and radiant heating systems. This course will cover the use, installation, diagnosis and maintenance of the items listed above.
(79.2 Lec. Hrs./118.8 Lab Hrs.)
Prerequisite: HCR:271.

HCR:405 Basic Electricity for HVAC Technicians   5 cr.

This course covers those concepts and procedures that will enable the student to work successfully in the industry. Electrical principles, components, meters, schematic and systems are discussed and applied to modern small and large scale installations. Troubleshooting and servicing are presented in practical terms for ensuring immediate productivity.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Co-requisites: HCR:260, HCR:308 and COM:102, ENG:105 or SPC:122.

HCR:441 HVAC Controls and Circuitry   5 cr.

This course acquaints the student with the electrical controls and circuitry associated with domestic oil, gas and electric heating systems. Hands-on laboratory experiences are correlated with the lecture to provide the student with realistically simulated work situations.
(59.4 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: HCR:308, HCR:405 and HCR:260.
Co-requisite: HCR:116, HCR:851 and MAT:104, MAT:110 or MAT:124.

HCR:525 Welding for the HVAC/R Trades   3 cr.

This course is designed to acquaint the student with the methods and techniques used to weld in the HVAC/R trades field. Major topics of instruction include oxyacetylene welding, cutting, brazing, and basic metal arc welding (SMAW stick welding). Preparation and safety will also be emphasized.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: HCR:260.

HCR:802 Control Systems for HVAC   4 cr.

This course covers electrical symbols, transformers, single phase motors, three-phase motors, motor starters and electronic devices for the Heating, Ventilation and Air Conditioning field (HVAC). Included with the instruction will be a hands-on, competency-based lab.
(59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: HCR:441.

HCR:805 Environmental Controls and Equipment   5 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 be included in this course.
(59.4 Lec. Hrs./118.5 Lab Hrs.)
Prerequisite: HCR:308, HCR:116.

HCR:811 Computer Aided Control System Design   3 cr.

This course is designed to deliver instruction in the area of heating and cooling load calculations, airflow, air supply/return layout, commercial and industrial burners and control systems. Extensive use of computers and load calculation software will be incorporated to enhance student productivity.
(59.4 Lec. Hrs.)
Prerequisite: HCR:116, HCR:441.

HCR:851 HVAC-R Industry Safety   2 cr.

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations with an emphasis on using specific approaches to provide a safe and healthful HVAC/R work environment. The course also provides the students with an industry approved 10 hour OSHA certificate.
(39.6 Lec. Hrs.)
Co-requisite: HCR:405.

COURSE DESCRIPTIONS

HCR:860 HVAC Management and Business Fundamentals   3 cr.

Topics of this course include HVAC residential heating and cooling load loss calculations,
equipment sizing, duct sizing and layout, job estimating, billing, customer relations and actual comparison of gas and electric heat calculations. Airflow measurements and calculations will also be demonstrated. Small business forms will be discussed including basic payroll, job estimating, workers compensation and self-employed government forms.
(59.4 Lec. Hrs.)
Prerequisites: HCR:308, HCR:116.
Co-requisite: HCR:291.

HCR:880 Industry Competency Exam (ICE) - Residential   1 cr.

This course is designed to prepare the student for the Residential Industry Competency Exam. Time is spent on each section of the exam, to ensure the student successfully passes the exam. The Residential Industry Competency Exam (ICE) is designed to test for knowledge of the fundamentals and basic skills necessary for entry-level residential technicians.
(19.8 Lec. Hrs.)
Prerequisite: HCR:116, HCR:308, HCR:405 and HCR:441.
Co-requisite: HCR:271.

HCR:885 Light Commercial Competency Exam   1 cr.

This course is designed to prepare the student to successfully complete the Light Commercial Industry Competency Exam (LC-ICE). The LC-ICE is designed to test for knowledge of the fundamentals and basic skills needed for an entry-level commercial HVAC technician. This course will also review the material for the North American Technician Excellence (NATE) Certification Core Exam. Completion of at least one of the exams is mandatory, either the LC-ICE or the NATE. Each exam requires an additional fee.
(19.8 Lec. Hrs.)
Prerequisites: HCR:291, HCR:860, HCR:805.
Co-requisites: HCR:802, HCR:320, HCR:811.

HISTORY

HIS:117 Western Civilization I: Ancient and Medieval   3 cr.

A survey course in Western Civilization from ancient history into the age of absolutionism. The civilizational components of religion, philosophy, literature, art, architecture and science are integrated into the political and social history of Europe, from our Mesopotamian and Egyptian origins to about 1450.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 minimum English placement score based on college assessment.

HIS:118 Western Civilization II: Early Modern   3 cr.

This is a survey course in Western Civilization from the Renaissance through the Age of Democratic Revolutions. The civilizational components of religion, philosophy, literature, art and architecture are integrated into the political and social history of Europe, from about 1450 to the end of the eighteenth century.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 minimum English placement score based on college assessment.

HIS:119 Western Civilization III: The Modern Period   3 cr.

This is a survey course in Western Civilization in the Modern Age, from the Age of Democratic Revolutions through the present day. The civilizational components of religion, philosophy, literature, art, science and architecture integrated into the political and social history of Europe and its impact on the modern world.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 minimum English placement score based on college assessment.

HIS:120 Readings in Western Civilization   1-2 cr.

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. This course may be repeated for additional credit.
(39.6-79.2 Lab. Hrs.)
Prerequisite: HIS:115, HIS:117 or HIS:118.

HIS:151 U.S. History to 1877   3 cr.

The study of political, cultural and economic developments in North American colonies and the United States from discovery through Reconstruction. Historical perspective and critical analysis are emphasized.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

HIS:152 U.S. History since 1877   3 cr.

The study of political, cultural, social and economic developments from 1877 to the present. Historical perspective and critical analysis are emphasized.
This course satisfies a general education requirement in the Cultural/Historical Perspectives area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

HIS:211 Modern Asian History 3 cr.

Designed to assist the student in analyzing developments in the modern history of China, India and Japan. Emphasis is placed on the historical changes and continuity in the three major cultures of Asia including the impact of the West and methods of modernization.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4 Lec. Hrs.)

HIS:224 Nazi Germany 3 cr.

"Nazi Germany" is a survey of the origins and development of the National Socialist German Workers Party (NSDAP), the foreign policies of Adolph Hitler which led to WW II, and the implementation of the Final Solution to the Jewish Question, the Holocaust.
(59.4 Lec. Hrs.).
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

HIS:231 Contemporary World Affairs 3 cr.

This course is designed to be a study of current events viewed in their historical context. Emphasis is placed on global politics, domestic issues, and cultural developments.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

HIS:257 African American History 3 cr.

Designed to assist students in developing an understanding of institutional racism in an historical context. Emphasis is placed on slave culture, social role of newly freed African Americans and community changes in the Twentieth Century.
(59.4 Lec. Hrs.)

HIS:271 American Frontier History 3 cr.

The study of European migration to North America, with a focus upon the interaction within settlements on the frontier. Emphasis upon political, cultural and economic developments in North American Colonies, the trans-Appalachian region, and the trans-Mississippian regions. Comparative study is emphasized with the patterns of frontier culture in the Far West, of the post-bellum period.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

HIS:272 Readings in United States History 1-2 cr.

Designed to provide the student with additional readings in United States history, allowing the student to obtain a greater understanding of the various problem areas of this discipline. This course may be repeated for additional credit.
(39.6-79.2 Lab. Hrs.)
Prerequisite: HIS:151 or HIS:152.

HONORS

HUM:924 Honors Service Project 1 cr.

This course is designed to integrate academic study and community service. By volunteering at least 32 hours at a non-profit service organization, students will have an opportunity to exercise civic responsibility and deepen their understanding of the content in their majors. Students will learn and develop through active participation in organized service experiences that meet our community's needs.
(39.6 Lab. Hrs.)
Prerequisite: Successful completion of HUM:926 or HUM:927.

HUM:926 Honors Seminar 3 cr.

This course is topical and the subject will vary from semester to semester. It is designed to explore critically and creatively selected issues related to the universal themes that inform the human condition. It can be interdisciplinary and community oriented, and will include a special project applicable to the requirements of the Honors Program.
(59.4 Lec. Hrs.)
Prerequisite: Acceptance in the Honors Program or a 3.5 cumulative grade point average.

HUM:927 Honors Independent Study 1 cr.

This course is designed to provide the student with the opportunity to obtain a greater understanding of a topic in this subject. The student will go beyond what is covered and expected in other classes of this discipline. The student will plan and complete an honors project or research paper for the course. The specifics of the honors project or paper will be contracted with the instructor and the Honors Committee at the beginning of the semester.
(39.6 Lab. Hrs.)

HOSPITALITY, CULINARY ARTS AND MANAGEMENT

HCM:100 Sanitation and Safety 2 cr.

This course provides students with a solid foundation in foodservice sanitation and safety. Students will be required to pass State of Illinois exam for certification.
(39.6 Lec. Hrs.)

HCM:106 Hospitality Management Information Systems 3 cr.

This course provides an introduction of information technology in the hospitality industry. The student will develop basic knowledge of information technology and its uses and importance to the hospitality industry.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

HCM:116 Fundamentals of Baking 3 cr.

This course is for a student with very little baking/pastry experience. Students will cover the basics of theory and preparation of baked items. Science and math will play a large role in this course. Items the students will prepare include yeast bread, cookies, creams, puddings, pie crusts and filling, and quick breads. The focus of the course is on standard production methods for a successful product in small and large scale batches.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Co-requisites: HCM:100.

HCM:125 Basic Cake Decorating 1 cr.

The course is designed to explain and demonstrate the crucial techniques, equipment, and components required to produce a decorated cake. Practice will be required outside of class for students to achieve success in decorating the most basic layered cake to the most complex tiered cake.
(39.6 Lab. Hrs.)

COURSE DESCRIPTIONS

HCM:154 Basic Food Preparation   2 cr.

Upon completion of this course, students will have attained basic skills in grilling, knife skills, frying, broiling, sauteing, vegetable cookery, recipe conversion and soups/stocks.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

HCM:155 Garde Manger   3 cr.

Students will prepare all foods associated with a true Garde Manger station in a restaurant. Some foods prepared will be salads, pate, terrines, cold appetizers, show pieces, ice carvings, canapes and show platters.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: HCM:100, HCM:241 and HCM:160.

HCM:156 Intermediate Food Preparation   3 cr.

This course is designed to help students transition from basic to advanced food skills. Students will develop a solid foundation in culinary arts.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: HCM:100 and HCM:154.

HCM:160 Advanced Food Preparation   3 cr.

In this course, students develop to the level of Advanced Food Preparation and Professional Standards. Students also acquire a knowledge of food and beverage combinations.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: HCM:154 and HCM:156.

HCM:180 Food Fundamentals   2 cr.

This course is an overview of foodservice and culinary arts. Students look at industry structure, developing trends and influences of management. Students will begin their awareness of food products and the world of food.
(39.6 Lec. Hrs.)
Co-requisite: HCM:100.

HCM:182 Intermediate Baking 3 cr.

This course is for students with a 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 as well as follow variations of recipes. Science and math are a large part of this course.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisite: HCM:100 and HCM:116.

HCM:212 Industry Management   3 cr.

This course is for an apprentice or professional chef seeking certification from the American Culinary Federation (ACF). Students will be exposed 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.)

HCM:233 Menu Planning and Nutrition   3 cr.

Emphasis will be on basic food nutrients and their use in restaurant cooking. USDA guidelines and USRDA standards are covered. Students will calculate body energy requirements and create nutritionally sound menus using classical tools/preparation methods.
(59.4 Lec. Hrs.)
Prerequisites: HCM:154.

HCM:241 Menu Planning and Sales Promotion   3 cr.

Students will learn what influences impact the menus that we offer and how to target menus to specific needs. Exploration of menus from other cultures and a variety of functions will also be covered. The student will learn to prepare a cost-effective, seasonally oriented and overall aesthetic menu.
(59.4 Lec. Hrs.)
Prerequisites: HCM:154 and HCM:280.

HCM:255 Purchasing   3 cr.

Students will study purchasing techniques and specifications used in the industry. Various food distributors will speak in class. This training will involve completion of a purchasing project.
(59.4 Lec. Hrs.)

HCM:265 Mathematics for Hospitality   3 cr.

This course will provide the student with a general understanding of mathematics application used in a professional food service setting. This course will then introduce the student to the mathematical knowledge needed in the restaurant and hospitality industry.
(59.4 Lec. Hrs.)

HCM:279 Hospitality Accounting   3 cr.

This course is designed to assist students in distinguishing between managerial accounting and financial accounting. Reading and developing financial statements and other concepts of income management are also included in this course.
(59.4 Lec. Hrs.)
Prerequisites: HCM:319.

HCM:280 Food Cost Accounting   3 cr.

This course teaches students to effectively calculate and control costs in foodservice establishments. Students are provided with the basic concepts to yield a profit in the kitchen and manage effective control over income and expenses in the restaurant industry.
(59.4 Lec. Hrs.)

HCM:301 Beverage Control   3 cr.

This course will provide an in-depth study of wines, beverages, spirits and beers. Purchasing/storage and developing a wine list that is compatible with a variety of foods will be covered. Students must be at least 21 years of age to taste alcoholic beverages.
(59.4 Lec. Hrs.)

HCM:310 Hospitality Law   3 cr.

This course reviews the legal areas relevant to the hospitality industry including government regulations, food and liquor liability, guests' rights and safety and employer/employee rights and responsibilities.
(59.4 Lec. Hrs.)
Prerequisite: RDG:045 or minimum reading placement score based on college assessment.

HCM:316 Hotel/Restaurant Operations   3 cr.

This course trains students to become effective front of the house restaurant managers, covering areas of dining such as effective speaking, leadership, scheduling practices and conflict resolution.
(59.4 Lec. Hrs.)

HCM:319 Introduction to Hospitality Field 3 cr.

This course is an overview of the hospitality industry. Students will examine and review the industry structure and developing trends in hotel management. Students will begin their awareness and exploration of the world of hospitality.
(59.4 Lec. Hrs.)

HCM:328 Conversational Spanish for Hospitality Management 3 cr.

This course emphasizes conversation in Spanish using relevant contemporary situations. Situations to be presented will be determined following an assessment of student's background and needs. Listening and comprehension is highly emphasized.
(59.4 Lec. Hrs.)

HCM:330 Hospitality Personnel Management 3 cr.

This course will assist students in developing skills in diverse working environments, documentation, analyzing and interviewing candidates for employment positions.
(59.4 Lec. Hrs.)

HCM:331 Workplace Human Relations 3 cr.

This course will expose students to multiple areas of the human resources including real life case studies based on the hospitality industry assessments and history.
(59.4 Lec Hrs.)

HCM:335 Introduction to Event Planning 3 cr.

This course is an overview of the event management industry. Students will examine the industry and the developing trends in planning events.
(59.4 Lec. Hrs.)

HCM:501 Culinary Practicum I 3 cr.

Students will complete a total of nine practicums (6000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)

HCM:502 Culinary Practicum II 3 cr.

Students will complete a total of nine practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)
Prerequisite: HCM:501.

HCM:503 Culinary Practicum III 1.5 cr.

Students will complete a total of nine practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(480 Practicum Hrs.)
Prerequisite: HCM:502.

HCM:504 Culinary Practicum IV 3 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)
Prerequisite: HCM:503.

HCM:505 Culinary Practicum V 3 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)
Prerequisite: HCM:504.

HCM:506 Culinary Practicum VI 1.5 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(480 Practicum Hrs.)
Prerequisite: HCM:505.

HCM:507 Culinary Practicum VII 3 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)
Prerequisite: HCM:506.

HCM:508 Culinary Practicum VIII 3 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(960 Practicum Hrs.)
Prerequisite: HCM:507.

HCM:509 Culinary Practicum IX 1.5 cr.

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.
(480 Practicum Hrs.)
Prerequisite: HCM:508.

HCM:606 Hospitality Management 3 cr.

This course is designed to train students in a supervisory capacity. Topics including problem solving, team playing, delegating of duties and evaluating performance are included in this course.
(59.4 Lec. Hrs.)
Prerequisite: HCM:319.

HCM:611 Hospitality Sales and Marketing 2 cr.

This course is designed to expose students to multiple approaches to marketing, including product and sales orientations, the four P's (Price, Product, Promotion and Place) of marketing and demand patterns.
(39.6 Lec. Hrs.)
Prerequisite: HCM:319.

COURSE DESCRIPTIONS

HCM:932 Event Management Internship   1 - 2.5 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. This course may be repeated up to three times for a total of six credits.
(79.2 - 237.2 Coop. Hrs.)
Prerequisite: HCM:335.

HCM:957 Hospitality Lab I   2 cr.

This hands-on lab course will allow students to train in front and back of the hospitality establishments. Training in operations of food service, dining skills, housekeeping and laundry operations are included in this course.
(79.2 Lab Hrs.)

HCM:958 Hospitality Lab II   2 cr.

This is a hands-on lab course where students will practice their skills in customer service, concierge contacts and point-of-sale training.
(79.2 Lab Hrs.)

HCM:959 Hospitality Lab III   3 cr.

This course will build on the foundation of customer service, front desk operations, catering and events planning, maintenance, and guest services that will be emphasized at the advanced level in this course.
(118.8 Lab Hrs.)

HCM:960 Hospitality Practicum I   3 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. Students will complete a total of 6 practicums totaling 4000 hours of on-the-job training.
(667 Practicum Hrs.)

HCM:961 Hospitality Practicum II   3 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 Practicum Hrs.)

HCM:962 Hospitality Practicum III   3 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 Practicum Hrs.)

HCM:963 Hospitality Practicum IV   3 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 Practicum Hrs.)

HCM:964 Hospitality Practicum V   3 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 Practicum Hrs.)

HCM:965 Hospitality Practicum VI   3 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 Practicum Hrs.)

HUMANITIES

HUM:105 Working in America   3 cr.

A humanities course which has as its theme the interplay of work and the individual. It focuses on technological society and how the humanities can interpret and reflect upon that society.
(59.4 Lec. Hrs.)

HUM:110 Changes and Choices   3 cr.

Changes and Choices offers students an opportunity to explore ways in which the humanities can contribute to their personal and work lives, especially as they face change and make decisions. ENG:013 or minimum English placement score based on college assessment.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)

HUM:135 Humanities of the Early World   3 cr.

This course is an integrated humanities course that surveys the major cultural achievements and ideas of Western civilization from Ancient Greece through the Middle Ages. Art, architecture, music and drama are presented as they reflect the society and world view of the eras studied.
This course fulfills a general education requirement in the Arts and Humanities.
(59.4 Lec. Hrs.)

HUM:136 Humanities of the Renaissance   3 cr.

This is an integrated humanities course which surveys the major cultural achievements and ideas of Western civilization from the Renaissance through the 18th Century. Art, architecture, music and drama are presented as they reflect the society and the world view of the eras studied.
This course fulfills a general education requirement in the Arts and Humanities.
(59.4 Lec. Hrs.)

HUM:137 Humanities of the Modern World   3 cr.

This is an integrated humanities course that surveys the major cultural achievements and ideas of Western civilization from the 19th century through the early 21st century. Art, architecture, music and drama are presented as they reflect the society and world view of the eras studied.

This course fulfills a general education requirement in the Arts and Humanities.
(59.4 Lec. Hrs.)

HUM:183 Living with Space, Time and Technology   3 cr.

This course will explore human values and individual beliefs within a constantly changing environment, community relationships, technological networks, the ethical dimensions of work and a meaningful personal life-style.

This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)

Prerequisite: ENG:013 minimum English placement score based on college assessment.

HUM:287 Leadership Development Studies   3 cr.

The central focus of this course is the development of leadership skills. The course is designed to provide a basic understanding of leadership and group dynamics theory and to assist the student in developing a personal philosophy of leadership, an awareness of the moral and ethical responsibilities of leadership, and an awareness of one's style of leadership. The course will integrate readings from the humanities, classic works of literature and experiential learning exercises.
(59.4 Lec. Hrs.)

Prerequisite: ENG:013 minimum English placement score based on college assessment.

INDUSTRIAL TECHNOLOGY

IND:102 Manufacturing Processes   3 cr.

An introductory course covering the machines, materials and processes used in a wide variety of industries. The course will emphasize the machining process used to produce machine parts, as well as systems used to control the processes. The course will include lecture and hands-on lab activities, as well as site visitations to reinforce the course content.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

IND:111 Industrial Safety Mechanical Systems   1 cr.

This course teaches the student general industrial safety practices. The topics include electrical safety, lockout tagout procedures, confined entry, NPFA symbols, and personal safety.
(19.8 Lec. Hrs.)

IND:129 Interpreting Pneumatics and Hydraulics Drawings   1 cr.

This course covers methods of visualizing and interpreting views and dimensions of basic pneumatics and hydraulic drawings as well as interpretation of symbols.
(19.8 Lec. Hrs.)

IND:131 Interpreting Machine Drawings   1 cr.

This course covers the design and graphic representation of basic machine parts such as gears, cams, castings and stampings, simple mechanisms, piping drawing and welding representation. Students will work on reading machine drawings from actual production drawings.
(19.8 Lec. Hrs.)

