

Des Moines Area Community College

## Open SPACE @ DMACC

---

Catalogs

College Publications

---

1988

### Catalog 1987-88

DMACC

Follow this and additional works at: <https://openspace.dmacc.edu/catalogs>

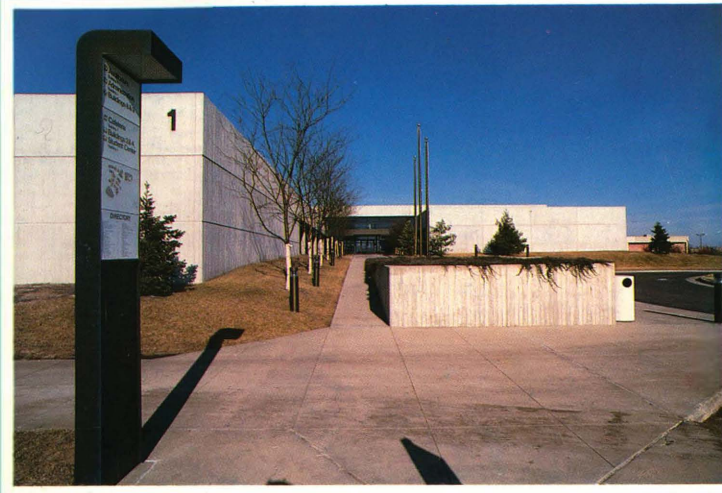
---

#### Recommended Citation

DMACC, "Catalog 1987-88" (1988). *Catalogs*. 24.  
<https://openspace.dmacc.edu/catalogs/24>

This Book is brought to you for free and open access by the College Publications at Open SPACE @ DMACC. It has been accepted for inclusion in Catalogs by an authorized administrator of Open SPACE @ DMACC. For more information, please contact [rsfunke@dmacc.edu](mailto:rsfunke@dmacc.edu).

# CATALOG 1987-88



ANKENY CAMPUS



BOONE CAMPUS



URBAN CAMPUS



CARROLL CAMPUS

**DMACC**  
DES MOINES AREA  
COMMUNITY  
COLLEGE





# GENERAL INFORMATION



## PRESIDENT'S MESSAGE

Welcome to Des Moines Area Community College. We are a people-oriented institution dedicated to serving the citizens of Iowa. We offer quality education while meeting the changes and challenges of the future.

This catalog contains a comprehensive guide to the educational programs, services, and courses we offer. What it cannot convey, however, is the level of satisfaction you will derive from attending a college where faculty and staff have a deep concern for the welfare and the future of its students.

I am pleased that you are considering Des Moines Area Community College to fulfill your personal and educational objectives.

Joseph A. Borgen

**ANKENY CAMPUS**  
2006 South Ankeny Boulevard  
Ankeny, Iowa 50021  
(515) 964-6200  
or, toll-free in Iowa  
1-800-362-2127  
1-800-362-2976

**BOONE CAMPUS**  
1125 Hancock Drive  
Boone, Iowa 50036  
(515) 432-7203

**CARROLL CAMPUS**  
906 N. Grant Road  
Carroll, Iowa 51401  
(712) 792-1755  
or, toll-free in Iowa  
1-800-622-3334

**URBAN CAMPUS**  
1100 - 7th Street  
Des Moines, Iowa 50314  
(515) 244-4226

## BOARD OF DIRECTORS

**Jasper Risdal, President**  
**Harold Belken**  
**DeVere Bendixen**  
**Susan Clouser**  
**Lloyd Courter**  
**Richard Johnson**  
**Eldon Leonard**  
**Doug Shull**  
**Nancy Wolf**

Des Moines Area Community College is a publicly supported community college serving the Iowa counties of Merged Area XI. The college is accredited by the North Central Association of Colleges and Secondary Schools, and is approved by the Iowa Department of Public Instruction and Board of Regents.

Des Moines Area Community College is an educational institution which admits academically qualified students without regard to sex, age, race, color, national origin or handicap, to all the rights, privileges, programs and opportunities generally available to students at the College; does not discriminate on the basis of sex, age, race, color, national origin or handicap in administration of its educational policies or programs, and is also an Equal Employment Opportunity, Affirmative Action employer, and complies with all applicable laws and regulations including Title IX of the Educational Amendment of 1972 and Section 504 of the Rehabilitation Act of 1973, regarding non-discrimination. Persons who wish additional information about this policy or assistance to accommodate individual needs should contact the Manager of Human Resources (Building 1, Telephone (515) 964-6301) who is the Title IX and Section 504 program coordinator. Des Moines Area Community College has an established procedure available to both staff and students for filing complaints in these regards. Complaint forms are available in the coordinator's office.

The Official Catalog of Des Moines Area Community College is defined as this document, together with official amendments and changes which are made from time to time. These official changes are contained in the master curriculum file available in the office of the Executive Vice President, Educational Services.

## TABLE OF CONTENTS

	Pages
General Information.....	1 - 6
Admissions.....	7 - 9
Tuition and Fees.....	10 - 11
Student Activities and Services.....	12 - 14
Academic Regulations.....	15 - 18
Program Information.....	19 - 24
Listing of Programs.....	25
Educational Programs.....	26 - 63
Specialist Certificates.....	64 - 72
Description of Courses.....	73 - 106
Faculty/Professional Staff.....	107 - 108
Index.....	109
Ankeny Campus Map.....	110
Application for Admission.....	111



# GENERAL INFORMATION

## IMPORTANT PHONE NUMBERS

Admissions.....	964-6495	Housing	
Alumni Affairs.....	964-6376	Ankeny.....	964-6347
Bookstore.....	964-6302	Boone.....	432-7203
College Information Center		Iowa College Aid Commission.....	281-3501
Ankeny.....	(515) 964-6241	Job Placement.....	964-6215
Boone.....	(515) 432-7203	Job Service.....	964-6395
Carroll.....	(712) 792-1755	Learning Centers	
Urban.....	(515) 244-4226	Ankeny.....	964-6255
Counseling, Advising & Placement.....	964-6246	Boone.....	432-7203
Credentials/Evaluation.....	964-6647	Urban.....	244-6297
District Services.....	964-6383	Library.....	964-6317
Economic Development.....	964-6397	Nurse.....	964-6352
Evening/Weekend College.....	964-6286	Student Accounts.....	964-6446
Financial Aid.....	964-6282	Student Records.....	964-6224
GED.....	964-6384	Veterans' Affairs.....	964-6284
Handicapped Services.....	964-6628	Vocational Rehabilitation.....	964-6366
<b>TOLL-FREE.....</b>			<b>1-800-362-2127</b>

## COLLEGE CALENDAR 1987-88

### FALL TERM

Classes Begin.....	September 2
Labor Day Holiday - College Offices Closed.....	September 7
Thanksgiving Vacation - College Offices Closed.....	November 26 - 27
Last Day of Classes.....	December 22
College Offices Closed.....	December 24 - January 3

### SPRING TERM

Classes Begin.....	January 13
Holiday - College Offices Closed.....	January 18
Spring Vacation.....	March 21 - 25
Last Day of Classes.....	May 6

### SUMMER TERM

Classes Begin.....	May 24
Holiday - College Offices Closed.....	May 30
Holiday - College Offices Closed.....	July 4
Last Day of Classes.....	August 4

### FALL TERM, 1988

Classes Begin.....	August 31
--------------------	-----------



# GENERAL INFORMATION

## HISTORY

Des Moines Area Community College is a publicly supported two-year institution serving the Des Moines metropolitan area and surrounding counties. The college district includes all or major portions of Audubon, Boone, Carroll, Dallas, Guthrie, Jasper, Madison, Marion, Polk, Story and Warren counties and minor parts of 11 adjacent counties. It encompasses 6,560 square miles or about 11 percent of the land area of the state. Approximately 20 percent of the state's population resides within the district.

Des Moines Area Community College was officially created March 18, 1966 and was designated as Merged Area XI. A nine member Board of Directors was elected and formally installed that same year.

The college was established after extensive studies had indicated the need for such an institution. Leading figures throughout the college's district combined their talents and resources to assure proper planning for the college.

In 1968, the Board of Directors adopted Des Moines Area Community College as the official name of the institution. The first classes were held at the new Ankeny Campus location in 1968. Administrative and operational control of Boone Junior College was assumed in 1969 and Carroll Campus in Carroll, Iowa was initiated in 1979. The Urban Campus began operation in metropolitan Des Moines in 1972, and a new facility was constructed at Seventh and Laurel in 1980.

Paul Lowery was the first superintendent/president of the college, and was succeeded by Dr. Joseph A. Borgen in 1981.

## PHILOSOPHY AND PURPOSE

It is the mission of Des Moines Area Community College to offer quality programs and courses to meet the different community interests, student abilities and personal objectives of citizens of all ages and levels of education, for the purpose of improving the quality of life, the economic conditions, and the public welfare of our state.

Therefore, the Board of Directors, faculty and staff are committed to provide, on a non-discriminatory, open-door basis, a variety of educational options.

Des Moines Area Community College

exists to:

- prepare or retrain students for employment and advancement in their chosen occupation through career education.
- prepare or retrain students for employment and advancement through occupationally-oriented associate degree programs.
- prepare students for transfer, typically as juniors, to four-year colleges and universities.
- assist students to become active, responsible citizens in our democratic society through a program of practical education.
- provide effective assistance to students in exploring their interests, identifying their aptitudes, and selecting the programs of study which best meet their needs and interests.
- provide counseling and other student support services which improve a student's chances for success in their educational endeavors.
- provide learning experiences and cocurricular activities which promote the personal, social, academic, and vocational

development of students.

- provide placement services for all students seeking full-time or part-time employment.
- provide opportunities for adults to complete their high school education.
- provide off-campus adult and continuing education programs as needs and interests are expressed.

## ACCREDITATION

Des Moines Area Community College is accredited by the North Central Association of Colleges and Schools. The college is also approved by the Iowa State Department of Public Instruction and the Iowa Board of Regents. College transfer curricula meet the requirements of four-year colleges and universities. Both career option and college transfer curricula carry the approval of the United States Department of Education, and are approved for veterans.

The college also holds membership in the American Association of Community and Junior Colleges.





# GENERAL INFORMATION

## THE CAMPUSES

Ankeny Campus is located on a 320 acre site six miles north of Des Moines within the city limits of Ankeny. The campus is easily accessible from both interstates 35 and 80.

Boone Campus is located on a 23-acre site at the southeast edge of the city of Boone. Constructed in 1968, the campus is comprised of two buildings — the academic building which includes a 500 seat auditorium, and the physical education building.

The Carroll Campus facility is located at 906 North Grant Road in the city of Carroll. Carroll Campus was started in 1979.

Urban Campus is located on a six-acre site north of I-235 at Seventh and Laurel Streets in Des Moines.

Credit classes have been offered on the basis of need in other locations throughout the area. Community Services and continuing education classes are offered in many additional communities within the college district.

## THE ECONOMIC DEVELOPMENT GROUP

The Economic Development Group of Des Moines Area Community College assists in the growth and development of business enterprises, government agencies, communities and individuals in central Iowa through quality training services tailored to specific needs. Services include:



**Contracted Training** - Consultants are available to design customized training to meet specific needs of a business, industrial firm or governmental agency. Training can be conducted on the job site or at one of the DMACC campuses.

**Training for New Employees** - Business and industrial firms which are expanding or developing in central Iowa may qualify for financial assistance to train new employees through the Iowa Industrial New Jobs Training Program. DMACC training consultants will explain the training and financing options.

**Quality of Work Life** - Our staff can assist you in various types of participatory employee involvement programs including Quality Circles.

**District Services** - The District Services unit of Economic Development Group provides a wide range of educational activities. A variety of non-credit and college credit classes is conducted in cooperation with public school districts utilizing local facilities in a community-based approach.

Basic skills courses consisting of Adult Basic Education, English as a Second Language and High School Equivalency preparation and testing are available throughout several locations.

The Electrical Trades Program conducted for high school students is a cooperative effort between the college and Knoxville Community School District. High school students are enrolled in a "split-day" program consisting of high school courses during one-half of the day and the Electrical Trades Program the other half of the day.

District Services offer an extensive number of courses in Career Supplemental Education. These courses assist employees in upgrading job skills required in their current job, preparing employees for possible job advancement and for employees needing recertification.

Seminars, workshops and conferences are conducted throughout our district during the year in cooperation with organizations, associations and businesses. Additionally, our Conference Center at the Ankeny Campus offers parking, food service, teleconferencing by satellite and other audio visual aids for workshops and seminars.



## EVENING/WEEKEND COLLEGE

The Evening/Weekend College provides alternative learning for those individuals who cannot attend traditional classroom activities. A limited weekend degree program is available allowing individuals to complete a degree by attending weekend classes. Currently the Weekend College is limited in scope. For more information call the Information Center or the Evening/Weekend College for details.

## COLLEGE DEPARTMENTS

Most of the curricula of the college are divided among four departments: Business/Management, Health Services and Sciences, Industrial and Technical, Public and Human Services.

## LIBRARY

The library at the Ankeny Campus provides printed and non-printed resource material to students and staff members. The library collection of 55,000 volumes relates to the humanities, social science, natural and health science, business and technology. In addition, the library maintains subscriptions to approximately 500 current periodicals and houses collections of audiovisual materials including videotapes of TV courses. Materials from other libraries can also be borrowed by the library for use by DMACC



# GENERAL INFORMATION

students.

The library at the Boone Campus is located in the Academic Building. It features open stack book shelving, individual study carrels, a periodical reading area, and a conference room. Almost 18,000 volumes and 120 periodicals are available to students and faculty members. Audio visual equipment, kits and two personal computers are also available for student/faculty use.

The rapidly growing library at Urban Campus now contains 7,000 volumes. The library subscribes to 80 periodicals and newspapers, has an extensive collection of vertical file materials, and has access to videotapes and films on interlibrary loan from regional libraries. A variety of audiovisual machines is available for faculty/student use. There is a reading room, conference room, and an area with typewriters and computers for student use.

## LEARNING CENTERS

Learning Centers are available to all students and staff members. Instructors will diagnose academic skill levels, establish individual programs of study, and assist in the learning process. Student progress in the Centers is set at a pace based on student ability, student interest, needs and time available for learning.

The following types of students are served in the Centers:

1. Full-time and part-time college students seeking assistance with college course work.
2. Adults working toward high school completion (G.E.D. or adult high school diploma).
3. Students pursuing studies for academic upgrading, program prerequisites, or enrichment.

## FOOD SERVICE

The Ankeny Campus has a snack bar/deli-grill in Building 5. It is open for breakfast, lunch and evening meals from 7:00 a.m. to 8:30 p.m., Monday through Thursday; till 5:00 p.m. on Friday; and 8:00 a.m. to 12:30 p.m. Saturdays. A complete breakfast menu is offered from 7:00 to 10:00 a.m. The snack bar serves deli sandwiches, salads, hamburgers, fries, beverages, and snack items from 10:00 a.m. until closing.

Snacks and beverages may be purchased on all campuses through vending machines.

For more formal dining, the Food Service students on the Ankeny Campus operate the College Inn and Lakeview Inn in Building 7.

## COLLEGE BOOKSTORE

A college bookstore is located at the four DMACC locations to serve students, faculty and staff. The administrative office is at the Ankeny Campus.

In addition to course requirements, the bookstores stock supplemental study aids such as study guides, dictionaries, and recommended reading materials. Also, a wide selection of writing instruments, paper products, calculators, binders, clothing and gift selections is available.

The bookstore offers a student "used book buyback" service the final two days of each term at Ankeny, Urban and Boone Campuses.





# GENERAL INFORMATION

## COLLEGE INSTRUCTIONAL CALENDAR

The college instructional calendar is comprised of three terms. The fall term (which begins in early September) and the spring term (January) are each 15 weeks in length with 55 minute class periods. The summer term features one 10 week session.

Students in vocational/technical programs may need to attend a college designated sequence of terms which could include the summer session. Other students may attend various term arrangements depending on course availability and sequencing.

## UNIT OF CREDIT

The unit of credit at Des Moines Area Community College is the semester hour. One semester hour of credit normally equals one class period or two periods of laboratory work per week over a semester. Curriculum outlines in this catalog give specific information about the number of instructional hours required in each program.

## CLASSIFICATION OF STUDENTS

**Freshman** - a student with fewer than 32 semester hours of credit or in the first year of a vocational/technical program.

**Sophomore** - a student with 32 or more semester hours of credit or in the second year of a vocational/technical program.

**Full-time** - a student registered for 12 or more semester hours.

**Part-time** - a student registered for 11 or fewer semester hours.

**Guest** - a full-time credit student attending DMACC on an interim basis who has already been accepted for admission to another college or whose primary enrollment is at another college. Normal admission procedures and the admission fee will be waived. Guest student status can be claimed for one term only.

## PARKING AND TRAFFIC CONTROL

Every vehicle is required to display a parking registration permit in accordance with rules and regulations as set out in the "Parking and Traffic Regulations" booklet. Each driver is required to know all parking regulations for the campus attended.

Ankeny, Boone, and Urban Campuses have parking lots assigned to staff, students, and visitors. Pedestrians on campus have the right-of-way at all times.

Failure to abide by the rules and regulations of the college will be cause to issue a traffic violation ticket.

Permits and regulations are available at the Physical Plant Office in Building 12, Ankeny Campus, the Business Offices at Boone, Carroll and Urban Campuses or dur-

ing registration.

## STUDENT HOUSING

The college does not have on-campus housing facilities. Housing is available in private homes and apartments in the area surrounding each campus. Information regarding housing may be obtained at the College Information Center, Building 1, Ankeny Campus.





# ADMISSIONS

## ADMISSIONS POLICIES

Des Moines Area Community College is dedicated to assisting individuals in reaching their educational and vocational goals. Admission of full-time students is based on an open door admissions policy. An open door policy allows the College to accept applicants into educational programs, providing that the program requirements have been met and there are vacancies in the program.

With the "rolling admissions process," acceptance of an applicant is granted as soon as all admissions procedures and requirements have been completed. If a program is at capacity enrollment, eligible applicants will be placed on standby status until an enrollment opportunity exists.

Each program establishes the minimum entrance requirements for applicants who wish to attend full-time. Applicants should have earned at least a high school diploma or have demonstrated an equivalent level of achievement.

Prospective students may apply at any time after the completion of their junior year in high school. Consideration will be given to admitting high school age individuals with their high school's cooperation. Credit for work completed at other colleges will be accepted to the extent that it is compatible with Des Moines Area Community College curricula and grade point policies.

## ADMISSIONS REQUIREMENTS AND PROCEDURES

### HOW TO APPLY

**Full-Time Students:** Full-time students are those enrolled in 12 or more credits during the fall and spring terms and 8 or more credits during the summer term. The procedures for enrolling as a full-time student are simple.

1. Complete a DMACC admissions application form.
2. Attend all required orientation/information sessions.
3. Complete all program prerequisites.

Program major should be declared on the application form. If you are undecided on a major, contact the **Counseling, Advising and Placement Office**.

After completing all entry requirements



you will be notified of your acceptance status. It is possible that the program you are interested in will be full. Because DMACC accepts students on a first come, first served basis, you could be notified that you are a standby student. When space is available in the program you selected, you will be notified.

**Part-Time Students:** Part-time students are those enrolled in 11 or fewer credits during the fall and spring terms and 7 or fewer during the summer term.

1. No formal admissions application is required prior to enrollment.
2. Enrollment for course work beyond a cumulative maximum of 16 semester credits at DMACC requires payment of a one-time non-refundable \$25.00 admissions fee. It is also recommended that you complete an admissions application at this time declaring a program major and degree.

Part-time students who wish to transfer credits to DMACC must submit an official transcript from each institution previously attended. Transcripts will be evaluated when 16 semester credits have accumulated, admission fee paid and program major

declared as in (2) above. Part-time students may request evaluations of transfer credit before accumulating 16 semester credits by paying the admissions fee, filing an admissions application and forwarding a request for an evaluation to the Admissions Office.

Registration by telephone and mail is also available to part-time students. Such students assume responsibility for their own educational planning unless they choose to take advantage of the available college counseling/advising services.

All admissions materials are to be submitted to:

**Admissions Office  
Student Enrollment Services  
Des Moines Area Community College  
2006 South Ankeny Boulevard  
Ankeny, Iowa 50021**

## COLLEGE INFORMATION

Often individuals need general information about specific programs before they submit an application. Requests for this type of information should be made to:

**College Information Office  
Des Moines Area Community College  
2006 S. Ankeny Blvd., Ankeny, Iowa 50021  
(515) 964-6241 or toll free  
1-800-362-2127, ext. 241**

Individual appointments can also be made with the counseling staff: (515) 964-6246.

## TRANSFER FROM DMACC

Students intending to transfer to another college or university should make plans during the first year of their college program. A typical preparation would include the following:

1. Decide on a major field of study. If you would like assistance, contact a member of the counseling/advising staff.
2. Identify colleges which offer your major field, study their catalogs, and visit with their college representative when they visit our campus. For further assistance, contact the Counseling, Advising and Placement Office.
3. Narrow your choice to three or four colleges and visit their campuses. Be sure to make an appointment to visit with their admissions personnel and major department chairpersons.
4. Confer with a DMACC educational ad-



# ADMISSIONS

visor or faculty member for further assistance in course planning to meet the senior institutions requirements.

**NOTE:** Students transferring to four year institutions are required to maintain a grade point average of at least a 2.0 for work to be accepted as transfer credit. In the student's major area, many colleges require a 2.5 grade point average.

## TRANSFER TO DMACC

Des Moines Area Community College accepts credits transferred from other accredited colleges and universities in which passing grades have been received, with the limitation that the total grade point average of the credits transferred must equal 2.0. Courses which correspond to an equivalent course at DMACC are transferred at face value and may be used to fulfill all major requirements. For college transfer students, courses for which there is no equivalent will be designated as electives. When a question exists as to the equivalency of courses, a request will be made for a description of that course from the awarding college. Students may transfer a maximum of 43 semester hours of academic credit toward fulfillment of requirements for an associate-level degree. There is no charge for credit granted through transfer.

## SERVICEMEMBERS OPPORTUNITY COLLEGES

DMACC has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of over 400 colleges and universities providing voluntary postsecondary education to members of the military throughout the world. As a SOC member, DMACC recognizes the unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. SOC has been developed jointly by educational representatives of each of the Armed Services, the Office of the Secretary of Defense and a consortium of thirteen leading national higher education associations; it is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community and Junior Colleges (AACJC).



## RESIDENCY REGULATIONS

A student shall be considered a resident of Iowa for tuition and fee purposes if he/she is permanently domiciled in Iowa and has resided in the state for a period of not less than ninety (90) days. When residency is in question, the burden of proof of domicile is the responsibility of the student.

To apply for reclassification from non-resident to resident status, the student shall complete the "Request for Residency Status" form and submit it to the Student Records and Enrollment Services Office for approval with any three of the following supporting documents:

rent receipts  
tax receipts, ownership of property  
Iowa income tax return  
Iowa vehicle registration  
Iowa drivers license  
other similar documents

Reclassification of residency status is not retroactive. International students cannot establish residency while studying in this country on a temporary visa.

## INTERNATIONAL STUDENTS

International applicants applying for admission must:

1. Complete an application for admission to the college.
2. Complete an International Student Data Sheet.

3. Show evidence of the English proficiency required by the college by providing one of the following:
  - a. TOEFL (Test of English as a Foreign Language) results.
  - b. Michigan test results (test is administered in the DMACC Learning Center).
  - c. Official transcript showing completion of freshman level English at an approved U.S. college or university.
4. Submit completed Statement of Financial Support to provide evidence of ability to meet educational and living expenses while attending the college.

Other conditions are similar to those of American students. Upon acceptance and payment of Admissions/Processing fee, the college will issue an I-20 (Certificate of Eligibility for Nonimmigrant "F-1" student status) which must be submitted for approval to the U.S. Immigration and Naturalization Service before enrolling in classes.

Tuition is assessed at the non-resident rate for international students. International students are not eligible for U.S. or state-of-Iowa financial aid. Information and forms can be obtained by contacting the International Student Office on the Ankeny Campus.

## REGISTRATION

Dates of registration for new and returning students are publicized each term. A late fee is charged to students who register dur-



# ADMISSIONS

ing the late registration period designated each term. Registration after the announced late registration period is possible only with authorization from the appropriate dean. The late registration fee applies only to courses that follow the term schedule of classes.

## CHANGES IN REGISTRATION

**Adding Courses** - Students may add courses through the first five class days each term. Students desiring such a change should obtain a "Drop-Add Notice" from the counselor, advisor, or the Student Records and Enrollment Services Office.

**Dropping Courses** - Students may drop a course at any time prior to the close of the 50th class day during all normal-length terms. A grade of "W" will be recorded. For

summer sessions, the last date to drop a course may vary depending upon the length of the session. In such cases, the appropriate date will be publicized.

If conditions warrant, an instructor may initiate a course drop procedure for a student no longer in attendance.

**Withdrawal from College** - Students may withdraw from college at any time prior to the close of the 50th class day in all normal-length terms and receive a grade of "W" for all courses.

Drops and withdrawals are not effective or valid until the completed form is received in the Student Records and Enrollment Services Office. If a grade of "W" is to be recorded, the form must be received by the deadline date.

In unusual circumstances (death, disability, etc.), the college may initiate withdrawal

for a student retroactively.