IND:133 Interpreting Electrical and Electronic Drawings   1 cr.

This course covers methods of presenting and interpreting basic electrical and electronic drawings including block diagrams, schematic diagrams, component identification, logic diagrams, printed wiring boards, lighting, motor controls, power distribution and generation.
(19.8 Lec. Hrs.)

IND:134 Print Reading   2 cr.

This course presents an overview of methods used in presenting and interpreting a variety of industrial blueprints and schematic. Topics will include engineering drawings in the machine and electrical fields, construction blueprints including structural, fabrication and erection drawings, piping drawings and architectural drawings.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

IND:136 Process Control I   3 cr.

This course is an introduction to process control. The student will learn the fundamentals of control devices, control wiring and sensors. Labs will be used to illustrate basic motor controls and control wiring techniques and sensor operation.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

IND:137 Process Control II   3 cr.

This course is a continuation off Process Control I. The students will study automatic process control and computerized process control systems. In the laboratory the students will apply the principles learned in the classroom.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

Prerequisite: IND:136.

IND:143 Motors and Drives   3 cr.

The student enrolled in Motors and Drives will learn the fundamentals of industrial motor control and power electronics. The topics covered include: AC and DC motors, thyristors, variable frequency drives, DC motor control and power distribution. Laboratory assignments help to illustrate the subjects discussed in the classroom.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

IND:146 Hydraulic Power Systems   2 cr.

A study of fluid power technology using liquid as the transfer media. Complete hydraulic systems are studied including power sources, reservoirs, pumps, lines, valves and actuators.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

Prerequisite: MAT:720 or MAT:073 or MAT:121.

COURSE DESCRIPTIONS

IND:147 Pneumatic Power Systems   2 cr.
An introduction to the principles of fluid power technology using air or gas as the transfer media. Basic principles are introduced. Complete pneumatic systems are studied including power sources, compressors, lines, valves and actuators. (19.8 Lec. Hrs./59.4 Lab Hrs.)

IND:148 Mechanisms   3 cr.
The application of principles and practical problem solving involving hydraulics, pneumatics, cams, gears and gear trains, belt drives and other industrial devices. Topics include hydraulic and pneumatic theory, drive train component alignment, and motion concepts. Laboratory will enhance the students' understanding. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: IND:149.

IND:149 Applied Mechanics   3 cr.
This course is designed to introduce the fundamentals of mechanics and to build confidence in the students in applying mechanics principles to solve problems. Having successfully completed this course the student will be able to: Explain the fundamental principles of static mechanics; solve static systems; distinguish between stress, strain, force, work, energy and power; describe Newton's Laws of motion and solve applied problems; solve simple dynamics and kinematics problems. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:743.
Co-requisites: MAT:748.

IND:158 Sheet Metal Fabrication   3 cr.
A study of some of the more common problems encountered during installation and modifications, particularly the mechanical and field fabrication problems involved in duct work, piping and electrical work. Introduction to the use of sheet metal tools, edges, seams and locks. (39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: IND:134.
Co-requisites: IND:133 and IND:129.

IND:159 Bearings and Lubrication   2 cr.
A study of friction, force and lubrication of industrial equipment, preventive maintenance, troubleshooting and replacement of bearings. (19.8 Lec. Hrs./59.4 Lab Hrs.)

IND:188 Mechatronic Applications   3 cr.
Mechatronics is the result of a union of several fields, including electronics, mechanics, pneumatics, hydraulics and others. In this course robotic systems are studied in detail along with work cell designs. Common robotic applications are studied along with robot terminology. In the lab students will interface between systems gaining understanding of how different technologies interact. (39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: IND:136 and ELT:123.

IND:222 Geometric Tolerancing and Dimensioning   3 cr.
This course introduces the student to the fundamentals of geometric tolerancing and dimensioning concepts as adopted by the American National Standards Institute (ANSI) and published by the American Society of Mechanical Engineers for engineering and related documentation. (59.4 Lec. Hrs.)

INTERIOR DESIGN

INT:116 Materials I   4 cr.
The focus of this course is the study of natural and man-made fibers. Specific units of study will cover the properties, terminology, production methods, finishing treatments, and weaves of natural and man-made fibers. Various aspects of fibers used in the interior environment will be explored. (79.2 Lec. Hrs.)

INT:120 Materials II   3 cr.
This course is a study of the materials used in interiors, including the criteria for evaluation and selection of materials and procedures for estimating quantities. (59.4 Lec. Hrs.)

INT:127 History of Decorative Arts I   3 cr.
This course examines the history of interior design from Renaissance to the 1800s. Art, furniture, architecture, fabric and accessories are discussed. (59.4 Lec. Hrs.)
Prerequisite: INT:301.

INT:131 Interiors I   4 cr.
Students will be introduced to the specialty area of residential design through client need analysis and design concept writing. Projects will include the development of floor plan drafting skills, space planning, room elevations, furniture and surface treatment selection and specification, finish schedules and sample board presentations. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: INT:302, INT:301, INT:310 and INT:116.

INT:134 Marketing for Interior Designers   3 cr.
This course teaches the fundamentals of marketing, sales and working with the public. The general structure of a marketing plan will be discussed and understanding of the world market place. Students will prepare sales presentations for the class. (59.4 Lec. Hrs.)

INT:140 Presentation Graphics 3 cr.
This course is a study of drawing and rendering techniques for interiors. Marker and colored pencil application for drawings will be presented. Students will learn to draw two-point and one-point perspectives, room interiors and furniture sketches. There will be an introduction to the use of computer-generated drawings to facilitate presentations. (39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: INT:302 and INT:310.

INT:205 Kitchen and Bath Design and Lighting   4 cr.
This course is designed in three segments presenting procedures in lighting design, electrical planning, light quantity and quality analysis and fixture selection. The second segment focuses on kitchen space planning and design utilizing detail drawing, cabinet specification and appliance selection. Bath design is the final segment teaching appliance placement, space planning and contemporary design. (59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: INT:310, INT:131 and INT:140.

INT:209 CAD for Interior Designers   3 cr.

This is a beginning level course designed for interior design students and/or professionals. The course will upgrade and enhance their technical drawing skills by introducing them to a computer-aided drafting and 3-D modeling program. The course will use current CAD training hardware and software which is comparable to the equipment used in the local interior design field. The 3-D program will enable the interior design student to quickly create 3-D drawings, such as isometric and perspective views.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: INT:140 and INT:310 or portfolio evaluation.

INT:210 Interiors II   3 cr.

This course is designed to expand students' experience in residential design. Students will design for complex interior problems integrating previous coursework.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: INT:120, INT:127, INT:131 and INT:140.
Co-requisites: INT:209.

INT:215 History of 20th Century Art and Architecture   4 cr.

This course surveys painting, sculpture, architecture and interior design from 1910 to the present time. Emphasis is placed on the inter-relatedness of these four art forms as they evolve and on their reflection of events and values of the period. The course is presented through slide lectures and field trips to local and regional art museums and architectural sites.
(79.2 Lec. Hrs.)

INT:228 History of Decorative Arts II   3 cr.

This course examines the history of interior design from 1800 to 1910. Art, furniture, architecture, fabric and accessories are discussed.
(59.4 Lec. Hrs.)
Prerequisite: INT:127.

INT:230 Interiors III   3 cr.

This course presents students with advanced residential problems and light commercial design problems. Students will research a historical design and learn techniques in historic restoration. Problems will emphasize adaptive use concepts.
(39.6 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: INT:210 and INT:205.

INT:261 Codes for Interiors   2 cr.

Codes are an essential part of all building interiors. Local, state and federal codes impact most new and remodeled interiors. Interior designers need a working knowledge of these codes to provide safe, accessible designs. This course defines codes and provides students with a working knowledge of these requirements.
(39.6 Lec. Hrs.)
Prerequisite: INT:205.

INT:301 Design Fundamentals 3 cr.

This course examines the creative design process, the elements and the principles required to execute an original idea. Projects emphasize elements of line, shape, pattern, texture and value. The course also presents a survey of the history of design ornament starting in ancient civilization to the Renaissance.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

INT:302 Color Theory   3 cr.

The study of color as a significant design element encompasses the principle of color as a component of white light, the nature of color sensation, and the psychological effects of color. Working with colored pencils and markers, the student develops an understanding of color relationships. Experiments with color mixing and rendering of fabrics gives the student opportunities to apply the color principles of hue, value, intensity, simultaneous contrast and color harmony.
(39.6 Lec. Hrs./59.4 Lab Hrs.)

INT:310 Architectural Graphics 4 cr.

In this course basic drafting skills will be learned through various elementary scale drawing exercises. These exercises will prepare the student for the completion of a full set of drawings for a residence. Lectures will present blueprint reading, construction systems and details, floor plan evaluations and housing styles.
(59.4 Lec. Hrs./59.4 Lab Hrs.)

INT:313 Contract Design   4 cr.

Students will study the specialty area of contract design which may include office design, related commercial interiors/store design, restaurant design, hotel/hospitality design and/or medical/hospital design. Projects will develop and incorporate the skills of concept writing, space planning/bubble diagrams, developing project programs/specifications, matrix development, systems furnishings, lighting/reflected ceiling plans, presentation/rendering graphics and furniture section-cuts/construction graphics. This course will provide an introductory level of skills/information needed for integration into the contract design field.
(59.4 Lec. Hrs./59.4 Lab Hrs.)
Prerequisites: INT:205 and INT:209.
Co-requisites: INT:261.

INT:920 Field Experience   4 cr.

Students will find placement in a work experience related to interior design. The field project will provide students on-the-job experience with an interior design firm. Students will observe experienced professionals in the work setting and will be introduced to the skills, knowledge and concepts required of a professional interior designer. Classroom lectures and discussions will give individuals the opportunity to share in the variety of experiences offered in each firm. The lecture component will present the professional requirements and ethical standards expected in the field.
(13.2 Lec. Hrs./162 Lab. Hrs.)
Prerequisite: 33 credits of interior design courses and a 2.0 GPA..

INTERPRETER TRAINING

ITP:121 Introduction to Interpreting I   4 cr.

Introduces basic knowledge and application of skills necessary for an individual to interpret accurately with emphasis on interpreting theory with opportunities to apply the concepts learned from the text and lecture.
(59.4 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ASL:151.

COURSE DESCRIPTIONS

ITP:122 Introduction to Interpreting II   4 cr.

This course gives the student a fundamental background in the theoretical and practical aspects of interpretation/transliteration, focusing on skill development in the classroom on three levels: prepared (rehearsed), simultaneous and consecutive.
(59.4 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ITP:121.

ITP:126 Orientation to Deafness   4 cr.

This course examines the historical aspects of the field of deafness. Topics include the history of deaf education, notable deaf persons, various deaf organizations and their significance, the mechanics of hearing, and causes and effects of hearing loss.
(79.2 Lec. Hrs.)

ITP:129 Deaf Studies   4 cr.

This course introduces students to fields of study about the American Deaf experience in the United States, including linguistics, sociology, audiology, and psychology. The course exposes students to the historical views of deafness and deaf education. Students will be familiarized to the contributions and contemporary lives of deaf people in America.
(79.2 Lec. Hrs.)
Co-requisite: ASL:151 or instructor permission.

ITP:131 Social Aspects of Deaf Culture   4 cr.

Social Aspects of Deaf Culture examines the various cultural aspects of the deaf community. It presents the interrelationship of language and culture along with a study of socialization, norms and values.
(79.2 Lec. Hrs.)

ITP:135 Introduction to Language   3 cr.

This course is designed to introduce students to the linguistic features of language. Students will first learn the characteristics common to all languages and the basic descriptive tools of linguistics. Origins, properties, and word formation systems and syntactic systems as they apply to all languages, but especially to English and ASL, will be covered. This will prepare the students to apply this information to the study of ASL as a language and its unique linguistic properties.
(59.4 Lec. Hrs.)
Prerequisite: ITP:141.

ITP:141 English Vocabulary/ Grammar for Interpreters   4 cr.

This course focuses on developing and expanding student competence in vocabulary comprehension and expressions that parallel American Sign Language. Coursework assists students in the improvement of their understanding and application of the semantic aspects of both languages.
(59.4 Lec. Hrs./59.4 Clinical Hrs.)

ITP:211 Interpreting Skills Lab 3 cr.

Interpreting Skills Lab is designed to provide the students with an ongoing interpreting skills experience in a safe environment under instructional supervision. This will include interpreting in a variety of simulated settings with immediate feedback from the instructor.
(39.6 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ITP:253.
Co-requisite: ASL:281.

ITP:230 Transliteration I   4 cr.

This course examines the various sign language codes used in the educational programs of North America. It focuses on understanding methodology as well as skill and vocabulary building in the system.
(59.4 Lec. Hrs./59.4 Clinical Hrs.)

ITP:231 Transliteration II   3 cr.

Transliteration II will continue to develop the skills begun in Transliteration I. Emphasis will be placed on speed, accuracy, skill and continued vocabulary building within the English-based sign systems.
(39.6 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisite: ITP:230.

ITP:253 Practical Issues   3 cr.

Emphasizes important aspects of interpreting that deal with various settings and situations. It also provides opportunities to observe professional interpreters performing their tasks. This course will give the student a general understanding and exposure to a variety of interpreting situations and how to interpret them.
(39.6 Lec. Hrs./59.4 Clinical Hrs.)
Prerequisites: ITP:121 and ASL:251.

ITP:256 Interpreter Certification Preparation   2 cr.

This course offers an overview of various interpreter tests that are given to sign language interpreters in the field of interpreting to maintain their certification status and keep their licenses up-to-date and in good standing. The course also offers helpful tips and strategies for students to prepare and study for the testing before or upon the completion of their Interpreter Training Program coursework.
(39.6 Lec. Hrs.)
Prerequisite: ASL:296, ITP:124, ITP:129, ITP:131 and ITP:230 .
Co-requisite: ASL:297 and ITP:231 or instructor permission.

ITP:941 Practicum   2 cr.

Practicum consists of field experience that provides advanced training for interpreting students giving them the opportunity to apply learned concepts and skills in actual interpreting situations with professional supervision. This on-the-job experience is the final phase of training prior to entrance into the field of professional interpreting.
(158.4 Co-op Hrs.)
Prerequisite: Student must complete this course in their last semester of studies in the Interpreter Training program or consent of instructor or academic advisor must be obtained.
Co-requisite: ITP:253.

JOURNALISM

JOU:120 Beginning Newswriting 3 cr.

Presents the fundamentals of newswriting: copy editing, newspaper style, spelling and vocabulary, writing leads, basic news stories, speeches, editorials and the handling of press releases.
(59.4 Lec. Hrs.)

JOU:123 Intermediate Newswriting 3 cr.

Refines newswriting skills through an introduction to more complex newswriting experiences such as interviews, feature stories, sportswriting and interpretive writing.
(59.4 Lec. Hrs.)
Prerequisite: JOU:120.

JOU:129 News Processing 3 cr.

Reviews the basics of copy editing for printed publications. Emphasis is placed on spelling and vocabulary when story rewriting is necessary. Headline writing, elementary typography, design, lay-out and paste-up of pages is covered, along with consideration of photographic design and advertisement placement and design. Use of the technologies available (video terminals and computer assistance) to the copy editor is also included.
(59.4 Lec. Hrs.)

JOU:171 Introduction to Photography 3 cr.

Presents the basics of photography: using a camera, developing and printing techniques, common photographic problems and the processes to solve them. Emphasis is placed on photographs for publication.
(59.4 Lec. Hrs.)

JOU:172 Intermediate Photography 3 cr.

Acquaints the student with photography and darkroom techniques with particular emphasis on control. Various techniques will be demonstrated and the student will use the necessary chemicals, papers and films to achieve negative and print excellence.
(59.4 Lec. Hrs.)
Prerequisite: JOU:171 or equivalent.

JOU:220 Advanced Newswriting 3 cr.

Expands journalistic skills by student reporting on news events as assigned by the instructor. Assignments vary from features, interpretive series, editorials and investigative reporting. Weekly seminar-type procedures and occasional lectures enhance the learning process. Articles written for the course are considered for publication.
(59.4 Lec. Hrs.)
Prerequisite: JOU:123.

JOU:932 Journalism Internship 3 cr.

On-site experience in a community news organization is provided and is supervised by a professional journalist. Practical experience will be provided in all aspects of working at a daily news organization and includes gathering, processing and editing the news. The student will learn to maintain a daily beat, write news articles and observe operations of the news organization.
(118.8 Internship Hrs.)
Prerequisites: JOU:120 and JOU:123.

JOU:941 Practicum in Communication 1-3 cr.

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. This course may be repeated for up to six hours credit in either print or broadcast.
(19.8-59.4 Lec. Hrs.)

LITERATURE

LIT:101 Introduction to Literature 3 cr.

A literature appreciation course which offers an introduction to the major literary genres: the short story, poetry, drama and the novel. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 recommended.

LIT:105 Children's Literature 3 cr.

Designed primarily for the student planning to enter elementary-level teaching. The student will develop an understanding of why and what children read and develop criteria for the selection of material for children's recreational and curriculum enrichment.
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 and a general education literature course recommended.

LIT:110 American Literature to Mid-1800's 3 cr.

A study of the important characteristics and transitions in American literature. Emphasis is given to the works of selected poets and prose writers from 1607 to 1865.
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 and a general education literature course recommended.

LIT:111 Modern American Literature Since Mid-1800's 3 cr.

An introduction to literary works in four genres (the short story, poetry, drama and the novel) by American authors from 1865 to the present, with a focus on themes and formal characteristics that define American literature. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 recommended.

COURSE DESCRIPTIONS

LIT:135 Film as Literature   3 cr.

Film as Literature examines the motion picture as a literary form. The motion picture is compared to other narrative literature, such as the novel, the short story, the epic poem, and the memoir. Special emphasis is placed on how written narratives are adapted into motion picture narratives.
(59.4 Lec. Hrs.)

LIT:183 Masterpieces: Neoclassical to Modern   3 cr.

An introduction to major works of literature from the 17th Century to the present. Attention is given to the personal and social values of the period through the study of the four primary literary genres: the short story, poetry, drama and the novel. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing. *This course satisfies a general education requirement in the Arts and Humanities Area.*
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 recommended.

LIT:185 Contemporary Literature   3 cr.

This course focuses on works written since World War II. The effects of culture, environment and mass media on literature and the four major genres (short fiction, poetry, novel and drama) are explored in detail through critical reading and writing. *This course satisfies a general education requirement in the Arts and Humanities Area.*
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or ENG:107. ENG:106 recommended.

The following courses will be offered on a rotating basis under Studies in Literary Form:

LIT:161 The Short Story   3 cr.

An examination of the literary history and boundaries of the short story, its particular components in comparison with other kinds of fiction and short writings (e.g. novels, fairy tales, oral histories), and its subgenres (e.g. horror, detective, science fiction).
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 or ENG:107. ENG:106 and a general education literature course recommended.

LIT:200 Studies in Literary Form   3 cr.

This course studies one particular literary genre such as the novel, the short story, contemporary drama, modern poetry, etc. The course emphasizes the craft of the genre through the examination of major, representative works as well as historical development. Students may enroll in more than one course under this catalog number.
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 or ENG:107. A general education literature course and ENG:106 is recommended.

The following courses will be offered on a rotating basis under Studies in Literary Theme:

LIT:180 Mythology   3 cr.

This course emphasizes the historical development and the craft of mythology through the study of major, representative works from ancient to modern day. Students will explore how mythology contributes to an understanding of the world and universe, and critically examine its pertinence to contemporary society.
(59.4 Lec. Hrs.)
Prerequisite: ENG:105 or 107.

LIT:195 Nature of Evil in Literature   3 cr.

A study of the social idea of evil as it is reflected in literature through the centuries (from *Paradise Lost* to *The Exorcist*).
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 or ENG:107. A general education literature course and ENG:106 is recommended.

LIT:943 Readings in Literature   1-2 cr.

Designed to provide the student additional readings in literature, allowing the student to obtain a greater understanding in various areas in the discipline than can be attained by normal course work. This course may be repeated for additional credit.
(19.8 - 59.4 Lec. Hrs.)

MANAGEMENT

MGT:101 Principles of Management   3 cr.

This course is designed to explain the history and development of management theory and practice. Behavioral and scientific schools of management philosophy are examined. Components of organizations and how they must be integrated at all levels in an organization in order to produce an effective system are presented.
(59.4 Lec. Hrs.)
Prerequisite: RDG:032/033 or minimum reading placement score based on college assessment.

MGT:110 Small Business Management   3 cr.

Blends entrepreneurial dreams with exploration of the range of business functions necessary to operate a small business, such as marketing and financial management, and business planning. Students will sharpen their problem-solving skills through a variety of experiential exercises, classroom discussion, and the completion of a partial business plan by course's end.
(59.4 Lec. Hrs.)

MGT:130 Principles of Supervision   3 cr.

Emphasis is placed on the managerial directing functions, including the necessary supervisory qualities, duties and responsibilities. Attention is also given to contemporary supervisory approaches to supervision; the supervisor's relationship to the total management environment; self-management; and the supervisor's relationship to the individual employee and the work group.
(59.4 Lec. Hrs.)

MGT:151 Management Communications I   3 cr.

A writing course that prepares the student for the types of written communication essential to management and supervision success.
(59.4 Lec. Hrs.)

MGT:165 Principles of Quality 3 cr.

This course provides a basic introductory understanding of the key principles of Total Quality Management (TQM) - leadership, information and analysis, planning, human resources, processes, results and customer satisfaction.
(59.4 Lec. Hrs.)
Prerequisite: MGT:101.

MGT:188 Personnel Administration/Industrial Relations 3 cr.

An introduction to the theory and practice of personnel administration and industrial relations with a view toward harmonizing an individual worker's goals with goals of the organization.
(59.4 Lec. Hrs.)

MGT:210 Management Decision-making 3 cr.

This course is a capstone "big-picture" course. It cuts across the whole spectrum of business and management. The center of attention is the total enterprise - the industry and competitive environment in which it operates, its long-term direction and strategy, its resources and competitive capabilities, and its prospects for success. Students will role play as managers answering such questions as what should managers do, and do well, to make the company a winner. Students will integrate the skills and knowledge they have acquired in previous courses in working real-world cases drawn from actual businesses.
(59.4 Lec. Hrs.)
Prerequisite: Completion of first year Business Management curriculum or instructor consent.

MGT:260 Introduction to Business Logistics 3 cr.

This course will provide an overview of the role of logistics in today's business world; terminology in the field of logistics; and an overview of the major functional areas of the logistics field such as transportation, inventory management, distribution and warehousing, and regulation and compliance. The student will be exposed also to trends, issues, and challenges of the field, as well as to potential careers in logistics (locally, regionally and nationally).
(59.4 Lec. Hrs.)
Prerequisite: ENG:064, RDG:045, and MAT:041 or minimum English, reading and math scores based on college assessment.

MGT:261 Principles of Transportation Management 3 cr.

This course studies the fundamental roles and importance of transportation in companies and society. The course evaluates the complex environment in which transportation services are provided and explores strategies for adapting to a fast-paced and rapidly changing industry. Specific tools include overview of transportation, the supply chain, the economy, traditional modes of transportation, special carriers, global transportation, economic operating characteristics of each mode, costing, pricing, carrier strategy, and information management.
(59.4 Lec. Hrs.)
Prerequisite: MGT:260.

MGT:265 International Transportation and Logistics 3 cr.

This course focuses on the major factors of importing and exporting goods and services on a global scale. It includes understanding current terminology, regulations, analysis of and opportunities in international markets, basic principles of international financing, exchange rates, and other elements associated with the transportation and distribution operations to facilitate global trade.
(59.4 Lec. Hrs.)
Prerequisite: MGT:260.

MGT:267 Principles of Cargo Security 3 cr.

This course examines relevant facets of maritime, land, pipeline and air transportation security related systems and associated issues. It covers applicable legislation and the agencies tasked to oversee each mode of transportation. This course also describes how to implement an appropriate program to enhance the security of a particular mode of transportation.
(59.4 Lec. Hrs.)
Prerequisite: MGT:260.

MGT:268 Principles of Logistics Operations Management 3 cr.

Provides a detailed study of operations management emphasizing the need to achieve the highest level of service and product quality while keeping cost as low as possible. The major areas covered include main concepts, tools and techniques of operations management, coordination and planning, quality improvement and project management for the typical business processes and its relationship to the supply chain.
(59.4 Lec. Hrs.)
Prerequisites: MGT:260, MGT:261, MGT:265, MGT:269 and HSE:261.

MGT:269 Introduction to Inventory Management 3 cr.

Focuses on the role of inventory management in the supply chain. Students will be exposed to the concepts, principles, problems and procedure of inventory management. The crucial role of inventory and materials management in the efficiency, competitiveness, and profitability of a business will be examined. The importance of inventory management, material requirements planning and just-in-time systems will also be emphasized.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MGT:260.

MGT:928 Independent Study - Special Projects in Logistics and Supply Chain 3 cr.

Designed by students and the logistics faculty to provide a highly individualized learning experience within the logistics and supply chain field to include RFID, Inventory Management, Transportation, Regulation and Compliance, and Import/Export. Specific tasks and outcomes are identified and customized for the student for completion in one semester. Students will create a project synopsis to be presented to the logistics department highlighting the outcomes of the project.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: MGT:260, MGT:261, MGT:265, MGT:267, MGT:269, HSE:261, BUS:300, BUS:301 and BUS:302.
Co-requisite: MGT:268.

COURSE DESCRIPTIONS

MANUFACTURING

MFG:105 Machine Shop Measuring   3 cr.

This course will cover a variety of precision measurement devices that are used in manufacturing processes. These devices include machinists scales, dividers, spring calipers, combination square, hermaphrodite calipers, calipers (vernier, dial, and digital), micrometers, depth micrometers, surface gauge, dial indicators, gauge blocks, height gauges and sine bar. Emphasis will be placed on how the student will accurately use these devices in the laboratory situation.
(19.8 Lec. Hrs./79.2 Lab Hrs.)

MFG:111 Machinery Handbook 1 cr.

The Machinery Handbook is the number one reference and application guidebook used by machinists of all levels in modern manufacturing. General information, using math tables, gear/thread information and speed/feeds will be covered.
(19.8 Lec. Hrs.)

MFG:112 Drills and Saws   2 cr.

This course will develop the primary skills and knowledge necessary to use basic drill presses and saws in the laboratory situation. Areas of instruction will include sharpening drill bits, drilling, reaming, counterbore, spotface, countersink, hand/power tapping and types/uses of saws. Students will be able to properly operate manual and automatic drilling operations using simple and larger radial drill presses, as well as cutting metals and materials to length for further machining operations by operating both horizontal and vertical band saws. Various drill and saw projects will strengthen the proper use of these tools.
(19.8 Lec. Hrs./39.6 Lab Hrs.)

MFG:113 Vertical/ Horizontal Mills   5.5 cr.

Upon completion of this course, students will be able to demonstrate competencies in all facets of manual milling operations. Students will be able to master the basic and advanced skills to operate both vertical/horizontal mills. Various topics covered in this course will include align vise, head, flycutter and end mill, tilt head and turn vise, drill, tap, ream, rotary table, saw slot on horizontal, sine plate, offset boring head, indexing head, keyways, dividing heads, gear cutting, universal indexing head, 5 C collet holders and dovetails. Special concentration will be placed on the set-up and safe operation of all milling machines with a heavier emphasis placed upon vertical milling machine operation in preparation for CNC Milling Center programming and operation. Various milling projects will strengthen the proper use of this equipment.
(39.6 Lec. Hrs./138.6 Lab Hrs.)
Prerequisite: MFG:105.

MFG:114 Surface Grinding   2.75 cr.

Students enrolled in this course will begin with development of basic off-hand and flat stock grinding techniques in both wet and dry applications and will progress to the more complex techniques used in grinding. Special attention will be placed on set-up including jigs and fixtures applications. Hands-on projects will enhance student's ability to incorporate optical comparators for final finishing and polishing of precision grinding application. Various grinding projects will strengthen the proper use of this equipment.
(19.8 Lec. Hrs./69.3 Lab Hrs.)
Prerequisite: MFG:105.

MFG:115 Lathe Work   4.5 cr.

This course will develop the theoretical and hands-on skills necessary to efficiently and productively operate all types of engine lathes. Students will begin with the basic skills and knowledge development of speeds, feeds, materials, cutting tools and basic turning techniques and will continue to refine their skills to include lathe tooling, facing, aligning lathe centers, turning, grooving/parting, cut radius/external tapers, knurling, boring internal tapers and internal/external threads. Students will progress from the basic manual lathes through the larger industrial DRO lathes and will polish their skills on turret lathe operation in preparation for CNC lathe programming and operation. Various lathe projects will strengthen the proper use of this equipment.
(19.8 Lec. Hrs./138.6 Lab Hrs.)
Prerequisite: MFG:105.

MFG:116 Carbide Tooling   1 cr.

This course will introduce the student to the history and advances of carbide tooling. Indexable inserts, drilling/milling/turning with carbide tools, basic tooling applications of carbides and coated carbide tools are also covered. Students will develop the necessary skills to understand and effectively utilize different types of machine tooling.
(9.9 Lec. Hrs./19.8 Lab Hrs.)

MFG:117 Cylindrical Grinding   1.5 cr.

This course will introduce the student to proper use and application of cylindrical grinders in manufacturing settings. Topics covered will include parallel grinding and external/internal tapers methods.
(9.9 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MFG:105, MFG:114.

MFG:118 Machine Tool Project   4 cr.

This course will provide the student with the opportunity to integrate all skills gained in manual machining courses to design, build, produce variety of parts using the equipment and tools in the manufacturing setting. Special attention and emphasis will be placed upon accuracy and proper use of equipment/tools following safe work practices in the lab situation.
(19.8 Lec. Hrs./118.8 Lab Hrs.)
Prerequisites: MFG:105, MFG:112, MFG:115, MFG:113, MFG:114 and MFG:117.

MFG:140 Geometric Dimensioning and Tolerances 1 cr.

This course will cover the basic principles of geometric dimensioning and tolerances (GD&T), interpreting GD&T symbols, interpreting form and orientation tolerances, profile, runout and location tolerances as it relates to manufacturing settings.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Prerequisite: MFG:192.

MFG:151 CNC Fundamentals   2 cr.

This course will introduce students to the 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 cr.

This course is fundamental to the safe operation of all machine tools within industrial application. Students will develop the basic skills and knowledge necessary to work safely within all aspects of the manufacturing industry. Basic safety, electrical safety, chemical health hazards, forklift safety and machine tool safety will be covered. (19.8 Lec. Hrs.)

MFG:190 Metallurgy   2 cr.

All ferrous and non-ferrous metals have unique characteristics making their machining unique and individual. This course will teach the basic theory of metals and their characteristics from their differences in hardness, brittleness and durability, resistance to corrosion, and machinability and welding. Basic understanding of metallurgy is essential if machinists and welders are to employ the correct techniques and operational sequences to produce quality parts and products efficiently and effectively. (19.8 Lec. Hrs./39.6 Lab Hrs.)

MFG:192 Blueprint Reading   3 cr.

This course will cover introduction to engineering drawings, multi-view drawings, sectional views, dimensions and tolerances and part feature specification. (19.8 Lec. Hrs./79.2 Lab Hrs.)

MFG:196 Materials and Processes in Manufacturing   2 cr.

An introductory course that will give the student a knowledge of important areas of production processes that deal with the most common materials used in industry and an understanding of some of the basic principles and theory behind the selection of certain materials and processes for certain industrial applications. (39.6 Lec. Hrs.)

MFG:201 CNC Turning Operator   2 cr.

This course introduces students to the proper use of Computer Numeric Control (CNC) turning centers in the manufacturing setting. Topics covered include programming codes/manual codes, reading Electrical Industrial Association (EIA) and International Organization for Standardization (ISO) part programs, reading conversational part programs. Loading/storing/activating part programs, tool offsets/tool data entry, machine start up, program restarting process planning for new jobs, work holding devices, installing new tools and entering tool life data, establishing program zero and entering tool offset data and establishing the safe index point. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting. (19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MFG:151.

MFG:203 Manufacturing Processes   3 cr.

This course is designed to give the student a basic understanding of machine practices and processes. Topics of discussion will include machine tools, measuring tools, bench tools, drills and saws, grinding, lathes and mills. Other topics will include types and characteristics of materials, machinability and heat-treating. Students will spend most of their time in the lab performing hands-on projects. (19.8 Lec. Hrs./79.2 Lab Hrs.)

MFG:205 Milling Programming 2 cr.

This course will introduce students to Computer Numeric Control (CNC) programming concepts in manufacturing settings. Topics covered include circular interpolation, manual program units, drilling, tapping, boring canned cycles, conversational programming units for milling operations, as well as verifying new programs and understanding advanced programming techniques. Various projects will strengthen the proper use, programming and troubleshooting of the equipment in the manufacturing setting. (19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MFG:221.

MFG:221 CNC Milling Operator   2 cr.

This course will introduce students to the proper use of Computer Numeric Control (CNC) machining centers in the manufacturing setting. Topics covered include programming codes/manual codes, reading Electrical Industrial Association (EIA) and International Organization for Standardization (ISO) part programs, reading conversational part programs. Loading/storing/activating part programs, tool offsets/tool data entry, machine start up, program restarting, process planning for new jobs, work holding devices, installing new tools and entering tool life data, establishing program zero and entering tool offset data. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting. (19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MFG:151.

COURSE DESCRIPTIONS

MFG:223 CAD/CAM   **2 cr.**

This course is designed to develop the skills necessary to author, apply and troubleshoot CNC programs in, as well as operate, basic CNC equipment, including CNC Turning/Milling Centers. Design and programming skills will be developed utilizing HAAS Fanuc control trainers for application on both types of machining centers, with students progressing from rudimentary to advanced CNC machining projects on both HAAS Turning and Milling Centers. Other topics such as mastercam working environment, overview of CAD/CAM processes, modifying existing geometry, tooling fundamentals, 2-D tool paths on mill/lathe, creating lathe geometry and improving CAD files will strengthen the proper use and understanding of CAD/CAM equipment in laboratory situations.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: MFG:186 and MFG:192.

MFG:224 Coordinate Measuring Machine (CMM)   **1 cr.**

This course will emphasize the proper use of Coordinate Measuring Machine (CMM) to qualify and inspect parts for various manufacturing processes. Statistical Process Control (SPC) is also covered. Various CMM hands-on projects will strengthen the proper use of this equipment.
(19.8 Lab Hrs.)
Prerequisites: MFG:186 and MFG:192.

MFG:229 CNC Project   **2 cr.**

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

MFG:239 Lathe Programming   **2 cr.**

This course will introduce students to Computer Numeric Control (CNC) programming concepts in manufacturing settings. Topics covered include calculating and entering program units, understanding advanced programming techniques, drilling/ grooving/boring canned cycles, turning, threading, facing canned cycles, machining the first piece for a new program for lathe operations. Various projects will strengthen the proper use, programming, troubleshooting of this equipment in the manufacturing setting.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MFG:201.

MARKETING

MKT:110 Principles of Marketing   **3 cr.**

Develops an integrated, analytical and managerial approach to the study of marketing. Principles of the psychological, social, political and economic forces are analyzed as relative to marketing. Strategy of marketing is based on the consumer-oriented concept.
(59.4 Lec. Hrs.)

MKT:140 Principles of Selling   **3 cr.**

Presents information regarding careers in selling, sales management, preparation needed for selling and sales presentations. Films and presentation by professional sales personnel enhance the learning experience.
(59.4 Lec. Hrs.)

MKT:150 Principles of Advertising   **3 cr.**

Explains the economic functions of advertising, its value and use in business. Analysis of consumer motivation, presentation of advertising and the effectiveness of various media is presented. Assignments give practice in effective advertising methods.
(59.4 Lec. Hrs.)

MKT:160 Principles of Retailing   **3 cr.**

Presents the character and significance of retailing in our economy. Examines the principles and applications of strategic planning in retail areas such as ownership, organization, consumer behavior, trading area, merchandise planning and financial management.
(59.4 Lec. Hrs.)

MKT:181 Customer Service Strategies   **2 cr.**

This course is designed to introduce students to the concepts of customer service and to help them learn the skills and techniques necessary to provide excellent service to the internal and external customers of the organizations for which they work. These skills are vital for every job since identifying and satisfying customer needs are essential parts of every business organization.
(39.6 Lec. Hrs.)

MASS MEDIA STUDIES

MMS:111 Video Production I   3 cr.

Introductory course in electronic remote video camera operation and editing. Special attention given to shot selection, framing, composition, and lighting. Weekly projects evaluated by students and instructor in group process.
(39.6 Lec. Hrs./39.6Lab Hrs.)

MMS:115 TV Production   **3 cr.**

Introduction to the principles, procedures and techniques of television production. Emphasis on the basic design and functions of TV production equipment.
(59.4 Lec Hrs.)

MATHEMATICS

MAT:037 Introduction to Applied Math Topics Module I   1 cr.

This course is designed for any applied technology student who needs to improve arithmetic skills. Topics include arithmetic operations and problem solving with real numbers, fractions, decimals and percents. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator is required.
(19.8 Lec. Hrs.)

MAT:038 Introduction to Applied Math Topics Module II   1 cr.

This course is designed for any applied technology student who needs to improve math skills. Topics include measurement systems, ratios and proportions, problem solving and an introduction to geometry. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator is required.
(19.8 Lec. Hrs.)
Prerequisite: MAT:037 or minimum math placement score based on college assessment.

MAT:039 Introduction to Applied Math Topics Module III   1 cr.

This course is designed for any applied technology student who needs an introduction to basic algebra. Topics include operations with signed numbers, techniques for solving simple equations and problem solving. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator in required.
(19.8 Lec. Hrs.)
Prerequisite: MAT:038 or minimum math placement score based on college assessment.

MAT:041 Basic Math Skills 1-2-3 cr.

This course is designed for students needing additional preparation for higher math courses. Topics include arithmetic operations on real numbers, fractions, decimals, percent, measurement, ratio and proportion, metric system, problem solving, and an introduction to algebra. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math.
(19.8, 39.6, 59.4 Lec. Hrs.)

MAT:047 Math for Nursing   3 cr.

This course is designed for pre-nursing students who need to improve arithmetic skills. This course builds on basic math skills and incorporates math computation skills necessary in the healthcare field. Emphasis is on understanding systems of measurement and conversions - metric, apothecary, household and other systems of measurement. Topics include: whole number review, decimals, fractions, ratios and proportions, percents, formulas, household and metric measurement, basic algebra and word problems. The course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math.
(59.4 Lec. Hrs.)

MAT:063 Elementary Algebra   4 cr.

A beginning course for students with little or no background in algebra. Covers basic concepts, linear equations and inequalities, graphing and linear equations in two variables, exponents and polynomials, factoring, rational expressions, and roots and radicals.
(79.2 Lec. Hrs.)
Prerequisite: Minimum math placement score based on college assessment.

MAT:073 Elementary Algebra II 4 cr.

A one-semester course for students with a background in elementary algebra. Topics covered include a review of fundamental concepts, linear equations and inequalities in one variable, polynomials and factoring, rational expressions, linear equations and inequalities in two variables, rational exponents and radicals, quadratic equations and inequalities, systems of linear equations and inequalities, introduction to relations and functions and exponential and logarithmic functions. A graphing calculator is recommended.
(79.2 Lec. Hrs.)
Prerequisite: MAT:063 or minimum math placement scores based on college assessment.

MAT:104 Applied Math Topics   3 cr.

Presents algebra and geometry applied to specific trade applications. Mathematical ideas and procedures will be presented first, followed by application within the various trades.
(59.4 Lec. Hrs.)
Prerequisite: MAT:041, MAT:039 or minimum math placement scores based on college assessment.

MAT:110 Math for Liberal Arts 3 cr.

A mathematics course designed for the liberal arts student. The course covers a broad spectrum of topics designed to help the student survey and develop skills that lead to an appreciation of the value and uses of mathematics. The course will include units on logic, problem solving and sets; counting methods and probability; statistics; financial mathematics; and different base systems. Other topics may be included in the course.
This course satisfies a general education requirement in the Mathematics area.
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement scores based on college assessment.

MAT:117 Math for Elementary Teachers   3 cr.

This course is designed for elementary education majors. Topics in this course include mathematical reasoning, logic, sets, number theory, integers, fractions and rational numbers, decimals, percents, statistics, measurement, and transformations.
This course satisfies a general education requirement in the Mathematics area for elementary educations majors only.
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement scores based on college assessment.

MAT:121 College Algebra   4 cr.

A college level course designed for students majoring in business, science, math, and pre-engineering. The course will prepare students for future study in mathematics. Topics include: solving equations and inequalities; functions including polynomials; absolute value; greatest integer; exponential and logrithmic functions; system of equations; matrices; permutations and combinations; and The Binomial Theorem. A graphing calculator is required.
(79.2 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement scores based on college assessment.

MAT:128 PreCalculus   4 cr.

A higher level mathematics course intended to prepare students for calculus or advanced science courses. Topics covered include logarithms and exponential functions, trigonometric functions, complex numbers, analytic geometry, and topics in the theory of equations. A graphing calculator is required.
This course satisfies a general education requirement in the Mathematics Area.
(79.2 Lec. Hrs.)
Prerequisite: MAT:121 or minimum math placement scores based on college assessment.

MAT:140 Finite Math   3 cr.

Finite Mathematics is designed for students studying business, the social sciences, or the life sciences. Topics covered in this course are sets, functions, finance, matrices, systems of linear equations, linear programming, exponential and logarithmic functions, and sequences and series. A graphing calculator is required. *This course satisfies a general education requirement in the Mathematics Area.*
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement scores based on college assessment.

MAT:142 Technical Mathematics I   1.5 cr.

The first of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: real numbers, solving equations, fractional equations, percent/ proportion/ variation, calculator operations, and measurements.
(29.7 Lec. Hrs.)