## READMISSION

Students who have withdrawn and who wish to be readmitted should apply to the Student Records and Enrollment Services Office.

## ATTENDANCE OF SELECTED HIGH SCHOOL STUDENTS

The college offers the opportunity for qualified high school students to attend credit courses when recommended and approved by the student's parents, guidance counselor, principal and the college.

These students will be required to meet the same standards as any other student and will be awarded the same credit for courses successfully completed.





# TUITION AND FEES

## TUITION 1987-88

### Tuition for credit offerings (resident students)

Full or part-time enrollment (per credit).....	\$29.50
Audit (per credit).....	\$29.50
Adult Education Certificate of Specialization Program (per credit).....	\$29.50
Continuing and General Adult Ed (per contact hour).....	\$ 1.25
English as a Second Language (per contact hour).....	\$ .25
Career Supplemental non-credit courses (per contact hour).....	\$ 1.60
High School Diploma (per contact hour).....	\$ .50
High School Equivalency (per contact hour).....	\$ .50

Non resident tuition is 200 percent of resident rate

## FEES

Activity fee (each term).....	\$ .95 per credit
Admission (one time only).....	\$25.00
Service fee per credit.....	\$ 3.50
Service fee per contact hour.....	\$ .20
Graduation fee (one time fee).....	\$20.00
Late Registration.....	\$ 5.00
International student processing.....	\$100.00

ALL FEES ARE NON REFUNDABLE

Des Moines Area Community College reserves the right to change tuition and fees

## FINANCIAL AID

All financial assistance available to DMACC students is administered by the Ankeny Campus Financial Aid Office. Students may receive assistance in the form of scholarships, grants, loans, and/or part-time employment.

**How to Apply:** One application is all it takes. The ACT - FAMILY FINANCIAL STATEMENT-FFS is the application preferred at DMACC. Applications are available at any DMACC campus.

**When to Apply:** Priority consideration will be given students who apply by **March 1** prior to the fall term. It is necessary to reapply each year.

## GRANTS & SCHOLARSHIPS

**Pell Grants** are based on financial need and are available if you have applied and show financial need and are an undergraduate enrolled at least one-half time. Maximum amount \$1,830.

### Supplemental Education Opportunity Grants (SEOG):

SEOG is available if you have completed an application and show financial need and are an undergraduate enrolled at least one-half time. Maximum amount \$400.

### Iowa Vocational-Technical Grant (IVT):

IVT is available for students enrolled full-time in a vocational-technical course. IVT awards are made by the Iowa College Aid Commission through notification to DMACC. Maximum amount \$450.

### State of Iowa Scholarship Program:

To be considered a state scholar recipient, a student must: (1) be a designated State of Iowa Scholar, (2) be entering as a freshman or sophomore at DMACC, and (3) plan to enroll full-time. See your high school counselor for assistance. Maximum amount \$600.

### Maytag Company Foundation Career Education Awards:

High school seniors who are children of Maytag Company employees residing in Iowa, or seniors at Newton High School who plan to enroll in

a vocational-technical program in an Iowa Community College are eligible to apply. Application forms may be obtained from the Maytag Company Foundation, Inc., Newton, Iowa 50208.

### DMACC Foundation Scholarships and Grants:

Various agencies, organizations and individuals donate money to DMACC for the purpose of financial aid for students. Some awards may be based on need or specific donor criteria. The ACT Family Financial Statement is the application needed to apply. Additional information may be requested.

### DMACC Alumni Association Scholarships:

DMACC's Alumni Association annually awards scholarships to outstanding DMACC students. These scholarship awards are made possible through special alumni fund-raising activities and gifts to the Association for scholarship purposes.

## LOANS

### National Direct Student Loans (NDSL):

To be eligible you need to attend DMACC



# TUITION AND FEES

one-half time and show financial need. These loans are made through DMACC Financial Aid Office. Repayment and interest (5 percent) begin after a student is no longer enrolled one-half time. Maximum \$1,000 yearly. Exit interviews are required.

## **Guaranteed Student Loans (GSL):**

These are 8 percent loans available by obtaining an application from your bank or credit union. Interest and repayment begin six months after terminating enrollment or a student is no longer enrolled one-half time. Loans are for students who attend college at least one-half time and complete a financial aid application. Maximum \$2,625 per grade level. Exit interviews are required.

**Nursing Loans:** These are 6 percent interest loans made to Associate Degree Nursing (ADN) students enrolled at least one-half time showing financial need. Maximum \$1,500 yearly. Exit interviews are required.

**Emergency Student Loan Fund:** Fifty dollars is available to a student enrolled one-half time or more, and has earned a cumulative grade point average of 2.0 or greater. These loans are interest free. Payment in full is due within six weeks from the date of the loan, with a \$20 late fee if the loan is not repaid by the due date.

**Parent Loans for Undergraduate Students (PLUS) and Supplemental Loans for Students (SLS):** A PLUS loan is a variable interest rate loan available to parents of dependent students and a SLS loan is a variable interest rate loan available to independent students. Maximum is \$4,000 per year with an aggregate total of \$20,000. Students must be enrolled at least one-half time.

## **EMPLOYMENT**

### **College Work Study Program (CWSP):**

The College Work Study Program is for students who show financial need. To be eligible a student must be an undergraduate enrolled at least one-half time and show financial need. College work study program is a part-time job at DMACC that pays \$3.50 per hour.

**Miscellaneous Scholarships:** Scholarships available from off-campus sources are posted on the Financial Aid bulletin board and notices are advertised in the student newspaper.

on students maintaining satisfactory academic progress as defined by the Financial Aid Office.

## **VETERANS AFFAIRS**

The primary function of the Veterans Affairs Office is to aid students in applying for veterans educational benefits and to act as a liaison between the student and the Veterans Administration if problems arise.

Application for veterans benefits should be completed at the time of admission application. It generally takes six to eight weeks for the Veterans Administration to issue a check, so appropriate paperwork should be submitted as early as possible.

It is the student's responsibility to keep the Veterans Affairs Office posted on all changes in status, address changes, changes in number of dependents, change in major, etc., as your benefits may be affected.

Career and degree programs, High School Completion, and GED programs are approved for V.A. benefits. The amount of monthly payments will depend on course type, number of hours enrolled, and number of dependents. Details may be obtained at the college Office of Veterans Affairs or Veterans Administration Regional Office regarding full-time requirements, payment procedures, and eligibility for veterans, spouses, or children.

## **STUDENT ACCOUNTS**

**Indebtedness Policy.** A student who has prior unsettled indebtedness to the college may not register while the indebtedness remains unsettled and no evidence of attendance or other official credentials will be processed. Indebtedness shall include tuition and fees, library and parking fines, and any other charges incurred by the student and owed to the college.

**Tuition Refund Policy.** Students who complete formal withdrawal procedures or officially drop a credit class within the first 30 days after the start of a class, during the fall and spring terms, will be eligible for a tuition refund.

The amount of refund will be determined by the number of credits dropped and the number of class days that have elapsed at the date of withdrawal or drop. The table below indicates the percentage of tuition that will be refunded per credit hour dropped. Fees are non-refundable once classes start.

<b>Day of term</b>	<b>Tuition Refund</b>
1 - 10 days	75%
11 - 20 days	50%
21 - 30 days	25%
31 or over	0%

The tuition refund schedule for summer sessions may vary depending upon the length of the session. Refund information will be included in the Summer Session Course Announcement.

Full refunds will be made on withdrawals prior to the start of classes and in cases where classes are cancelled due to insufficient enrollment. Students are not required to complete class drop forms when classes are cancelled by the college.

**Payment of Charges.** Students are responsible for payment of tuition and fees by the published due date and failure to do so will result in cancellation of Registration. Payments **ARE NOT** deferred pending processing of V.A. records and/or the receipt of checks.

Payment may be made by cash, check (for amount of charges only), MasterCard, or VISA.

Two-party checks will not be accepted.





# STUDENT ACTIVITIES/SERVICES

## HEALTH SERVICES

The Student Health Service is located on the Ankeny Campus in building 5 with some services extended to the Boone and Urban Campuses. Students and staff members are invited to stay healthy through weight/blood pressure control and fitness programs sponsored by the Health Service. Confidential counseling, assistance with physically handicapped, or referral for health-related problems is available from the campus nurse.

The Health Service also offers emergency treatment for injury and illness and assistance in obtaining the services of a physician. The nurse will also cooperate in carrying out instructions of the student's personal or family physician whenever appropriate. A physician is available twice weekly on the Ankeny Campus.

## STUDENT ACTIVITIES

Much of a student's growth is the result of participation in activities, clubs and organizations. It is the philosophy of the college that co-curricular activities complement the academic program. The activities are financed by your activity fee which is charged each term in addition to regular tuition. Student representatives elected to the Student Action Board are responsible for assessment and disbursement of this activity fee.

## STUDENT CENTERS

Student lounge and recreation areas are provided for your use during nonclassroom hours. Various types of game equipment are available, and food and beverage facilities are located in or near each of these areas.

## STUDENT ACTION BOARD

The Student Action Board, as the primary student representative body, is an integral part of the college. Through its work, you are provided an opportunity to participate in the democratic process. Meetings are held at regularly stated intervals. The Board serves as a liaison between the administration/faculty/staff and the student body in areas of mutual interest.

The purposes of the organization are to promote college spirit, provide a focal point for discussions between students and the college staff, and to give you a representative voice in college affairs. Any student,



administrator, or faculty member may attend meetings of the Student Action Board and take part in discussion, but only members may vote. The Board offers to students activities and services in four areas: campus life, professional development, programming and special events.

## STUDENT CLUBS AND ORGANIZATIONS

You are encouraged to participate in campus clubs and organizations which appeal to your own interests. Students may form a new club by contacting the Student Activities Office for information. Most recognized

organizations fall into one of the following classifications:

- 1. Pre-professional and Departmental Clubs** are joined by students wishing to pursue interests which contribute to the development of career fields.
- 2. Service Organizations** have as their primary purpose activities which will contribute positively to the college and the community.
- 3. Scholastic Honorary Organizations** offer membership on the basis of academic excellence and performance.
- 4. Special Interest Organizations** are planned by students who desire to



# STUDENT ACTIVITIES/SERVICES

develop or broaden their interest in some particular aspect of their lives.

5. **The Student Newspaper** is published by students under the direction of a Communications Board and with the sponsorship of a faculty advisor. The student newspaper expresses student opinion and reports college events, the college calendar, and other information of interest to the college community.

## SOCIAL ACTIVITIES

The social program emphasizes meaningful social activities as a way of providing students with a well-rounded college experience. Each year administration, faculty and student representatives cooperatively plan a sequence of social events. These events vary from year to year, but include a balanced program of formal and informal activities.

## STUDENT IDENTIFICATION

If you attend classes for credit at the Ankeny, Boone and Urban locations, you are required to have a Des Moines Area Community College student ID/Activity card. The ID/Activity card will be mailed to each student usually four to five weeks after the term begins. You should carry your ID/Activity card with you at all times. It is required for services at various college offices and by campus security.

## STUDENT HANDBOOK

The student handbook is developed to assist you in becoming informed about Des Moines Area Community College. You should be familiar with its contents, which include a general overview of college policies and procedures as they relate to you and your college life — student conduct and discipline, grievances and other items of student concern.

## SPORTS AND ATHLETICS

The intramural program and Recreation Services Department provide an opportunity for students to participate in a wide variety of sports activities on a recreational basis. A year-round program of tournaments and team sports provides for participation on an individual or team basis.

The college is a member of the National Junior College Conference. Currently, the

college offers intercollegiate athletics in basketball, baseball, softball and golf on the Boone Campus.

## ALUMNI

Des Moines Area Community College values its alumni constituents and strives to remain in contact and provide service to them after graduation. A variety of services and benefits is offered to alumni — for more information call 964-6376.

## COUNSELING, ADVISING AND PLACEMENT

The Counseling, Advising and Placement staff is a group of people consisting of educational advisors, counselors, and secretaries who can assist you in a variety of ways. Included are:

**Placement Services** for job seeking skills, resume' writing, and part-time or full-time employment.

**Tutorial Services** are available for students who are receiving a D or F or if an instructor recommends tutoring in a particular course. Once need is determined, a student can apply for college-assisted tutoring.

If you would like to tutor for the college, you must be receiving or have received an A or B in the subject matter you want to tutor; have at least a 2.5 grade point average; and be receiving no Ds or Fs during the term you are tutoring.

For more information contact the Counseling, Advising and Placement Office, building 5, or Student Life at Boone, Carroll or Des Moines Urban Campus.



**Academic Advising** for aid in selecting a transfer university, transfer information, the value of an A.A. or A.S. degree at DMACC for transferring, course selection and college representative visitation.

**Counseling Services** will provide personal counseling, crisis intervention and referral, as well as assisting with time management, stress management, career planning and decision making, assertiveness training and value clarification.

**Glance at DMACC** is a program offered every other Thursday morning for prospective students, parents and others wishing to inquire about the educational opportunities and services offered at DMACC Ankeny. Arrangements must be made by calling the Tour Coordinator at 964-6216 or 1-800-362-2127, ext. 216.

## SUPPORT SERVICES FOR HANDICAPPED STUDENTS

This is a resource for students who are mentally/physically handicapped or who experience learning disabilities. Students in need of counseling or other support services such as test-writers, readers and some special equipment, may contact the Counseling, Advising and Placement Office at Ankeny or Student Life at Boone, Carroll or Des Moines Urban Campus.

Through a special agreement with the (Iowa) Division of Vocational Rehabilitation Services, a rehabilitation counselor is assigned to the college on the Ankeny Campus to



# STUDENT ACTIVITIES/SERVICES

provide rehabilitation services to eligible handicapped students. These services include assistance in obtaining medical evaluations, vocational evaluations, physical restoration, job training, financial aid and job placement.

Facilities constructed by the college have been designed to be accessible for students with mobility problems.

## DUE PROCESS PROCEDURES

Procedures have been established that protect the rights of all students associated with Des Moines Area Community College. The procedures are outlined in the Student Rights and Regulations: Academic and Non-Academic Appeal Process. Copies are available in the Counseling, Advising and Placement Office.

## STUDENT RECORDS — CONFIDENTIALITY

Des Moines Area Community College complies with the laws of the United States and the State of Iowa in the maintenance of, access to, and release of student records. No third party access to non-directory information is allowed without the student's written consent, except as allowed by law. At its discretion, the institution may provide Directory Information which is defined as: student name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and awards received, most recent previous educational agency or institution attended, participation by the student in officially recognized activities and sports, and weight and height of

members of athletic teams.

More detailed information concerning the confidentiality of student information can be obtained by contacting the Enrollment Services Office on the Ankeny Campus.





# ACADEMIC REGULATIONS

## ACADEMIC REGULATIONS

### GRADING SYSTEM

The grading scale is as follows:

A - Superior	B - Above Average
C - Average	D - Below Average
F - Failing	W - Dropped or Withdrew
I - In progress	N - Audit. No Credit
X - Course Repeated	T - Credit by Testing
P - Pass	
L - Credit for prior educational or occupational experience	
S - Satisfactory (CEU courses)	
U - Unsatisfactory (CEU courses)	

### IN PROGRESS AND FAILING MARK POLICIES

Should a student be unable to complete some portion of assigned course work during the regular term, a mark of "I" (In progress) may be assigned. In such cases the student must then complete the course by the midterm date of the following term. Should there be an unusual emergency, such as serious injury or illness, an extension of this period may be granted by approval of the instructor. "In progress" grades automatically remain unless the work is satisfactorily completed within the time period specified.



Should a student fail a required course, he/she must repeat and pass that course in order to fulfill graduation requirements. Should an elective course be failed, the student has the option of repeating the same course or choosing a different course during a later term. When another grade is earned in a previously failed course, only the latter grade is included in the computation of the grade point average. This privilege does not pertain to courses failed while in attendance at other colleges and universities. Des Moines Area Community College cannot make changes in the grades issued by other institutions.

Students may repeat courses taken at DMACC in which they have earned a grade of "C" or less if they wish. When a course is repeated, only the final grade earned will be included in computation of the grade point average.

### AUDITING

A student may enroll in any course on an audit basis if space is available. Priority is given to students who wish to enroll for credit. Each audited course will appear on the student's transcript with no credit or grade. Students auditing courses are not required to complete regular assignments or examinations.

A student may change a course from "credit" to "audit" status through the day designated as midterm. The completion of a "Drop-Add Notice" form is required.

### GRADE REPORTING

Final grade reports are issued from the Office of Academic Records approximately two weeks after the end of each term.

### SCHOLASTIC STANDARDS

**Associate Degree Programs:** The cumulative grade point average (GPA) must be 2.0 in all course work taken at DMACC which is applicable to that particular degree.

**Diploma Programs:** Passing grades are required in all courses as outlined in the program of study. The cumulative grade point average must be 2.0 in all course work taken at DMACC which is applicable to the diploma.

**Certificate of Specialization:** Passing grades must be received in all required



courses as outlined in the program of study. The cumulative grade point average of 2.0 in all course work applicable to the certificate is required for satisfactory completion.

Students who have enrolled in 12 or more credits at Des Moines Area Community College are subject to the following academic progress standards for all credit programs:

A. Any student maintaining a cumulative grade point average of 2.0 or higher is considered in "good academic standing." Individual programs of study may require a cumulative GPA higher than 2.0 or may specify additional requirements. In such programs, the program chair will notify enrolled students of such requirements.

B. If a student's cumulative GPA falls below 2.0 at the end of any term, the student is placed on "probationary status." A probationary student is eligible to re-enroll in a subsequent term, but is urged to seek help with their course load and selection from the Counseling, Advising & Placement staff.

Any student on probationary status will continue on probationary status if his/her term GPA for the term following placement on probationary status is 2.0 or higher, but the cumulative GPA remains below 2.0. The same rule will apply for subsequent terms.



# ACADEMIC REGULATIONS



C. A student on probationary status who earns a term GPA of less than 2.0 will be placed on "suspended" status. A student on suspended status will not be allowed to re-enroll in credit classes at Des Moines Area Community College for a period of one term **except** for purposes of remediation. Approval from designated officials will be required for the exception.

After one term, a student on suspended status may be readmitted to a career education or paraprofessional program of study if he/she meets the standards for readmission established by that program. A student will be eligible for readmission to a general studies program after one term of suspended status.

In all instances, a suspended student who is subsequently readmitted will be placed on probationary status.

D. A student placed on either probationary or suspended status, may appeal that placement to the college's judicial committee by following the procedures established by that committee.

## GRADUATION

### Graduation Requirements

Students may choose to satisfy the re-

quirements in effect at the time of enrollment in their program, or the requirements in effect at the time of graduation.

Full requirements of the chosen program must be met; adjustments will be made in instances where programs have changed and courses are no longer available.

### Graduation Status Analysis

Students may obtain a graduation status analysis upon application to the Credentials Evaluations Office. The analysis may be requested any time after completion of at least one-half of the program requirements. Each student is limited to one analysis per program.

### Commencement

Commencement ceremonies are held at the end of spring and summer terms for Ankeny and Urban Campus graduates. Boone Campus ceremonies are held at the end of spring term and Carroll Campus ceremonies at the end of summer term.

### Graduation Application

Students are responsible for filing an "Application for Graduation" and for payment of the designated fee, by midterm of the term preceding completion of graduation requirements.

## ACADEMIC AND GRADUATION HONORS

### A. Phi Theta Kappa (Boone Campus)

Phi Theta Kappa is a national scholastic honor society for students of two-year colleges. Membership is conferred upon students who have completed at least 30 semester hours (15 at Boone Campus) of college work with a 3.25 grade point average and who are judged to have high moral character and desirable qualities of citizenship and leadership.

Provisional membership may be conferred upon students who have completed at least 12 semester hours of work at Boone Campus with a 3.50 grade point average. To be eligible for either provisional or full membership the student must be enrolled in a two-year associate degree program that requires 64 semester hours of work. Members who complete their program of study and graduate maintaining the grade point average necessary for membership will have the designation "Phi Theta Kappa Honors" on their transcript and will be enrolled permanently on the national Phi Theta Kappa roll.

### B. Honors Program

DMACC offers an Honors Seminar



# ACADEMIC REGULATIONS

designed to challenge and enrich a student's academic experience. Acceptance into the seminar is based on grade point, standardized test scores, and faculty recommendations. The two-credit seminar, which meets weekly, allows students to discuss a range of subjects with faculty members and guest lecturers who have similar interests. There will be a variety of written assignments. The seminar also provides an opportunity for academically talented students to get acquainted with each other and share ideas.

## C. Dean's List

Full-time students who earn a 3.50 to 3.74 grade point average in any term are honored by being named to the Dean's List.

## D. President's List

Full-time students who earn a 3.75 to 4.0 grade point average in any term are honored by being named to the President's List.

## E. Graduation With Honors

Candidates for graduation who have maintained a cumulative grade point average of at least 3.50 in their program of study are recognized by inclusion of their names on the list of those who have graduated with honors. The grades for courses which are accepted by Des Moines Area Community College as transfer credit from other institutions are included in the computation of grade point averages for this honor.

## REQUESTS FOR TRANSCRIPTS

Transcripts of work taken at Des Moines Area Community College are issued, upon written request by the student to the Office of Academic Records. Request forms for this purpose are available at that office. While a student is enrolled in the college, transcripts will be supplied free of charge. A charge will be made for all transcripts after graduation or withdrawal from college. Records are confidential and transcripts will be issued only upon written request by the student or graduate.



## INDEPENDENT STUDY

Independent study provides an opportunity for the above-average student to do independent research in areas not covered in the regular curriculum or to explore in much greater depth a topic covered in a class. Each independent study project must be arranged in advance through a supervising faculty member. The standard tuition charge will be made. Independent study may not be used to earn credit for any courses listed in the college catalog. A maximum of six hours of credit in any one term, and twelve hours in total, may be earned through independent study. Students may register for course work in independent study at any time during the term.

## CHALLENGE TESTING

Des Moines Area Community College recognizes that, because of previous education or experience in a particular field, students may possess sufficient knowledge to complete their instructional programs at an accelerated rate. As a result, the college

has adopted a policy allowing students to receive college credit for courses which they challenge and successfully pass by examination.

Credit will be granted only to students who are admitted to the college and who are in a program of study leading to a certificate, diploma or degree.

A student may not take a specific challenge test more than once. If a student is enrolled in a course and wishes to challenge test out of that course, the test must be completed prior to midterm. Only a grade of P will be entered on the student's transcript. Challenge test grades will not be used in computing grade point averages. The challenge test **can not** be used as a course retake.

If the examination is requested prior to registration in a class, a non-refundable fee equal to one half the tuition for the course will be charged.

For details about challenge test procedures, contact program chairpeople or the appropriate dean.



# ACADEMIC REGULATIONS

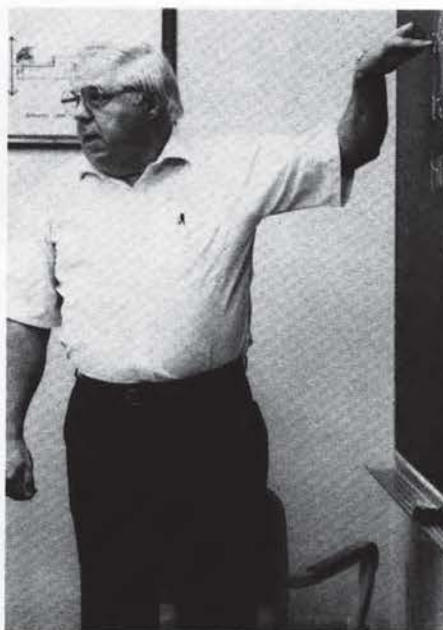
## COLLEGE LEVEL EXAM PROGRAM

Any student who has been accepted by the college may be eligible to receive credit based on scores achieved on the five C.L.E.P. general examinations or the C.L.E.P. subject examinations. Earned credit will be officially recognized only after the student has successfully completed a minimum of **twelve hours** of credit course work at the college.

Procedures for C.L.E.P. tests acceptance, together with credit hours allowed, are available in the Credentials Evaluations Office.

## GENERAL EDUCATIONAL DEVELOPMENT (GED) TESTS

General Educational Development Tests (High School Level) are administered to adults who desire certification of high school equivalency. Those who pass the tests are entitled to receive the Iowa High School Equivalency Diploma. GED testing services are available throughout the year at six different testing centers. For more information, contact the Ankeny Campus District Services Office.



## UNITED STATES ARMED FORCES INSTITUTE (U.S.A.F.I.) AND OTHER MILITARY SCHOOLS

The college grants credit to veterans for educational training completed in the Armed Forces, for college work completed through the United States Armed Forces and for college work completed through the United States Armed Forces Institute (U.S.A.F.I.), provided such credit is not a duplication of work previously taken.

Veterans must present authentic military service and training records, including separation papers, D.D. Form 214, to the Admissions Office at the time of initial application to the college.

U.S.A.F.I. college level credit courses taken by correspondence or by extension through another accredited college are accepted under regular transfer credit provisions. Official reports of the educational achievement must be mailed directly to the college from U.S.A.F.I. at Madison, Wisconsin.

The college is a participant in the Serviceman's Opportunity College. Information about this program can be obtained by contacting the Veterans Office. The college is also involved in the evaluation of selected educational experiences conducted by the Army Reserve and the Iowa National Guard.