MAT:143 Technical Mathematics II   1.5 cr.

The second of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: geometry, algebraic fractions, formula rearrangement, functions and graphs, right triangles, and oblique triangles.
(29.7 Lec. Hrs.)
Prerequisites: MAT:142

MAT:144 Technical Mathematics III   1.5 cr.

The third of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: systems of two equations and formulas, systems of three equations, powers/roots/logarithms, trigonometric functions, vectors, and polynomials.
(29.7 Lec. Hrs.)
Prerequisites: MAT:143

MAT:145 Technical Mathematics IV   1.5 cr.

The fourth of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: factoring and fractions, quadratic equations, circle concepts, identities/ inverse notation/equations, complex numbers, and sine waves.
(29.7 Lec. Hrs.)
Prerequisites: MAT:144

MAT:156 Statistics   3 cr.

Introductory statistics course for business, economics, mathematics, science and social science students. The course deals with obtaining, presenting and organizing statistical data. Topics covered include descriptive measures, probability, probability distributions, binomial distributions, normal distributions, sampling estimates, confidence intervals, hypothesis testing, chi-square test, and linear regression and correlation. A graphing calculator with statistics functions is required.
This course satisfies a general education requirement in the Mathematics Area.
(59.4 Lec. Hrs.)
Prerequisite: MAT:073 or minimum math placement scores based on college assessment.

MAT:165 Business Calculus   3 cr.

This course is designed for students in business, social sciences and life sciences. Topics covered are limits, derivatives and applications of the derivative related to business, social science and the life sciences, integration and applications of the integral to business, social science and life sciences. A graphing calculator is required. *This course satisfies a general education requirement in the Mathematics Area.*
(59.4 Lec. Hrs.)
Prerequisite: MAT:121 or minimum math placement scores based on college assessment.

MAT:210 Calculus I   4 cr.

First of a series of three courses. The purpose of the sequence is to provide the student with a foundation in calculus and analytical geometry. Those students enrolled in the science, math, engineering, computer science and similar fields will gain proficiency. Topics include analytic geometry, differentiation and applications of the derivative, integration and its applications. A graphing calculator is required.
This course satisfies a general education requirement in the Mathematics Area.
(79.2 Lec. Hrs.)
Prerequisite: MAT:128 or minimum placement score based on college assessment.

MAT:216 Calculus II   4 cr.

A continuation of Calculus I, this is the second course in the series. Topics include differentiation and integration of trigonometric, logarithmic and exponential functions, methods of integration, improper integrals; polar coordinates and infinite series. A graphing calculator is required.
(79.2 Lec. Hrs.)
Prerequisite: MAT:210.

MAT:219 Calculus III   4 cr.

A continuation of Calculus II, this is the final course in the series. Topics include solid analytic geometry, moments, partial derivatives, multiple integrals, and vector analysis. A graphing calculator is required.
(79.2 Lec. Hrs.)
Prerequisite: MAT:216.

MAT:227 Differential Equations 4 cr.

This course is designed primarily for science, mathematics and engineering majors. Topics include ordinary differential equations, differential operators, numerical techniques and applications. A graphing calculator is required.
(79.2 Lec. Hrs.)
Prerequisite: MAT:216.

MAT:720 Industrial Math and Measurement I   3 cr.

Designed to give the student a basic knowledge of applied mathematics and the understanding of how it relates to the manufacturing industry. Also will prepare the student for further study in mathematics. Topics include basic math operations, English and metric linear measurement units and instruments, algebraic operations, plane geometry, trigonometry, compound angles and numerical control.
(59.4 Lec. Hrs.)

MAT:721 Industrial Math and Measurement II   3 cr.

This course is designed to follow Industrial Math and Measurement I as it covers more advanced areas of applied mathematics using trigonometry, algebra and geometry. Specific areas of emphasis are basic linear equations, graphing, exponents and scientific notation, roots

and radicals, quadratic equations, logarithms and advanced trigonometry. Use of a scientific calculator will be emphasized as well as industry-related application problems.
(59.4 Lec. Hrs.)
Prerequisite: MAT:720.

MAT:722 and MAT:723 Industrial Math and Measurement I/A and I/B   1.5 cr. each

Designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. Also will prepare the student for further study in mathematics. Topics include basic math operations, English and metric linear measurement units and instruments, algebraic operations, plane geometry, trigonometry, compound angles and numerical control.
(29.7 Lec. Hrs. each course)

MAT:724 and MAT:725 Industrial Math and Measurement II/A and II/B   1.5 cr. each

This course is designed to follow Industrial Math and Measurement I as it covers more advanced areas of applied mathematics using trigonometry, algebra and geometry. Specific areas of emphasis are basic linear equations, graphing, exponents and scientific notation, roots and radicals, quadratic equations, logarithms and advanced trigonometry. Use of a scientific calculator will be emphasized as well as industry-related application problems.
(29.7 Lec. Hrs. each course)
Prerequisites: MAT:722 and MAT:723.

MAT:733 Math for Technologies A   1.5 cr.

This course will cover use of fractions, decimals, exponents and percentages as they apply to manufacturing applications. It will also introduce the use of algebraic formulas.
(29.7 Lec. Hrs.)

MAT:734 Math for Technologies B   1.5 cr.

This course will cover algebraic equations, ratios and proportions, geometric shapes, and machine shop trigonometry.
(29.7 Lec. Hrs.)

MAT:743 Technical Math   3 cr.

The first of a two-course sequence designed to communicate the mathematics principles, concepts and manipulative skills needed in basic science and technology. Covers the areas of basic algebra and trigonometry.
(59.4 Lec. Hrs.)

MAT:748 Technical Math II   3 cr.

The second of a two-course sequence designed to communicate the mathematics principles, concepts and manipulative skills needed in basic science and technology. Covers the areas of advanced algebra.
(59.4 Lec. Hrs.)
Prerequisite: MAT:743.

MAT:767 Applied Math for IT   3 cr.

This course prepares Information Technology students for the types of mathematical problems they will encounter in their career including number systems, conversions, formulas and reasoning. Logical steps to problem solving will be emphasized.
(59.4 Lec. Hrs.)
Prerequisite: MAT:041 or minimum math placement score based on college assessment.

APPLIED MUSIC

MUA:101 Applied Voice   1 cr.

Advances students from their present vocal ability to a higher and more proficient level. There is no prerequisite and students need only the desire and interest to learn better singing techniques. May be repeated up to a total of 8 credits.
(9.9 Lab. Hrs.)

MUA:120 Applied Piano   1 cr.

Advances students from their present ability to a higher and more proficient level. There is no prerequisite and students need only the desire and interest to learn to play the piano. May be repeated up to a total of 8 credits.
(9.9 Lab. Hrs.)

COURSE DESCRIPTIONS

MUA:147 Applied Instrumental Lessons   **1 cr.**

Students will be able to further their musical and technical skills on a particular instrument. May be repeated up to a total of 8 credits.
(9.9 Lec. Hrs./19.8 Lab. Hrs.)

MUSIC

MUS:100 Music Appreciation   **3 cr.**

An introductory course including an exploration of the basic music elements; a survey of musical periods and their characteristics from the ancient through the twentieth century; and a discussion of the differences between Western and non-Western musical form and function. Listening and concert attendance required.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)

MUS:120 Music Theory I   **3 cr.**

An introduction to the basic elements of music, music reading and elementary ear training. Music notation skills are emphasized.
(59.4 Lec. Hrs.)

MUS:123 Music Theory II   **4 cr.**

Techniques and materials of diatonic music, including melodic, harmonic and structural analysis. Introduction to tonal harmony through part-writing and harmonization of melodies. Sightsinging and aural skills included.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Prerequisite: MUS:120.

MUS:147 College Community Orchestra   **2 cr.**

Designed for students to play with a community orchestra and participate in performances throughout the semester. Audition is required for selection into the orchestra. May be repeated up to a total of 8 credits.
(79.2 Lab Hrs.)

MUS:151 Pop Singers   **1 cr.**

Pop Singers perform musical numbers with choreography; sacred and secular numbers, either a cappella or with instrumental accompaniment. They perform many civic and school concerts throughout the year. Audition is required for selection for the group. May be repeated up to a total of 8 credits.
(39.6 Lab. Hrs.)
Co-requisite: MUA:101 and MUS:154.

MUS:154 Chorus   **1 cr.**

Designed for the student to participate in group performances. Choral arrangements include a variety of literature throughout the year including works with orchestra, sacred, secular and popular musical scores. The chorus presents several concerts during the year and produces the annual variety show. Open to all students without an audition. May be repeated up to a total of 8 credits.
(39.6 Lab. Hrs.)

MUS:158 Civic Chorale   **1 cr.**

Designed to allow the choral groups to perform large scale choral works with orchestration and soloists. Enrollment may be with or without credit. Civic Chorale membership is open to any resident of the community without audition. May be repeated up to a total of 8 credits.
(39.6 Lab. Hrs.)

MUS:199 Music History   **3 cr.**

This course surveys the history of music from ancient times to the present. Basic elements of music are introduced as they apply to specific musical periods. The course includes listening activities and concert attendance.
(59.4 Lec. Hrs.)

MUS:222 Music Theory III   **4 cr.**

Further study in diatonic techniques and initial study in twentieth century techniques. Continuation of writing skills and analysis including small part forms. Sightsinging and aural skills included.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Prerequisite: MUS:123.

MUS:223 Music Theory IV   **4 cr.**

An introduction to the techniques and materials of twentieth century music through analysis, listening and writing. Sightsinging and aural skills included.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Prerequisite: MUS:222.

PHILOSOPHY

PHI:101 Introduction to Philosophy   **3 cr.**

An introductory course using an analytical approach to the major types and problems of philosophy and stressing their relevance to contemporary society. *This course satisfies a general education requirement in Arts and Humanities.*
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

PHI:105 Introduction to Ethics 3 cr.

This course is designed to give an introduction to ethics from a philosophical perspective. As with any philosophical activity, it will be an inquiry into the fundamental principles and basic concepts that are found at work in the ongoing determination of right and wrong in human life. Socrates' statement that ethics or moral philosophy is a subject that is "no small matter, but (concerns) how we ought to live" will be the overriding consideration in this course. *This course satisfies a general education requirement in the Arts and Humanities Area.*
(59.4 Lec. Hrs.)
Prerequisites: ENG:105 and PHI:101 recommended.

PHI:110 Introduction to Logic 3 cr.

A study of the argumentative use of language and of methods for distinguishing correct from incorrect reasoning. First the multiple uses of language and their governing conventions are analyzed. Next the language of argument and informal fallacies are studied, followed by close analysis of actual arguments. The formal analysis of argument is then introduced through work on propositional logic and categorical syllogisms. The relation of formal analysis to everyday argument is examined as the course emphasis is on effective use of the latter.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

PHYSICAL EDUCATION

PEA:102 Aerobic Fitness I   1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:117 Bowling I   1 cr.

Designed for students who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:128 Distance Running I   1 cr.

Designed for students who would like to improve their physical conditioning and/or develop an interest in jogging for leisure activity.
(39.6 Lab. Hrs.)

PEA:132 Fishing I   1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:134 Golf I   1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab Hrs.)

PEA:137 Leisure Time Education   1 cr.

Designed to provide an opportunity for the student to increase appreciation and enjoyment of leisure time via activities and skill development. Students will not be permitted to repeat for credit the several courses offered under this title.
(39.6 Lab. Hrs.)

PEA:143 Physical Conditioning I   1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:154 Racquetball I   1 cr.

Designed for students who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:164 Swimming I   1 cr.

For skill techniques or physical condition. Basic swimming strokes, breath control and balance and control of the body are taught.
(39.6 Lab. Hrs.)

PEA:174 Tennis I   1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:185 Weightlifting I   1 cr.

Designed for the student who would like to develop a degree of knowledge sufficient for leisure time participation.
(39.6 Lab. Hrs.)

PEA:187 Weight Training I   1 cr.

A course in physical fitness with emphasis on weight training.
(39.6 Lab. Hrs.)

PEC:100/101 Introduction to Coaching   2-3 cr.

Introductory course dealing with the responsibilities, duties and problems in coaching the interscholastic athlete and the interscholastic team.
(39.6-59.4 Lec. Hrs.)

PEC:144 Theory of Coaching Baseball   2 cr.

A study of theory, mechanics and strategy of coaching baseball. Topics include offensive and defensive team play and basic fundamentals of hitting, catching, throwing and running. Attention is given to organization of team and practice sessions, conditioning and handling of players.
(39.6 Lec. Hrs.)

PEC:148 Theory of Coaching Basketball   2 cr.

A study of the theory, mechanics and strategy of coaching basketball. Topics include various systems of offensive and defensive team play and basic fundamentals of passing, shooting, dribbling, etc. Attention is given to organization of squad and practice sessions, conditioning and handling of players.
(39.6 Lec. Hrs.)

PEC:161 Sports Officiating   3 cr.

Designed to teach the student the rules of officiating football, basketball, baseball and softball. Emphasis is on rule interpretation and proper mechanics of officiating.
(39.6 Lec. Hrs./39.6 Lab. Hrs.)

PEH:102 Health Education   3 cr.

Study of the problems of health affected by social, economic and political changes of the twentieth century.
(59.4 Lec. Hrs.)

PEH:109 Personal Wellness   1 cr.

The objective of this course is to teach students the basic principles of exercise, both theory and practice. Concepts included in this course are pre-exercise evaluation, cardiovascular fitness, practical training techniques, various exercise programs and post-exercise evaluation. Students will have the option of analysis of computerized assessments.
(19.8 Lec. Hrs.)

PEH:141/142 First Aid   2-3 cr.

Deals with first aid practices and problems relating to shock, contusions, hemorrhages, fractures, poisoning and other related injuries and illnesses.
(39.6-59.4 Lec. Hrs.)

COURSE DESCRIPTIONS

PEH:161 Introduction to Physical Education 2 cr.

Introductory course designed to help the student develop leadership techniques, measure aptitudes and learn the general areas of physical education. Emphasis is placed on current needs and demands. (39.6 Lec. Hrs.)

PEH:176 Sports Psychology 3 cr.

Deals with the motivation and understanding of the athlete and athletic team. Emphasis is on examining one's own competitive attitudes and how to improve the attitudes of the individual and the team. (59.4 Lec. Hrs.)

PEH:270 Individual and Team Sports 4 cr.

Designed to allow the student to understand the rules, organization and technique of developmental procedures in individual and team sports. (59.4 Lec. Hrs./39.6 Lab. Hrs.)

PEV:112 Techniques in Baseball 2 cr.

A course dealing with the development of the skills necessary for competition in baseball at the intercollegiate level. (79.2 Lab. Hrs.)

PEV:167 Techniques in Softball 2 cr.

A course dealing with the development of the skills necessary for competition in softball at the intercollegiate level. (79.2 Lab Hrs.)

PHYSICAL SCIENCE

PHS:120 Exploring Physical Science 4 cr.

An introduction and overview to physical science. A typical semester will cover 3 to 5 of the major fields in physical science from the following areas: Physics, Modern Physics, Chemistry, Geology, Astronomy, Meteorology, Environmental Science and Oceanography. Topics covered will be determined by the instructor.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Recommended: ENG:013 and MAT:063 or minimum English and math placement scores based on college assessment.

PHS:152 Astronomy 4 cr.

A basic course in descriptive astronomy dealing with the development of modern astronomy and with its present-day theories and observations. Topics covered include motions of solar system and deep sky objects, telescopes and other instruments, members of the solar system, nature of the sun, other stars, origin and development of stars and planets, our galaxy, other galaxies, and the organization of the universe. Some night labs are required.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Recommended: MAT:063 or minimum math placement score based on college assessment.

PHS:166 Meteorology: Weather and Climate 4 cr.

An introduction to meteorology. Topics covered: earth's atmosphere, the elements of weather, weather forecasting, different types of storms and storm formation, severe weather, thunderstorm, hurricanes, tornados, the global climate, global change, and man's interaction with the environment.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Recommended: ENG:013 and MAT:063 or minimum English and math placement scores based on college assessment.

PHS:172 Physical Geology 4 cr.

A survey course in physical geology including the Earth's physical systems, the rock cycle, the hydrologic cycle, and the theory of plate tectonics. Volcanism, earthquakes, erosion, and geologic resources are included. Emphasis in lab is on reading geologic maps and the study of common rocks and minerals.
This course satisfies a general education requirement in the Natural Sciences Area.
(59.4 Lec. Hrs./39.6 Lab. Hrs.)
Recommended: MAT:063 or math placement score based on college assessment.

PHYSICS

PHY:110 Survey of Physics I 3 cr.

The first of two algebra-based courses in physics for pre-chiropractic students. Students will develop problem solving skills in mechanics, thermodynamics, and acoustics. The student will become proficient in applying the scientific method to laboratory measurements of topics from motion, heat, and sound. Applications to physics of the body will be emphasized
(39.6 Lec. Hrs./39.6 Lab. Hrs.)
Prerequisite: MAT:073 or minimum math placement score based on college assessment.

PHY:111 Survey of Physics II 3 cr.

The second of two algebra-based courses in physics for pre-chiropractic students. Students will develop problem solving skills in electricity and magnetism, optics, and modern physics. The student will become proficient in applying the scientific method to laboratory measurements in topics from electric circuits, light, and radiation physics. Applications to physics of the body will be emphasized.
(39.6 Lec. Hrs./39.6 Lab. Hrs.)
Prerequisite: PHY:110

PHY:130 Applied Physics I   2 cr.

The first of a two course sequence, this is an intensive applied math and physics problem experience. The content covered will be reinforced with many applied problems. This course will include: technical measurements and vectors, translational equilibrium and friction, and torque and rotational equilibrium.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:143.

PHY:135 Applied Physics II   2 cr.

The second of a two course sequence, this is an intensive applied math and physics problem experience. The content covered will be reinforced with many applied problems. This course will include: uniform acceleration, Newton's second law, and work/energy/power.
(19.8 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: PHY:130.

PHY:162 College Physics I   4 cr.

The first course in a sequence of two physics courses for students in liberal arts, pre-med, pre-vet, pre-dental, pre-pharmacy and other students not majoring in the physical sciences, math or engineering. Topics include fundamentals of mechanics, Newton's laws of motion, energy, momentum, fluids, rotation and thermal physics. Applications and history are discussed.
This course satisfies a general education requirement in Natural Science.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:073, or minimum math placement score based on college assessment or two years of high school algebra. Trigonometry or high school geometry recommended.

PHY:172 College Physics II   4 cr.

Continuation of PHY:162, including waves, electricity, magnetism, optics and modern physics.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: PHY:162.

PHY:173 and PHY:174 Applied Physics I/A and I/B   1.75 cr. each

An intensive applied math and physics experience. The content covered will be reinforced with a highly "hands-on" approach, applying concepts across the four primary energy systems, while strengthening each participant's math skills. Topics covered will include force, work, rate, resistance and power/force transformers.
(19.8 Lec. Hrs./29.7 Lab Hrs. each course)
Prerequisites: PHY:173 - MAT:723. PHY:174 - PHY:173.

PHY:175 and PHY:176 Applied Physics II/A and II/B   1.75 cr. each

A continuation of concepts developed and delivered in Applied Physics I/A and I/B. It is an intensive applied math and physics course. Course content is delivered through application labs as well as traditional methods. Concepts will again be applied over the four primary energy systems. Main units of coverage will be momentum, waves, energy converters, transducers, radiation, optical systems and time constants.
(19.8 Lec. Hrs./29.7 Lab Hrs. each course)
Prerequisites: PHY:175 - PHY:174. PHY:176 - PHY:175.

PHY:181 Applied Physics I   3 cr.

An intensive applied math and physics experience. The content covered will be reinforced with a highly "hands-on" approach, applying concepts across the four primary energy systems, while strengthening each participant's math skills. Topics covered will include force, work, rate, resistance, energy, power and force transformers.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: MAT:720.

PHY:182 Applied Physics II   3 cr.

A continuation of concepts developed and delivered in Applied Physics I. It is an intensive applied math and physics course. Course content is delivered through application labs as well as traditional methods. Concepts will again be applied over the four primary energy systems. Main units of coverage will be momentum, waves, energy converters, transducers, radiation, optical systems and time constants.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: PHY:181.

PHY:184 Applied Physics   4 cr.

This course will deal with the basic principles applied to the field of the auto or diesel technician. It will also provide the math skills necessary to deal with the appropriate physics principles. Competencies developed in this course are aimed at entry level skills as an auto/diesel technician.
(79.2 Lec. Hrs.)

PHY:212 Classical Physics I   5 cr.

A course for students planning to major in physics, chemistry, engineering, mathematics or another physical science. The first in a sequence of two engineering physics courses. Topics include fundamentals of mechanics, Newton's laws of motion, energy, momentum, fluids, rotation and thermal physics. The application of calculus to physics is used.
This course satisfies a general education requirement in the Natural Sciences Area.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Pre/Co-requisite: MAT:210 or permission of instructor.

PHY:222 Classical Physics II   5 cr.