## STUDENT RIGHTS AND RESPONSIBILITIES

### Student Responsibility for Catalog Information:

Each student is responsible for knowledge of the information in this catalog, any published addenda, and the most current issue of the Student Handbook. The official catalog of the college is understood to include this catalog, plus any published addenda. The college reserves the right to change regulations and policies or to revise curricula as may be deemed necessary and desirable. The official college curriculum is that contained in the master curriculum file.

Des Moines Area Community College reserves the right to make any changes in the published schedule and to cancel classes with a determined low enrollment.



# PROGRAM INFORMATION

## OCCUPATIONAL CAREERS

Educational programs offer instruction in a variety of areas which require education beyond high school but do not require four years of college preparation. Programs vary in length from 15 weeks to 21 months.

Outstanding features of the programs include modern equipment and facilities common to the trade, business or industry, and a strong faculty with many years of experience in shops, industries, businesses or medical services.

The overall objectives of the programs are:

- to teach the essential skills and operational theory needed by the student to ensure occupational competency.
- to develop correct habits of work safety.
- to cultivate desirable civic attitudes, such as integrity, dependability, resourcefulness, and cooperation.

## COLLEGE TRANSFER

The college offers over three-hundred courses in thirty-three different disciplines to provide a variety of educational opportunities.

- **General Education** courses are designed for students who intend to transfer to a four-year institution. Students may also take these courses for enrichment or with the intention of terminating after two years of general educational study.
- **Para-professional** programs prepare students for employment in a variety of human service/public service fields upon attainment of the Associate in Science degree. Graduates may also elect to transfer to a baccalaureate program at a four-year institution.
- **Pre-professional** programs provide the recommended courses for the first two years of study in various professions.
- **College Adaptor** programs provide developmental courses which aid the student whose educational background requires additional strengthening to achieve success in regular college transfer courses. Up to four semester credit hours of Adaptor courses (numbered 080-099) may be used as elective credit for the AA or AS degree.

## PARA-PROFESSIONAL PROGRAMS (College Parallel/Career Option)

The para-professional programs are designed for students who want an education that is relevant to solving problems and those relating to the quality of our society.

Almost all public and private social service agencies, schools, and other community organizations have a need for qualified workers, especially those who can work effectively to meet human needs. Particularly in demand are people whose education has combined practical experience in the field with relevant academic studies.

Each program provides the graduate with the skills and knowledge needed to function at a high level of effectiveness. All programs lead to an Associate in Science degree and then either to immediate full-time employment or to further studies at a four-year college.

Para-professional employees in public service careers have several options. Many continue their education on a part-time basis. Others advance in their work by virtue of their experience. Some choose to return to school full-time and work for advanced degrees.

## PROFESSIONAL PREPARATION

Des Moines Area Community College offers a wide range of pre-professional preparation designed to prepare students to enter the junior year at four-year colleges and universities. Graduates are awarded the Associate in Arts or Associate in Sciences degree.

Four-year colleges and universities vary in the required number and nature of pre-professional and general education courses which should be taken during the freshman and sophomore years. The recommended pre-professional curricula listed on the following pages should be used only as suggested guidelines.

Students who have determined which profession they plan to enter should become familiar with the specific course requirements of the four-year institution to which they plan to transfer. Then with the help of a college counselor or faculty advisor, the student can develop a curriculum best suited to satisfy the particular transfer objectives.

Some examples of professional preparation programs available include:

Business	Medicine
Computer Science	Nursing
Dentistry	Pharmacy
Engineering	Social Work
Journalism/Advertising	Teacher Education
Law	Veterinary Medicine





# PROGRAM INFORMATION



## ADULT AND CONTINUING EDUCATION

Adult Education is the fastest growing segment in America's educational system today. The need to continue one's education is brought into sharp focus when community problems, leisure time, updating individual skills and breaking the chains of unemployment or under employment are considered.

The Adult and Continuing Education program provides the opportunity to enroll in a comprehensive program of basic education, high school completion, personal enrichment, classes for updating job skills, English as a Second Language and specialist certificate programs which award college credit.

Classes are offered at schools and other public buildings throughout the college district as well as at four major locations in Ankeny, Boone, Carroll and Des Moines.

## LEARNING CENTERS

Learning Centers at Ankeny Campus, Boone Campus, Carroll Campus and Des Moines' Urban Campus provide individualized instruction in the basic skill areas at all levels. Instructors work with students who desire to complete high school, or who are interested in enriching their skills and academic backgrounds in most of the basic skill areas. Students may enroll in course work which is considered to be a prerequisite to admission to the college in either the Career or College Transfer programs. Students enrolled in college programs who are having difficulty with their studies may drop into the Centers for assistance.

## ADAPTOR COURSES

The purpose of college Adaptor courses is to provide students with a series of developmental courses in reading, oral and written English language, and mathematics. Students may apply up to four semester credit hours toward the associate degree. Courses available include:

ACCT:	090	Accounting Adaptor Lab	2
ENGL:	070	Basic Writing	3
ENGL:	071	Writing Skills Review	3
ENGL:	080	Study Skills	3
ENGL:	084	English as a Second Language I	3
ENGL:	085	English as a Second Language II	3
ENGL:	086	Writing Tutorial	1
ENGL:	087	Developmental Reading I	3
ENGL:	088	Developmental Reading II	3
MATH:	091	Arithmetic	2
MATH:	092	Introductory Algebra	4
MATH:	093	High School Geometry	3
MATH:	094	Intermediate Algebra	3

## ADULT BASIC EDUCATION

The Adult Basic Education program provides individualized instruction to adults who need development or review of basic reading, language and mathematic skills. Adult Basic Education (ABE) services are provided to adults who are seeking high school completion, vocational advancement, further training, English as a Second Language, and general improvement of every-day living skills. Classes are also offered in many locations throughout the college district.





# PROGRAM INFORMATION

## ADULT HIGH SCHOOL DIPLOMA

The following courses are required of all students enrolled in the Adult High School Diploma program:

- Two credits in American history
- One credit in American government
- Two credits in mathematics
- Two credits in science
- Four credits in English

Elective courses shall be completed to meet the minimum requirement of 32 semester credit hours.

## IOWA HIGH SCHOOL EQUIVALENCY DIPLOMA

The Iowa High School Equivalency Diploma is awarded by the State of Iowa through the Iowa Department of Education. Eligible adults may earn the Diploma by achieving passing scores on the General Education Development (G.E.D.) test administered by Des Moines Area Community College.

## SUPPLEMENTAL (SHORT COURSES)

The Career Supplemental program offers short-term courses which are occupationally oriented. These courses are available to provide persons with initial training for direct entry into an occupation or training to upgrade present job skills. Out of this program, several new specialist certificate programs are offered to provide short-term career education for the working person. Many short courses are offered on a part-time, evening schedule. The college maintains a staff of educational specialists in occupational fields who can assist companies, associations and institutions interested in structuring specific educational programs for their employees. Short-term courses can be offered almost anytime and anywhere within the college district.

One and two-day seminars are scheduled periodically and are often in cooperation with professional associations, labor and business groups.



## PERSONAL ENRICHMENT

Personal enrichment classes fall into two distinct classifications. The first is general interest which includes courses that are designed to assist persons in their self development. These courses are generally educational in nature and provide the participant with information and knowledge over a wide range in subject matter. The second classification is leisure or avocational and tends to assist persons in the development of hobbies or recreational skills for use during their leisure time.

## COOPERATIVE EDUCATION

Cooperative Education is an educational program that combines classroom instruction with paid, practical work experience which is directly related to the student's program curriculum. Combining classroom study and work experience is a meaningful way for students to learn, to gain valuable work experience, and to make career choices. Cooperative Education is an integral part of the learning process because it enhances the student's academic knowledge, personal development, and professional preparation.

Cooperative Education works in partnership with students, employers, and all college programs through campuses at Ankeny, Boone, Carroll, and Urban in Des Moines. Over 600 students working with more than 200 Iowa employers benefit from the cooperative partnerships each year at Des Moines Area Community College. A growing number of students and employers work together preparing tomorrow's professionals.

Cooperative Education offers a pre-employment seminar course in skills development to assist the student in making a successful transition from school to a beginning professional career. The pre-employment course presents theory, principles, and practices on the development of a personal portfolio that covers all aspects of professional job placement procedures. Attention is focused on self and employer assessments, job networking, resume writing, pre-employment communications and interviewing techniques.

## COURSE CLASSIFICATIONS

**CORE** - Those courses that constitute the body of traditional liberal arts curriculum in the first two years of a baccalaureate degree. Essentially, these courses have universal transfer status among receiving institutions.

**GENERAL** - Courses not in the core that are generally accepted for transfer where specific lower-division courses are identified as equivalent at most receiving institutions.

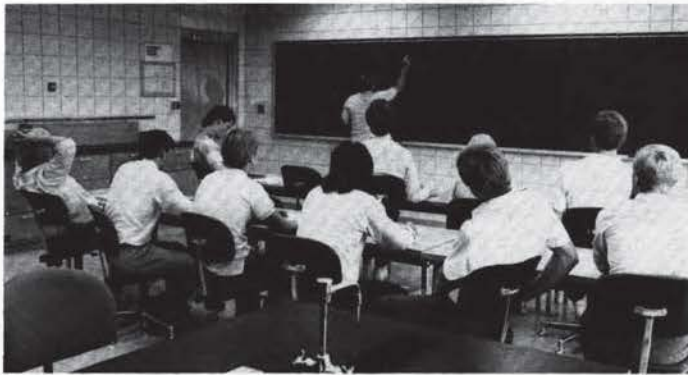
**OPEN** - Occupationally specific courses that may correspond to offerings in certain professional programs or colleges at receiving institutions. Where such programs of study exist, these courses readily transfer for equivalent courses or elective credit.

**VOCATIONAL** - Occupationally specific courses oriented toward, and immediately applicable to job task skills. Such courses may or may not transfer depending on the institution.

**ADAPTOR** - Courses representing developmental courses which aid the student whose educational background requires additional strengthening to achieve success in regular academic coursework.



# PROGRAM INFORMATION



## DEGREES

### ASSOCIATE IN ARTS (AA) DEGREE

The Associate in Arts (AA) Degree at Des Moines Area Community College is primarily a general education degree intended for transfer. General education is education which is baccalaureate oriented and includes courses within communications, social and behavioral sciences, mathematics and sciences, and humanities.

To receive an AA degree a student must:

- Maintain a 2.0 grade point average on all work applicable for the AA Degree.
- Take at least 21 semester credit hours of work at DMACC.
- Take the last 10 semester credit hours of work at DMACC.
- Complete a minimum of 64 semester credit hours.
- Include at least 48 semester credit hours of core courses.
- Include at least 16 semester credit hours of elective credit.

### CORE REQUIREMENTS - 48 CREDITS

#### A. COMMUNICATIONS - 9 credits

NOTE: Student who intends to transfer to a four-year institution is advised to take ENGL 117 and 118.

ENGL: 115  
 ENGL: 117  
 ENGL: 118  
 } Choose two courses  
 and  
 SPCH: 110  
 or  
 SPCH: 117

#### B. SOCIAL AND BEHAVIORAL SCIENCES - 9 credits

Student must complete at least 3 courses. Each course must be from a distinct discipline (reflected by a distinct acronym).

ANTH: 120, 121	HIST: 121, 122, 124, 125
CRIM: 110	PLSC: 111, 112, 121, 122, 126
ECON: 101, 102	PSCH: 101, 102, 103, 104, 105, 108
GEOG: 141, 147, 148	SOCY: 101, 102, 103, 105

#### C. MATHEMATICS AND SCIENCES - 9 credits

- Student must take one laboratory science course from BIOL, CHEM or PHYL listed below.
- Student must take one MATH or BSAD course listed below.

BIOL: 118 & 119, 126, 127, 128, 145, 146, 147, 148, 149, 154  
 CHEM: 120, 131, 132, 151, 152, 161, 162  
 MATH: 115, 118, 121, 123, 124, 129, 130, 132  
 PHYL: 102, 106, 111, 112, 121, 122  
 BSAD: 152

#### D. HUMANITIES - 9 credits

Select from the following:

ARTS: 101	HUMN: 115, 133
DRAM: 110	LITR: 120, 121, 122, 123
FORL: 120, 121, 122, 130	125, 126, 127
131, 140	MUSI: 130, 131
HIST: 121, 122	PHIL: 110, 111, 112, 113

#### E. DISTRIBUTED REQUIREMENT - 12 credits

Select the remainder from any of the courses in the above categories A, B, C, D.

#### F. ELECTIVES - 16 credits

- Student may include **no more than 8 semester credit hours** of Vocational courses.
- Student may include **no more than 4 semester credit hours** of Adaptor courses (designated as "A").
- Student may include **no more than 8 semester credit hours** of Independent Study courses; **no more than 4 semester credit hours** of Independent Study may be earned in any single semester.

**Total AA Degree Requirements - 64 credits**





# PROGRAM INFORMATION

## ASSOCIATE IN SCIENCE (AS) DEGREE

The Associate in Science (AS) degree at Des Moines Area Community College is a college transfer degree designed especially for students desiring additional career specialization during their first two years of college. Curricular offerings include all of the college's general education courses plus collegiate level courses designed to fulfill a variety of professional and occupational goals. This degree is especially appropriate for students wishing to complete a para-professional or college parallel/career option program with the intention of either seeking employment or continuing studies at a baccalaureate degree-granting institution.

To receive an AS degree a student must:

- Maintain a 2.0 grade point average on all work applicable for the AS degree.
- Take at least 21 semester credit hours of work at DMACC.
- Take the last 10 semester credit hours of work at DMACC.
- Complete a minimum of 64 semester credit hours.
- Include at least 24 semester credit hours of core courses.
- Include at least 42 semester credit hours of elective credit.

## CORE REQUIREMENTS - 24 CREDITS

### A. COMMUNICATIONS - 9 credits

NOTE: Student who intends to transfer to a four-year institution is advised to take ENGL 117 and 118.

ENGL: 115	}	Choose two courses
ENGL: 117		
ENGL: 118		
and		
SPCH: 110		
or		
SPCH: 117		



### B. SOCIAL AND BEHAVIORAL SCIENCES - 6 credits

ANTH: 120, 121	HIST: 121, 122, 124, 125
CRIM: 110:	PLSC: 111, 112, 121, 122, 126
ECON: 101, 102	PSCH: 101, 102, 103, 104, 105, 108
GEOG: 141, 147, 148	SOCY: 101, 102, 103, 105

### C. MATHEMATICS AND SCIENCES - 6 credits

1. Student must take one MATH or BSAD course and one science BIOL, CHEM or PHYL listed below.

BIOL: 118, 119, 126, 127, 128, 145, 146, 147, 148, 149, 154
CHEM: 120, 131, 132, 151, 152, 161, 162
MATH: 115, 118, 121, 123, 124, 129, 130, 132
PHYL: 102, 106, 111, 112, 121, 122
BSAD: 152

### D. HUMANITIES - 3 credits

Select from the following:

ARTS: 101	HUMN: 115, 133
DRAM: 110	LITR: 120, 121, 122, 123
FORL: 120, 121, 122, 130	125, 126, 127
131, 140	MUSI: 130, 131
HIST: 121, 122	PHIL: 110, 111, 112, 113

### E. ELECTIVES - 40 CREDITS

- Student may include **no more than 16** semester credit hours of Vocational courses.
- Student may include **no more than 4** semester credit hours of Adaptor courses (designated as "A").
- Student may include **no more than 8** semester credit hours of Independent Study courses; **no more than 4** semester credit hours of Independent Study may be earned in any single semester.

**Total AS Degree Requirements - 64 credits**



# PROGRAM INFORMATION

## **ASSOCIATE IN APPLIED ARTS AND ASSOCIATE IN APPLIED SCIENCE DEGREE**

The Associate in Applied Arts (AAA) or Associate in Applied Science (AAS) degree is awarded to those individuals who satisfactorily complete an approved two-year preparatory Vocational-Technical or a college parallel program. Specific program descriptions will indicate the type of degrees awarded.

To receive an Associate in Applied Arts (AAA) or Associate in Applied Science (AAS) degree the student must:

- A. Maintain a 2.0 grade point average (GPA) on all work applicable for the AAA/AAS degree.
- B. Take **at least 21 semester credit hours of work at DMACC.**
- C. Take **the last 10 semester credit hours of work at DMACC.**
- D. Complete the number of semester credit hours required in a particular program of study.
- E. Complete all required courses in a particular program of study.

## **DIPLOMA**

The diploma is awarded to those individuals who complete an approved program of at least 30 semester credit hours of credit. Specific requirements for the programs leading to diplomas are listed elsewhere in the catalog.

To receive a diploma the student must:

- A. Maintain a 2.0 grade point average (GPA) on all work applicable for the diploma.
- B. Take **at least 10 semester credit hours of work at DMACC.**
- C. Take **the last 5 semester credit hours of work at DMACC.**
- D. Complete the number of semester credit hours required in a particular program of study.
- E. Complete all required courses in a particular program of study.

## **CERTIFICATE OF SPECIALIZATION**

The certificate of specialization is awarded to those individuals who satisfactorily complete a curriculum of study in selected areas of study. Specific requirements for the programs leading to certificates of specialization are listed elsewhere in this catalog.

To receive a certificate the student must:

- A. Maintain a 2.0 grade point average (GPA) on all work applicable for the certificate.
- B. Take **at least one-third of the semester credit hours of course work at DMACC.**
- C. Complete the number of semester credit hours required in a particular program of study.
- D. Complete all required courses in a particular program of study.

## **CERTIFICATE OF COMPLETION**

A certificate of completion is issued to signify that a student has satisfactorily completed a program of instruction other than those listed above. Certificates are normally issued to students at the completion of a specific short term course of study.





# LISTING OF DMACC PROGRAMS

Below is a listing of diploma and degree programs available at Des Moines Area Community College. Further explanation of these can be found in the following sections of this catalog.

PROGRAM	CAMPUS	PROGRAM	CAMPUS
ASEP - General Motors	Ankeny	High Tech-Computers	Ankeny
Accounting Specialist	Ankeny, Boone, Urban	High Tech-Robotics	Ankeny
Agri Business	Ankeny	Hospitality Apprentice	Ankeny
Agriculture Equipment Technology	Ankeny	Hotel & Restaurant Management	Ankeny
Agriculture Power & Equipment	Ankeny	Human Services	Ankeny, Boone, Urban
Architectural Drafting	Ankeny	Industrial Management & Marketing	Ankeny
Auto Chassis & Power Train	Ankeny	Information Word Processing	Ankeny, Boone, Carroll, Urban
Auto Collision Repair	Ankeny	International Trade Studies	Ankeny
Auto Engines & Tune-up	Ankeny	Job Shop Machinist	Ankeny
Auto Mechanics Technology	Ankeny	Labor Studies	Urban
Bookkeeping & Accounting	Ankeny, Boone	Legal Assistant	Ankeny
Building Trades	Ankeny	Leisure Studies-Holistic Wellness	Boone
Business & Computers	Boone	Leisure Studies-Rec Leadership	Boone
Business Administration	Ankeny, Boone, Carroll, Urban	Machine Drafting	Ankeny
Child Development	Ankeny	Medical Assistant	Ankeny
Child Development Associate	Ankeny	Medical Assistant Associate	Ankeny
Clerical	Ankeny, Boone, Carroll, Urban	Medical Laboratory Technology	Ankeny
Commercial Art	Ankeny	Nursing-Advanced Standing	Ankeny, Boone
Commercial Horticulture	Ankeny	Nursing-Associate Degree	Ankeny, Boone, Carroll
Computer Programming	Ankeny	Nursing-Practical	Ankeny, Boone, Carroll
Computer Science Technology	Boone	Office Management	Ankeny, Boone, Urban
Conditioned Air	Ankeny	Printing	Ankeny
Criminal Justice	Ankeny	Respiratory Therapy	Ankeny
Culinary Arts	Ankeny	Retail Management	Ankeny
Dental Assistant	Ankeny	Retail Merchandising	Ankeny
Dental Hygiene	Ankeny	Sales & Management	Ankeny
Developmental Disabilities	Ankeny	Secretary - Administrative	Ankeny, Boone, Carroll, Urban
Developmental Disabilities Associate	Ankeny	Secretary - Legal	Ankeny
Diesel Equipment Mechanic	Ankeny	Secretary - Medical	Ankeny
Electronics Maintenance	Ankeny	Small Business Entrepreneurship	Ankeny
Executive Assistant	Ankeny, Boone, Urban	Teacher Associate	Ankeny
Fashion Merchandising	Ankeny	Telephony	Ankeny
Financial Services	Ankeny	Tool & Die Making	Ankeny
Fire Science Technology	Ankeny	Upholstery	Ankeny
Health Care Administration	Ankeny	Welding	Ankeny
High Tech-Biomedical	Ankeny		

Below is a listing of certificate of specialization offerings available at Des Moines Area Community College. Further explanation of these can be found in the following sections of this catalog.

Accounting Advanced	Money Management
Accounting Basic	Motor Control
Administrative Support	Nursing Assistant
Airbrush Art	Nursing Home Administrator
Building Maintenance	Phlebotomy
Chemical Dependency Counseling	Production Art
Child Care Specialist I	Public Safety Communication
Child Care Specialist II	Purchasing
Child Care Specialist III	Real Estate Sales
Clerical Specialist	Resident Care Facility Admin
Computer Languages	Selling Advanced
Coronary Care - Basic	Selling Basic
Credit Union Operations	Small Business Management
Data Entry	Small Business Start-up
Data Processing	Supervision Basic
Dietary Manger Specialist	Technical Management
Electronic Fundamentals	Travel Personnel
Emergency Med Tech Ambulance	Upholstery
Fire Specialist	Volunteer Management
Gerontological Nursing	Ward Clerk
Insurance Sales	Wastewater Treatment Operator
International Trade	Water Operator
Mid Management	Word Processing

(SEE PAGE 1 FOR CAMPUS ADDRESSES)



# EDUCATIONAL PROGRAMS

## ACCOUNTING SPECIALIST

The Accounting Specialist program prepares the student for a career in the field of accounting. Upon graduation, the student will be able to distinguish, analyze, summarize, communicate and record economic events for a profit oriented entity at the entry level. The student will show sensitivity and awareness of interpersonal relationships with co-workers, supervisors, and the public. The program offers technical courses in intermediate accounting, and computers, allowing students to seek advanced level placement.

Fluency in oral and written communications is stressed throughout. The internship part of the program provides "real-world" experience under the combined guidance of a faculty member and a cooperating employer. Actual job experience is obtained whereby many of the skills and procedures studied in the classroom are observed and practiced.

Employment opportunities are currently found in commercial businesses, government offices, public accounting firms and similar establishments.

Locations: Ankeny, Boone, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students enrolling in ACCT 101 who have not completed a high school course or had other previous exposure to book-keeping and accounting MUST enroll in ACCT 090. Students start any term.

### Graduation Requirements

To earn an Accounting Specialist AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A business course elective may be substituted for BKKA 401 if ACCT 102 is completed satisfactorily. Departmental approval required.

#### Required Courses

ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT104	Intermediate Accounting II	4
ACCT203	Cost Accounting I	4
ACCT206	Income Tax	3
ACCT351	Financial Accounting-Micro Computers	3
ACCT352	Managerial Acct Microcomputers	3
BKKA401	Acct Applications I/Cost Acct	4
BKKA410	Taxes/Payroll	3
BSAD223	Business/Financial Math	3
COOP220	Pre-Employment Seminar	2
OFFC324	Office Calculators	1
SPCH110	Fundamentals Of Speech	3

#### Option Courses

Select 1 Course From Each Option		
ENGL117	Composition I	Opt1 3
OFFC205	Business English	Opt1 3
OFFC301	Typing I	Opt2 2
OFFC329	Keyboarding I	Opt2 1
DATA101	Intro To Data Processing	Opt3 3
OFFC340	Intro To Office Computer Application	Opt3 3
OFFC341	Advanced Office Computer Application	Opt3 3
OFFC206	Written/Oral Communication	Opt4 3
ENGL115	Technical And Business Writing	Opt4 3
ENGL118	Composition II	Opt4 3
MGMT203	Human Relations In Business	Opt5 3
PSCH101	General Psychology	Opt5 3
MATH094	Intermediate Algebra	Opt6 4
MATH115	Finite Mathematics	Opt6 4
ACCT403	Accounting Internship	Opt7 3



COOP223	Coop Career Experience	Opt7 3
BSAD243	Quantitative Methods	Opt8 4
MATH121	Elementary Statistics	Opt8 4
BSAD153	Office Management	Opt9 3
OFFC203	Admin Office Management	Opt9 3

## AGRI-BUSINESS

The Agri-Business program is designed to train people for the rapidly expanding fields of agricultural supply, distribution and services.

This program provides the student with training in the latest developments in technical agriculture in both the classroom and industry settings and actual experiences in agricultural business through on-the-job employment experience. Entry level jobs the graduate will be capable of filling include: assistant or manager of agricultural supply centers handling feed, seed, grain, fertilizer, chemicals or petroleum products, technical representative for the chemical, fertilizer, feed or supply industry and account specialists for commodity brokers.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn an Agri-Business AAS degree, students must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

AGRI201	Feeding & Animal Nutrition I	3
AGRI204	Animal Science I	3
AGRI219	Soils & Fertilizers	5
SOCY302	Industrial Relations	3
SPCH110	Fundamentals Of Speech	3

#### Term 2

AGRI203	Feeding & Animal Nutrition II	3
AGRI205	Commodities I	3
AGRI214	Animal Science II	3
AGRI421	Chemical Technology	3
AGRI430	Employment Experience I	4
COOP220	Pre-Employment Seminar	2

#### Term 3

AGRI202	Soil Fertility	3
AGRI206	Crop Management	3
AGRI215	Commodities II	3
BUSL101	Business Law I	3



# EDUCATIONAL PROGRAMS

## Term 4

ACCT301	Accounting Fundamentals	3
AGRI440	Physical Facilities	1
AGRI436	Grain Management	2
AGRI455	Employment Experience II	4
RCMA400	Related Math	3
AGRI207	Livestock Disease Prevention	3

## Term 5

AGRI411	Agricultural Economics	2
AGRI454	Agriculture Seminar	1
BSAD227	Business Communications	3
DATA101	Intro To Data Processing	3
MKTG103	Principles Of Selling	3
AGRI464	Employment Experience III	4

## AGRICULTURE EQUIPMENT TECH

The Agriculture Equipment Technology program will develop in its graduates the knowledge and skills needed to diagnose, adjust, and repair the individual pieces of equipment found on midwestern farms. The program covers tractors, combines, planting, tillage, and haying equipment. Shop and field adjustments of this equipment are incorporated into the program. The diagnosis and repair of hydraulic, electrical, and air conditioning systems are covered. Gas and diesel engines, transmissions, differentials, and final drives are also covered.

Graduates enter the farm equipment industry with jobs such as farm equipment or component mechanic at a retail dealership or large corporate farms, or technical representative for a farm equipment manufacturer.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

### Graduation Requirements

To earn an Agriculture Equipment Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

AGPE470	Technical Publications	2
AGPE476	Planting/Tillage Equipment	5
AGPE479	Basic Electricity	5
ENGL410	Communication Skills	3
RCMA400	Related Math	3

#### Term 2

AGPE474	Hydraulics	10
AGPE480	Advanced Electricity	3
AGPE482	Shop Management	2
WELD477	Ag Welding	3

#### Term 3

AGPE475	Harvesting Systems	7
AGPE477	Air Conditioning	2
AGPE478	Basic Engines	3

#### Term 4

AGET479	Advanced Engines	10
AGET481	Diesel Fuel Systems	5
SOCY302	Industrial Relations	3

#### Term 5

AGET471	Power Trains	10
AGET485	Power Unit Testing	7

## AGRICULTURE POWER & EQUIPMENT

The Agriculture Power and Equipment program provides the graduate with the skills to adjust, maintain and, on a limited basis, repair components and systems on farm equipment.

The machines, components, and systems covered in this program can easily be serviced without expensive tools or elaborate facilities, or are most often the source of aggravating problems for the owner or operator. Examples of equipment covered include planters, tillage equipment, combines, and balers. Systems and components covered include hydraulics, electrical, and air conditioning systems for tractors and combines, basic engines, and their systems.

Graduates would be prepared to return to the farm to maintain their own equipment, work as a component or systems repair person in a service department or large corporate farm.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

### Graduation Requirements

To earn an Agriculture Power and Equipment diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

AGPE470	Technical Publications	2
AGPE476	Planting/Tillage Equipment	5
AGPE479	Basic Electricity	5
ENGL410	Communication Skills	3
RCMA400	Related Math	3

#### Term 2

AGPE474	Hydraulics	10
AGPE480	Advanced Electricity	3
WELD477	Ag Welding	3

#### Term 3

AGPE475	Harvesting Systems	7
AGPE477	Air Conditioning	2
AGPE478	Basic Engines	3





# EDUCATIONAL PROGRAMS

## ARCHITECTURAL DRAFTING

The Architectural Drafting program is designed to develop the proper skills and knowledge required for satisfactory entrance into the field of building construction, drafting, and detailing.

Graduates are employed by architects, structural, mechanical and electrical engineers, contractors, subcontractors, building equipment and material suppliers, and building code officials. Students periodically visit construction sites to observe actual construction practices.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school algebra or equivalent with the grade "C" or above. Students start summer term.

### Graduation Requirements

To earn an Architectural Drafting diploma, complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

ARCH410	Architectural Drafting I	2
ARCH460	Architectural Drafting Lab I	3
ARCH464	Construction Techniques I	2
ARCH472	Construction Estimating	2
SOCY302	Industrial Relations	3

#### Term 2

ARCH420	Architectural Drafting II	3
ARCH461	Architectural Drafting Lab II	5
ARCH470	Construction Techniques II	2
ARCH473	Building Equipment Techniques I	2
ARCH474	Drafting Math Algebra	3
ENGL410	Communication Skills	3

#### Term 3

ARCH462	Architectural Drafting III	3
ARCH463	Architectural Drafting Lab III	5
ARCH465	Building Equipment Techniques II	2
ARCH471	Construction Techniques III	3
ARCH475	Technical Report & Specs	2
ARCH476	Drafting Math Trigonometry	3

## ASEP - GENERAL MOTORS

The Automotive Service Educational Program (ASEP), co-sponsored by DMACC and General Motors, is a two-year automotive program designed to upgrade the technical competence and professional level of the incoming dealership technician. The curriculum, designed by General Motors and DMACC, leads to Associate Degree in Automotive Technology. The program involves classroom lecture, laboratory experiences, and a dealership sponsored cooperative experience.

Location: Ankeny

### Program Entry Requirements

Complete an application, aptitude and ability tests and be accepted by General Motors as a participant. In addition, all program participants must be sponsored by a General Motors automotive dealership.

### Graduation Requirements

To earn an Automotive Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

ASEP312	GM Specialized Electronics Training	3
ASEP317	GM Shop Fundamentals & Minor Service	3

ASEP318	GM Steering/Suspension/Brake Systems	4
ASEP320	Technical Internship I	3
ASEP326	GM Auto Air Conditioning Systems	3
ASEP327	Minor Service/Repair-GM Engines	3
ASEP328	Diagnosis/Repair-GM Electrical Syst	3
ASEP330	Technical Internship II	3
ASEP333	Major Service Procedures/GM Engines	3
ASEP336	GM Carb & Fuel Induction Systems	3
ASEP337	GM Tune Up Proc & Emission Control	4
ASEP340	Technical Internship III	3
ASEP343	GM Transmissions & Transaxles	8
ASEP350	Technical Internship IV	3
ASEP354	Advanced GM Motors Systems	5
AUTO464	Automotive Measurement & Tools	3
BSAD150	Intro To Business	3
ENGL410	Communication Skills	3
MATH091	Arithmetic	2
PHYL401	Physics For Technicians	3
PSCH106	Psychology Of Human Relations & Adj	3
RCEL401	Basic Electricity & Magnetism	1

## AUTO MECHANICS TECHNOLOGY

The Auto Mechanics Technology program is designed to prepare students for employment in the new technological automotive industry and to update those already employed.

There are two separate diploma options which can be taken individually or in combination. One option prepares graduates for entry in current Automotive Technology Tune-up and Engine repair. The other option prepares graduates to enter the automotive industry in the latest Power Train and Chassis Repair techniques. By completing the two diploma options plus one course, students may receive an AAS degree. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall or spring terms.

### Graduation Requirements

To earn an Auto Mechanics Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Auto Engines And Tune Up

#### Required Courses

PHYL401	Physics For Technicians	3
---------	-------------------------	---





# EDUCATIONAL PROGRAMS

AUTO466	Fuel Systems		3
AUTO468	Automotive Electricity		6
AUTO472	Auto Air Conditioning & Heating		4
AUTO474	Automotive Engine Fundamentals		3
AUTO476	Electronic Engine Control		5
AUTO478	Advanced Tune Up		4
AUTO479	Service Management		2
AUTO482	Advanced Engines		3
ENGL410	Communication Skills		3
COOP220	Pre-Employment Seminar		2
	Select 1 Course from Option 1		
MATH091	Arithmetic	Opt1	2
MATH092	Introductory Algebra	Opt1	4
RCMA400	Related Math	Opt1	3

## Auto Chassis & Power Train

### Required Courses

AUTO464	Automotive Measurement & Tools		3
AUTO484	Basic Power Train		6
AUTO486	Basic Brakes		3
AUTO488	Basic Suspension & Alignment		4
AUTO490	Advanced Power Train		6
AUTO492	Advanced Brakes & Alignment		5
ENGL410	Communication Skills		3
SOCY302	Industrial Relations		3
COOP220	Pre-Employment Seminar		2
HLCR314	Emergency Care		1

## Automotive Mechanics Technology

### Required Courses

WELD467	Related Weld-Transportation Trades		2
---------	------------------------------------	--	---

## AUTOMOTIVE COLLISION REPAIR

The Automobile Collision Repair Technician performs tasks ranging from minor service work to complete vehicle rebuilding. The event of unibody and front-wheel drive concepts has given collision repair a new emphasis. These concepts involve attachment of steering, suspension and mechanical components directly to the body. In addition, electrical, electronic, and air conditioning components are located in zones subjected to high rates of collision. New paint, paint refinishing materials, new steels and plastics used in construction, and new repair technologies have emerged in recent years.

The complete program, consisting of three terms, will prepare a student for entry positions. Students may register for the programs starting either fall or spring. A number of individual courses can be taken to satisfy the person wanting only specific segments of the complete program.

To assure the best learning, individuals are permitted to progress at a pace equal to their ability. The listed sequence of course offerings may be altered to enhance this feature.

Core course study in communication skills and mathematics provides valuable growth to accompany the technical skills of the Automobile Collision Repair Technician.

Location: Ankeny

### Program Entry Requirements

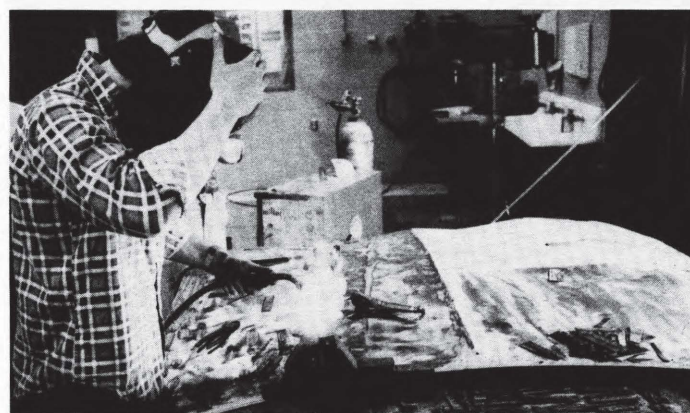
Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

### Graduation Requirements

To earn an Automotive Collision Repair diploma, a student must complete course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

AUTC402	Fundamentals Of Sheet Metal Repair		7
AUTC404	Fundamentals Of Paint Refinishing		4
AUTC406	Collision Analysis & Measuring		4
AUTC407	Collision Damage Appraisal Estimate		3
AUTC409	Collision Correction		5
AUTC411	Automotive Paint Refinishing		4
AUTC415	Major Collision Repair		5
AUTC417	Collision Repair Specialization		5
AUTC419	Fund/Auto Electrical Component		2
AUTC428	Unibody Wheel Alignment		3
ENGL410	Communication Skills		3
RCMA400	Related Math		3



## BOOKKEEPING & ACCOUNTING

The Bookkeeping and Accounting program prepares students for a career in the field of bookkeeping and recordkeeping. Upon graduation, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity as an entry-level bookkeeper. The student will show sensitivity and awareness of interpersonal relationships with co-worker, supervisors, and the public.

Technical courses in taxes, payroll, computer, and cost accounting allow students to seek advanced level placement. The internship part of the program provides on-the-job training under the combined guidance of a faculty member and a cooperating employer. Actual job experience is obtained where many of the skills and procedures studied in the classroom are observed and practiced.

Employment opportunities are currently found in commercial businesses, government offices, public accounting firms, and similar establishments.

Locations: Ankeny, Boone, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students enrolling in ACCT 101 who have not completed a high school course or had other previous exposure to bookkeeping and accounting MUST enroll in ACCT 090. Students start fall term.

### Graduation Requirements

To earn a Bookkeeping and Accounting diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A business course elective may be substituted for BKKA 401 if ACCT 102 is completed satisfactorily. Departmental approval required.



# EDUCATIONAL PROGRAMS

## Required Courses

ACCT101	Principles Of Accounting I	4
BSAD223	Business/Financial Math	3
COOP220	Pre-Employment Seminar	2
OFFC324	Office Calculators	1
BKKA401	Acct Applications I/Cost Acct	4
BKKA410	Taxes/Payroll	3
BKKA402	Accounting Applications II	3
ACCT351	Financial Accounting-Micro Computers	3
BKKA490	Bookkeeping Internship	3

## Option Courses

Select 1 Course From Each Option		
ENGL117	Composition I	Opt1 3
OFFC205	Business English	Opt1 3
OFFC301	Typing I	Opt2 2
OFFC329	Keyboarding I	Opt2 1
DATA101	Intro To Data Processing	Opt3 3
OFFC340	Intro To Office Computer Application	Opt3 3
OFFC341	Advanced Office Computer Application	Opt3 3
OFFC206	Written/Oral Communication	Opt4 3
ENGL115	Technical & Business Writing	Opt4 3
ENGL118	Composition II	Opt4 3
MGMT203	Human Relations In Business	Opt5 3
PSCH101	General Psychology	Opt5 3
BSAD153	Office Management	Opt6 3
OFFC203	Admin Office Management	Opt6 3

## BUILDING TRADES

The Building Trades program is designed to provide students with the skills and knowledge necessary to enter the residential construction field. At the end of the program students will have basic knowledge of construction techniques and design to produce an energy efficient home.

Classroom work focuses on information designed to familiarize the student with basic knowledge of construction materials. Students also have the opportunity in labs to practice various carpentry skills.

The last term is devoted to applying skills in the construction of a home. All homes constructed focus on energy efficient construction methods. Construction includes application of masonry, concrete placement, framing, insulating, drywall installation, construction of kitchen and vanity cabinets, and interior finish work. When the program is completed students are employed with carpentry and masonry contractors, lumber



yards, and other construction enterprises.

Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information session. Students start fall or spring term.

## Graduation Requirements

To earn a Building Trades diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

BLDG451	Residential Materials/Const Theory	5
BLDG452	Residential Construction Techniques	7
BLDG453	Care/Use Of Hand & Power Tools	1
BLDG455	Residential Blueprint Reading/Est	2
RCMA400	Related Math	3

### Term 2

BLDG461	Masonry Technology & Practices	4
BLDG462	Residential Drafting & Design	2
BLDG464	Residential Practices	3
ENGL410	Communication Skills	3

### Term 3

BLDG480	Resident Const/Procedure App I	5
BLDG481	Resident Const/Procedure App II	5
BLDG482	Resident Const/Procedure App III	5

## BUSINESS ADMINISTRATION - PREPARATION

Students planning to major in business at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## BUSINESS ADMINISTRATION

The Business Administration program offers you a number of career and educational opportunities. The curriculum is designed for career oriented students who desire career positions in business; college transfer students who wish to complete a four-year degree; or working adults who want to complete their associate degree, gain advancement opportunities, or who are considering a career change.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Unique features of the Business Administration curriculum include: introductory business studies in accounting, finance, management, marketing and business administration; a complement of arts and science transfer courses; an internship option which provides practical work experience under the supervision of a faculty advisor and cooperating employer; and an Associate in Science degree.

Locations: Ankeny, Boone, Carroll, Urban

## Program Entry Requirements

Complete an application and attend any orientation/information sessions. Students start any term.



# EDUCATIONAL PROGRAMS

## Graduation Requirements

To earn a Business Administration AS degree, a student must complete the standard core requirements for the degree, plus the Business Administration required courses and options, and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
BSAD150	Intro To Business	3
DATA101	Intro To Data Processing	3
ECON101	Principles Of Macro-Economics	3
ECON102	Principles Of Micro-Economics	3
MGMT102	Introduction To Management	3
MKTG102	Principles Of Marketing	3

### Option Courses

Select 3 Courses From Option 1 And 1 Course From Option 2

BSAD229	Small Business Management	Opt1	3
BUSL101	Business Law I	Opt1	3
BUSL102	Business Law II	Opt1	3
COOP220	Pre-Employment Seminar	Opt1	2
COOP223	Coop Career Experience	Opt1	3
MGMT101	Personnel Supervision	Opt1	3
MKTG103	Principles Of Selling	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3
MGMT203	Human Relations In Business	Opt2	3
PSCH101	General Psychology	Opt2	3

### Elective Courses

Electives	1-5
-----------	-----

DATA101	Intro To Data Processing	3
ENGL115	Technical & Business Writing	3
ENGL117	Composition I	3
ENGL118	Composition II	3
MATH115	Finite Mathematics	4
SPCH110	Fundamentals Of Speech	3

### Option Courses

Select 1 Course From Option 1

COMS172	Computer Programming-FORTRAN	Opt1	2
DATA231	RPG/II	Opt1	3



## BUSINESS & COMPUTERS

The Business and Computers program is designed to allow students to transfer to a four-year program and additionally qualifies the students for positions as programmer and programmer analyst. The program emphasizes business applications programming. The student studies several programming languages, various levels of operating systems, various types of computer systems, and the peripheral equipment available in the field.

Location: Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit transcript to show proof of one year of high school algebra or equivalent with the grade "C" or above. Students start any term.

### Graduation Requirements

To earn a Business and Computer AS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
ACCT101	Principles Of Accounting I	4
ACCT351	Financial Accounting-Micro Computers	3
BSAD150	Intro To Business	3
BSAD152	Business Statistics	4
COMS125	Business Programming COBOL I	3
COMS126	Business Programming COBOL II	4
COMS174	Applied Programming I Pascal	3
COMS176	Applied Programming II	4

## CHILD DEVELOPMENT

The Child Development program prepares students for careers working with children. By the end of the program, they can assume a position of responsibility in early childhood education.

Course work includes instruction in human development, observation and guidance techniques, curriculum planning, nutrition, and emergency care.

Students will have the opportunity each term to participate in the Des Moines Area Community College Day Care Center and will also complete a practicum for one-half of a term in a community child care program.

When course work is complete, students will be qualified to work in day care centers, preschools, or public and private schools working with infants, preschoolers, or school-aged children. This program also



# EDUCATIONAL PROGRAMS

allows a graduate to become a certified nanny. A second career option, Child Development Associate, is also available.  
Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

## Graduation Requirements

To earn a Child Development diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD260	Observation/Guidance-Children	3
CHLD262	Curriculum & Activities I	4
CHLD264	Child Nutrition & Health	3
CHLD265	Curriculum & Activities II	4
CHLD268	Professional Relationships	1
CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464	Practicum	2

### Option Courses

Select 1 Course From Each Option			
ENGL410	Communication Skills	Opt1	3
ENGL115	Technical & Business Writing	Opt1	3
ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
BSAD227	Business Communications	Opt1	3
SOCY101	Introduction To Sociology	Opt2	3
SOCY302	Industrial Relations	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
MGMT203	Human Relations In Business	Opt2	3

## CHILD DEVELOPMENT - ASSOCIATE

The Child Development Associate program is designed to build on those skills developed in the Child Development Diploma program and to broaden the students' background in general education. Further competence in early childhood education is developed through course work in administration of programs for children and field practicum settings.

Students completing the Child Development program plus the additional requirements listed, will earn a Child Development Associate in Science degree. They may choose to transfer to a four-year institution or take one of the many jobs available in early childhood education.  
Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

## Graduation Requirements

To earn a Child Development AS Degree, a student must complete the standard core requirements for the degree plus the Child Development required courses and options, and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD260	Observation/Guidance-Children	3
CHLD262	Curriculum & Activities I	4
CHLD264	Child Nutrition & Health	3

CHLD265	Curriculum & Activities II	4
CHLD266	Admin Of Programs/Children	3
CHLD268	Professional Relationships	1
CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464	Practicum	2
CHLD465	Child Development Assoc Practicum	3

### Elective Courses

Electives	7
-----------	---

## CLERICAL

The Clerical program will prepare students for entry-level employment as clerical office workers.

A program of instruction implementing simulated working experience and classroom instruction prepares the graduates for employment as general office clerks, file clerks, receptionists, and other clerical positions.  
Locations: Ankeny, Boone, Urban, Carroll

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

## Graduation Requirements

To earn a Clerical diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC204	Office Procedures	4
OFFC205	Business English	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC309	Office Accounting	2
OFFC311	Business Math & Calculators	3
OFFC337	Word Processing I	3
OFFC401	Model Office	3
OFFC403	Professionalism I	1
OFFC404	Professionalism II	1

### Option Courses

Select 1 Course From Option 1			
OFFC340	Intro To Office Computer Application	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3





# EDUCATIONAL PROGRAMS

## COMMERCIAL ART

The Commercial Art program prepares students for a career in commercial art. By the end of the program, students will be able to design and produce creative communications to play a significant role in the profession.

Technical courses prepare for entry level positions. Required courses in design, production, illustration, print processes, and business management allow students to seek advanced level placement. Optional courses in computer graphics, animation, and airbrush provide additional training opportunities. The development of a portfolio is stressed throughout the program.

The Coop/Internship course is a valuable part of the "real world" training offered. Most of the instructors are employed full-time as commercial artists, and teach courses related to their professional responsibilities.

When the program is completed, employment may be in art studios, advertising agencies, in-house art departments, printing companies, publishing firms, and other establishments in need of creative communications.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend a Commercial Art Realities Exploration Day, obtaining a passing score on art portfolio. Students start fall term.

### Graduation Requirements

To earn a Commercial Art AAA degree, a student must complete all course work as prescribed and maintain a grade point average of 2.0.

<b>Term 1</b>			
GRPH401	Graphic Arts Orientation		3
GRPH403	Communication Design I		3
GRPH405	Typography I		2
GRPH407	Production Art I		3
GRPH409	Printing Processes		4
CART410	Illustration I		3
<b>Term 2</b>			
GRPH411	Typography II		2
GRPH415	Production Art II		3
GRPH421	Internship Preparation		2
CART411	Communication Design II		4
CART414	Illustration II		4
	Select 1 Course from Option 1		
ENGL117	Composition I	Opt1	3
ENGL115	Technical & Business Writing	Opt1	3
<b>Term 3</b>			
CART424	Commercial Art Internship		6
CART431	Photography I		3
	Select 1 Course from Option 2		
	Social Behavioral Sciences	Opt2	
	Humanities	Opt2	
	Math & Science	Opt2	
<b>Term 4</b>			
CART409	Advertising		3
CART426	Communication Design III		3
CART428	Illustration III		3
CART430	Production Art III		3
CART436	Portfolio Preparation I		3
CART445	Photography II		3
<b>Term 5</b>			
CART437	Communication Design IV		3

CART440	Production Art IV	3
CART442	Illustration IV	3
CART444	Portfolio Preparation II	3
CART447	Business Management	3
SPCH110	Fundamentals Of Speech	3



## COMMERCIAL HORTICULTURE

The Commercial Horticulture program provides students with technical training in the broad horticultural field through classroom, greenhouse, turf lab, tree nursery and practical on-the-job employment experiences.

Jobs the graduate will be capable of filling include: greenhouse operator and management involving greenhouse production, scheduling and marketing; landscaping involving design, planting and maintaining trees, shrubs, turf and foliage plants for the beautification of home grounds, commercial, public and recreation; turf management involving establishing, managing and maintaining grassed areas for ornamental and/or recreational purposes; nursery operation and management concerned with the production of trees, shrubs and turf for the purpose of transplanting or propagating them; garden center merchandising and management; merchandising of flowers and foliage plants.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Commercial Horticulture AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.



# EDUCATIONAL PROGRAMS

## Term 1

	Select 1 Course From Option 1		
COMH494	Horticulture Prod Alternatives	Opt1	1
COMH497	Floral Design I	Opt1	1
AGRI219	Soils & Fertilizers		5
COMH437	Turf I		3
COMH479	Nursery Production I		3
COMH488	Plant Materials & Landscape Drafting		3
ENGL410	Communication Skills		3

## Term 2

COMH410	Greenhouse Production I		3
COMH411	Horticulture Chemical Tech		2
COMH440	Landscape Design I		2
COMH450	Botany		2
COMH454	Supervised Employment Experience I		3
COMH478	Plant Propagation I		2
RCMA400	Related Math		3

## Term 3

COMH452	Arboriculture & Plant Prop. II		2
COMH453	Landscape Design/Plant Materials II		2
COMH455	Turf II		2
COMH490	Greenhouse Production II		3
COMH499	Supervised Employment Experience II		2

## Term 4

ACCT301	Accounting Fundamentals		3
COMH496	Landscape Construction		2
COMH459	Foliage Plant Production & Display		1
COMH468	Commercial Horticulture Marketing		2
COMH484	Supervised Employment Exp III		4
COOP220	Pre-Employment Seminar		2

## Term 5

BUSL101	Business Law I		3
COMH457	Fruit & Vegetable Science		2
COMH469	Garden Center Management		2
COMH498	Supervised Employment Experience IV		3
MGMT203	Human Relations In Business		3
MKTG103	Principles Of Selling		3



## COMPUTER PROGRAMMING

The Computer Programming curriculum prepares students for a position as computer programmer or programmer analyst. With additional experience, graduates can advance to positions as systems analyst and programming manager.