Continuation of PHY:212 Classical Physics I, including waves, electricity, magnetism, optics and modern physics. The application of calculus to these topics is used.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: PHY:212 or permission of instructor.

POLITICAL SCIENCE

POL:111 American National Government   3 cr.

A survey of American government and politics. It includes discussion of the historical foundations and fundamental principles of American democracy, the basic institutions of government, the fundamental rights of citizens and the public policy process.
This course satisfies a general education requirement in the Social Sciences Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment.

COURSE DESCRIPTIONS

POL:112 American State and Local Government 3 cr.

An introduction to politics, government and public policy at the state and local level, with particular emphasis on the state of Iowa. It includes an analysis of the relationship among federal, state and local governments; the structure and powers of state and local governments; the scope of political participation in state and local parties; and public policy-making by state and local governments.
(59.6 Lec.Hrs.)

POL:125 Comparative Government and Politics 3 cr.

This course is a survey of political institutions across the globe. It includes discussion of the political institutions of countries at different levels of development. Emphasis will be placed on the impact of these differences on a state's citizens and public policy. Comparative Government will familiarize students with similarities and differences of governments around the world.
(59.4 Lec.Hrs.)
Prerequisite: ENG:013 or minimum English placement score based on college assessment. POL:111 is recommended.

POL:943 Readings in American Government 1-2 cr.

Designed to provide the student with additional reading in American government, allowing the student to obtain a greater understanding of the various problem areas in this discipline. This course may be repeated twice for additional credit.
(39.6-79.2 Lab. Hrs.)
Prerequisite: POL:111.

PRACTICAL NURSING

PNN:165/166 Nursing Fundamentals Modules A and B 10 cr.

(PNN:165 - 5 cr.; PNN:166 - 5 cr.)
This course is the initial course in the nursing curriculum. The course introduces the core concept of caring as it relates to the practice of nursing. This course acquaints the student with the therapeutic use of self in caring for clients across the life span. Additionally, the concepts of health, environment, person and nursing are presented as the supporting structure to practice. The nursing process, critical thinking, communication and adaptation are introduced as contributing concepts that are essential to the art of holistic caring. The course is structured to facilitate acquisition of knowledge, techniques and professional values necessary to basic nursing care. The course includes the psychosocial and interpersonal concerns of the nurse and client in the therapeutic environment. Basic interventions for the client with specific health needs are included. Various health care facilities are used including acute and long-term care facilities. This course is offered in two modules. Module A is a prerequisite to Module B.
(59.4 Lec. Hrs./118.8 Clinical Hrs.for each module)
Prerequisites for PNN:166: PNN:210, and PNN:165.
Co-requisites: BIO:168; PNN:210, PNN:211 and PSY:111.
Note: PNN:210 is a prerequisite for PNN:211.

PNN:210/211 Principles of Pharmacology, Modules A and B 2 cr.

(PNN:210 - 1 cr.; PNN:211 - 1 cr.)
Presents basic principles of pharmacology and their relationship to nursing. Drugs are viewed either as assisting the body in homeostasis, assisting the process of adaptation when change is necessary, or as protection against environmental hazards. From these basic concepts, pharmacological maintenance and regulation of body functions are discussed. Drug categories are discussed according to drug prototypes. This allows students to draw inferences about other drugs in the same category. Emphasis is placed on nursing responsibilities in drug therapy including SAFE administration of ALL drugs. This course is offered in two modules. Module A is a prerequisite to Module B.
(19.8 Lec. Hrs. for each module)

PNN:511/512 Concepts in Clinical Nursing I Modules A and B 9 cr.

(PNN:511 - 4 cr.; PNN:512 - 5 cr.)
This course builds on basic concepts and techniques learned in Nursing Fundamentals. It is the second nursing course in the Practical Nursing curriculum. In addition, this course contributes to the foundation of the Associate Degree Nursing curriculum. Emphasis will be placed on adaptation to common stressors, the resulting health-illness responses and the transformation of caring into therapeutic nursing interventions. A life span approach to health restoration and rehabilitation will be used. The course is structured to integrate prior and concurrent knowledge and techniques. Professional behaviors conducive to a therapeutic environment are emphasized. Clinical experience is provided in acute and long-term care facilities. This course is offered in two modules. Module A is a prerequisite to Module B.
(49.5 Lec. Hrs./118.8 Clinical Hrs. per module)
Prerequisites: BIO:168, PNN:210/211, PNN:165/166 and PSY:111. Note: PNN:511 is a prerequisite for PNN:512.
Co-requisites: BIO:151, BIO:173 and PSY:121.

PNN:641 Transition to Practice 6 cr.

Transition to Practice is an exit course for practical nurses which builds on concepts taught in previous nursing courses. The concepts of caring, health, environment, person and nursing are closely examined. Emphasis is placed on meeting the spiritual, psychosocial, emotional and physical needs of clients, by the practical nurse team member. In addition, nursing care specific to elderly clients is presented. This course affords the student an opportunity to examine current trends in health care delivery and legislation. Consequently the student will be prepared to assume the role of a licensed practical nurse.
(79.2 Lec. Hrs./118.8 Clinical Hrs.)
Prerequisites: BIO:168, BIO:173, BIO:151, PSY:111, PSY:121, PNN:210, PNN:211, PNN:165, PNN:166, PNN:511, PNN:512.
Co-requisite: ENG:105.

PSYCHOLOGY

PSY:111 Introduction to Psychology — 3 cr.

An examination of the fundamentals of behavior. Designed to familiarize students with human behavior, how it is studied and the applications of the results of that study. Theoretical issues, comprehension of research findings and research techniques will also be examined.
This course satisfies a general education requirement in the Social Sciences Area.
(59.4 Lec. Hrs.)

PSY:116 Human Resources I — 2 cr.

Designed to facilitate self-awareness, positive self-regard and clarification of personal values in an atmosphere of trust and sharing. Emphasis is on the ways to use personal resources (strengths) for self-enhancement and personal growth.
(39.6 Lec. Hrs.)

PSY:117 Human Resources II — 2 cr.

Designed to enable the student to explore personal values, strengths, experiences and relationships to enhance feelings of self-worth. Students practice specific interrelationship skills to improve abilities in relating to others. Assertiveness training and T.A. are utilized to help the student retain the achieved sense of self and allow others to maintain self-worth.
(39.6 Lec. Hrs.)

PSY:121 Developmental Psychology — 3 cr.

Designed to provide the student with an understanding of the process and interrelationship of physical, emotional, intellectual and social evolution in the individual. Attention is given to these human potentials throughout the life cycle from conception to death.
(59.4 Lec. Hrs.)
Recommended: ENG:105.

PSY:211 Psychology of Adjustment — 3 cr.

A study of the factors of mutual accommodation, adjustment. Emphasis is placed on normal adjustment problems.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or permission of instructor.

PSY:213 Industrial and Organizational Psychology — 3 cr.

A study of psychology as a guide to the relationship of people in industry. Designed to help each student develop an awareness of needs, sentiments and attitudes toward self and others in an organizational setting. Organizational problems are anticipated and preventive means are studied.
(59.4 Lec. Hrs.)
Recommended: PSY:111.

PSY:222 Child Psychology — 3 cr.

Deals with the interplay of biological factors, human interactions, cultural forces and social structures which shape the growing child from conception to adolescence.
(59.4 Lec. Hrs.)

PSY:223 Child and Adolescent Psychology — 3 cr.

Deals with the interplay of biological factors, human interactions, cultural forces and social structure which shape the growing child from conception through adolescence.
(59.4 Lec. Hrs.)

PSY:224 Adolescence Psychology — 3 cr.

A comprehensive examination of the physical, cognitive and social dynamics of the developmental period between the ages of 11-18 years. Topics of discussion include puberty, the adolescent and the family, the adolescent and peers, education of adolescents, and sex and drugs in the adolescent subculture. The course is designed to provide an accurate picture of the adolescent within American culture.
(59.4 Lec. Hrs.)

PSY:226 Psychology of Aging — 3 cr.

Aging is presented as an aspect of living. The course studies aging in terms of four distinct, but interrelated processes: chronological aging, biological aging, psychological aging and social aging. Same as SOC:220.
(59.4 Lec. Hrs.)
Prerequisite: PSY:121 recommended.

PSY:236 Psychology of Personality — 3 cr.

An in-depth study of concepts related to personality development, description, assessment and special problems. Emphasis is given to the fields of psychoanalytic, behavioral, self-actualization and existentialism.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or PSY:121 or permission of instructor.

PSY:241 Abnormal Psychology — 3 cr.

Designed to provide the student with an understanding of abnormal behavior as it exists in modern life. Also the student will be given criteria to recognize abnormal behavior and be shown theoretical aspects along with treatment designs.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or permission of instructor. ENG:105 recommended.

PSY:246 Introduction to Counseling Skills — 3 cr.

This course is designed to provide students with three essential components relative to the fields of counseling and human services. These are 1) to attain a foundation in the theories of psychotherapy. In this course, selected prominent theories of psychotherapy, which provide guidelines for understanding human problems and for selecting interventions for these problems, will be studied. 2) To learn "helping" skills so that students can begin to practice micro-counseling techniques in the classroom. 3) To gain knowledge about the large number of occupational choices within the field of counseling and human services.
(59.4 Lec. Hrs.)

PSY:251 Social Psychology — 3 cr.

A survey of the theories and research dealing with individual behavior in the social environment. Topics include social influence processes, interpersonal attraction, group behavior, leadership, conformity and attitude formation and change. Same as SOC:251.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or permission of instructor.

COURSE DESCRIPTIONS

PSY:261 Human Sexuality   3 cr.

Introduction to the study of the dynamics of human sexuality. Emphasis is given to the physiological, psychological and social aspects of sexuality.
Same as SOC:261.
(59.4 Lec. Hrs.)

PSY:262 Psychology of Gender   3 cr.

This course is designed to explore the differences between the male and female gender from conception through adulthood. Differences in abilities and attitudes which arise from biology and the brain will be emphasized, although socio-cultural explanations for differences will also be discussed. In addition, the differences in the use of language and communication by males and females will be explored. The goal of the course is to understand these differences and to decide how males and females can use this understanding to communicate with each other and to augment appreciation for the cross-sex.
(59.4 Lec. Hrs.)
Recommended: PSY:111.

PSY:281 Educational Psychology   3 cr.

This course is designed for individuals who are or will be working in a vocational environment that requires them to provide or become part of an educational or training program. Although the course is targeting traditional educational systems, there is direct applicability to virtually any setting in which you may be required to help an individual or group of individuals learn and understand new information, or to develop new knowledge and skills sets. The fundamentals of this course are designed to assist the student in differentiating learning theory and processes as aspects of human development. Emphasis is placed on the roles of the educators and the students in applying the principles of learning, instruction, evaluation and pupil management.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or permission of instructor.

PSY:943 Readings in Psychology   1-2 cr.

Designed to provide additional readings in psychology, allowing the student to obtain a greater understanding of the various areas of this discipline than can be attained by normal course work. This course may be repeated twice for additional credit.
(39.6-79.2 Lab. Hrs.)
Prerequisite: PSY:111 or permission of instructor.

RADIOLOGIC TECHNOLOGY

RAD:100 Introduction to Radiography and Patient Care 5 cr.

This course will introduce the student to the history of radiology and radiologic technology. The student should learn about the hospital; its structure, medical specialties, and the role of the radiographer on the health care team. The student should gain the knowledge necessary to provide safe patient care including: communication skills, legal and ethical issues in medicine, body mechanics, patient transfer, medical terminology, valuing diversity, standard precautions and radiography as a profession. In the final half of the semester the student will spend four hours per week observing in the radiology department.
(59.4 Lec. Hrs./79.2 Lab Hrs.)
Co-requisites: RAD:123 and RAD:350.

RAD:123 Radiographic Procedures I   5 cr.

This course familiarizes the first-semester student with patient positioning and common terms and procedures performed in the radiology department. Procedures to be studied and simulated in the energized laboratory include upper and lower extremity, chest, gastrointestinal, abdominal and urinary tract radiography. Preparation, precautions and administration of contrast media will be explored. Radiographic critique will be integrated throughout the course.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: RAD:100 and RAD:350.

RAD:143 Radiographic Procedures II   5 cr.

This course is designed to study radiographic anatomy and procedures of the shoulder and pelvic girdles, bony thorax, spine and skull. Students will simulate these procedures in the energized laboratory. Emphasis will be given to those procedures that are most commonly performed in the radiology department. Radiographic film critique will be integrated throughout the course.
(79.2 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RAD:123.
Co-requisites: RAD:210 and RAD:300.

RAD:183 Special Procedures   3 cr.

An integrated study of detailed anatomy, physiology and radiographic procedures including the use of special equipment. Special emphasis is placed on the radiographic procedures related to the circulatory and nervous system. The scientific principles and uses of computerized tomography, digital angiography, magnetic resonance, ultrasonography and nuclear medicine are discussed. Students will apply these principles during clinical practicum and special rotations. Preparation, precautions and administration of contrast media will be explored.
(59.4 Lec. Hrs.)
Prerequisite: RAD:143.
Co-requisites: RAD:220.

RAD:210 Clinical Education I   4 cr.

The radiography student will be assigned to a clinical affiliate. Students will be thoroughly oriented to the operation of the hospital and radiology department. Students will observe, assist with and gradually perform under direct supervision, procedures learned in RAD:123 Radiographic Procedures I. They will learn routine procedures performed in the assigned clinical affiliate and apply procedures introduced in RAD:350 Imaging. Film critique will be integrated throughout the course. Students will meet requirements and competencies in the areas specified in the clinical procedure manual.
(249.6 Clinical Practicum Hrs.)
Prerequisites: RAD:123, RAD:350 and RAD:100.
Co-requisites: RAD:143 and RAD:300.

RAD:220 Clinical Education II 3 cr.

The student will be assigned to the same clinical affiliate as in Clinical Education I. Students will continue to perform radiographic procedures with indirect supervision on those exams where competency has been achieved. Emphasis will be placed on routine procedures learned in Radiographic Procedures I and II. Film critique will be integrated throughout the course. Students will meet requirements and competencies in the areas specified in the clinical procedure manual. The student will complete rotations in ultrasound, nuclear medicine and radiation therapy.
(187.2 Clinical Practicum Hrs.)
Prerequisite: RAD:210.
Co-requisites: RAD:183.

RAD:300 Radiographic Exposures 4 cr.

This course explores the principles of equipment operation, phototimers and manual techniques. The factors affecting radiographic quality and the methods for maintaining good radiographic quality are investigated. Many learning experiences are provided in the energized laboratory.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisite: RAD:350.
Co-requisites: RAD:143 and RAD:210.

RAD:350 Imaging 3 cr.

This course explores the principles of automatic processing, digital radiography, image intensification and fluoroscopy. Film characteristics and composition, screens, grids are investigated. Learning experiences are provided in the energized laboratory when appropriate.
(39.6 Lec. Hrs./39.6 Lab Hrs.)
Co-requisites: RAD:100 and RAD:123.

RAD:500 Clinical Education III 6 cr.

The student will be assigned to a different clinical affiliate where he/she will be oriented to the hospital and radiology department. Under indirect supervision, the student will perform routine procedures where competency has been achieved as assigned. With direct supervision, the student will achieve competencies in radiographic procedures as specified in the clinical manual. Film critique will be integrated throughout the

course. The student will complete rotations in computed tomography, mammography, magnetic resonance imaging and cardiac catheterization.
(374.4 Clinical Practicum Hrs.)
Prerequisite: RAD:220.
Co-requisites: RAD:761 and RAD:800.

RAD:510 Clinical Education IV 6 cr.

The student will be assigned to the same clinical affiliate as Clinical Education III and continue to perform routine procedures with indirect supervision where competency has been achieved. Film critique will be integrated throughout the semester. Students will meet requirements as specified in the clinical procedures manual.
(374.4 Clinical Practicum Hrs.)
Prerequisite: RAD:500.
Co-requisites: RAD:790, RAD:750 and RAD:850.

RAD:540 Clinical Education V 3 cr.

Students will be assigned to the same clinical affiliate as in Clinical Education IV. Students will continue to perform radiographic procedures with minimal supervision and attain competency in all radiographic procedures as specified in the clinical procedure manual.
(187.2 Clinical Practicum Hrs.)
Prerequisite: RAD:510.
Co-requisites: RAD:890 and RAD:946.

RAD:750 Radiographic Pathology 3 cr.

This course focuses on the common diseases and abnormalities of organs and systems as they relate to radiography. The anatomy and physiology of each system will be reviewed preceding the discussion of that system's diseases. Proper learning and understanding of the material will be facilitated by experience in performing radiographic procedures and film evaluation, including the concept of the changes in technique required to compensate for density differences produced by the underlying pathologic conditions.
(59.4 Lec. Hrs.)
Prerequisites: RAD:183 and RAD:220.
Co-requisites: RAD:510, RAD:790 and RAD:850.

RAD:761 Film Evaluation I 3 cr.

This is the first of a two course sequence. This course is designed to emphasize principles of film evaluation as it relates to technique, collimation, shielding, positioning and radiographic quality. "Radiograph rejects" are studied in detail. Procedures to improve their diagnostic quality are emphasized, including the use of existing diagnostic exams to demonstrate desirable films.
(59.4 Lec. Hrs.)
Prerequisites: RAD:183 and RAD:220.
Co-requisites: RAD:500 and RAD:800.

RAD:790 Film Evaluation II 2 cr.

This is the second of a two course course sequence. This course is designed to emphasize principles of film evaluation as it relates to techniques, collimation, shielding, position and radiographic quality. "Radiograph rejects" are studied in detail. Procedures to improve their diagnostic quality are emphasized, including the use of existing diagnostic exams to demonstrate desirable films.
(39.6 Lec. Hrs.)
Prerequisite: RAD:761.
Co-requisites: RAD:510, RAD:750 and RAD:850.

RAD:800 Physics for Radiographers 3 cr.

This course explores the physical concepts of energy, the structure of matter, electrostatics, electrodynamics, magnetism, electromagnetism, electric generators and motors, the principles of electricity as it relates to x-ray circuits, rectification and x-ray production. X-ray tubes, rating charts and interaction of x-rays with matter are also discussed in detail.
(59.4 Lec. Hrs.)
Prerequisites: RAD:183 and RAD:220.
Co-requisites: RAD:500 and RAD:761.

RAD:850 Radiation Protection and Biology 3 cr.

This course explores the history and biological effects of ionizing radiation. Different methods of radiation measurement, detection and protection are discussed.
(59.4 Lec. Hrs.)
Prerequisites: RAD:761, RAD:500 and RAD:800.
Co-requisites: RAD:510, RAD:790 and RAD:750.

COURSE DESCRIPTIONS

RAD:890 Quality Assurance   1 cr.

This course explores the theory and practice of quality assurance in the diagnostic radiology department. The use of quality assurance test tools, interpretation of results and management of a quality assurance program through record keeping are investigated in the laboratory.
(9.9 Lec. Hrs./19.8 Lab Hrs.)
Prerequisites: RAD:800, RAD:850, RAD:790 and RAD:510.
Co-requisites: RAD:540 and RAD:946.

RAD:946 Seminar   2 cr.

This course is designed to provide the student with the opportunity to explore state-of-the-art technology, computer fundamentals and computer applications in radiology. The student will also be given the opportunity for the re-examination of previously learned material and based on pre-assessment, certain topics will be selected for discussion.
(39.6 Lec. Hrs.)
Prerequisites: RAD:800, RAD:850, RAD:790 and RAD:510.
Co-requisites: RAD:540 and RAD:890.

READING

RDG:032/033 Introduction to College Reading   2-3 cr.

Introductory course designed to assist the student whose present reading level is not sufficiently developed to meet the recommended college-level assignments. Emphasis will be on improving comprehensive reading skills as well as reading speed and general vocabulary. Satisfactory completion of course work and a passing score on the reading posttest must be met before enrollment in 100 level courses is permissible.
(39.6-59.4 Lec. Hrs.)
Prerequisite: RDG:042 or RDG:045 or ENG:064 or appropriate scores based on college assessment.

RDG:042 Basic Reading Skills - Paired   3 cr.

This course is designed for students who need intensive direction in reading and study skills. This interdisciplinary course will include: 1) using an appropriate textbook to teach reading, vocabulary and study skills; and 2) using the reading text to remediate specific reading problems.
(59.4 Lec. Hrs.)

RDG:045 Keys to Reading   3 cr.

This course is designed for students who need intensive direction in reading and study skills. Emphasis will be on improving comprehensive reading skills and general vocabulary.
(59.4 Lec. Hrs.)

RELIGION

REL:101 Survey of the World's Religions   3 cr.

This is an introductory course to the origins and historical developments of various religions of the world. Particular emphasis will be placed on understanding why peoples of the world embrace various religions, and the role religion plays in giving meaning and purpose to personal and social existence. The course will provide students the opportunity to understand world events through an understanding of the impact of religious beliefs and values on people's daily lives. The study will include a survey of Religions of Prehistoric Cultures; Native American Religions; African Religions; Religions of India; Religions of China and Japan; Religions of Southwest Asia; Christianity; the Bahai Religion; and New Religions in America.
This course satisfies a general education requirement in the Arts and Humanities Area.
(59.4 Lec. Hrs.)
Prerequisite: ENG:064 or minimum English score based on college assessment.

SOCIOLOGY

SOC:110 Introduction to Sociology   3 cr.

The basic premise of sociology is that life is not lived individually, but in groups, through the symbols, the language, the roles we play, the culture the group has developed and the meanings the group has to offer. This course will introduce a framework of thinking that involves social structure, function, interaction and conflict, with respect to family, education, the economy, government and religion. *This course satisfies a general education requirement in the Social Sciences Area.*
(59.4 Lec. Hrs.)

SOC:115 Social Problems   3 cr.

Designed to assist the student in the examination of major social problems: poverty, mental illness, crime and delinquency, alcoholism and drug addiction, family disorganization, problems of the aged and racial problems.
(59.4 Lec. Hrs.)

SOC:120 Marriage and Family 3 cr.

A study of the contemporary American family, the interpersonal relationships of family members, the emergence of human personality and the roles and role expectations of our culture, with emphasis on how they affect the student.
(59.4 Lec. Hrs.)

SOC:160 Introduction to Social Work   3 cr.

Social work's objective is to help people meet their legitimate needs. A society's social welfare system is the set of provisions it makes for the well-being of all its members. This course is an introduction to the social work profession, its participation in the social welfare system, and some of the ways social workers help people.
(59.4 Lec. Hrs.)
Prerequisite: ENG:013 or minimum English score based on college assessment.

SOC:220 Sociology of Aging   3 cr.

Aging is presented as an aspect of living. The course studies aging in terms of four distinct, but interrelated processes: chronological aging, biological aging, psychological aging and social aging. Same as PSY:226.
(59.4 Lec. Hrs.)
Prerequisite: PSY:121 recommended.

SOC:230 Juvenile Delinquency   3 cr.

Introduces the causes of delinquency and the modification of such behavior by corrective institutions and individual therapy. Emphasis is placed on the study of the development of individual personality through inter-family relationships, antisocial aggressive acts from early abnormal family and social situations.
Same as CRJ:201.
(59.4 Lec. Hrs.)

SOC:240 Criminology   3 cr.

The study of human behavior and crime, the development of corrections and criminology with sociological and cultural approaches to crime and the career criminal. Same as CRJ:200.

SOC:251 Social Psychology   3 cr.

A survey of the theories and research dealing with individual behavior in the social environment. Topics include social influence processes, interpersonal attraction, group behavior, leadership, conformity and attitude formation and change.
Same as PSY:251.
(59.4 Lec. Hrs.)
Prerequisite: PSY:111 or permission of instructor.

SOC:261 Human Sexuality   3 cr.

Introduction to the study of the dynamics of human sexuality. Emphasis is given to the physiological, psychological and social aspects of sexuality.
Same as PSY:261.
(59.4 Lec. Hrs.)

SOC:943 Readings in Sociology   1-2 cr.

Designed to provide additional reading in sociology, allowing the student to obtain a greater understanding in various problem areas in the discipline. This course may be repeated twice for additional credit.
(39.6-118.8 Lab. Hrs.)
Prerequisite: SOC:110.

SPANISH

FLS:141 Elementary Spanish I 4 cr.

Beginning Spanish with emphasis on understanding, speaking, reading and writing. Supplemented by cultural readings and multimedia presentations.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(79.2 Lec. Hrs.)

FLS:142 Elementary Spanish II 4 cr.

A continuation of FLS:141, further developing the student's skills in reading, writing, listening and speaking. Similarities and differences in culture will also be explored.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(79.2 Lec. Hrs.)
Prerequisite: FLS:141 or equivalent.

FLS:146 Situational Spanish   2 cr.

Conversation in Spanish using relevant contemporary situations. Situations to be presented will be determined following an assessment of student's background and needs. Listening comprehension is highly emphasized.
(39.6 Lec. Hrs.)
Prerequisite: FLS:142.

FLS:231/241 Intermediate Spanish I   3-4 cr.

Equivalent to third-level Spanish, this course reviews the fundamentals of language communication and further improves on idiomatic usages, speaking and understanding. Readings and multimedia presentations on Hispanic culture, current events and literary offerings are integrated in texts and assignments. Exams will test oral, cultural, comprehension and written skills.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4/79.2 Lec. Hrs.)
Prerequisite: FLS:142, two years of high school Spanish or consent of instructor.

FLS:232/242 Intermediate Spanish II   3-4 cr.

Designed to complete the second-year college course through intensive practices of methods and materials presented in Intermediate Spanish I. Advanced examination of Hispanic culture, through selected readings and multi-media presentations, will aid the student in increasing speed and fluency in the spoken language. Translation skills will be enhanced as well.
This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.
(59.4/79.2 Lec. Hrs.)
Prerequisite: FLS:231 or consent of instructor.

COURSE DESCRIPTIONS

SPEECH

SPC:111 Public Speaking 2 cr.

Introduction to public speaking with emphasis on organization, presentation and listening. Experience in the process and principles of public speaking: audience analysis, selection and organization, style and delivery. Practice in preparation and delivery of informative and persuasive extemporaneous speeches. *This course satisfies a General Education requirement in Communication.*
(39.6 Lec. Hrs.)

SPC:112 Public Speaking 3 cr.

Introduction to public speaking with emphasis on organization, presentation and listening. Experience in the process and principles of public speaking: audience analysis, selection and organization, style and delivery. Practice in preparation and delivery of informative and persuasive extemporaneous speeches. *This course satisfies a General Education requirement in Communication.*
(59.4 Lec. Hrs.)

SPC:114 Advanced Public Speaking 2 cr.

Applications of the principles, theory, process and analysis of various methods of speaking, persuasion, composition, audience analysis, propaganda and logical, ethical and emotional proofs to change attitudes. Students will participate in class debates and discussions.
(39.6 Lec. Hrs.)

SPC:120 Intercultural Communication 3 cr.

Introduction to the principles of intercultural communication. Emphasis on the impact of culture on personal identity and communication processes. Students will acquire knowledge and develop skills to help them communicate with a diverse audience.
(59.4 Lec Hrs.)

SPC:122 Interpersonal Communication 3 cr.

This course will help students become more aware of how they relate to and communicate with other people. Elements will include self-esteem, disclosure, perception, listening, verbal and nonverbal communication, persuasion, assertiveness, coping with conflict and managing relationships. Small group communication and critical thinking are emphasized.
(59.4 Lec. Hrs.)

SPC:170 Professional Communication 3 cr.

Introduction to the principles of professional communication. Components include interpersonal, dyad, small group and large group discussion, extemporaneous and impromptu speaking - informative and persuasive. *This course satisfies a general education requirement in the Communications Area.*
(59.4 Lec. Hrs.)

STUDENT DEVELOPMENT

SDV:107 Health Science College Experience 1 cr.

This course will assist all science students to acquire essential skills needed for academic success in the fields related to science and health. The topics covered are classroom strategies, computer resources, science terminology and symbols, scientific interpretation of data, and student responsibilities.
(19.8 Lec. Hrs.)

SDV:108 The College Experience 1 cr.

This course will assist all new college students to acquire essential skills needed for academic success. The topics covered are campus resources, classroom strategies, library skills, computer resources, and student responsibilities.
(19.8 Lec. Hrs.)

SDV:113/114 Strategies for Academic Success 2-3 cr.

The purpose of this course is to provide an opportunity for students to learn and adopt methods to be successful in school. Topics include memory development, reading and note-taking techniques, test-taking techniques, time and money management, stress reduction, self-esteem, and college policies and procedures.
(39.6-59.4 Lec. Hrs.)

SDV:130/131 Career Exploration 1-2 cr.

Designed to involve students in educational and occupational orientation (as related to self) and to make valid educational choices. Participants have an opportunity to investigate employment opportunities in their field of interest. The college selection process is reviewed and an appropriate curriculum for students' majors will be developed.
(19.8-39.6 Lec. Hrs.)

SDV:174 Critical and Creative Thinking 3 cr.

Provides training in thinking, decision-making, problem analysis and problem solving. The students will apply critical and creative thinking strategies to problems in a variety of personal, occupational and cultural situations.
(59.4 Lec. Hrs.)

SDV:188 Understanding Chemical Dependency 2 cr.

This course studies a broad range of chemicals and the physiological and psychological effects on the human body and mind. The study includes behavioral implications and issues of prevention, intervention and treatment.
(39.6 Lec. Hrs.)

SDV:196 Getting Involved 1 cr.

Students will receive credit for volunteer work in a community organization or with one of the college services. Emphasis is on involvement with other people. Activities may include tutoring, working with youth or aged, or a leadership position in a college activity. This course may be repeated once for additional credit.
(19.8 Lec. Hrs.)
Prerequisite: Consent of instructor.

SDV:220 Honors Colloquium   2 cr.
Provides students who have a high level of academic achievement with learning opportunities beyond current curricular offerings. Through a variety of classroom and field activities, students will be challenged to use critical and creative thinking processes. Academic departments and guests will have opportunities to present enriching activities.
(39.6 Lec. Hrs.)

SURGICAL TECHNOLOGY

SUR:122 Introduction to Surgical Technology   4 cr.
This course provides an introduction to the knowledge and skills required for surgical technologies including principles of sterile techniques, the operative care of the surgical patient, and the roles of scrubbing and circulating duties. Application of surgical fundamentals is demonstrated. Theory is correlated to practice by requiring students to participate as members of a surgical team in laboratory simulations.
(59.4 Lec. Hrs./59.4 Lab Hrs.)
Co-requisite: CSP:110.

SUR:225 Surgical Technology II   4 cr.
This course is a continuation of Introduction to Surgical Technology with emphasis on acquiring skills of scrubbing and assisting the circulator during surgical procedures in the operating room and delivery room. Specific areas of study are general surgery, genitourinary, orthopedics, and endocrine system. Students must demonstrate competency in the lab setting of this course and pass a clinical readiness examination in order to proceed to clinical coursework.
(59.4 Lec. Hrs./39.6 Lab Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, SUR:122 and CSP:110.
Co-requisites: SUR:421 and SUR:518.

SUR:330 Surgical Technology Specialties   3 cr.
This course outlines advanced techniques in surgical technology. It is a continuation of the surgical technology series. This course will focus on specifics to all the different surgical specialties.
(59.4 Lec. Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, SUR:122, CSP:110, SUR:225, SUR:421 and SUR:518.
Co-requisite: SUR:524.

SUR:421 Surgical Technology Pharmacology   1 cr.
This course is a study of pharmacology and anesthesia. It will deal with all aspects of pharmacology: drug sources, forms, nomenclature, route of administration, classifications, pharmacokinetics, pharmacodynamics, drug handling techniques, identification, supplies needed, transfer of medications to the sterile field, commonly used medications, general anesthesia, nerve conduction clocks, history, and team member roles during anesthesia.
(19.8 Lec. Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, SUR:122 and CSP:110.
Co-requisites: SUR:225 and SUR:518.

SUR:450 Advanced Concepts in Surgical Technology   4 cr.
This course is a continuation of the Surgical Technology series. In this course the students will gain knowledge of specific surgeries related to the disease processes. This lecture class will give the students an opportunity to learn about new technology within the surgery arena. Suturing and knot tying will also be presented.
(79.2 Lec. Hrs.)
Prerequisites: CSP:110, SUR:122, SUR:225, SUR:421, SUR:518, SUR:330 and SUR:524

SUR:518 Surgical Technology Practicum I   2.5 cr.
This course provides the student with an introductory hands-on experience at a designated clinical site. Student will be evaluated on the following: preparation, aseptic technique, priority of duties, use of time, professional/personal habits, safety/ethical aspects, and skill set.
(153.6 Clin. Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, SUR:122, CSP:110 and pass comprehensive lab examination.
Co-requisites: SUR:225 and SUR:421.

SUR:524 Surgical Technology Advanced Practicum II   6.5 cr.
This course provides the student with advanced hands-on experience at a designated clinical site. Student will be evaluated on the following: preparation, aseptic technique, priority of duties, use of time, professional/personal habits, safety/ethical aspects, and skill set.
(386.4 Clin. Hrs.)
Prerequisites: MAT:047 or minimum math placement score based on college assessment, SUR:122, CSP:110, SUR:225, SUR:421 and SUR:518.
Co-requisite: SUR:330.

SUSTAINABLE ENERGY

SER:100 Introduction to Renewable Energy Applications   2 cr.
Provides an overview of various renewable energy applications. This includes a discussion of energy from wind, solar, ethanol, biodiesel, methane and hydro. There will be an introduction to cost, uses and maintenance of such systems.
(39.6 Lec. Hrs.)

SER:102 History of Power Generation   3 cr.
This course will provide a comprehensive history of power production. The course will cover the progressions of power generation from the earliest forms of power such as fire, wind and water to the modern power generation techniques. Also covered will be historical sidelines to alternative power. This course will utilize a lab component to reinforce the fundamentals of each power generation technology.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

COURSE DESCRIPTIONS

SER:103 Renewable Energy Site Assessment   3 cr.

This course examines the theoretical background, utilization of existing energy-potential databases, and on-site evaluation methodologies for determining the feasibility and actual siting of solar and wind technologies, both active and passive, but also consideration for fuels cells, geothermal and biomass sources. It also guides the student through multiple deployment methods for the installation of anemometers, pyranometers, and weather stations, as well as their integration with state-of-the-art data logging computer systems.
(39.6 Lec. Hrs./39.6 Lab Hrs.)

SER:104 Residential Renewable Energy Power Systems   3 cr.

This course covers the fundamentals of capturing the wind and sun for use in power generation. Students will install working wind turbines and solar photovoltaic systems on pre-selected sites. A significant amount of this class will be dedicated to hands-on construction of the systems. This is an applied learning course with optional tower climbing.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: SER:100 and MAT:723.

SER:105 Residential Renewable Energy Mounting & Tower Systems   3 cr.

This course will provide the students with a comprehensive overview of the tower types used in the wind industry. Tower safety and construction will be the primary focus of this course. Work will include freestanding, guyed and tilt-up towers. A section will include solar mounting systems for use in hybrid systems. This is an applied learning class, with optional tower climbing.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: SER:100 and MAT:723.

SER:108 Inverters, Chargers and Storage Devices   3 cr.

This course will focus on the components used in conditioning the power generated to the various end-use applications. There will be a focus on systems that are on grid, off grid and hybrid. Students will work with batteries, inverters, controllers, grounding systems and pumping applications. This is an applied learning class.
(29.7 Lec. Hrs./59.4 Lab Hrs.)
Prerequisite: SER:100 and MAT:723.

TRUCK DRIVING

TDT:111 Commercial Drivers License Regulations   3 cr.

This course is designed to deliver all of the information needed for students to pass three Commercial Drivers license (CDL) written examinations in the states of Illinois and Iowa: general knowledge, combination vehicle and air brakes. CDL requirements, Department of Transportation (DOT) Rules and Regulations, log books and air brakes will be covered.
(59.4 Lec. Hrs.)

TDT:112 Commercial Drivers License Regulations   2.5 cr.

This course is designed to deliver all of the information needed for students to pass three Commercial Drivers license (CDL) written examinations in the states of Illinois and Iowa: general knowledge, combination vehicle and air brakes. CDL requirements, Department of Transportation (DOT) Rules and Regulations, log books and air brakes will be covered.
(59.4 Lec. Hrs.)

TDT:130 Commercial Vehicle Operation   7 cr.

This course delivers the information necessary to take and pass the CDL skills test and become a commercial vehicle operator. The student will develop the skills and techniques essential to the safe and professional operation of a commercial vehicle.
(19.8 Lec. Hrs./237.6 Lab Hrs.)
Prerequisite: TDT:111 or TDT:112.

TDT:131 Commercial Vehicle Operation   5 cr.

This course delivers the information necessary to take and pass the CDL skills test and become a commercial vehicle operator. The student will develop the skills and techniques essential to the safe and professional operation of a commercial vehicle.
(9.9 Lec. Hrs./178.2 Lab Hrs.)
Prerequisite: TDT:111 or TDT:112.

WELDING

WEL:124 Maintenance Welding   3 cr.

Designed for the basic needs of the manufacturing student, including instruction and practice in gas cutting and welding, brazing, arc welding in various positions and basic MIG welding. Topics covered also include safe use of welding equipment and machinery, abrasive cut-off saws, shears, grinders and various tools common to the welding field. Designed to teach the student how to weld with different electrodes in all positions. Emphasis is on the E-6010 and E-7018 electrodes. The student safely sets up welding equipment, learns how to adjust it and how to operate it, and how to weld and braze in all four positions. The learning experience is also enhanced by cutting freehand with the cutting torch and operating semi-automatic cutting equipment.
(19.8 Lec. Hrs./118.8 Lab Hrs.)

WEL:126 Shielded Metal Arc Welding - Basic   4.75 cr.

This course covers basic Shielded Metal Arc Welding procedures in the flat position. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./168.3 Lab Hrs.)

WEL:127 Shielded Metal Arc Welding - Modules   1.25 cr.

Selected modules from WEL:126 course will be taught in this course. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./29.7 Lab Hrs.)
Co-requisites: MFG:186 or instructor's approval.

WEL:129 Gas Metal Arc Welding - Basic   4.25 cr.

This course covers safety and Metal Inert Gas (MIG) welding techniques in horizontal, vertical and overhead positions. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./148.5 Lab Hrs.)
Co-requisites: MFG:186.

WEL:132 Flux Core Arc Welding   2.25 cr.

This course covers safety and flux core arc welding techniques. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./69.3 Lab Hrs.)
Prerequisites: WEL:126, WEL:129 and MFG:186.

WEL:133 Gas Tungsten Arc Welding   2.5 cr.

This course covers safety and tungsten inert gas (GAS) in the flat position. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: WEL:126, WEL:129 and MFG:186.

WEL:136 Oxy-Acetylene Welding and Cutting   4.25 cr.

This course covers safety and Oxy-Acetylene Welding and Cutting techniques. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./148.5 Lab Hrs.)
Prerequisites: WEL:126, WEL:129 and MFG:186.

WEL:137 Oxy-Acetylene Welding and Cutting - Modules   0.5 cr.

Selected modules from WEL:136 will be covered. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting. Variable credits are awarded in this course.
(4.95 Lec. Hrs./9.9 Lab Hrs.)
Prerequisites: WEL:126, WEL:129 and MFG:186 or instructor's approval.

WEL:215 Shielded Metal Arc Welding - Advanced I   5 cr.

This course covers basic advanced shielded metal arc welding procedures in variety of positions. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./178.2 Lab Hrs.)
Prerequisite: WEL:126.

WEL:216 Shielded Metal Arc Welding - Advanced II   4.5 cr.

This course continues with the advanced concepts and techniques covered in the Shielded Metal Arc Welding (Advanced I - WEL:215 course). Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./158.4 Lab Hrs.)
Prerequisite: WEL:215

WEL:217 Gas Metal Arc Welding - Advanced   1.25 cr.

This course covers advanced metal inert gas (MIG) welding techniques in a variety of positions. Electrode selection, power source and welding distortion control using arc-welding process are emphasized. Numerous hands-on projects/experiments integrate and reinforce theoretical concepts in the laboratory setting.
(9.9 Lec. Hrs./29.7 Lab Hrs.)
Prerequisite: WEL:129.

WEL:219 Layout and Fabrication   3 cr.

This course includes the computation and development of sketch outs of various geometries and special fabrication techniques in cutting, fitting, clamping and tacking. The lab project requires the use of fabrication equipment.
(19.8 Lec. Hrs./79.2 Lab Hrs.)
Prerequisites: WEL:216 and WEL:217.

WEL:331 Welding Fundamentals   2 cr.

This course is designed especially for auto technology and diesel technology students. The welding processes that will be studied are those that are currently being used in auto and truck repair centers. Competencies that will be developed are intended to provide entry-level skills. This course is not designed to provide the skills required for welding certification.
(19.8 Lec. Hrs./59.4 Lab Hrs.)

WEL:949 Special Topics - Welding   1-6 cr.

Students with basic welding knowledge and skills may develop specialized courses of study to meet their individual needs. This course may be repeated for a maximum of 6 credits.(39.6-237.6 Lab Hrs.)