The major curriculum focus is on technical courses which lead to proficiency in designing, writing and testing computer programs. The program also emphasizes the understanding of business and accounting principles since the majority of programming applications relates to specific business problems.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

### Graduation Requirements

To earn a Computer Programming AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ACCT101	Principles Of Accounting I	4
BSAD150	Intro To Business	3
COOP220	Pre-Employment Seminar	2
DATA101	Intro To Data Processing	3
DATA231	RPG/II	3
DATA301	DOS Job Control	4
DATA304	COBOL/Beginning	4
DATA306	COBOL/Intermediate	4
DATA310	Program Logic Design	4
DATA319	Assembler/Beginning	4
DATA321	Assembler/Intermediate	4
DATA334	Applications Programming	8
DATA341	Data Base Language (DL/I)	3
DATA352	Telecommunications/CICS Programming	4
DATA382	Systems Analysis	4

### Option Courses

	Select 1 Course From Each Option	
BSAD223	Business/Financial Math	Opt1 3
MATH094	Intermediate Algebra	Opt1 4
DATA308	COBOL/Advanced	Opt2 4
DATA327	Assembler/Advanced	Opt2 4
DATA103	BASIC	Opt3 3
DATA104	BASIC/Advanced	Opt3 3
DATA106	Microcomputers In Business	Opt3 3
DATA110	Microcomputer Systems Design	Opt3 3
DATA211	FORTRAN	Opt3 3
DATA221	PL/I	Opt3 3
COMS174	Applied Programming I Pascal	Opt3 3
ENGL115	Technical & Business Writing	Opt4 3
ENGL117	Composition I	Opt4 3
ENGL410	Communication Skills	Opt4 3
OFFC205	Business English	Opt4 3
BSAD227	Business Communications	Opt4 3
SOCY101	Introduction To Sociology	Opt5 3
SOCY302	Industrial Relations	Opt5 3
PSCH101	General Psychology	Opt5 3
PSCH106	Psychology Of Human Relations & Adj	Opt5 3
MGMT203	Human Relations In Business	Opt5 3

### Elective Courses

Elective	3
----------	---



# EDUCATIONAL PROGRAMS

## COMPUTER SCIENCE - PREPARATION

Students planning to major in computer science at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## COMPUTER SCIENCE TECHNOLOGY

The Computer Science Tech program is designed to allow students to transfer to a four-year program and additionally qualifies the students for positions as programmer and programmer analyst. The program emphasizes technical applications programming. The student studies several programming languages, various levels of operating systems, various types of computer systems, and the peripheral equipment available in the field.

Location: Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of two years of high school algebra or equivalent with the grade "C" or above. Students start any term.

### Graduation Requirements

To earn a Computer Science Technology AS degree a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

	Complete AS Degree Core Requirements	24
COMS111	Computers & Programming I	3
COMS112	Computers & Programming II	3
COMS160	Computational Structures	3
DATA101	Intro To Data Processing	3
DATA319	Assembler/Beginning	4
ENGL117	Composition I	3
ENGL118	Composition II	3
MATH094	Intermediate Algebra	4
MATH121	Elementary Statistics	4
MATH129	Calculus I	5
MATH130	Calculus II	5
SPCH110	Fundamentals Of Speech	3

#### Option Courses

	Select One Course From Option 1	
COMS172	Computer Programming-FORTRAN	Opt1 2
DATA231	RPG/II	Opt1 3

## CONDITIONED AIR

The Conditioned Air program provides the theory, knowledge, and skills of refrigeration, air conditioning, heating, and ventilation equipment for systems in residential and light commercial structures. Students in air conditioning and refrigeration are taught in the classroom and laboratory on models and equipment to prepare the student for satisfactory entrance and advancement in the conditioned air field.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/infor-



mation sessions. Students start summer term.

### Graduation Requirements

To earn a Conditioned Air diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

CONA451	Fundamentals Of Refrigeration	3
CONA452	Electricity I	3
CONA454	Fundamentals Of Heating	3
RCMA400	Related Math	3

#### Term 2

CONA461	Advanced Refrigeration/Heating	5
CONA462	Year Round Air Conditioning I	8
CONA463	Blueprint Reading	2
CONA464	Related Physics	3

#### Term 3

CONA471	Air Distribution	5
CONA472	Year Round Air Conditioning II	7
ENGL410	Communication Skills	3
SOCY302	Industrial Relations	3

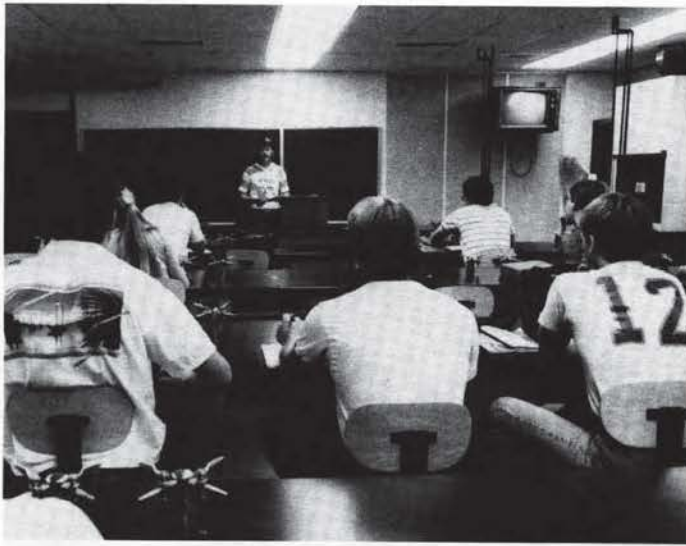
## COOPERATIVE EDUCATION

The Cooperative Education curriculum is designed for students who want to gain work experiences relevant to their academic and career plans. These supervised work experiences encourage students to apply what they are studying. Students may earn up to six academic credits. Opportunities are available year-round to qualified students in a wide variety of organizations.

Cooperative Education offers a course in job seeking skills. The Pre-employment Seminar course presents principles and practices of



# EDUCATIONAL PROGRAMS



marketing yourself to employers. Attention is focused on developing a plan and personal portfolio for a job winning campaign. Topics include job market assessment, personal assessment, resume writing, and interviewing.

## CRIMINAL JUSTICE

The Criminal Justice program prepares students for a career in such areas as law enforcement, corrections, and juvenile justice. The program allows students to choose either an AA or an AS degree. All students must complete basic Criminal Justice requirements, then select other Criminal Justice classes in areas of primary interest.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Criminal Justice AA or AS degree, students must complete the standard core requirements for the degree, plus the Criminal Justice required courses and options, and maintain a grade point average of 2.0.

### Criminal Justice (AA Degree)

#### Required Courses

	Complete AA Degree Core Requirements	48
CRIM101	Intro To Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Crim Justice Agencies	3
PLSC126	Intro To Public Administration	3
SOCY107	Criminology	3

#### Option Courses

	Select 12 Credits From Option 1	
CRIM104	Criminal Law	Opt1 3
CRIM106	Juvenile Law	Opt1 3
CRIM107	Theories Of Interviewing	Opt1 3
CRIM110	Penology	Opt1 3
CRIM171	Comparative Criminal Justice Systems	Opt1 3
CRIM211	Correctional Treatment	Opt1 3
CRIM212	Correctional Law	Opt1 3

CRIM214	Criminal Investigation	Opt1 3
CRIM226	Retail Security Investigations	Opt1 3
CRIM230	Seminar In Criminal Justice	Opt1 3
CRIM236	Internship	Opt1 3
CRIM250	General Identification	Opt1 3
CRIM260	Fingerprinting	Opt1 3
CRIM270	Weapons & Firearms	Opt1 3
CRIM280	Physiological Fluids/Hairs/Fibers	Opt1 3

### Criminal Justice (AS Degree)

#### Required Courses

	Complete AS Degree Core Requirements	24
CRIM101	Intro To Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Crim Justice Agencies	3
CRIM236	Internship	3
PLSC126	Intro To Public Administration	3
SOCY107	Criminology	3

#### Option Courses

	Select 15 Credits From Option 1	
CRIM104	Criminal Law	Opt1 3
CRIM106	Juvenile Law	Opt1 3
CRIM107	Theories Of Interviewing	Opt1 3
CRIM110	Penology	Opt1 3
CRIM171	Comparative Criminal Justice Systems	Opt1 3
CRIM211	Correctional Treatment	Opt1 3
CRIM212	Correctional Law	Opt1 3
CRIM214	Criminal Investigation	Opt1 3
CRIM226	Retail Security Investigations	Opt1 3
CRIM230	Seminar In Criminal Justice	Opt1 3
CRIM250	General Identification	Opt1 3
CRIM260	Fingerprinting	Opt1 3
CRIM270	Weapons & Firearms	Opt1 3
CRIM280	Physiological Fluids/Hairs/Fibers	Opt1 3

#### Elective Courses

Electives	4
-----------	---

## CULINARY ARTS

The Culinary Arts program prepares the student to enter culinary positions with hotels, restaurants, clubs, or institutions. Some select jobs in dining room service, catering, or management. By the end of the program, graduates will have taken courses in food preparation, sanitation and equipment, purchasing/cost control, and buffet decorating. International cuisine, restaurant management, and advanced culinary cuisine are practicum courses and a valuable part of the training. These courses are management designed courses and offer the student practical knowledge of the restaurant industry.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information session. Students start fall term.

### Graduation Requirements

To earn a Culinary Arts AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation & Equipment	2



# EDUCATIONAL PROGRAMS

HRMT319	Sanitation & Equipment Lab		1
MGMT203	Human Relations In Business		3
BSAD223	Business/Financial Math		3

## Term 2

HRMT326	Food Preparation II		2
HRMT328	Food Preparation II Lab		2
HRMT349	Nutrition & Menu Planning		3
HRMT348	Purchasing/Cost Control		3
ENGL410	Communication Skills		3

Select 2 Courses from Option 1

CULA340	Baking	Opt1	2
CULA386	Buffet Decorating	Opt1	2
CULA332	Ala Carte Cooking	Opt1	2
OFFC329	Keyboarding I	Opt1	1

## Term 3

HRMT347	Work Experience		5
HRMT342	Work Experience Seminar		1

## Term 4

HRMT335	Restaurant Management		2
HRMT357	Restaurant Management Lab		5
CULA456	International Cuisine		2
CULA446	International Cuisine Lab I		3
MGMT101	Personnel Supervision		3
COOP220	Pre-Employment Seminar		2

## Term 5

CULA452	Advanced Culinary Cuisine		2
CULA451	Culinary Cuisine Lab		8
Select 2 Courses from Option 2			
CULA349	International Cuisine Lab II	Opt2	3
CULA365	Advanced Baking	Opt2	3
BSAD150	Intro To Business	Opt2	3
OFFC340	Intro To Office Computer Application	Opt2	3
OFFC341	Advanced Office Computer Application	Opt2	3
HRMT360	Layout Equipment & Design	Opt2	3

## DENTAL ASSISTANT

The Dental Assistant program prepares the student, as a member of the dental health team, to assist the dentist in all phases of dentistry. The program includes general and specialty dentistry, chairside procedures, radiology, and laboratory and business office assisting.

An integral part of the educational program is clinical experience; this is provided by rotation through various dental facilities.

The Dental Assistant program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council of Postsecondary Accreditation and the United States Department of Education.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit proof of successful completion of one year of high school biology or equivalent (Learning Center Biology I & II or BIOL127). Typing skill of 35 wpm with no more than 5 errors is strongly recommended. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

### Graduation Requirements

To earn a Dental Assistant diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

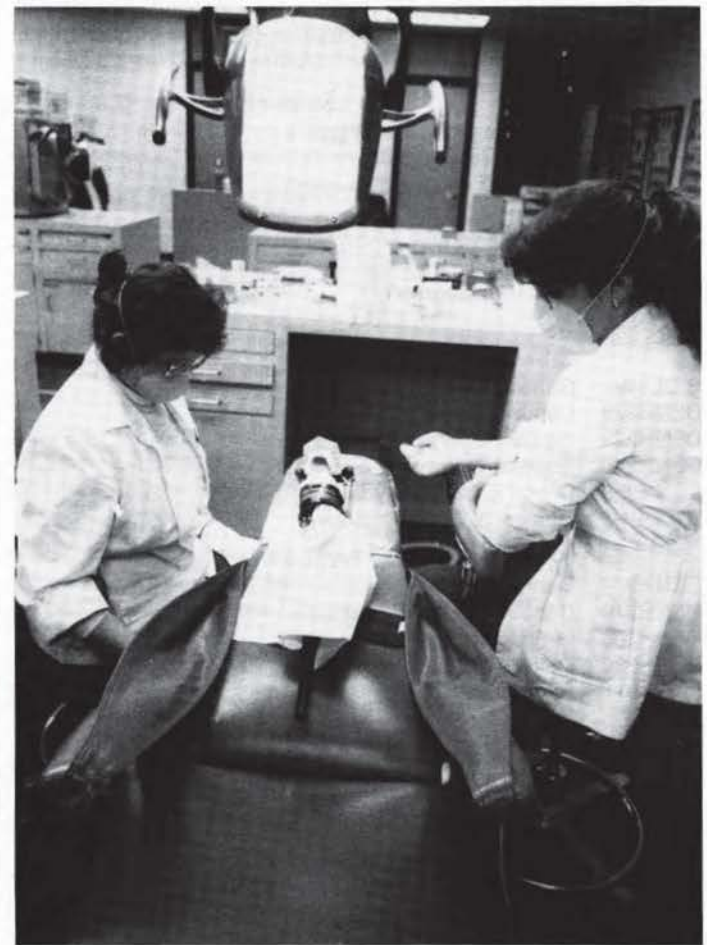
<b>Term 1</b>			
DENA302	Dental Science I		4
DENA304	Dental Anatomy		2
DENA325	Dental Materials Lab		1
DENA320	Preclinical Dental Assisting		6
DENH201	Dental Materials		2
DENH257	Dental Radiography I		3

## Term 2

DENA305	Dental Radiography II		2
DENA309	Dental Assisting Seminar		1
DENA310	Dental Assisting Clinical		3
DENA312	Dental Science II		2
DENA322	Clinical Dental Assisting		5
DENA323	Dental Business Office Procedure		2
ENGL117	Composition I		3

## Term 3

DENA316	Ethics & Clinical Seminar		1
DENA318	Dental Assisting Clinical II		4
PSCH106	Psychology Of Human Relations & Adj		3
SPCH110	Fundamentals Of Speech		3





# EDUCATIONAL PROGRAMS

## DENTAL HYGIENE

The Dental Hygiene curriculum is designed to prepare graduates for positions in general and specialty dental offices, hospitals, schools, public health agencies and industrial agencies.

Students are trained in educational methods and preventive clinical services which qualify them as dental health educators and competent clinicians. Emphasis is placed on the correlation between prevention, education, and the clinical phases of dental hygiene practice and the basic and social sciences.

The Dental Hygiene program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council of Postsecondary Accreditation and the United States Department of Education.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Provide records indicating high school graduation or GED completion, and a composite score of 20 or above on ACT. Submit evidence of completion of college level General Chemistry I and General Anatomy and Physiology with a "C" or better. (DMACC course numbers are CHEM 131 and BIOL 154). A 2.0 grade point average on a minimum of 12 semester hours of college credit, including General Chemistry I and General Anatomy and Physiology, may be substituted for the ACT score. Fall starts only.

### Graduation Requirements

To earn a Dental Hygiene AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. Only one grade of "D" in DENH curriculum is allowed toward fulfilling graduation requirements.

		<b>Term 1</b>	
CHEM132	General Chemistry II		4
DENH208	Principles Of Dental Hygiene		2
DENH209	Principles/Dental Hygiene Practicum		3
DENH210	Oral Histology & Embryology		2
DENH230	Dental Anatomy		4
DENH257	Dental Radiography I		3
		<b>Term 2</b>	
	CPR Certification		
BIOL149	General Microbiology		4
DENH228	Dental Hygiene I		2
DENH229	Dental Hygiene I Practicum		4
DENH240	Nutrition & Preventive Dentistry		4
DENH259	Dental Radiography II		2
DENH293	General & Oral Pathology		3
		<b>Term 3</b>	
DENH278	Dental Hygiene II		2
DENH279	Dental Hygiene II Practicum		2
DENH280	Periodontology		2
DENH282	Dental Pharmacology		2
PSCH101	General Psychology		3
		<b>Term 4</b>	
DENH201	Dental Materials		2
DENH203	Dental Materials Lab		1
DENH227	Dental Health Education		3
DENH288	Dental Hygiene III		2
DENH281	Dental Hygiene III Practicum		5
SOCY101	Introduction To Sociology		3
		<b>Term 5</b>	
DENH290	Community Health Issues		3

DENH298	Dental Hygiene IV	2
DENH291	Dental Hygiene IV Practicum	5
SPCH110	Fundamentals Of Speech	3
ENGL117	Composition I	3

## DENTISTRY - PREPARATION

Students planning to major in Dentistry at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## DEVELOPMENTAL DISABILITIES

The Developmental Disabilities Diploma program prepares students to serve as a member of a multidisciplinary team in institutions or community settings serving the handicapped.

Course work includes instruction in human growth, speech and hearing problems, health care techniques, and program planning for the mentally retarded, emotionally disturbed, learning disabled and physically handicapped individual.

Practical experience is a key component of the Developmental Disabilities Diploma program; students will complete a practicum each term within various programs for handicapped persons.

When the program is completed, students may be employed in positions such as group leader, cottage parent, program or educational assistant, or teacher's aide. A second career option; the Developmental Disabilities Associate degree is also available for those wishing further education.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Developmental Disabilities diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD268	Professional Relationships	1
DEVD260	The Exceptional Individual	3
DEVD261	Programs For Mentally Retarded	3
DEVD262	Health Care	3
DEVD264	Programs/Physically Handicapped	3
DEVD265	Multicategorical Disorders	3
DEVD266	Speech & Hearing Disorders	2
DEVD267	Observation/Guidance Of Disabled	3
DEVD460	Practicum I	2
DEVD463	Practicum II	3

#### Option Courses

Select 1 Course From Each Option		
ENGL115	Technical & Business Writing	Opt1 3
ENGL117	Composition I	Opt1 3
ENGL410	Communication Skills	Opt1 3
OFFC205	Business English	Opt1 3



# EDUCATIONAL PROGRAMS

BSAD227	Business Communications	Opt1	3
SOCY101	Introduction To Sociology	Opt2	3
SOCY302	Industrial Relations	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
MGMT203	Human Relations In Business	Opt2	3

## DEVELOPMENTAL DISABILITIES - ASSOCIATE

The Developmental Disabilities Associate degree is designed to build on those skills acquired in the Developmental Disabilities Diploma program and to broaden a student's background in general education. Further competence in working with the handicapped is developed through additional field practicum experience.

Students who have completed the Developmental Disabilities Diploma program and the requirements below will be awarded a Developmental Disabilities Associate in Science degree. Graduates of the program may choose to transfer to a four-year institution or work in one of the many areas providing services to the developmentally disabled individual.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Developmental Disabilities AS degree, a student must complete the standard core requirements for the degree, plus the required Developmental Disabilities courses and options, and maintain a 2.0 grade point average.

#### Required Courses

	Complete AS Degree Core Requirements	24
CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD268	Professional Relationships	1
DEVD260	The Exceptional Individual	3
DEVD261	Programs For Mentally Retarded	3
DEVD262	Health Care	3
DEVD264	Programs/Physically Handicapped	3
DEVD265	Multicategorical Disorders	3
DEVD266	Speech & Hearing Disorders	2
DEVD267	Observation/Guidance Of Disabled	3
DEVD460	Practicum I	2
DEVD463	Practicum II	3
DEVD464	Developmental Disab Assoc Practicum	3

#### Elective Courses

Electives	7
-----------	---



## DIESEL EQUIPMENT MECHANIC

The Diesel Equipment Mechanic program prepares students for a career in the diesel repair field. Instruction is in the repair, maintenance, and testing of diesel engines, power trains, and components of trucks and construction equipment.

Employment opportunities exist in the servicing and repair of equipment such as buses, trucks, tractors, and heavy construction equipment. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Diesel Equipment Mechanic AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

		<b>Term 1</b>	
DISL401	Diesel Engines		15
RCMA400	Related Math		3
		<b>Term 2</b>	
DISL404	Power Trains		8
DISL406	Hydraulics		5
DISL408	Basic Electricity		5
		<b>Term 3</b>	
DISL420	Air Conditioning		3
DISL428	Operation & Maintenance		6
DISL430	Dynamometer Testing		3
		<b>Term 4</b>	
DISL402	Diesel Electronics		3
DISL407	Diesel Fuel System		15
		<b>Term 5</b>	
DISL470	Advanced Electricity		2
DISL476	Truck & Heavy Equipment Repair		14
WELD467	Related Weld-Transportation Trades		2
		<b>Term 6</b>	
COMS181	Intro To Computer Literacy		3
DISL460	Shop Management		2
ENGL410	Communication Skills		3
SOCY302	Industrial Relations		3





# EDUCATIONAL PROGRAMS

## ELECTRONICS MAINTENANCE

The Electronics Maintenance curriculum is designed to prepare the student for entry level positions as an electronics service person.

Students who have completed the program should be able to perform the routine maintenance of electronic systems. The curriculum places emphasis on servicing consumer products, e.g., color TV, radio, video cassette recorders, video discs, and other related consumer product devices.

Upon program completion, students seek employment in TV service shops, stereo shops, audio-visual businesses, major retail outlets, as well as other related electronic service positions.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

### Graduation Requirements

To earn an Electronic Maintenance AAS degree, a student must complete all courses as prescribed and maintain a 2.0 grade point average.

#### Term 1

	Select 1 Course From Option 1		
ENGL115	Technical & Business Writing	Opt1	3
ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3
ELEM450	Related Math		3
ELEM451	DC & AC Fundamentals		3
ELEM452	DC & AC Fundamentals Lab		3
ELEM453	Basic Electrical Practices		3
ELEM454	Basic Electrical Practices Lab		3

#### Term 2

ELEM460	Applied Electronics		3
ELEM461	Applied Electronics Lab		3
ELEM462	Digital Electronics		3
ELEM463	Digital Electronics Lab		3
ELEM464	Industrial Electronics		3
ELEM465	Industrial Electronics Lab		3

#### Term 3

	Select 1 Course From Option 2		
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
PSCH101	General Psychology	Opt2	3

SOCY101	Introduction To Sociology	Opt2	3
SOCY302	Industrial Relations	Opt2	3
ELEM470	Communications		3
ELEM471	Communications Lab		2
ELEM472	Color Systems I		3
ELEM474	Color Systems I Lab		1

#### Term 4

ELEM480	Consumer Products		6
ELEM481	Consumer Products Lab		3
ELEM482	Color Systems II		6
ELEM483	Color Systems II Lab		3

## ENGINEERING - PREPARATION

Students planning to major in engineering at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## EXECUTIVE ASSISTANT

The Executive Assistant is a person who possesses a mastery of office skills, demonstrates the ability to assume responsibility without direct supervision, exercises initiative and judgment, and makes decisions within the scope of assigned authority.

The Executive Assistant students select electives such as accounting, shorthand, or word processing to emphasize their personal preferences and then combines all the office skills with management techniques. Those techniques will help in supervisory positions.

Locations: Ankeny, Boone, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn an Executive Assistant AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD150	Intro To Business		3
BSAD223	Business/Financial Math		3
BUSL101	Business Law I		3
COOP220	Pre-Employment Seminar		2
MGMT101	Personnel Supervision		3
MGMT203	Human Relations In Business		3
OFFC203	Admin Office Management		3
OFFC204	Office Procedures		4
OFFC205	Business English		3
OFFC206	Written/Oral Communication		3
OFFC301	Typing I		2
OFFC302	Typing II		2
OFFC303	Typing III		2
OFFC309	Office Accounting		2
OFFC310	Professional Development		3
OFFC324	Office Calculators		1
OFFC337	Word Processing I		3
OFFC338	Word Processing II		3





# EDUCATIONAL PROGRAMS

OFFC403	Professionalism I		1
OFFC404	Professionalism II		1
OFFC405	Professionalism III		1
OFFC409	Internship		4

## Option Courses

Select 1 Course From Option 1

OFFC340	Intro To Office Computer Application	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3

## Elective Courses

Elective - Dept Approved			5
--------------------------	--	--	---



## FASHION MERCHANDISING

The Fashion Merchandising program appeals to the individual who has the drive to become a leader in business. Will a competitive atmosphere on the job or a willingness to take risks motivate you? The fashion business, whether it's clothing, accessories or home furnishings, is fast paced and challenging. You can be a decision maker, use your creativity and work closely with consumers as a consultant in helping satisfy their needs. This program will provide you with up-to-date sales and management instruction as well as cooperative work experience to receive training and enhance your skills. A Fashion Study Tour is available as an elective activity in the program.

Specific fashion career opportunities include retail, wholesale or manufacturer sales, fashion retail store management, buying, display, customer service, or small business ownership. Advanced management positions are available to those who demonstrate strong skills and knowledge.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/infor-

mation sessions. Students start fall or spring term.