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Computer Technology Support Specialist
AA/AS, Scott Community College
BS, St. Ambrose University

Karen S. Allen
Continuing Education Registration Clerk

Erin Anderson
Iow@Work Intake Worker/ Records
Clerk/FIP Tech

Paula Arends
Iow@Work Associate Director
B.A. Eastern Illinois University
M.Ed. University of Illinois

Jeffrey Armstrong
Vice Chancellor of Instruction
BA, University of Iowa
MA, University of Iowa
PhD, University of Iowa

Julie Aye
Urban Center Manager

Chris Banker
Assistant Director, Career Link
BBA, University of Iowa
MA, National University

Kirk R. Barkdoll
Director of Facilities
BA, University of Northern Iowa
MSEd, Western Illinois University

Nancy Beam
Payroll Specialist
AA, Scott Community College

Honey H. Bedell
Associate Director for Board
Services/Executive Director,
EICC Foundation
BA, Baylor University
MA, University of Iowa

Tina Berg-Boldt
Muscatine Community College
Associate Director, Graphic Arts Training
and Consulting Group
BA, Indiana University of Pennsylvania

Kathryn A. Birkett
Iow@Work Fiscal Officer
AA, Clinton Community College
BA, Mount St. Clare College

Jim Brattvet
Assistant to Director of Economic
Development
BS, Florida Atlantic University
MIS, University of Phoenix
MBA, Kennesaw State University

James Breitbach
Assistant Director Industrial Technologies
Business and Industry Center
Journeyman, Machinist

Mary S. Briones
Associate Director, Health Occupations,
Continuing Education
RN, University of New York
BS, University of St. Francis
MS, University of St. Francis

Alan Campbell
Associate Director, Communications
BA, William Penn College
MBA, St. Ambrose University

Lauri Eich
Executive Assistant, Continuing
Education
AA, Teikyo Marycrest
BA, Mount St. Clare

Tori Cribbs
Switchboard/Records Clerk

Donna Day
Executive Assistant
AAS, American Institute of Commerce

Ilene Deckert
Associate Director, Economic
Development
BS, Clarke College

Lana J. Dettbarn
Executive Director,
Administrative Services
BA, Western Illinois University
MBA, St. Ambrose University

Nancy J. Dugan
Research Analyst
AA, Scott Community College

Roma Egger
Administrative Assistant I,
Information Technology

Jenny Eis
Computer Technology Support Specialist
AA/AS, Scott Community College

Alison Entler
Microcomputer Technology
Support Specialist
AAS, Scott Community College

Karen D. Farley
Associate Director of Marketing
BA, MA, University of Northern Iowa

Laurie Finn
Director, Resource Development
BA, Drake University
MBA, St. Ambrose University
PhD, University of Iowa

Johnna Forbes
Information Specialist/Iow@Work
Employment and Training Counselor

Jen'e Fuller
Continuing Education Administration
Assistant

Kathryn F. Garrison
Iow@Work Employment & Training
Counselor
BS, Illinois State University

Sandra Gayman
Assistant Director of Database Services
AAS, Scott Community College
BA, St. Ambrose University

H. James Gekes
Assistant Director of Web-based Services
BS, Northern Illinois University

LeAnn M Gillespie
Personnel Specialist
BA, St. Ambrose University

Sheila Goderis
Accounts Payable Clerk

Debora Goodall
Associate Director, Business and
Management Training
AA, Mount St. Clare College
BA, Loras College
MS, Western Illinois University

Terri Goodman
Administrative Assistant for E-learning,
GATC and Professional Development
BS, Iowa State University

Jeff Halterman
Assistant Dean for Reach to Achieve
BA, Marycrest College
MEd, Auburn University

Dawn Hamilton
Assistant Director for Health
Continuing Education
ADN, Scott Community College
BS, University of St. Francis

Laurie Hanson
Director, Institutional Effectiveness
BA, Hope College
MA, Western Illinois University

Amy Hanzelin
Accountant
BA, Coe College

Barbara Hardison
Continuing Education Administration
Assistant
AAS, Clinton Community College

Nicole Harrison
Web & Media Specialist
AAS, Clinton Community College

Eric Hayes
Urban Center Maintenance

Tracy Higgins
Data Entry/Records Clerk

Heidi Hilbert
Assistant Dean of E-learning
BS, University of Iowa
MBA, HRM, Columbia Southern
University

Mary Hildebrandt
Administrative Assistant I
BA, Iowa Wesleyan College

Thea Holman-Ellis
Prevocational Training Facilitator
BA, University of Missouri at
Kansas City

Tammy L. Hoover
Information Center Specialist
AAS, Scott Community College

Richard R. Horst
Director of Development
BS, Iowa State University

Ann Hutchinson
Director, Eastern Iowa Small Business
Development Center
BA, Augustana College
Professional Degree, Prochnow
Graduate School of Banking,
University of Wisconsin

Cheryl Jones
Assistant Director of Server Services
AS, Carl Sandburg College

Winifred Jones
Help Desk Technician

Lori Kaiser
Continuing Education Administration
Assistant

Mark D. Kapfer
Executive Director, Community and
Economic Development
BA, University of South Dakota
MA, Western Illinois University

Natasha Kerr
Administrative Assistant I/
Accounts Clerk II
BA, Western Illinois University

Angelique Kimble
Accounts Receivable Clerk
BS, Illinois State University
MBA, Colorado Technical University

Christina R. Kloss
Executive Assistant to Director of
External Affairs

Nancy Kothenbeutel
Executive Director of
Continuing Education and Contract
Training
BS, MA, Northeast Missouri
State University
PhD, University of Iowa

Cynthia S. LaFrentz
Purchasing Clerk
AA, Scott Community College

Cathy Langdon
Associate Director, Curriculum and
Program Support
BS, Illinois State University
MSEd, Western Illinois University

Ryan Light
Assistant Director,
Renewable Energy Program

Ellen Kabat Lensch
Executive Director for Resource
Development & Innovation
BS, Iowa State University
MBA, St. Ambrose University
PhD, University of Iowa

PERSONNEL DIRECTORY

Victoria Lorenz
Iow@Work Secretary
EICC Secretarial Graduate

Melody Loveridge
Iow@Work Employment and Training
Counselor

Jill Maine
Assistant Director for Health, Continuing
Education/Long Term Care Instructor
AS, Scott Community College

Monica Masat
Administrative Assistant I/
Accounts Clerk II

Robin Martin
Accounts Payable Clerk

John (Red) Mayo
Computer Technology Support Specialist
Blong Technology Center
AAS, Scott Community College
BA, St. Ambrose University

Robin Michel
HR Development and EEO
BA, University of Iowa

Gary Mohr
Executive Director for External Affairs
BS, Northwest Missouri State University
MS, Iowa State University

Barbara D. Notz
Iow@Work Employment and Training
Counselor

Julie Plummer
Assistant Director, Iowa Waste
Exchange/EICC Sustainability Manager
BA, Augustana College
MA, University of Iowa

Patsy Ramicitti
Small Business Development Center
Admistrative Assistant

Karinda Richard
IT Report Writing Specialist
AS, Scott Community College

Karen Roebuck
AA/EEO Officer, Diversity Chair,
Pre-vocational Trainer
BA, Wright State University

Gale G. Roeder
Associate Director of Family and
Consumer Science, Continuing Education
BS, Iowa State University
MS, University of Iowa

Rebecca Rome
Iow@Work Employment and
Training Counselor
BA, University of Northern Iowa

Gary Ronzheimer
Assistant Director, Fire Science and
Rescue, Health, Continuing Education
BA, Columbia Southern University

Tamara Sachsenmaier
Iow@Work Employment and
Training Counselor
AA, Clinton Community College

Dennis Schnoor
Assistant Director for Industrial
Technologies - Continuing Education
AAS, Scott Community College

Gail Sederquist
IT Web-Based Program/Data Analyst
BA, Augustana College
BS, University of Iowa

Bridget Sheridan
Aquatics/Fitness Coordinator

Sabrina Shoemaker
Iow@Work Employment and Training
Counselor

Kathy Skeffington
Iow@Work Employment and Training
Specialist
B.A., St. Ambrose University

Erin Snyder
Associate Director for Enrollment
Management
BA, University of North Carolina -
Chapel Hill

Martha Spears
Iow@Work Employment and Training
Specialist
BA, Western Illinois University

Lori Strausse
Accounts Payable Clerk
AA, American Institute of Business

Lynn Summers
Assistant Director of Computer Support
AS, Black Hawk College
BS, George Williams College

Doris Swanson
Executive Assistant to the Chancellor

Suteesh Tandon
Director of Business Services,
BA, Delhi University of India
CA, Institute of Chartered Accountants of
India

James A. Temple
Assistant Director for Health (EMS),
Continuing Education
BA, Dordt College
EMT-P, Scott Community College

Karen Till
Iow@Work Employment and Training
Specialist

Peg Walker
Associate Director, Sales and Services,
Blong Technology Center
AAS, Black Hawk College
BOG, Western Illinois University

Chris Warner
Computer Technology Support Specialist

Frank Weiser
Assistant Director of Media Services
AAS, Scott Community College

Wanda Wyatt-Hardwick
Iow@Work Employment and Training
Specialist

Sue Zettel
Graphics Technician
AA, Scott Community College
BA, Marycrest College

Clinton Community College

Amensisa Abdi
Physics Instructor
MS, University of Cincinnati
PhD, University Cincinnati

Jane Beinke
Business and Industry Center Secretary
AA, Stevens Henager College of Business
AAS, Clinton Community College

Anthony Bielski
Transition Advisor
AA, Illinois Valley Community College
BS, Western Illinois University

Gina Bielski
Speech Instructor
BA, Eastern Illinois University
MA, Eastern Illinois University

John L. Bonte
Chemistry Instructor
BA, St. Olaf College
PhD, Iowa State University

Martha K. Bonte
Humanities/Social Science Instructor
BA, St. Olaf College
MS, Iowa State University

Theresa Boysen
Library Assistant

Martha Brown
English Instructor
BS, Drake University
MS, University of Iowa

Craig Burken
Welding Instructor

Patrick Cheak
Graphic Arts Instructor
BS, Southern Illinois University
MFA, Southern Illinois University

Alicia Clark
Evening College Assistant
AA, Clinton Community College

William Clausen
Biology/Chemistry Instructor
BS, MST, South Dakota State University

Tim Cottle
Associate Director for Business and Industry Center
BA, Clemson University

Charlotte Darsidan
Library Specialist
AAS, Clinton Community College

Mary Dierksen
Lead Custodian

Melanie Drury
Accounts Clerk I
AA, Clinton Community College
BA, Mount St. Clare College

Gary Duffey
Custodian I
AAS, Scott Community College

Amy Dykstra
Secretary I/Special Projects
AAS, Clinton Community College
BS, Mount St. Clare College

Ann Eisenman
Assistant to the President/Foundation Director
BBA, University of Iowa

Vincent D. Enslein
Business Instructor
BBA, University of Cincinnati
MS PM, Florida Institute of Technology

Jody Feller
Custodian I

Susan K. Geerts
Financial Aid Specialist
AAS, Mount St. Clare College

Debby Gosnell
GED Instructor/Adjunct Instructor
BA, Illinois State University

Jennifer Green
Executive Assistant
Student Services

Lauren Guemmer
Administrative and Office Support Instructor
BA, Northwestern University
MA, University of Northern Iowa

Beth Hafner
English/Journalism Instructor
BA, University of Iowa
MA, Western Illinois University

Shawn Hamerlinck
Humanities/Social Sciences Instructor
BA, Loras College
MA, Loyola University

Marcus Harris
Academic Advisor/Job Placement Coordinator
AA, Wabash Valley Community College
BA, Mount St. Clare College

Amy Johnson
Library Assistant
MLS, University of Iowa

Brian Johnson
Construction Trades Instructor

Amy Kramer
Nursing Instructor
RN, North Central Missouri College
MSN, University of Phoenix

Susan Kunde
Lab Assistant I/ Math and Science
AAS, Clinton Community College
BS, St. Ambrose University

Sydney Kurtz
Literacy Coordinator

Marcia Larson
Academic Advisor/ADA Liaison/ Retention Specialist
AA, Clinton Community College
BA, Ashford University

Deanna LaShelle
Custodian I
AAS, Clinton Community College

Marcia Lathrop
Developmental Education Instructor
BS, Judson Baptist College
MA, City University

Christopher Legel
Graphic Arts/Multimedia Instructor
BA, University of Wisconsin-Madison

Vickie A. Lehmann
Bookstore Manager
AA, Clinton Community College

Gail Levsen
Executive Assistant,
President/Dean's Offices

PERSONNEL DIRECTORY

James Lyon
Automotive Instructor
ASE Certified

Amy Madsen-Smith
Biology/Math/Science Instructor
BA, St. Louis University
MA, Western Illinois University

Jane Marlowe
Developmental Education
Department Coordinator/Instructor
AA, Mount St. Clare College
BA, Marycrest College
MA, The Franciscan University

Lisa Miller
Dean of Student Development
AA, Scott Community College
BA, Western Illinois University

Mary "Lanell" Mogab
English Instructor
BS, Southwest Missouri State University
MA, Western Illinois University

Heather Mohler
Admissions Officer
AA, Clinton Community College
BA, University of Iowa

Mardell Mommsen
Manager of Records and Registration
AA, Clinton Community College

Sally Myers
Assistant Dean of Library
BA, Cornell College
MA, University of Iowa

Roxanne Otto
Secretarial Services Assistant
AA, Clinton Community College

Kathy Paasch
Computer Technology
Support Specialist
Diploma, Clinton Community College

Penny Plautz
Continuing Education Specialist
(Maquoketa)
BA, University of Northern Iowa

Jeff Reid
Maintenance Custodian
Certificate, Highland Community College

Susan Reynolds
Computer Lab Assistant II
AAS, Clinton Community College

Deborah E. Richter
Assistant to the President for
Administration
AA, Mount St. Clare College
BBA, St. Ambrose University

Ron Serpliss
Dean of the College
BA, Central Connecticut State University
MA, Wheaton College

Joe Shovlain
Academic Advisor/Volleyball Coach
BA, MBA, St. Ambrose University

Robyn Smith
Art Instructor
BA University of Iowa
MA, University of Iowa

Dean Stone
Social Science/ Education Instructor
BA, Regis College
MA, University of Virginia
PhD, Ball State University

Ruth Sueverkruebbe
District Nursing Department
Coordinator/Instructor
AA, Scott Community College
BSN, Marycrest College
MS, Northern Illinois University

Stephen Teney
Business Instructor
PhD, University of South Dakota

Pamela S. Teymer
Business/Administrative and Office
Support Coordinator/Instructor
AA, Clinton Community College
BS, Northeast Missouri State University
MA, Teikyo Marycrest University

Teresa A. Thiede
Financial Aid Officer/Student
Activities Facilitator
AA, AAS, Clinton Community College

Peggy Thoms
Psychology Instructor
BA, Coe College
MA, Loras College

Joyce Tiesman
Secretary II

Shirley Turnis
Mathematics Instructor
BS, University of Dubuque
MSM, Iowa State University

Karen Vickers
President/Vice Chancellor of Student
Development
BS, Iowa State University
MSEd, Western Illinois University
PhD, Iowa State University

Mark Wade
Facilities Manager

Wanda Walker
Records Clerk I

Dave Wallace
Mechatronics Technology Instructor
AAS, Clinton Community College

Ryan Welch
Math/Science Instructor
BA, MS, University of Northern Iowa

Scott Weston
Transition Advisor/Head Volleyball Coach
BS, Missouri Western State University

Christine Whipple
Nursing Instructor
BSN, University of Maryland/
Walter Reed
Medical Army Institute of Nursing

Glenn Williams
Instructor, Microcomputer Information
Technology
AA, BA, BS, University of Maryland

Beth Wood
Mathematics/Computer Science Instructor
BS, Western Illinois University
MS, University of Illinois

Muscatine Community College

Heather Adams
Computer Technical Support Specialist
BA, St. Ambrose University

Barbara Adlam
Nursing Clinical Instructor
BSSN, University of Iowa

Robert Allbee
Acting President of MCC
MA, University of Iowa

Michael Anson
Maintenance/Custodian

David Barb
Baseball Coach/College Assistant
BS, Davis and Elkins College

William Barwick
Bookstore Manager

Debra Beatty
Financial Aid Officer
AA, Muscatine Community College

Scott Beatty
Softball Coach/College Assistant

Chad Bishop
Media Production Specialist
BA, University of Iowa

Pam Bloomquist
Child Care Aide/Cook

Erin Bohnsack
Academic Advisor
BA, University of Iowa

Richard Boyer
Science/Math Department Coordinator
Biology Instructor
Doctorate, Palmer College of Chiropractic

Renae Britt
Library Technician II
BA, Marycrest College

Elias Calderon
Custodian I

Anabelia Calderon-Flores
Tech Prep Facilitator/Career Services/
Student Success Specialist
BS, Iowa State University

David Carson
Transition Advisor
MDiv, Christian Theological
Seminary, IN

Leakhena Chhim
Accounts Clerk I
AAS, Scott Community College

Lisa Powell Cler
English Instructor
MFA, University of Alabama

James Compton
English/Literature/Communications
Department Coordinator
English Instructor
BA, University of Illinois
MA, Northern Illinois University

Shelly Cram Rahlf
Dean of Student Development
BA, Coe College
MA, Iowa State University

John A. Dabeet
Business Department Coordinator
Economics/Statistics Instructor
BA, Bethlehem University
MPA, Kutztown University

Daniel Drahos
Vet Tech Program Veterinarian
DVM, Iowa State University

Angela Einfeldt
Child Care Aide
AA, Muscatine Community College

Sipra Eko
Math Instructor
M Ed, University of Maine

James Elias
Business Instructor
BS, University of South Dakota
MBA, St. Ambrose University

Heather Elliott
Preschool Teacher
AA, Muscatine Community College

Jan Fasse
Administrative Office Instructor
AA Indian Hills Community College
BBA University of Iowa
MBA University of Iowa

Jana Fowler
Science Instructor
BS, Iowa State University

Janet Freeborn
Horticulture Instructor
BS, Western Illinois University

Kathy Freund
Executive Assistant
AA, Muscatine Community College

Lesa Hadley
English Instructor
MA, New Mexico State University

Angela Henning
Information Technology Instructor
AAS, Muscatine Community College
BA, St. Ambrose University
MS, St. Ambrose University

Bradley Hesford
Media Production Technician II

Blaine Hill
Maintenance/Custodian

Stephen T. Holland
Journalism/English Instructor
BA, University of Iowa
MA, University of Iowa
Ed S, University of Iowa
PhD, University of Iowa

Robin Jennings
Financial Aid Officer
Management & Supervision
Certificate, Scott Community College

Kenneth T. Johnson
Math/Science Instructor
BS, University of Wisconsin - Madison
MS, University of Iowa

Sue Kahl
Administrative Assistant I
Diploma, Scott Community College

Jeffrey A. Kaufmann
Social Science Department Coordinator
History/Psychology Instructor
BA, University of Iowa
MA, University of Iowa
PhD, University of Iowa

Caryn Kelly
ABE Facilitator
MA, University of Arizona
Teaching English as a Foreign Language
Certification, Hamline University
BA, University of Iowa

PERSONNEL DIRECTORY

Arthur Kistler
Manufacturing Technology Instructor
AAS, Kirkwood Community College

Christine Klingaman
Veterinary Technician Instructor
AAS, Bel-Rea Institute of Veterinary
Technology

Kristina Koch
English/Journalism Instructor
BA, Western Illinois University
MA, Western Illinois University

Cindy Kress
Secretarial Service Assistant
AA, Muscatine Community College

Kathy Kurriger
Lab Assistant, Skills Center
BS, Northeast Missouri State University

David Lane
Drama Instructor
MA, Fontbonne University

Brandon Lange
Chemistry Instructor
MS, University of Illinois - Urbana

Julie Lloyd
Executive Assistant

Janine Loveless
Microcomputer Information Technology
Instructor
Specialist, Universidade do Vale do Rio
dos Sinos - Brazil
MA, University of Iowa

Nancy Bird Luikart
Assistant Dean for Library Services
BS, Louisiana State University
MLIS, Louisiana State University

Bari Marshall
Residence Hall Manager
BA, University of Albany, SUNY

Paul Martin
Agri-Business Instructor
AAS, Muscatine Community College
BS, Southern Illinois University

Juan Martinez, Sr.
Custodian I

Marshall H. McDonald
Agricultural/Industrial Occupations
Department Coordinator
Agri-Business/Technology Instructor
BS, Southern Illinois University
MS, Southern Illinois University

Jo Miller
Switchboard Typist
AA, Muscatine Community College

Sandra Miller
Custodian I

Robin Mitchell
Manager of Registration and Records
AA, Muscatine Community College

Ruth Moorhead
Lab Assistant I
BS, St. Ambrose University

Becky Morrissey
Custodian I

Linda Mowl
Developmental Education Department
Coordinator
Learning Center Instructor
BSE, Northeast Missouri State University

Jennifer Parker
Academic Advisor - International Grant
BA, Iowa State University

William Parli
Agricultural Instructor
BS, Western Illinois University
MS, Southern Illinois University

Joan M. Paul
Preschool Teacher
BA, Marycrest College

Melissa Paulsen
Preschool Teacher
AA, Muscatine Community College

Elida Perales
Academic Advisor
MS, Western Illinois University

Janet Phillips
Music Instructor
BA, Marycrest College
MA, University of Iowa

Alnetha Poole
Registration Clerk
AAS, Scott Community College

Robert Rada
Automotive Instructor

Kay Rooff-Steffen
Humanities/Fine Arts Department
Coordinator
Spanish/Communication Instructor
BA, University of Northern Iowa
MAP, University of Iowa

Mary Rummery
Custodian I

Marvin Smith
Associate Director, Business and Industry
Center
BA, Iowa Wesleyan College

Tonya Smith
Child Care Aide
AA, Muscatine Community College

Gail Spies
Dean of the College
BS, Southern Illinois University
MSN, Northern Illinois University