## Graduation Requirements

To earn a Fashion Merchandising AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## Required Courses

BSAD150	Intro To Business		3
BSAD223	Business/Financial Math		3
BSAD227	Business Communications		3
COOP220	Pre-Employment Seminar		2
MGMT101	Personnel Supervision		3
MGMT203	Human Relations In Business		3
MGMT322	Office Procedures		1
MGMT341	Business Internship I		5
MGMT342	Internship Seminar I		2
MGMT353	Business Internship II		4
MGMT358	Internship Seminar II		1
MGMT362	Business Internship III		4
MGMT367	Internship Seminar III		1
MGMT406	Human Potential		2
MGMT407	Professional Development Seminar		1
MKTG102	Principles Of Marketing		3
MKTG103	Principles Of Selling		3
MKTG104	Advertising & Sales Promotion		3
MKTG231	Principles/Clothing Selection		3
MKTG321	Retail Management I		3
MKTG322	Retail Management II		3
MKTG323	Display & Visual Merchandising		2
MKTG324	Buying & Merchandise Control		3
MKTG332	Textiles		3
MKTG333	Fashion Show Procedures		3
MKTG334	Prin Of Fashion Merchandising		3
SPCH110	Fundamentals Of Speech		3

## Option Courses

Select 1 Course From Each Option

ACCT101	Principles Of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
DATA101	Intro To Data Processing	Opt2	3
DATA103	BASIC	Opt2	3

## FINANCIAL SERVICES

Upon completion of the Financial Services program, the successful student will be prepared for a career in the financial services industry.

Specialized courses in Principles of Bank Operations, Introduction to Data Processing, Consumer Lending, Management Fundamentals, Real Estate Finance, Money and Banking, and Field Experience provide the basic content areas. A good background in general business courses is included with the options of specializing in a specific area of interest.

The field experience program in the last two terms gives the student practical experience in a financial institution.

Financial Services institutions favor promoting from within, and continuing the education of their employees. Industry classes, college and graduate school, working at occupations such as teller, management trainee, internal auditor, public relations manager, credit analyst, loan officer, customer service representative, administrative secretary, trust administrator, proof operator, cashier, and market researcher are utilized as methods of furthering employee competence.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/infor-



# EDUCATIONAL PROGRAMS

mation sessions. Students start any term.

## Graduation Requirements

To earn a Financial Services AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
BSAD150	Intro To Business	3
BSAD223	Business/Financial Math	3
BSAD227	Business Communications	3
BUSL101	Business Law I	3
BUSL102	Business Law II	3
COOP220	Pre-Employment Seminar	2
DATA101	Intro To Data Processing	3
ECON101	Principles Of Macro-Economics	3
ENGL117	Composition I	3
FNSR201	Principles Of Banking	3
FNSR203	Real Estate Finance	3
FNSR204	Management Fundamentals	3
FNSR205	Money & Banking	3
FNSR237	Consumer Lending	3
FNSR393	Field Experience I	4
FNSR395	Field Experience II	4
MGMT101	Personnel Supervision	3
MGMT203	Human Relations In Business	3
MGMT322	Office Procedures	1
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3
SPCH110	Fundamentals Of Speech	3

### Elective Courses

Electives - Dept. Approved	6
----------------------------	---

## FIRE SCIENCE TECHNOLOGY

The Fire Science program provides a fundamental base of knowledge for people seeking career opportunities in the broad field of fire protection.

During the program, students complete general education core requirements and specific fire science courses. The latter examine the causes and behavior of fire, and the means of minimizing its destructive effects through design, detection, suppression, and prevention. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Fire Science AS degree, a student must complete the standard core requirements for the degree, plus the Fire Science Technology required courses, and maintain a 2.0 grade point average.

### Required Courses

Complete AS Degree Core Requirements	24	
BSAD225	Principles Of Insurance	3
CHEM131	General Chemistry I	4
ENGL117	Composition I	3
ENGL118	Composition II	3
FIRE231	Intro To Fire Science	2
FIRE232	Fire Behavior	3
FIRE233	Building Construction	3
FIRE234	Fire Protection Systems	3
FIRE235	Hazardous Materials	3

FIRE236	Fluid Flows	3
FIRE237	Planning For Fire Protection	3
FIRE238	Fire Investigation	2
MGMT102	Introduction To Management	3
PHYL106	Survey Of Physical Science	4
PLSC112	State & Local Government	3
PSCH106	Psychology Of Human Relations & Adj	3
SPCH110	Fundamentals Of Speech	3

## HEALTH CARE ADMINISTRATION

The Health Care Administration program trains students for entry level administrative positions in a rapidly growing health care field. Administrators play a vital role in planning, organizing, directing and controlling the operation of a health care facility.

Students in the program complete general education core requirements, Business Law, and Accounting. Health Care Administration courses are offered on an independent study basis. Independent study, as defined in this program, means a combination of classes, group meetings, written assignments mailed to the instructors on a regular basis, and examinations. All students complete a practicum supervised by a licensed administrator, who helps the student apply theoretical knowledge gained in the classroom.

Completion of the AS degree qualifies the graduate to apply and sit for the Nursing Home Administrator Licensure Exam. Location: Ankeny

### Program Entry Requirements

Complete an application and attend the required program orientation. Students start any term.

### Graduation Requirements

To earn a Health Care Administration AS degree, a student must complete the standard core requirements for the degree, plus the Health Care Administration program required courses and options and maintain a 2.0 grade point average.

### Required Courses

Complete AS Degree Core Requirements	24	
BUSL101	Business Law I	3
HCAD275	Admin: Long-Term Care Facilities	6
HCAD276	Services/Long-Term Care Residents	6
HCAD251	Pract: Social Services	2
HCAD252	Pract: Dietary	2
HCAD253	Pract: Legal Aspects & Govt Organ	2
HCAD254	Pract: Nursing	2
HCAD255	Housekeeping/Laundry/Maintenance	2
HCAD256	Pract: Activ/Community Resources	2
HCAD257	Pract: Business Administration	2
HCAD258	Pract: Administrative Organization	2
HCAD259	Pract: Human Resource Management	2
HCAD281	Seminar In Health Care	3
SOCY204	Social Gerontology/Applications	4

### Option Courses

Select One Of The Following Options			
ACCT101	Principles Of Accounting I	Opt1	4
ACCT102	Principles Of Accounting II	Opt1	4
ACCT101	Principles Of Accounting I	Opt2	4
HCAD237	Long-Term Care Financial Management	Opt2	3
ACCT301	Accounting Fundamentals	Opt3	3
HCAD237	Long-Term Care Financial Management	Opt3	3

## HIGH TECH - BIOMEDICAL

The High Tech-Biomedical program prepares you for a career as a



# EDUCATIONAL PROGRAMS

biomedical electronic technician. By the end of the program you will be able to troubleshoot and repair medical electronic instrumentation such as patient monitoring EEG equipment as well as clinical lab instrumentation such as PH meters, spectrophotometers, and blood cell counters. The technical curriculum is also supported by courses from the health field such as health care delivery and integrated sciences.

Upon program completion you may seek employment in hospitals or as a technician for a manufacturer of medical electronic equipment. Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school algebra or equivalent with the grade "C" or above. Obtain a satisfactory score on an algebra aptitude test. Students start fall term.

## Graduation Requirements

To earn a High Tech-Biomedical AAS degree, a student must complete the courses as prescribed and maintain a 2.0 grade point average.

### Term 1

ELHT311	Circuit Analysis I	6
ELHT312	Circuit Analysis I Lab	3
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	2
ENGL115	Technical & Business Writing	3

### Term 2

ELHT321	Circuit Analysis II	6
ELHT322	Circuit Analysis II Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
	Select 1 Course from Option 1	
SOCY101	Introduction To Sociology	Opt1 3
SOCY302	Industrial Relations	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology Of Human Relations & Adj	Opt1 3
MGMT203	Human Relations In Business	Opt1 3

### Term 3

ELHT330	Digital Circuits I	3
ELHT331	Circuit Analysis III	3
ELHT342	Calculus For Electronics	3
ELHT362	Digital Circuits Lab	1
ELHT363	Circuit Analysis III Lab	2

### Term 4

CHEM120	Survey Of Chemistry	3
ELHT340	Digital Circuits II	5
ELHT341	Digital Circuits II Lab	5
ELHT345	Data Communication & Laser	3
ELHT346	Data Communication & Laser Lab	2

### Term 5

BIOL127	Human Biology	3
ELHT343	Physics For Electronics	3
HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instrumentation I Lab	5
HTBM358	Internship	3

### Term 6

HTBM355	Electro-Mechanical Systems I	2
HTBM356	Electro-Mechanical Systems I Lab	2
HTBM362	Health Care Delivery	3
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instrumentation II Lab	2

## HIGH TECH - COMPUTERS

The High Tech-Computers program prepares you for a career as a computer technician. At the end of the program, you should be able to diagnose and repair digital electronic equipment, including computers, microprocessor-based instrumentation and peripheral equipment such as floppy disk drives, terminals, and various interface devices. These skills will qualify you for positions such as computer field engineer, customer engineer, or as a test technician prototyping microprocessor-based instrumentation for a variety of industrial uses.

Highly technical courses will train you in state-of-the-art digital electronics and the use of specialized test equipment used for both circuit design and to diagnose and repair digital and microprocessor circuits. Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school algebra or equivalent with the grade "C" or above. Obtain a satisfactory score on an algebra aptitude test. Students start fall term.

## Graduation Requirements

To earn a High Tech-Computers AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.



### Term 1

ELHT311	Circuit Analysis I	6
ELHT312	Circuit Analysis I Lab	3
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	2
ENGL115	Technical & Business Writing	3

### Term 2

ELHT321	Circuit Analysis II	6
ELHT322	Circuit Analysis II Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
	Select 1 Course from Option 1	
SOCY101	Introduction To Sociology	Opt1 3
SOCY302	Industrial Relations	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology Of Human Relations & Adj	Opt1 3
MGMT203	Human Relations In Business	Opt1 3



# EDUCATIONAL PROGRAMS

## Term 3

ELHT330	Digital Circuits I	3
ELHT331	Circuit Analysis III	3
ELHT343	Physics For Electronics	3
ELHT362	Digital Circuits Lab	1
ELHT363	Circuit Analysis III Lab	2

## Term 4

ELHT340	Digital Circuits II	5
ELHT341	Digital Circuits II Lab	5
ELHT345	Data Communication & Laser	3
ELHT346	Data Communication & Laser Lab	2
	Select 1 Course From Option 2	
BSAD150	Intro To Business	Opt2 3
BUSL101	Business Law I	Opt2 3
ECON101	Principles Of Macro-Economics	Opt2 3

## Term 5

HTCT351	Major Computer Systems I	5
HTCT352	Major Computer Systems I Lab	5
HTCT353	Microprocessors	5
HTCT354	Microprocessors Lab	2

## Term 6

HTCT361	Major Computer Systems II	3
HTCT362	Major Computer Systems II Lab	3
HTCT364	Microcomputer Systems	3
HTCT365	Microcomputer Systems Lab	3

## HIGH TECH - ROBOTICS

The High Tech-Robotics program prepares you for a career as a technician in industrial manufacturing. At the end of the program, you should be able to diagnose and repair industrial equipment ranging from the basic motor control devices used in hard automation to the sophisticated industrial robots that utilize microprocessors for programming and servo control.

The curriculum includes both the fundamental technologies and system applications. Upon program completion you may seek employment with area manufacturers maintaining plant equipment or with companies that produce process control or robotic devices.

Location: Ankeny



## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school algebra or equivalent with the grade "C" or above. Obtain a satisfactory score on an algebra aptitude test. Students start fall term.

## Graduation Requirements

To earn a High Tech-Robotics AAS degree, a student must complete the courses as prescribed and maintain a 2.0 grade point average.

### Term 1

ELHT311	Circuit Analysis I	6
ELHT312	Circuit Analysis I Lab	3
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	2
ENGL115	Technical & Business Writing	3

### Term 2

ELHT321	Circuit Analysis II	6
ELHT322	Circuit Analysis II Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
	Select 1 Course from Option 1	
SOCY101	Introduction To Sociology	Opt1 3
SOCY302	Industrial Relations	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology Of Human Relations & Adj	Opt1 3
MGMT203	Human Relations In Business	Opt1 3

### Term 3

ELHT330	Digital Circuits I	3
ELHT331	Circuit Analysis III	3
ELHT342	Calculus For Electronics	3
ELHT362	Digital Circuits Lab	1
ELHT363	Circuit Analysis III Lab	2

### Term 4

ELHT340	Digital Circuits II	5
ELHT341	Digital Circuits II Lab	5
ELHT345	Data Communication & Laser	3
ELHT346	Data Communication & Laser Lab	2
	Select 1 Course From Option 2	
BSAD150	Intro To Business	Opt2 3
BUSL101	Business Law I	Opt2 3
ECON101	Principles Of Macro-Economics	Opt2 3

### Term 5

HTPC351	Hydraulics & Pneumatics	3
HTPC352	Hydraulics & Pneumatics Lab	3
HTPC354	Motor Control & PLC's	3
HTPC355	Process Control Instrumentation	3
HTPC356	Motor Control & PLC Lab	3
HTPC357	Process Control Instr Lab	2

### Term 6

HTPC360	Industrial Electronics	2
HTPC361	Robotics	3
HTPC362	Robotics Lab	2
HTPC363	Mechanisms	3
HTPC364	Mechanisms Lab	2

## HOSPITALITY APPRENTICE

The Hospitality Apprentice program prepares students to enter either the food service field or lodging industry at a job entry level position.

Students who have completed the program will have taken courses in Food Preparation, Sanitation/Safety, Accounting, Purchasing/Cost



# EDUCATIONAL PROGRAMS

Control, Business Math, and Pre-employment Seminar. Positions that are filled by graduates are: front desk clerk, night auditor, and cooks. Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

## Graduation Requirements

To earn a Hospitality Apprentice diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

ENGL410	Communication Skills	3
HRMT315	Sanitation & Equipment	2
HRMT316	Food Preparation I	3
HRMT319	Sanitation & Equipment Lab	1
HRMT320	Food Preparation I Lab	3
MGMT203	Human Relations In Business	3

### Term 2

COOP220	Pre-Employment Seminar	2
HRMT326	Food Preparation II	2
HRMT328	Food Preparation II Lab	2
HRMT349	Nutrition & Menu Planning	3
MATH091	Arithmetic	2
	Select 3 Credits from Option 1	
CULA340	Baking	Opt1 2
CULA386	Buffet Decorating	Opt1 2
CULA332	Ala Carte Cooking	Opt1 2
HRMT330	Introduction To Hotel Operations	Opt1 2
OFFC311	Business Math & Calculators	Opt1 3
OFFC329	Keyboarding I	Opt1 1

### Term 3

HRMT347	Work Experience	5
HRMT342	Work Experience Seminar	1

## HOTEL & RESTAURANT MANAGEMENT

The Hotel & Restaurant Management program prepares students for a career in the hospitality field. Most graduates will enter the industry either in cooking positions or line management positions with hotels, restaurants, and clubs.

Students who complete the program will take courses in Food Preparation, Sanitation and Equipment, Purchasing/Cost Control, Marketing, Principles of Accounting, and House Administration.

Restaurant Management and House Administration feature practical courses. These courses are management designed and offer the student practical knowledge of the hotel and restaurant management industry.

Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

## Graduation Requirements

To earn a Hotel and Restaurant Management AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

BSAD223	Business/Financial Math	3
HRMT315	Sanitation & Equipment	2
HRMT316	Food Preparation I	3
HRMT319	Sanitation & Equipment Lab	1

HRMT320	Food Preparation I Lab	3
MGMT203	Human Relations In Business	3

### Term 2

ENGL410	Communication Skills	3
HRMT348	Purchasing/Cost Control	3
HRMT349	Nutrition & Menu Planning	3
SPCH110	Fundamentals Of Speech	3
	Select 2 Courses from Option 1	
HRMT330	Introduction To Hotel Operations	Opt1 2
OFFC329	Keyboarding I	Opt1 1
CULA340	Baking	Opt1 2
CULA332	Ala Carte Cooking	Opt1 2
CULA386	Buffet Decorating	Opt1 2
HRMT326	Food Preparation II	Opt1 2
HRMT328	Food Preparation II Lab	Opt1 2

### Term 3

HRMT347	Work Experience	5
HRMT342	Work Experience Seminar	1

### Term 4

ACCT301	Accounting Fundamentals	3
MGMT101	Personnel Supervision	3
BSAD150	Intro To Business	3
	Select Either Option 2 or 3	
HRMT364	Hotel Administration	Opt2 2
HRMT366	Hotel Administration Lab	Opt2 4
HRMT335	Restaurant Management	Opt3 2
HRMT357	Restaurant Management Lab	Opt3 5

### Term 5

COOP220	Pre-Employment Seminar	2
MKTG103	Principles Of Selling	3
	Select 1 Course from Option 4	
OFFC340	Intro To Office Computer Application	Opt4 3
OFFC341	Advanced Office Computer Application	Opt4 3
DATA101	Intro To Data Processing	Opt4 3
	Select 3 Courses from Option 5	
CULA446	International Cuisine Lab I	Opt5 3
HRMT360	Layout Equipment & Design	Opt5 3
BSAD229	Small Business Management	Opt5 3
BUSL101	Business Law I	Opt5 3
MKTG102	Principles Of Marketing	Opt5 3





# EDUCATIONAL PROGRAMS

## HUMAN SERVICES

The Human Services program prepares students for entry level jobs or for transfer to a four-year degree program. By the end of the program students will be able to interact effectively with clients in a human services agency.

The program emphasizes skills needed in working with clients such as interviewing, determining eligibility for services, making appropriate referrals, and assisting with counseling. A supervised field experience allows students to apply their skills in a work setting.

Specializations are offered in chemical dependency counseling, eating disorders, mental health, and social services.

When the program is completed, students may find employment in a wide variety of settings, including public and private social services agencies, treatment centers, group homes, institutions, hospitals, community centers, and state or county departments of social services. Locations: Ankeny, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Human Services AS degree, a student must complete the standard core requirements for the degree, plus the Human Services required courses and options, and maintain a 2.0 grade point average.

#### Required Courses

	Complete AS Degree Core Requirements	24
HUMS101	Introduction To Human Services	3
HUMS104	Community Organization	3
HUMS109	Survey Mental Health Treatment	3
HUMS202	Interviewing/Interper Relation	3
HUMS205	Intervention Theories/Practice I	3
HUMS206	Intervention Theories/Practice II	3
HUMS208	Field Experience	3
PSCH103	Developmental Psychology	3
PSCH104	Abnormal Psychology	3

#### Option Courses

	Select 3 Courses From Option 1 & 1 Course From Option 2	
ANTH120	Introduction To Anthropology	Opt1 3
CHLD170	Child Development	Opt1 3
HUMS210	Counseling Techniques	Opt1 3
HUMS211	Counseling With Women	Opt1 3
HUMS213	Pract: Chemical Depend Counsel I	Opt1 6
HUMS214	Pract: Chemical Depend Counsel II	Opt1 6
HUMS215	Eating Disorders	Opt1 3
HUMS216	Survey Of Addictive Disease	Opt1 3
PHIL112	Ethical Problems	Opt1 3
PLSC112	State & Local Government	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH102	Psychology Of Thinking	Opt1 3
PSCH105	Personality & Social Psychology	Opt1 3
PSCH106	Psychology Of Human Relations & Adj	Opt1 3
PSCH107	Principles Of Behavior Modification	Opt1 3
PSCH108	Human Sexuality & Sex Roles	Opt1 3
PSCH109	Educational Psychology	Opt1 3
PSCH110	Stress & Stress Management	Opt1 3
PSCH120	Understanding Human Behavior	Opt1 3
PSCH121	The Growing Years	Opt1 3
PSCH122	Brain, Mind, Behavior	Opt1 2
SOCY103	Courtship, Marriage & Family	Opt1 3
SOCY104	Social Psychology Of Small Groups	Opt1 3
SOCY105	Race, Ethnic & Gender Relations	Opt1 3

SOCY106	Juvenile Delinquency	Opt1 3
SOCY107	Criminology	Opt1 3
SOCY109	Aging In American Society	Opt1 3
SOCY110	Group Dynamics	Opt1 3
SOCY204	Social Gerontology/Applications	Opt1 4
SOCY101	Introduction To Sociology	Opt2 3
SOCY102	Social Issues	Opt2 3

## INDUSTRIAL MANAGEMENT & MARKETING

The Industrial Management and Marketing program offers a number of career options. It is a people-oriented field. Career opportunities consist of working with professional management in solving sales, purchasing, manufacturing and transportation problems. Specific benefits of this program include: up-to-date curriculum which emphasizes the latest industrial management and marketing principles; student-centered instruction which offers seminars, labs, field trips, field study projects, and classes; opportunity to earn as you learn through on-the-job training; leadership training at the local, state, and national levels through participation in the professional management club. Instructors possess extensive backgrounds in business and industry. Basic subject areas are: selling, advertising, marketing, purchasing, human relations, supervision, management, industrial organization, accounting and information processing.

Challenging careers with advancement opportunities exist in positions as manufacturer's representatives, purchasing agents, wholesalers, salespeople, owning your own distribution business, traffic and transportation managers, manufacturing and distribution managers, production supervision, customer service, parts and inventory management, and purchasing. Advanced management positions are available to those who demonstrate strong individual skills and knowledge.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn the Industrial Management and Marketing AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD150	Intro To Business	3
BSAD227	Business Communications	3
BUSL101	Business Law I	3





# EDUCATIONAL PROGRAMS

COOP220	Pre-Employment Seminar	2
MGMT101	Personnel Supervision	3
MGMT203	Human Relations In Business	3
MGMT322	Office Procedures	1
MGMT345	Field Experience I	5
MGMT344	Field Experience I Seminar	2
MGMT356	Field Experience II Seminar	1
MGMT363	Field Experience II	4
MGMT364	Field Experience III	4
MGMT369	Field Experience III Seminar	1
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3
MKTG211	Industrial Marketing	3
MKTG212	Purchasing	3
MKTG335	Industrial Product Analysis	3
MKTG336	Industrial Mgmt Operations	3

### Option Courses

Select One Course From Each Option

DATA101	Intro To Data Processing	Opt1	3
DATA103	BASIC	Opt1	3
MGMT102	Introduction To Management	Opt2	3
MGMT103	Sales Management	Opt2	3
ACCT101	Principles Of Accounting I	Opt3	4
ACCT301	Accounting Fundamentals	Opt3	3
BSAD223	Business/Financial Math	Opt4	3
MATH092	Introductory Algebra	Opt4	4
ENGL117	Composition I	Opt5	3
SPCH110	Fundamentals Of Speech	Opt5	3

OFFC401	Model Office	3
OFFC403	Professionalism I	1
OFFC404	Professionalism II	1

### Option Courses

Select 1 Course From Option 1

OFFC340	Intro To Office Computer Application	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3



## INFORMATION WORD PROCESSING

The Information/Word Processing program is designed to give students the knowledge needed for today's high technology office.

Workers are in demand in almost every type of business, and graduates of this program will have skills in English, grammar, and text-editing equipment operation.

Locations: Ankeny, Boone, Carroll, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn an Information/Word Processing diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC204	Office Procedures	4
OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC309	Office Accounting	2
OFFC310	Professional Development	3
OFFC311	Business Math And Calculators	3
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3

## INTERNATIONAL TRADE STUDIES

The International Trade Studies program offers a series of courses designed to provide a basic understanding and appreciation of international trade. Beginning with a traditional business core, the student will acquire specialized knowledge in buying and selling, insurance, freightage, warehousing, packaging, transporting, advertising and distributing, accounting and financing, banking and data processing, communication, custom documentation, and other areas relevant to commerce on an international scale.

Students completing the program will be prepared for employment in any organization actively involved in international markets.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn an International Trade Studies AS degree, a student must complete the standard core requirements for the degree, plus the International Trade Studies required courses and options and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
ACCT101	Principles Of Accounting I	4
BSAD150	Intro To Business	3
DATA101	Intro To Data Processing	3
ECON101	Principles Of Macro-Economics	3
FNSR213	International Banking	3
ITSP111	Intro To International Business	3
ITSP130	International Marketing	3
ITSP150	International Documentation	3



# EDUCATIONAL PROGRAMS

MKTG102 Principles Of Marketing 3

### Option Courses

Choose Either Option 1 Or Option 2

FORL120	Elementary Spanish I	Opt1	4
FORL121	Elementary Spanish II	Opt1	4
FORL130	French I	Opt2	4
FORL131	French II	Opt2	4

### Elective Courses

Electives 4

## JOB SHOP MACHINIST

The Job Shop Machinist program is designed for students who desire employment in general machine shop work.

Students gain practical experience on the latest, most up-to-date equip-



ment in the trade. Classroom work is strongly emphasized in order to understand the theory and principles of the processes involved.

The Job Shop Machinist program is the same as the first year of the Tool & Die program. Students who successfully complete the Job Shop Machinist program will receive credit for the first year of the Tool & Die program.

Career opportunities include work in job shops, machine shops, production departments, experimental departments, maintenance departments, and quality control departments. This training also provides background for the highly technical field of computer numerical control. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information session. Obtain a satisfactory score on an arithmetic aptitude test. Students start fall term.

### Graduation Requirements

To earn a Job Shop Machinist diploma, a student must complete the courses as prescribed and maintain a 2.0 grade point average.

### Term 1

TOOL403	Machine Shop Math	3
TOOL480	Blueprint Reading I	3
TOOL482	Machine Shop Measurements I	3
TOOL484	Machine Tool Operations I	3
TOOL486	Machine Tool Operations Lab I	5

### Term 2

TOOL481	Blueprint Reading II	3
TOOL483	Machine Shop Measurements II	3
TOOL485	Machine Tool Operations II	4
TOOL487	Machine Tool Operations Lab II	7

### Term 3

TOOL490	Machine Tool Operation Lab III	7
TOOL491	Machine Tool Operations III	4
	Must be taken anytime prior to completion	
ENGL410	Communication Skills	3

## JOURNALISM - PREPARATION

Students planning to major in journalism at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institution, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.





# EDUCATIONAL PROGRAMS

## LABOR STUDIES

The Labor Studies program was created through the cooperative efforts of the College and organized labor in the greater Des Moines area. This program is intended for those who want to become more active or involved in their local unions, for those wanting to update their skills in trade union education, and for students interested in learning about the many facets of organized labor in the United States.

Location: Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Labor Studies AS degree, a student must complete the standard core requirements for the degree, plus the Labor Studies required courses and options, and maintain a 2.0 grade point average. See program chairperson for specific requirements.

#### Required Courses

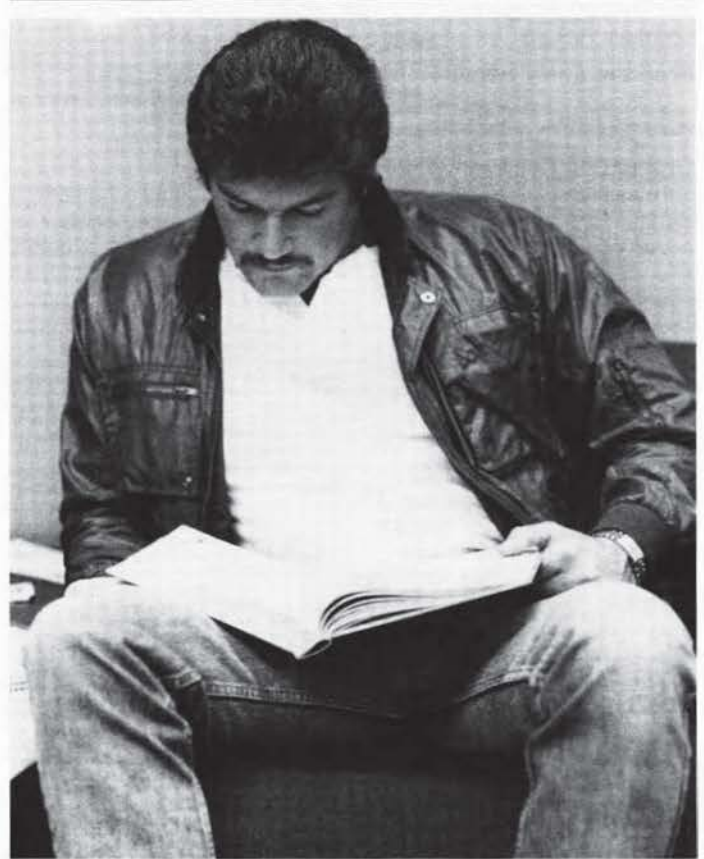
	Complete AS Degree Core Requirements	24
LABS220	Survey Of Labor Studies	3
LABS221	Grievance Handling & Arbitration	3
LABS222	History/Dev Of Labor Movement	3
LABS223	Protective Labor Relations Legis	3
LABS226	Labor Economics/Collective Bargain	3
LABS227	Union Administration	3

#### Option Courses

	Select 9 Credits From Option 1	
LABS224	Publ Sect Labor Leg/Col Barg	Opt1 3
LABS225	Union Psychology/Indust Sociology	Opt1 3
LABS228	Unions/Politics/Comp Labor Movement	Opt1 3
LABS229	Labor Studies Problems	Opt1 3
LABS230	Union Counseling	Opt1 3
LABS231	Advanced Union Counseling	Opt1 3

#### Elective Courses

Electives	13
-----------	----



## LAW - PREPARATION

Students planning to major in Law at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## LEGAL ASSISTANT

The Legal Assistant program trains students to do legal work under the supervision of an attorney. A legal assistant can relieve attorneys of routine matters and assist them with more complex ones.

Students in the program complete general education core requirements and courses in substantive law. Courses in areas such as torts and litigation, family law, business law, probate, and income tax prepare students to work in many legal areas.

All students complete an internship, under the supervision of an attorney, during which they apply the theoretical knowledge gained in the classroom.

Instructors in the Legal Assistant program are practicing attorneys. In addition, there is a legal assistant and a program counselor available to assist students with educational and career planning.

Graduates of the Legal Assistant program are employed in private



# EDUCATIONAL PROGRAMS

law firms, public agencies, and legal departments of large companies.  
Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

## Graduation Requirements

To earn a Legal Assistant AS degree, a student must complete the standard core requirements for the degree, plus the Legal Assistant required courses and options, and maintain a 2.0 grade point average, and receive a grade of "C" or above in all LEGA course work. LEGA courses taken more than six years prior to graduation will not satisfy program requirements, unless a student's proficiency in the area can be demonstrated.

### Required Courses

	Complete AS Degree Core Requirements	24
LEGA240	Introduction To Law	3
LEGA242	Torts & Litigation I	3
LEGA243	Torts & Litigation II	3
LEGA244	Domestic Relations	3
LEGA245	Income Tax Law	3
LEGA246	Business & Corporate Law I	3
LEGA247	Business & Corporate Law II	3
LEGA248	Real Estate Law	3
LEGA249	Probate Procedure	3
LEGA250	Legal Internship & Ethics	4
LEGA260	Legal Research & Writing I	3
LEGA261	Legal Research & Writing II	3

### Option Courses

	Select 9 Credits From Option 1	
ACCT101	Principles Of Accounting I	Opt1 4
BSAD153	Office Management	Opt1 3
CRIM104	Criminal Law	Opt1 3
CRIM105	Constitutional Law	Opt1 3
COMS181	Intro To Computer Literacy	Opt1 3
LEGA251	Wills, Estate Planning & Taxation	Opt1 3
LEGA252	Administrative Practice	Opt1 3
LEGA254	Evidence: Theory & Practice	Opt1 3
LEGA256	Debtor/Creditor Law	Opt1 3
LEGA257	Paralegalism In Practice	Opt1 3
LEGA258	Computerized Legal Research	Opt1 1
LEGA259	Advanced Legal Research & Writing	Opt1 3
LEGA270	Legal Interviewing/Clinical Exper	Opt1 3

## LEISURE STUDIES-HOLISTIC WELLNESS

The Leisure Studies program with the emphasis on the holistic wellness track prepares the student with the skills, training, and experience necessary to successfully develop and coordinate wellness programs for employees in the work place.

After completion of the program, the student has the choice of transferring to a four-year institution or seek employment. If the student chooses employment, opportunities exist in corporations, factories, private businesses, government agencies, health spas and other work settings.  
Location: Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Leisure Studies-Holistic Wellness AS degree, a student must complete the standard core requirements for the degree, plus the Leisure



Studies-Holistic Wellness required courses and electives and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
HUMS212	Survey Of Chemical Dependency	2
HLSC203	Diet & Your Health	3
LRST142	Supervised Field Experience I	1
LRST144	Prog Planning/Organization	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction To Recreation	2
PHYE149	Wellness Prog/Planning/Organiz	3
PHYE150	Fitness Testing/Programming	3
PSCH110	Stress & Stress Management	3

### Elective Courses

Electives	9
-----------	---

## LEISURE STUDIES-REC LEADERSHIP

The Leisure Studies program with an emphasis in recreational leadership, prepares the student with the skills, training, and experience necessary to successfully organize and lead activities in a variety of recreational settings. After completion of the program, employment opportunities are available in YMCA's, YWCA's, Boys' or Girls' Clubs, retirement communities, resorts, swimming pools, medical facilities, schools, industries, armed forces, and public and private institutions.  
Location: Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students may start any term.

### Graduation Requirements

To earn a Leisure Studies-Recreational Leadership AS degree, a student must complete the standard core requirements for the degree plus the Leisure Studies-Recreational Leadership required courses and electives and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
LRST141	Recreation Leadership	3
LRST142	Supervised Field Experience I	1
LRST144	Prog Planning/Organization	3



# EDUCATIONAL PROGRAMS

LRST146	Intro/Therapeutic Recreation	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction To Recreation	2
LRST152	Recreation/Special Populations	3
PHYE149	Wellness Prog/Planning/Organiz	3

## Elective Courses

Electives		11
-----------	--	----

## MACHINE DRAFTING

The Machine Drafting program is one of several in the field of drafting. The primary aim of employment is a manufacturing company that produces home or commercial appliances, electrical/electronic equipment, agricultural implements, and/or many other items. These products are made from a wide variety of materials and are fabricated to the final form by various manufacturing processes.

The support courses include Mathematics (up through Trigonometry) and Statics. Also included is a module in Computer-Aided Drafting (CAD), with experience on two basic systems which includes all the components of a typical industrial model.

The program is set up on an individual instruction basis so each student can progress as slowly or as quickly as their capabilities will allow.

When this intensive program is completed, the drafter may work as a detailer in support of a designer or engineer. As well as working in the engineering department of a firm, the graduate could work in the inspection department, manufacturing or process engineering department, or as an industrial sales representative.

Location: Ankeny

### Program Entry Requirements

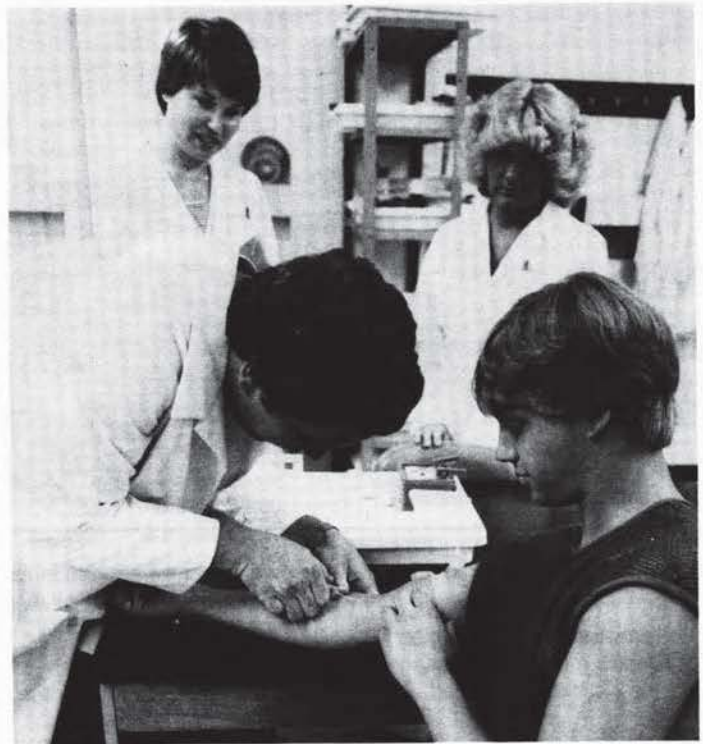
Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Machine Drafting diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

ENGL410	Communication Skills	3
MACD451	Drafting Basics	3
MACD452	Basic Shape/Design Description	3
MACD453	Adv Shape & Size Description	3
MACD456	Materials & Processes	3
MACD458	Drafting Math I	3



#### Term 2

MACD461	Mfg Dimensions & Tolerances	3
MACD462	Mechanical Components	3
MACD463	Advanced Mechanical Components	3
MACD466	Descriptive Geometry	3
MACD468	Drafting Math II	3
SOCY302	Industrial Relations	3

#### Term 3

MACD471	Layouts & Working Drawings	4
MACD472	Presentation Drawings	2
MACD479	Statics	3
MACD480	Computer-Aided Drafting	3

## MEDICAL ASSISTANT

The Medical Assistant program is designed to prepare the student to be employed in a private physician's office, a clinic, hospital, or laboratory as a clinical assistant, receptionist, or office manager.

The student gains a basic knowledge of anatomy and physiology, laboratory procedures, office management, and patient care techniques. These subjects are presented in the classroom, through laboratory experience, and in supervised clinical experience in the field.

Students are eligible to take the certification examination given by the certifying board of the American Association of Medical Assistants upon completion of the three-term course of study.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school biology or equivalent (Learning Center Biology I & II or BIOL127). Typing skill of 35 wpm with no more than 5 errors is required. Submit





# EDUCATIONAL PROGRAMS



proof of high school graduation or GED prior to enrollment. Students start fall term.

## Graduation Requirements

To earn a Medical Assistant diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

MEDA461	Human Body-Health & Disease I	4
MEDA462	Medical Terminology	1
MEDA464	Medical Laboratory Procedures I	4
MEDA465	Medical Office Procedures I	3
MEDA466	Medical Office Management I	2
MEDA467	Professional Development I	3
BSAD227	Business Communications	3

### Term 2

MEDA471	Human Body In Health & Disease II	4
MEDA472	Diagnostic Radiography I	2
MEDA473	Medical Office Management II	4
MEDA474	Medical Laboratory Procedures II	3
MEDA475	Medical Office Procedures II	3
PSCH106	Psychology Of Human Relations & Adj	3

### Term 3

MEDA480	Professional Development III	1
MEDA482	Diagnostic Radiography II	2
MEDA483	Medical Office Management III	1
MEDA485	Practicum	5

## MEDICAL ASSISTANT - ASSOCIATE

The Medical Assistant Associate degree program allows students to build a curriculum based on their interest in employment as a medical assistant with an emphasis on clinical or administrative skills. Advanced courses in these areas will prepare the graduate to meet increased responsibilities in physician's offices, clinics, extended care facilities, and related health care delivery systems.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students must have successfully completed a one year Medical Assistant program approved by the Committee on Allied Health

Education and Accreditation. MEDA courses are also available to those with documented work experience with approval by the instructor. Students start fall term.

## Graduation Requirements

To earn a Medical Assistant Associate AAS degree, a student must complete course work as prescribed for the Medical Assistant diploma program, all required courses listed below and maintain a 2.0 grade point average. A minimum of 64 semester credit hours is required for graduation.

### Required Courses

Select 6-12 Hours From Courses Listed Below

MEDA493	Insurance Coding	3
MEDA494	Medical Lab Procedures III	3
MEDA495	Medical Office Procedures III	3
MEDA496	Patient Education	3

### Option Courses

Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
BSAD227	Business Communications	Opt1	3
MATH117	Programming In Basic	Opt2	3
BSAD223	Business/Financial Math	Opt2	3
MGMT203	Human Relations In Business	Opt3	3
PSCH101	General Psychology	Opt3	3
PSCH106	Psychology Of Human Relations & Adj	Opt3	3

### Elective Courses

BUSL101	Business Law I	3
BUSL102	Business Law II	3
PSCH103	Developmental Psychology	3
PSCH104	Abnormal Psychology	3
PSCH105	Personality & Social Psychology	3
SPCH110	Fundamentals Of Speech	3
BSAD153	Office Management	3

## MEDICAL LABORATORY TECHNOLOGY

The Medical Laboratory Technician program prepares the student to perform complicated laboratory procedures with a limited amount of supervision. This training includes a six-month hospital laboratory assignment.

The program is accredited by the Committee on Allied Health Education (CAHEA) a committee of the American Medical Association (AMA). Graduates are eligible to take the National Certification Examination. Job opportunities are found in hospitals, clinics, doctors' offices, public health laboratories, veterinarians' offices, and industrial laboratories. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school biology and chemistry or equivalent (Learning Center Biology I & II and Chemistry I & II or BIOL 127 and CHEM 131). Students start fall term.

## Graduation Requirements

To earn a Medical Laboratory Technician AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all MLTS courses.

### Term 1

BIOL154	General Anatomy & Physiology	5
CHEM131	General Chemistry I	4
MLTS400	Intro To Medical Laboratory	6



# EDUCATIONAL PROGRAMS

## Term 2

BIOL132	Health Science Microbiology	4
CHEM132	General Chemistry II	4
ENGL117	Composition I	3
MLTS411	Hematology	6

## Term 3

MLTS442	Immunohematology	4
MLTS450	Clinical Practicum I	2
SPCH110	Fundamentals Of Speech	3

## Term 4

MLTS422	Clinical Chemistry	8
MLTS431	Clinical Microbiology	4
PSCH101	General Psychology	3
SOCY101	Introduction To Sociology	3

## Term 5

MLTS455	Clinical Practicum II	8
MLTS460	Clinical Seminar	1
MLTS461	Med Lab Review	1

## Term 6

MLTS456	Clinical Practicum III	4
MLTS463	Professional Development	1

## MEDICINE - PREPARATION

Students planning to major in Medicine at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## NURSING - PREPARATION

Students planning to major in Nursing at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## NURSING ASSOCIATE DEGREE

A career as a Registered Nurse is available to students who successfully complete the Associate Degree Nursing program. Classroom and lab concentration on the basic health sciences serves as a basis for clinical applications of nursing skills in a functioning health care agency. Students receive close support in the practicum area from college nursing instructors who provide individual and small group instruction. The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing.

Upon completion of the nursing curriculum and attainment of the objectives of the Associate Degree Nursing program, the student will be eligible to write the NCLEX for Registered Nurse Licensure.

Locations: Ankeny, Boone, Carroll

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit proof of successful completion of two semesters of high school biology or equivalent (Learning Center Biology I & II or BIOL 127). High school chemistry or equivalent (Learning Center Chemistry I & II or CHEM 131) is required prior to enrollment in Term 2. Students start fall term.

## Graduation Requirements

To earn a Nursing Associate AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all NURS and ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

## Elective Courses

Elective		3
<b>Term 1</b>		
BIOL133	Health Science Anatomy	3
NURS254	Human Needs I	6
NURS255	Nursing Practicum I	3
PSCH101	General Psychology	3
<b>Term 2</b>		
ASDN209	Human Needs II	6
ASDN210	Nursing Practicum II	4
ENGL117	Composition I	3
PSCH103	Developmental Psychology	3
<b>Term 3</b>		
BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3
<b>Term 4</b>		
ASDN211	Human Needs III	6
ASDN212	Nursing Practicum III	6
SOCY101	Introduction To Sociology	3
<b>Term 5</b>		
ASDN213	Human Needs IV	4
ASDN214	Nursing Practicum IV	6
ASDN215	Mgmt/Accountability In Nursing	1
SPCH110	Fundamentals Of Speech	3





# EDUCATIONAL PROGRAMS

## NURSING-ADVANCED STANDING - PART-TIME

This program offers the opportunity for current Iowa Licensed Practical Nurses to complete an Associate Degree in Nursing. The part-time program provides the same quality curriculum and experienced faculty utilized in the full-time, day program on DMACC campuses. Scheduling extends the program over six terms.

Students enter the third term of the Associate Degree curriculum and upon completion of six terms and attainment of the program objectives, are eligible to write the NCLEX for Registered Nurse Licensure.

The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing.

Location: Ankeny, Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school chemistry or equivalent (Learning Center Chemistry I & II or CHEM 131). Submit a copy of current Iowa LPN license and proof of completion of an approved Practical Nursing Program with a cumulative GPA of 2.0. General Psychology, Composition I, and Developmental Psychology (or equivalent Human Growth and Development course) must be successfully completed prior to entry. Students start summer term.

#### NOTE:

\* ASDN 211 - Human Needs III is a 6 cr/hr. course. The student will register and pay fees fall term of the first year for 6 cr/hrs. Three (3) cr/hrs. are scheduled fall term. The course continues spring term for the remaining 3 cr/hrs. The student must successfully complete both terms, a total of 6 cr/hrs. to earn a grade for the course at the end of spring term.

\* ASDN 212 - Nursing Practicum III is a 6 cr/hr. course. The above procedure also applies to this course regarding registration, payment of fees, division of credits, and course completion.

\*\* ASDN 213 - Human Needs IV is a 4 cr/hr. course. The student will register and pay fees fall term of the second year for 4 cr/hrs. Two (2) cr/hrs. are scheduled fall term. The course continues spring term for the remaining 2 cr/hrs. The student must successfully complete both terms, a total of 4 cr/hrs. to earn a grade for the course at the end of spring term.

\*\*ASDN 214 - Nursing Practicum IV is a 6 cr/hr. course. The above

procedure also applies to this course regarding registration, payment of fees, division of credits, and course completion.

### Graduation Requirements

To earn an AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A minimum grade of "C" is required in all ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

<b>Elective Courses</b>		
Elective		3
<b>Term 3</b>		
BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3
	Complete a Transition Workshop	
<b>Term 4</b>		
ASDN211	Human Needs III (cont)*	6
ASDN212	Nursing Practicum III (cont)*	6
<b>Term 5</b>		
ASDN211	Human Needs III	6
ASDN212	Nursing Practicum III	6
<b>Term 6</b>		
ASDN215	Mgmt/Accountability In Nursing	1
SOCY101	Introduction To Sociology	3
SPCH110	Fundamentals Of Speech	3
<b>Term 7</b>		
ASDN213	Human Needs IV (cont)**	4
ASDN214	Nursing Practicum IV (cont)**	6
<b>Term 8</b>		
ASDN213	Human Needs IV	4
ASDN214	Nursing Practicum IV	6

## NURSING - ADVANCED STANDING

This program is limited to persons who are licensed as Iowa Practical Nurses. Students enter third term of the Associate Degree Nursing curriculum and upon completion of three terms and attainment of program objectives are eligible to write the NCLEX for Registered Nurse Licensure. The program is approved by the Iowa Board of Nursing and accredited by the National League of Nursing.

Locations: Ankeny, Boone

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school chemistry or equivalent (Learning Center Chemistry I or II or CHEM 131). Submit copy of current Iowa LPN license and proof of completion of an approved practical nursing program with a cumulative 2.0 grade point average. General Psychology, Composition I, and Developmental Psychology (or Human Growth and Development course) or equivalent must be successfully completed prior to term three. Students start summer term.

### Graduation Requirements

To earn an AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

<b>Elective Courses</b>		
Elective		3





# EDUCATIONAL PROGRAMS

## Term 3

BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3
	Complete a Transition Workshop	

## Term 4

ASDN211	Human Needs III	6
ASDN212	Nursing Practicum III	6
SOCY101	Introduction To Sociology	3

## Term 5

ASDN213	Human Needs IV	4
ASDN214	Nursing Practicum IV	6
ASDN215	Mgmt/Accountability In Nursing	1
SPCH110	Fundamentals Of Speech	3

## NURSING - PRACTICAL

The Practical Nursing program is designed to prepare students to become Licensed Practical Nurses. They provide nursing care under the supervision of a registered professional nurse or physician. Theory and practice in the care of patients are blended into a sequence of selected learning experiences, proceeding from the simple to the more complex, in such a manner as to produce an effective, safe practitioner. The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing.

Upon completion of the curriculum and attainment of the objectives of the Practical Nurse program, the student will be eligible to write NCLEX for Practical Nurse Licensure.

Locations: Ankeny, Boone, Carroll

### Program Entry Requirements

Complete an application and attend any required orientation/information session. Submit evidence of completion of one year of high school biology or equivalent (Learning Center Biology I & II or BIOL 127). Students start fall term.

### Graduation Requirements

To earn a Practical Nursing diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all NURS courses. Submit proof of high school graduation or completion of a GED prior to graduation.

## Term 1

BIOL133	Health Science Anatomy	3
NURS254	Human Needs I	6
NURS255	Nursing Practicum I	3
PSCH101	General Psychology	3

## Term 2

ENGL117	Composition I	3
NURS256	Human Needs II	6
NURS257	Nursing Practicum II	4
PSCH103	Developmental Psychology	3

## Term 3

NURS258	Human Needs III	4
NURS259	Nursing Practicum III	5
NURS260	Accountability In Nursing	1

## OFFICE MANAGEMENT

The Office Management program prepares students for careers as office managers/general bookkeepers. The program is built on a solid base of bookkeeping and office management theory and includes specialized courses in computer operations and purchasing along with

electives in governmental accounting, small business administration and marketing.

Location: Ankeny, Boone, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students enrolling in ACCT 101 who have not completed a high school course or had other previous exposure to bookkeeping and accounting MUST enroll in ACCT 090. Students start fall or spring term.

### Graduation Requirements

To earn an Office Management AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A business course elective may be substituted for BKKA 401 if ACCT 102 is completed satisfactorily. Departmental approval required.

### Required Courses

ACCT101	Principles Of Accounting I	4
BSAD223	Business/Financial Math	3
COOP220	Pre-Employment Seminar	2
OFFC324	Office Calculators	1
BKKA401	Acct Applications I/Cost Acct	4
BKKA410	Taxes/Payroll	3
ACCT102	Principles Of Accounting II	4
MGMT102	Introduction To Management	3
BUSL101	Business Law I	3
ACCT352	Managerial Acct Microcomputers	3
SPCH110	Fundamentals Of Speech	3
MKTG212	Purchasing	3
MGMT101	Personnel Supervision	3

### Option Courses

	Select 1 Course From Each Option	
ENGL117	Composition I	Opt1 3
OFFC205	Business English	Opt1 3
OFFC301	Typing I	Opt2 2
OFFC329	Keyboarding I	Opt2 1
DATA101	Intro To Data Processing	Opt3 3
OFFC340	Intro To Office Computer Application	Opt3 3
OFFC341	Advanced Office Computer Application	Opt3 3
OFFC206	Written/Oral Communication	Opt4 3
ENGL115	Technical & Business Writing	Opt4 3
ENGL118	Composition II	Opt4 3
MGMT203	Human Relations In Business	Opt5 3
PSCH101	General Psychology	Opt5 3
MATH094	Intermediate Algebra	Opt6 4
MATH115	Finite Mathematics	Opt6 4
ACCT403	Accounting Internship	Opt7 3
COOP223	Coop Career Experience	Opt7 3
OFFC203	Admin Office Management	Opt8 3
BSAD153	Office Management	Opt8 3

### Elective Courses

Electives-Dept Approved	9
-------------------------	---

## PHARMACY - PREPARATION

Students planning to major in Pharmacy at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC



# EDUCATIONAL PROGRAMS

courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## PHYSICIAN ASSISTANT

Des Moines Area Community College and the University of Osteopathic Medicine and Health Sciences have a cooperative agreement established to assist DMACC students in their preparation for admission to the University's Physician Assistant (PA) program. DMACC students should include the following courses as a part of their AA degree.