Kathryn A. Trosen
Skills Center Facilitator/
Disability Services Provider
BA, Elmhurst College
MSEd, Western Illinois University

William Trotter
Mathematics Instructor
BS, University of Massachusetts - Boston
MS, Western Illinois University

Pam Viner
Learning Tree Preschool Manager

Robert Warner
Facilities Manager

Katherine Watson
Admissions Officer
AAS, Muscatine Community College
BA, Western Illinois University

Lisa Wiegel
Assistant to the President
AA, Muscatine Community College

Paul Wilts
Manufacturing Technology Instructor
BS, University of Northern Iowa

Scott Community College

Barb Adlam, RN, MSN
Nursing Clinical Instructor
LPN, Muscatine Community College
ADN, Scott Community College
BSN, University of Iowa
MSN, Univ of Phoenix

Michelle Allmendinger
Athletic Facilitator/Campus Activities
Specialist
BA, Knox College
MS, University of Wisconsin

Heather Anderson
Early Childhood ED/Interpreter Training
Department Coordinator
BA, Augustana College
MS, Western Illinois University

Rhonda Anderson-Paxston
Nursing Instructor
AS, Muscatine Community College
BSN, Marycrest College
MSN, University of Iowa

Diana Archer
Admistrative Assistant,
Registrar's Office

Sarahy Arriaga de Castro
ESL Instructor, Career Assistance Center

Mark Aronson
Biology Instructor
BA, BM, University of Iowa
MA, University of Montana

Laura Asleson
Account Clerk I
AA, Scott Community College

Alex Backes
Accounts Clerk
BA, St. Ambrose University
MS, Western Illinois University

Mary E. Bailey
Nursing Instructor
Diploma, Moline Public Hospital
BSN, Marycrest College
MSN, Clark College

Michelle Bailey
Assistant Dean of Library/Learning
Resources
BA, University of Iowa
MLIS, University of Iowa

Bruce Bainbridge
Industrial Engineering
Technology/Drafting
Blong Technology Center
BS, University of Wisconsin - Stout

Andrew Bair
Maintenance/Custodian,
Kahl Educational Center
AAS, Scott Community College

John F. Baker, Jr.
Biology Instructor
BA, Aurora College
MA, PhD, University of Iowa

Mary K. Baker
Nursing Instructor
Diploma, Creighton Memorial
St. Joseph's Hospital School of Nursing
BSN, University of Illinois-Chicago
MA, Western Illinois University

Dan Baldwin
English Instructor
BA, Northeast Missouri State University
MA, Western Illinois University

Tina L. Ball
Dental Assisting Instructor
Diploma, Robert Morris College,
RDA, CDA

Tatiana Ballentine
CASS Housing Specialist,
International Programs
Certificate, ESAN University, Lima, Peru
BBA, IPAE University, Lima, Peru

Jan Barkdoll
Executive Assistant to the Dean of
Student Development
AA, Black Hawk College

Pamela D. Bass
Biological Sciences Instructor
BS, MS, University of Iowa

Candice E. Beever-England
Academic Transfer Advisor, TRIO
BA, Western Illinois University

Bret Benson
Business Management/Accounting
Management Instructor, Accounting
Specialist and Administrative and Office
Support Instructor
AA, Black Hawk College
BA, MBA, Western Illinois University

Stephen R. Bergren
Admissions Officer
BA, Augustana College
MA, Western Illinois University

John Blair
Heating, Ventilation and Air
Conditioning Instructor
Diploma, Scott Community College

Sharon Bonis
Executive Assistant to Dean of Arts &
Sciences

Carol A. Brade
Library Technician II
BA, MA, University of Iowa

Dee A. Brand
Surgical Technology Program
Director/Instructor
ADN Nursing, Scott Community College
Diploma, Surgical Technology,
Kirkwood Community College

Vincent L. Briley
Assistant Dean of Academic Advising and
Testing
BSS, Ohio University
MA, Ohio State University

Charity Brinkley
ABE/GED Instructor
Career Assistance Center

Jill M. Brodersen
Mathematics Instructor
BA, St. Ambrose University
MSM, Iowa State University

Lisa Brown
Dean of Student Development
BS, University of Iowa
MS, Western Illinois University

Gary T. Buckley
Psychology Instructor
BS, Northeast Missouri State University
MA, Assumption College

Jim Burden
Welding Intructor, Blong Technology
Center
Journeyman Welder/Pipefitter

R. Andrew Burt
Dean of Arts & Sciences
AA, Seward County Community College
BA, MA, Emporia State University
PhD, Capella University

Carrie Butler
Administrative Assistant
AS, Scott Community College

Eric Carr
Social Science Instructor
BA, University of Texas at Austin
MPA, Texas Tech University
MA, Rice University

Wayne Carter
Electrical/Mechanical Program Instructor,
Blong Technology Center
AAS, Black Hawk College

Patty Cheng
Web Design & Web Server Specialist,
ATEEC
BA, BS, MS, Western Illinois University

Norm Christin
Maintenance
BS, Calvary Baptist College

Donna Clarquist
Health Information Technology Instructor
AAS, Illinois Central College
BA, Western Illinois University

Stephanie Coble-Day
Alternative High School Curriculum
Manager
BA, University of Northern Iowa

Kathy Coiner
Psychology Instructor
BS, University of Iowa
MS, Central Missouri State University

Wayne Cole
Job Placement/Student Success Specialist
BS, Iowa State University

Kathleen Conway
Faculty Mentor
BA, Marycrest College
MA, University of Iowa

Janet Coogan
Dean of Applied Technologies
BS, Iowa State University
MEd, University of Illinois - Champaign

Wavie Cox
Evening College Assistant
Kahl Educational Center

Carol Crane
Library Technician II

Julie Cutler
Nursing Instructor

Stephen Daley
ABE/ GED Instructor,
Career Assistance Center

Kimberly Darling
Industrial and Design Technologies
Department Coordinator/Interior
Design Instructor
BFA, MA, University of Iowa

Edward DeJaynes
Truck Driving Instructor

Sandra DeVine
Receptionist/Secretary II
Career Assistance Center

Julie Dittmer
Nursing Instructor
MSN, University of Iowa

Melonee K. Docherty
Lead Instructional Designer
Advanced Technology Environmental
and Energy Center
AS, Black Hawk College
BA, Augustana College

Nancy Drucker
Financial Aid Specialist
AAS, Black Hawk College

Armond (Russ) Dunn
Biology Instructor
BS, Western Michigan University
MS, Iowa State University

Alicia Duyvejonck RN, BSN
Nursing Instructor
BSN, University of Iowa

Susan Edwards
ABE/ GED Instructor,
Career Assistance Center

Karree Fah
ESL Instructor
BS, Truman State University

Veronique Fernandez
ESL Instructor
BA, Creighton University

Cindy A. Flanders
Business Administration and Speech
Department Coordinator/Instructor
BA, JD, MA, University of Iowa

Steve Flanigin
Drama Instructor
BA, Marycrest College
MFA, University of North Carolina-
Greensboro

Sue Fleck
Program Facilitator
Career Assistance Center

Randy Ford
Chemistry Instructor
BS, St. Cloud State University
MS, University of Minnesota-
Minneapolis

Barbara A. Foster
Allied Health Services Department
Coordinator/Health Information
Technology Instructor
AA, Indian Hills Community College
BA, Marycrest International University

Jazmin Fountain
ABE/GED Instructor
St. Ambrose University

Margo Fox
Blong Technology Center Manager

Ruth Ann Gallagher
Developmental Education Instructor
BS, MEd, Western Illinois University

Bhaswati Gangopadhyay
Physical Science & Computer Science
Department Coordinator/Physics
Instructor
BS, MS, University of Calcutta
MS, PhD, Rensselaer Polytechnic
Institute

Karen Ganzer
Nursing Instructor
RN, Lutheran Hospital School of Nursing
BSN, University of St. Francis

Peg Garrison
Dean, ABE/GED/ESL
BA, University of Nebraska
MS, Western Illinois University

Rebecca Geiken
Basic Education Training/Orientation,
Career Assistance Center

Angie Ghrist
Biology Instructor
AA, Southeastern Community College
BA, University of Iowa
MS, Iowa State University

Ezequiel Gonzalez
Facilities Manager, Kahl
AAS, Scott Community College

Ann Gray
English Department
Coordinator/Instructor
BA, Illinois Wesleyan University
MA, Indiana State University

Sandra F. Griffith
Registration & Records Administrative
Assistant
Kahl Educational Center

Thomas Hackett
Truck Driving Instructor

Cathy Hackney
Secretary, Nursing Department

Kirk Hakanson
Building Trade Instructor
Master Carpenter

Darrell Hanan
Automotive Technology Department/
Instructor
AAS, Southeastern Community College
BT, University of Northern Iowa
ASE Master Certified

Gloria Hanne
Project Coordination Specialist
Advanced Technology Environmental and
Energy Center

Jane A. Haugland
District Financial Aid Officer
BA, University of Northern Iowa

Sharon Heesch
ABE/ GED Alternate High School
Instructor, Career Assistance Center

Lysa Hegland
Assistant to the President/
Foundation Director
AA, Scott Comunity College
BA, St. Ambrose University

Susan E. Hess
Assistant to Dean for International
Studies
BS, University of Wisconsin-
Stevens Point

Delores Hill
Administrative Assistant,
Registrar's Office

Barbara Hixon
Biology Instructor
AS, Holyoke Community College
BS, MS, PhD, University of
Massachusetts-Amherst

Dale Holder
Truck Driving Instructor

David Hollingsworth
Maintenance
Diploma, Scott Community College

Michelle Holmes
Arts and Sciences Administrative
Assistant

Thea Holmon-Ellis
Transition Advisor-SCC
BA, University of Missouri

Jeanne Holuba
Financial Aid Specialist
AAS, Scott Community College

Ann Horan
Registration Center Assistant

Sherry Horan
Developmental Education
Coordinator/Instructor
MEd, University of Northern Iowa

Hans Humbarger
Mathmatics Instructor
BS, Purdue University
MA, Univervisity of Wisconsin at
Madison

Kenneth L. Hunter
Diesel Instructor
AA, Scott Community College

Elizabeth A. Huntley
Interpreter Training Instructor
AA, Black Hawk College
BS, Northern Illinois University

Jonathan Ikoba
Social Science Department Coordinator/
Economics Instructor
BS, University of Liberia
MS, University of Cincinnati
MA, PhD, Northern Illinois University

Jeannine E. Ingelson
Financial Aid Officer
BA, Augustana College

Larry Jackson
Special Needs Specialist
BGS/MA, Univeristy of Iowa

Jan M. Jacobs
Director/Radiologic Technology
Instructor
AAS, Carl Sandburg College
BS, University of St. Francis
MA, St. Xavier University

Katherine Jaeggi
Administrative Assistant,
Blong Technology Center
AAS, Scott Community College

Lora Kaisler
Instructional Designer
Advanced Technology Environmental and
Energy Center
BA, Marycrest College
MS, Western Illinois University
MA, University of Iowa

Caryn Kelly
Lead Teacher, Career Assistance Center
BA, University of Iowa
MA, University of Arizona

Jennifer Kelly
Biology Lab Assistant
BS, Truman State University
M.A.T. University of Iowa

Sherry Kelly
Electroneurodiagnostic Technology
Instructor
AAS, Black Hawk College

Craig R. Klein
English Instructor
BS, MA, Iowa State University

Gabe Knight
Business Coordinator/Instructor
MBA, St. Ambrose University

Marysue Knoblauch
TRIO Executive Assistant

Leland R. Kothenbeutel
Maintenance

Amy Kramer
Nursing Instructor
BSN, University of Phoenix

Monica Kurth
Developmental Education Instructor
BA, Mount Mercy College
MA, Northeast Missouri State University

PERSONNEL DIRECTORY

Doug Kutzli
Instructional Media Telecommunications
Technician
AAS, Scott Community College

Ann Lawler
Mathematics Department
Coordinator/Instructor
AA, Southeastern Community College
BA, MA, University of Iowa

Melissa Laws
Library Technician II

Mary Lee
ABE Instructor, Career Assistance Center

Richard Lindbom
Security, Career Assistance Center

John Lindberg
Geography Instructor
BA/MS, St. Cloud State University

Robert Lipnick
Humanities Department Coordinator/
Art Instructor
BS, University of Maryland
MFA, University of Notre Dame

Clara Littig
Facilities Manager, Kahl Educational
Center
St. Ambrose University

Kevin L. Lucas
GED Alt. Chief Examiner
Career Assistance Center
AS, Scott Community College

Georgeann D. Lucewich
Financial Aid Specialist
AA, Scott Community College

Mercedes Luna-Rivero
Instructional Designer
Advanced Technology Environmental and
Energy Center
BS, Universidad Argentina de la Empresa
MA, San Diego State University

Robert Majchrzak
HSET Facilitator and EICC Safety
Compliance Facilitator
BA, University of Colorado - Boulder
MS, University of Illinois

Dan Martin
Director of Operations
Blong Technology Center
BS, Middle Tennessee State University

Susan K. Massick
Executive Assistant,
Kahl Educational Center
Diploma, American Institute
of Commerce
BA, St. Ambrose University

Lori J. Matthew
Psychology Instructor
BA, Rockford College
MS, EdD, Northern Illinois University

Dan Maxwell
Math Instructor
BS, Pensacola Christian College
BS, Iowa State University
MAT, University of Idaho

Thomas McAninch
Criminal Justice/Sociology Instructor
BA, MS, Marshall University
MA, University of Illinois
PhD, Illinois State University

Gerald McCarthy
Truck Driving Instructor

Bradley McConnell
Industrial Engineering
Technology/CAD/PRO-E Instructor
Blong Technology Center
AAS, Morrison Institute of Technology

Sharon McCubbin
Executive Assistant to the President

Heather (Mattern) Meissen
Biology Instructor
BS, Iowa State University
PhD, University of Missouri-Columbia

Ryan Melbard
Mathematics Instructor
BS, University of Wisconsin Platteville
MS, University of Wisconsin Platteville
MS, Texas A&M

Herbert Meyer
Accounting & Business Management
Instructor
BA, MS, Eastern Washington University
CPA

Ken Mirocha
Facilities Manager

John Morgan
Coordinator/Trainer for Health, Safety,
and Environmental Program
Advanced Technology Environmental and
Energy Center
AAS, Black Hawk College

Melissa Morgan
Receptionist, Student Services
AA, Scott Community College
AS, Scott Community College

Christine Mulvania
Bookstore Assistant Manager

Nathan Murray
Mail Room/Copy Center Clerk

Katia Nardini
ESL Instructor, Career Assistance Center

Linda Nelson
Library Technician
AA, Black Hawk College
BA, Augustana College

Lavern Neulieb
Truck Driving Instructor

Stephanie Newell
English Instructor
AA, Iowa Western Community College
BA, University of Iowa
MA, University of Nebraska

Barb Nichol
Dental Assisting Instructor
AA, Scott Community College
RDA, CDA

Jana Nichols
Nursing Instructor ADN,
Scott Community College
BSN, St. Ambrose University

Amy O'Shaughnessy
Administrative Assistant II, Placement
Office
BA, St. Ambrose University

Julia Oxyer
ABE/GED Instructor
Career Assistance Center

Teresa Paper
President
BS, MSEd, Kearney State College
EdD, University of Nebraska - Lincoln

Catarina Pena
College Assistant
Kahl Educational Center

Catherina Petersen
Special Needs Specialist for
ACCESS Program
BA, MA Illinois State University

Lillian M. Phillips
Behavioral Sciences and Education
Coordinator/Social Sciences Instructor
BA, St. Ambrose University
MS, Iowa State University

Linda Plummer
Academic Advisor
BA, St. Ambrose University

Jay Rakus
Radiologic Technology instructor/Clinical
Coordinator
BA, Western Illinois University

Tom Rathmann
Transition Advisor
BA, St. Ambrose University
MA, Western Illinois University

Desmond Rigg
HVAC Instructor
Journeyman Electrician
National Joint Apprenticeship and
Training Committee for the Electrical
Industry
AAS, RETS Electronics School

Brian Ritter
Facilitator, Nahant Marsh/Eco. Education,
Advanced Technology Environmental and
Energy Center
AA, Scott Community College
BS, St. Ambrose University
MS, Western Illinois University

William H. Roba
History Instructor
BA, Augustana College
MA, Cornell University
PhD, University of Iowa

Jennifer Robb
Facilitator, TRIO Program
BA, St. Ambrose University
MPS, St. Ambrose University

Karen Roebuck
Academic Advisor
BA, Wright State University

Pat Rosenberg
Machining Instructor
Blong Technology Center

Thais Rowland
ESL Instructor
Career Assistance Center

Jan Russell
Volunteer Coordinator
Career Assistance Center

Raji Sankar
Tutor - Mentor Specialist, TRIO

Abigail Sawyer
TRiO Tutorial Specialist/Adjunct
Instructor, English and Humanities
BA, University of Iowa
MA, University of Otago

Irv Schlimmer
Truck Driving Instructor

Matt J. Schmit
Assistant to the President for
Administration
BA, Cornell College
MPA, Drake University

James Schneider
Project Director TRiO Support Center
BS, Illinois State University
MSEd, University of Kansas

Anna M. Schony
Speech Instructor
BA, MA, Western Illinois University

Dawn M. Schroeder
Executive Assistant, Applied
Technologies
AA, Scott Community College

Jennifer Schueller
ABE/GED Instructor & Campus Support
BA, College of St. Scholastica

Bradley Scott
Culinary Arts and Hospitality Services
Department Coordinator/Culinary Arts
Apprenticeship Facilitator
ACF Certified

Dennis Seaman
Learning Center Menter
Blong Technology Center

Alan Shaw
Auto Mechanics Instructor
BA, University of Northern Iowa
ASE Master Certified

Reg Shoesmith
Faculty Facilitator
BA, University of Northern Iowa
MA, Marycrest College
EdS, Western Illinois University

Michelle Schoenfelder
Administrative Assistant,
Applied Technologies

Steve Sinn
Automotive Technology Lab Technician
AAS, Indian Hills Community College

Nicole Smith
Bookstore Assistant

Tina Solheim
Department Coordinator/Administrative
and Office Support Instructor
AA, Scott Community College
BA, Mount St. Clare College
MS, Western Illinois University

Diane Stanley
Hospitality Program Instructor/Facilitator
AA, Black Hawk College

Mary Stavnes
Advisor Student Services
BS, Upper Iowa University

Ruth Sueverkruebbe
District Nursing Department
Coordinator/Instructor
AAS, Scott Community College
BSN, Marycrest College
MSN, Northern Illinois University

Scott Swanson
Manager of ESL and Foreign Languages
BA, University of Iowa
MEd, Temple University

Ellie Sweet RN, MSN
Nursing Instructor
BSN, Marycrest College
MSN, Northern Illinois University

Jamal Tayh
Chemistry Instructor
BS, Tanta University-Egypt
MS, Eastern Michigan University
PhD, Northern Illinois University

Paula Telford RN, BSN
Nursing Clinical Instructor
BSN, University of Iowa

PERSONNEL DIRECTORY

Arnold Thode
Manager of Registration Records
BA, Carthage College

Glenn Trafford
Lab Assistant I
Chemical Sciences Department

Mary Treacy
ESL Instructor
Career Assistance Center

Susan Trudell
English Instructor
BA, Augustana College
MAT, University of Iowa

John R. Turner
English/Literature Instructor
BJ, University of Missouri
MA, University of Northern Iowa

Nnachi Julius Umennachi
Philosophy Instructor
BA, Bigard Memorial Seminary-Nigeria
MA, PhD, University of Nebraska

Joe Utter
Career Academy Advisor
BA, University of Northern Iowa
MS Ed, EdS, Western Illinois University

Edward Valle
Auto Collision Repair Instructor
AAS, Scott Community College

Roy VenHorst
Auto Collision Repair Instructor
Diploma, Scott Community College
ICAR, ASE Certified

Tamara Vesselovskaia-Mandadori
Admistrative and Office Support
Instructor
AAS, Scott Community College
MA, Nizhny Novgorod State Linguistic
University, Russia

David M. Vyncke
Business Administration Instructor
BA, MBA, Southern Illinois University

Lori Walljasper
Information Technology Coordinator/
Instructor
BOG/BA, Western Illinois University
MA, University of Iowa

Janice Weis
Disabilities Resource Person
AA, Scott Community College
BA, St. Ambrose University
MEd, St. Ambrose University

Lynn Welch
Resource Development Assistant
AAS, Scott Community College

Christine Whipple
Nursing Instructor
BSN, University of Maryland/Walter
Reed Medical Army Institute of Nursing

Joseph Wilcox
Truck Driving Instructor

Jerry Wilkerson
Information Technology Department
Co-coordinator/ Instructor
BA, Westminster College

Andrea Williams
Speech Instructor
BA, MA, University of Northern Iowa

LaDrina Wilson
Admissions Officer
BS, Northern Arizona University

John Wingert
Automotive/Diesel Technology Instructor
AAS, Scott Community College
ASE Certified

Kelly Wood
Truck Driving Instructor

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