Recommended DMACC courses are:

- Eight semester hours of natural sciences including lab. Biology I, II, General Microbiology
- Eight semester hours of General Chemistry with lab. General and Inorganic Chemistry I, II
- Six semester hours of communications.
- Composition I, II, Fundamentals of Speech
- Six semester hours of Social Sciences. General Psychology, Developmental Psychology, Abnormal Psychology, Personality Theories and Application, Introduction to Sociology, Introduction to Social Gerontology, Introduction to Anthropology

For additional information regarding the cooperative agreement, contact the Counseling, Advising, and Placement Office.

## PRINTING

The Printing program is designed to provide graduates with the knowledge needed to enter the printing industry. This program provides an understanding of the materials, tools, and equipment that are used in the production of printed material.

Instruction is accomplished in the classroom and laboratory setting, but could also include actual experience in a printing industry during the final term of the program. Classes include layout and design, printer's math, cost estimating, and press operation.

Graduates of this program will find employment in printing companies, publishing firms, technical representatives for printing suppliers, or companies that produce their own printed material.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

### Graduation Requirements

To earn a Printing diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

<b>Term 1</b>		
GRPH401	Graphic Arts Orientation	3
GRPH403	Communication Design I	3
GRPH405	Typography I	2
GRPH407	Production Art I	3
GRPH409	Printing Processes	4
OFFC329	Keyboarding I	1
ENGL410	Communication Skills	3
<b>Term 2</b>		
GRPH411	Typography II	2
GRPH415	Production Art II	3
PRTG400	Photo-Offset Fundamentals I	2
PRTG401	Pre-Press I	3
PRTG403	Press I	4
RCMA400	Related Math	3

### Term 3

Select 1 Course From Option 1		
PRTG464	Press Specialization	Opt1 10
PRTG465	Pre Press Specialization	Opt1 10
PRTG466	Photocomposition, Paste Up Special	Opt1 10
GRPH421	Internship Preparation	2

### Term 4

Select Option 2 Or Option 3		
PRTG454	Career Experience	Opt2 12
PRTG468	Print Shop Operations	Opt3 12

## RESPIRATORY THERAPY

The Respiratory Therapy program provides education in the dynamic career of Respiratory Care. This is an allied medical specialty involved with the diagnosis, treatment, and prevention of diseases and condi-



tions which affect the respiratory and cardiovascular systems of the body. Respiratory therapists work closely with physicians and provide direct care to persons with pulmonary and cardiovascular diseases.

The curriculum includes 1000 hours of supervised clinical practicum experience in local hospitals. The program will prepare students with the knowledge, skills, and attitudes needed to begin a successful career in respiratory care. The program is accredited by the American Medical Association (AMA).

Graduates of the program receive an Associate of Applied Science (AAS) degree and are eligible for all credentialing examinations currently offered by the National Board of Respiratory Care (NBRC) and the Iowa Department of Public Health.

Employment opportunities are found in hospitals, clinics, home health care agencies, equipment and supply sales, and rehabilitation and continuing care.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. (The orientation sessions may occur on the same day



# EDUCATIONAL PROGRAMS

as the group orientation if prior arrangements are made with the program chairperson.) Submit proof of successful completion of two semesters of high school biology and chemistry or equivalent (Learning Center Biology I & II and Chemistry I & II or BIOL 127 and CHEM 131). Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

## Graduation Requirements

To earn a Respiratory Therapy AAS degree, a student must complete all courses as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all RESP courses.

### Term 1

BIOL133	Health Science Anatomy		3
RESP300	Fundamentals Of Respiratory Therapy		3
RESP302	Cardiopulmonary Therapeutics I		4
RESP304	Cardiopulmonary Therapeutics II		3
	Select 1 Course from Option 1		
MATH094	Intermediate Algebra	Opt1	4
MATH115	Finite Mathematics	Opt1	4

### Term 2

BIOL134	Health Science Physiology		3
PHYL106	Survey Of Physical Science		4
RESP310	Cardiopulmonary Renal Pathophys		5
RESP315	Respiratory Therapy Pharmacology		3
	Select 1 Course from Option 2		
ENGL117	Composition I	Opt2	3
ENGL410	Communication Skills	Opt2	3

### Term 3

BIOL132	Health Science Microbiology		4
RESP325	Neonatal/Pediatric Resp Therapy		3
RESP361	Respiratory Therapy Practicum I		6

### Term 4

CHEM131	General Chemistry I		4
RESP320	Advanced Respiratory Therapy		5
RESP371	Respiratory Therapy Practicum II		7
	Select 1 Course from Option 3		
DATA101	Intro To Data Processing	Opt3	3
HLSC205	Health Application Of Computer	Opt3	3

### Term 5

CHEM132	General Chemistry II		4
RESP330	Cardiopulmonary Diagnostics		3
RESP381	Respiratory Therapy Practicum III		10

### Term 6

RESP335	Respiratory Therapy Mgmt & Ethics		3
RESP391	Respiratory Therapy Practicum IV		7
	Select 1 Course from Option 4		
PSCH101	General Psychology	Opt4	3
PSCH106	Psychology Of Human Relations & Adj	Opt4	3
SOCY101	Introduction To Sociology	Opt4	3
SOCY302	Industrial Relations	Opt4	3

## RESTAURANT MANAGEMENT - PREPARATION

Students planning to major in restaurant management at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement office can provide course check sheets from various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-

year college should contact a counselor or advisor for course planning assistance.

## RETAIL MANAGEMENT

Rapid expansion in the field of retail management during the last few years has created numerous career opportunities for people who like working with people, and for those who want the challenge of a management position.

Graduates from the Retail Management program are now found in positions such as: owners of their own business; managers of clothing stores, stereo shops, building materials stores, furniture and grocery stores and department managers and salespeople in almost all kinds of marketing businesses.

Outstanding features of the program include: an in-depth study into management principles and practices; opportunity to earn as you learn through business internship; opportunity to specialize in product lines of your choice such as apparel and accessories, food marketing, automotive, home furnishing, sporting goods and building materials. Up-to-date instruction is based on advice from an advisory committee of retail managers. Rapid advancement opportunities generally result from a promotion-from-within policy.

Location: Ankeny

## Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

## Graduation Requirements

To earn a Retail Management AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

BSAD150	Intro To Business		3
BSAD223	Business/Financial Math		3
BSAD227	Business Communications		3
BSAD229	Small Business Management		3
BUSL101	Business Law I		3
COOP220	Pre-Employment Seminar		2
MGMT101	Personnel Supervision		3
MGMT203	Human Relations In Business		3
MGMT322	Office Procedures		1
MGMT341	Business Internship I		5
MGMT342	Internship Seminar I		2
MGMT353	Business Internship II		4
MGMT358	Internship Seminar II		1
MGMT362	Business Internship III		4
MGMT367	Internship Seminar III		1
MGMT406	Human Potential		2
MGMT407	Professional Development Seminar		1
MKTG102	Principles Of Marketing		3
MKTG103	Principles Of Selling		3
MKTG104	Advertising & Sales Promotion		3
MKTG301	Retail Product Analysis		3
MKTG321	Retail Management I		3
MKTG322	Retail Management II		3
MKTG323	Display & Visual Merchandising		2
MKTG324	Buying & Merchandise Control		3

### Option Courses

	Select 1 Course From Each Option		
MGMT102	Introduction To Management	Opt1	3
MGMT103	Sales Management	Opt1	3
DATA101	Intro To Data Processing	Opt2	3
DATA103	BASIC	Opt2	3



# EDUCATIONAL PROGRAMS

ACCT101	Principles Of Accounting I	Opt3	4
ACCT301	Accounting Fundamentals	Opt3	3
ENGL117	Composition I	Opt4	3
SPCH110	Fundamentals Of Speech	Opt4	3

## RETAIL MERCHANDISING

Retail Merchandising offers rapidly growing employment opportunities. A recent government study reported that one-fourth of all job openings will be in the merchandising and distribution industry.

Graduates of the Retail Merchandising program work in positions related to sales and sales management, display and advertising, supervision and in-store merchandising. Several graduates are now operating their own businesses. The list of employment opportunities in retail merchandising is almost endless.

Highlights of the program: a one-year concentrated program three terms in length; opportunity to earn as you learn through business internship; student-centered instruction which offers seminars, labs, field trips, classes, and on-the-job training. Up-to-date curriculum as based on advice from the retail merchandising advisory committee. An opportunity to specialize in a product line of your choice such as furniture, automotive, decorator products, clothing and sporting goods is available. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Retail Merchandising diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD150	Intro To Business	3
---------	-------------------	---

BSAD223	Business/Financial Math	3
BSAD227	Business Communications	3
COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
MGMT322	Office Procedures	1
MGMT348	Retail Internship Seminar I	1
MGMT361	Retail Merchandise Internship I	5
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3
MKTG301	Retail Product Analysis	3
MKTG321	Retail Management I	3
MKTG323	Display & Visual Merchandising	2

## SALES AND MANAGEMENT

The Sales and Management program offers basic sales and management skill development. Many opportunities exist for the highly-motivated, people-oriented, goal-setting individual who wants to quickly move into a sales or management, industry-sponsored training program.

Specific benefits of the program include rapid development of sales and management skills, total transferability into any of DMACC's two-year Marketing and Management AAS degree programs, and the satisfaction of gaining self-confidence as marketing skills are acquired.

The student will have the opportunity to enroll in the program during either days or evenings at the beginning of each term. In addition the program offers: opportunities to earn as you learn through on-the-job training; opportunities to gain advanced standing with prior occupational experience (after evaluation by the program chairperson); and leadership training at local, state and national levels through involvement in the Sales and Management Club.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

### Graduation Requirements

To earn a Sales and Management diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD227	Business Communications	3
COOP220	Pre-Employment Seminar	2
MGMT101	Personnel Supervision	3
MGMT203	Human Relations In Business	3
MGMT345	Field Experience I	5
MGMT344	Field Experience I Seminar	2
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3

#### Option Courses

Select 1 Course From Each Option		
ACCT101	Principles Of Accounting I	Opt1 4
ACCT301	Accounting Fundamentals	Opt1 3
DATA101	Intro To Data Processing	Opt2 3
DATA103	BASIC	Opt2 3
MGMT102	Introduction To Management	Opt3 3
MGMT103	Sales Management	Opt3 3
BSAD150	Intro To Business	Opt4 3
MKTG102	Principles Of Marketing	Opt4 3





# EDUCATIONAL PROGRAMS

BSAD223	Business/Financial Math	Opt5	3
MATH092	Introductory Algebra	Opt5	4

## SECRETARY - ADMINISTRATIVE

The Administrative Secretary will be prepared to assist the employer with some of the administrative details of an office as well as perform the duties of a general secretary.

After completing the program, the Administrative Secretary will have a variety of skills including shorthand transcription, English usage, and word processing.

Locations: Ankeny, Boone, Carroll, Urban

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn an Administrative Secretary diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC204	Office Procedures	4
OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC309	Office Accounting	2
OFFC310	Professional Development	3
OFFC311	Business Math & Calculators	3
OFFC335	Introductory Shorthand	3
OFFC336	Advanced Shorthand & Transcription	3
OFFC337	Word Processing I	3
OFFC401	Model Office	3
OFFC403	Professionalism I	1
OFFC404	Professionalism II	1

#### Option Courses

Select 1 Course From Option 1

OFFC340	Intro To Office Computer Application	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3

## SECRETARY - LEGAL

The students in the Legal Secretary program will study the basic skills of the business office secretary. Additional training will concentrate on developing an understanding of the numerous branches of the law to help the secretary produce the paper work and provide the miscellaneous information and assistance required by an attorney.

Successful legal secretarial work experience through internship will lay the foundation for eventual qualification as a professional legal secretary, a legal assistant or legal administrator.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Legal Secretary AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC209	Law & Citations Research Lab	3
OFFC210	Estate Planning, Probate & R E Lab	3
OFFC211	Civil Litigation Business Organization Lab	3
OFFC230	Legal Procedures	3
OFFC231	Legal Management	3
OFFC232	Real Estate	1
OFFC233	Probate	1
OFFC234	Intro To Law & Citations/Research	1
OFFC236	Domestic Relations	1
OFFC237	Criminal Law	1
OFFC238	Civil Litigation	1
OFFC239	Business Organization	1
OFFC242	Income Tax	3
OFFC243	Estate Planning	1
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC309	Office Accounting	2
OFFC324	Office Calculators	1
OFFC330	Bankrupt, Worker Comp/Docket Lab	3
OFFC331	Legal Terminology	3
OFFC335	Introductory Shorthand	3
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC403	Professionalism I	1
OFFC404	Professionalism II	1
OFFC405	Professionalism III	1
OFFC421	Legal Internship	4

#### Option Courses

Select 1 Course From Option 1			
OFFC340	Intro To Office Computer Application	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3





# EDUCATIONAL PROGRAMS



## SECRETARY - MEDICAL

The Medical Secretary program is designed to prepare the student to work for doctors, clinics, hospitals, or health-related businesses.

In addition to the duties of a secretary, the medical secretary acts as a liaison between the doctor and the patient, and is an important person in building and maintaining good relations with those people who are seeking medical assistance.

The Medical Secretary has a variety of responsibilities, such as receptionist, bookkeeper, stenographer, and in emergencies, a technician. Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Medical Secretary AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD223	Business/Financial Math	3
COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC221	Medical Terminology I	3
OFFC222	Medical Terminology II	3
OFFC223	Medical Transcription III	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC309	Office Accounting	2
OFFC320	Human Body In Health & Disease	3
OFFC324	Office Calculators	1
OFFC325	Medical Word Processing	3
OFFC326	Medical Insurance	3
OFFC328	Internship For Medical Secretaries	4
OFFC337	Word Processing I	3
OFFC403	Professionalism I	1
OFFC404	Professionalism II	1
OFFC405	Professionalism III	1
OFFC430	Medical Transcription I	3
OFFC431	Medical Transcription II	3
OFFC432	Medical Office Techniques I	3
OFFC433	Medical Office Techniques II	3

### Option Courses

Select 1 Course From Option 1		
OFFC340	Intro To Office Computer Application	Opt1 3
OFFC341	Advanced Office Computer Application	Opt1 3

## SMALL BUSINESS ENTREPRENEURSHIP

The Small Business Entrepreneurship program prepares students for careers in small business as either an employee or owner.

The program is designed to provide the skills required to successfully operate a small business. Many of the courses emphasize the practical approach to small business operation. Students also complete a cooperative education experience in a small business as a part of the program. This program will be offered pending approval of the Department of Education.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Small Business Entrepreneurship diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BSAD229	Small Business Management	3
COOP212	COOP Career Seminar	1
COOP225	COOP Career Experience	5
ENTR301	Small Business Finance & Law	3
ENTR302	Human Potential For Business	3
ENTR303	Small Business Marketing	3
MGMT101	Personnel Supervision	3
MKTG103	Principles Of Selling	3

#### Option Courses

Select 1 Course From Each Option		
ACCT101	Principles Of Accounting I	Opt1 4
ACCT301	Accounting Fundamentals	Opt1 3
BSAD223	Business/Financial Math	Opt2 3
MATH115	Finite Mathematics	Opt2 4
BSAD227	Business Communications	Opt3 3
ENGL117	Composition I	Opt3 3
MGMT203	Human Relations In Business	Opt4 3
PSCH101	General Psychology	Opt4 3





# EDUCATIONAL PROGRAMS

## SOCIAL WORK - PREPARATION

Students planning to major in social work at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## TEACHER ASSOCIATE

The Teacher Associate program prepares the student for work assisting the professional teacher. Two options are offered: elementary and secondary teacher associates. Credits are transferable to four-year colleges and universities.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn the Teacher Associate AS degree, a student must complete the standard core requirements for the degree, plus the Teacher Associate required courses and options, and maintain a 2.0 grade point average.

#### Required Courses

	Complete AS Degree Core Requirements	24
CHLD170	Child Development	3
EDCR101	Intro To Education	3
EDCR207	Internship Teaching Experiences	3
LITR124	Children's Literature	3
PLSC111	American National Government	3
PSCH101	General Psychology	3
PSCH109	Educational Psychology	3
SOCY101	Introduction To Sociology	3

#### Option Courses

	Select One Course From Option 1	
MATH115	Finite Mathematics	Opt1 4
MATH118	Math For Elementary Educators	Opt1 4
	Select at least 9 Credits from Option 2	
ARTS110	Teaching Arts & Crafts	Opt2 3
EDCR103	Contemporary Issues/Education	Opt2 3
EDCR104	Enriching The Curriculum	Opt2 3
MUSI131	Introduction To Music	Opt2 3

#### Elective Courses

Electives	7-9
-----------	-----

## TELEPHONY

This one year (three term) program prepares the student for employment in the telephone industry as a craftsman. The common industry job titles for the graduate of this program are keysystem and station equipment installer, and switchman (switchperson).

The learning experiences in classroom and laboratory instruction for the first term provide a knowledge of telephony outside plant and station equipment, including buried and aerial cable, cable splicing techniques, OSP trouble shooting procedures, and installation and repair of 554 wall and 500 desk phones, and installation and repair of multi-channel subscriber carrier systems.

Learning experiences for second term include, 1A2 keysystem installation and repair, electronic and digital keysystem installation and repair, and installation and repair of Computerized Branch Exchange (ROLM VSCBX).

Third term experience will consist of digital switching systems maintenance and repair, and will be conducted on a Northern Telecom Digital Multiplex System (DMS-10).

Graduates have been placed with numerous telephone companies, interconnect companies, and specialized common carriers.

Location: Ankeny

### Program Entry Requirements

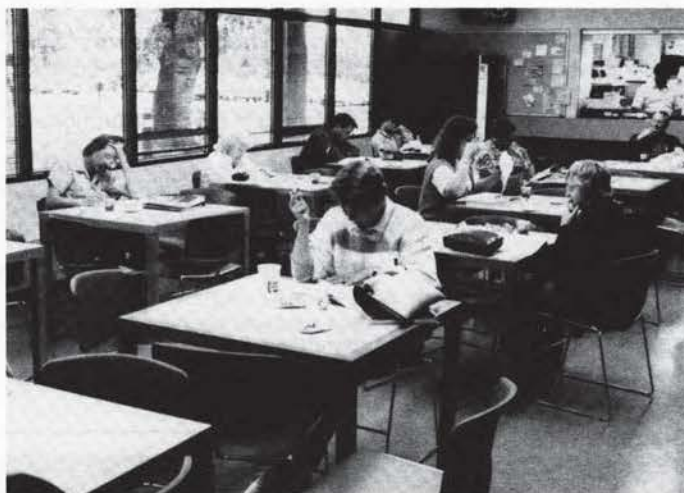
Complete an application and attend any required orientation/information sessions. Submit evidence of completion of one year of high school algebra or equivalent with a "C" or above. Students start summer term.

### Graduation Requirements

To earn a Telephony diploma, a student must complete all courses as prescribed and maintain a 2.0 grade point average.

#### Term 1

TELE419	DC Fundamentals For Telephony	3
---------	-------------------------------	---





# EDUCATIONAL PROGRAMS

TELE439	Math For Telephony I	2
TELE481	Telephony I	2
TELE483	Telephony Experience I	5

## Term 2

TELE429	Telephony II	4
TELE440	Math For Telephony II	3
TELE451	Basic Digital Logic Electronics	4
TELE454	Telephony Experience II	7

## Term 3

ENGL410	Communication Skills	3
TELE452	AC & DC Applications	4
TELE453	Telephony III	4
TELE455	Telephony Experience III	7

## TOOL & DIE MAKING

The Tool and Die program is designed to fill the demand for qualified personnel for either conventionally controlled or computer-numerically controlled (CNC) tooling industry.

A variety of career goals may be expected from the program after a suitable period of practical experience. Former students of this program are employed as tool planners who assist in making decisions on methods of production, experimental technicians who work closely with engineers in developing working models, tool makers who devise the tooling that makes quantity production possible, and program operators who plan, direct, and operate computer-numerically controlled equipment.

A solid basis of machining skills is taught in the first year; however the second half of the program involves the familiarization and practical experience on state-of-the-art equipment in developing real industry tooling projects. Actual industrial equipment is taught including CNC turning center, machining center, and wire electrical discharge machining.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions and obtain a satisfactory score on an arithmetic aptitude test. Students start fall term.

### Graduation Requirements

To earn a Tool and Die Making AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point



average.

## Term 1

TOOL403	Machine Shop Math	3
TOOL480	Blueprint Reading I	3
TOOL482	Machine Shop Measurements I	3
TOOL484	Machine Tool Operations I	3
TOOL486	Machine Tool Operations Lab I	5

## Term 2

TOOL481	Blueprint Reading II	3
TOOL483	Machine Shop Measurements II	3
TOOL485	Machine Tool Operations II	4
TOOL487	Machine Tool Operations Lab II	7

## Term 3

TOOL490	Machine Tool Operations Lab III	7
TOOL491	Machine Tool Operations III	4

## Term 4

DIEM400	Basic Diemaking	4
DIEM401	Basic Diemaking Lab	7
DIEM402	Advanced Blueprint Reading	3
TOOL489	Heat Treatment Of Materials	3

## Term 5

DIEM403	Progressive Die Design	4
DIEM404	Advanced Diemaking	4
DIEM405	Advanced Diemaking Lab	7
DIEM413	Electrical Discharge Machining	3

## Term 6

DIEM407	Plastic Moldmaking	3
DIEM410	CNC Machine Operations	8
	Must be taken anytime prior to completion	
ENGL410	Communication Skills	3
SOCY302	Industrial Relations	3

## UPHOLSTERY

The Upholstery program is designed to provide the student with the necessary knowledge to enter employment in the automotive or furniture upholstery field. The program provides a blend of shop and classroom activities utilizing laboratory projects and experiences.

Classroom instruction includes the use of machines and hand tools, pattern layout, furniture construction, color concepts and coordination, and cost estimating. The listed sequence of courses may be altered.

Graduates of this program will find employment in automotive or furniture upholstery business.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

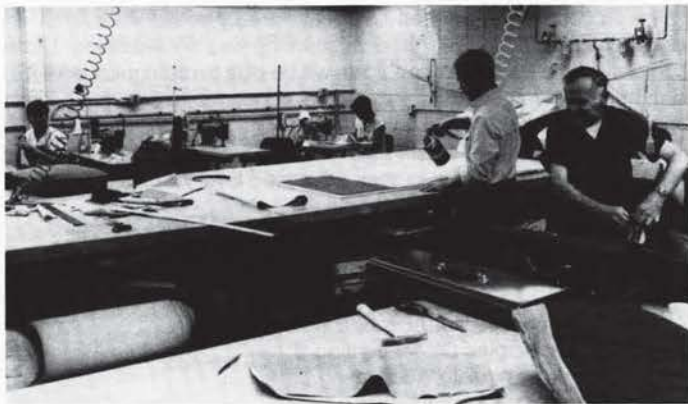
To earn an Upholstery diploma, complete all courses as prescribed and maintain a 2.0 grade point average.

## Term 1

UPHL435	Intro To Upholstery	3
UPHL436	Intro To Upholstery Lab	6
ENGL410	Communication Skills	3
RCMA400	Related Math	3
	Select 1 Course from Option 1	
UPHL437	Furniture Repair	Opt1 3
UPHL438	Auto Upholstery Repair	Opt1 3



# EDUCATIONAL PROGRAMS



## Term 2

UPHL432	Technical Problems	4
UPHL433	Recordkeeping & Filing	2
SOCY302	Industrial Relations	3
	Select Option 2 or 3	
UPHL439	Upholstery & Repair	Opt2 6
UPHL440	Furniture Recovering	Opt2 2
UPHL441	Auto Upholstery Repair & Restoration	Opt3 4
UPHL442	Auto Upholstery	Opt3 4

## Term 3

	Select Option 4 Or 5	
UPHL443	Furniture Reconstruction	Opt4 6
UPHL444	Advanced Upholstery	Opt4 6
UPHL445	Adv Auto Upholstery Restoration	Opt5 5
UPHL446	Advanced Auto Upholstery Lab	Opt5 7

## VETERINARY MEDICINE - PREPARATION

Students planning to major in Veterinary Medicine at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

## WELDING

Welding is the term used to describe numerous methods of joining metals. Students are provided with entry level welding skills and knowledge essential for employment in the industrial manufacturing, job shop, and pipe welding industries.

Ferrous and non-ferrous metals are joined using the oxy-acetylene, shielded metallic arc and gas shielded arc welding processes. Freehand and machine flame cutting are also taught.

Classroom theory, blueprint reading and related math are part of the instructional program. The listed sequence of course offerings may be altered.

Location: Ankeny

### Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

### Graduation Requirements

To earn a Welding diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ENGL410	Communication Skills	3
RCMA400	Related Math	3
WELD470	Welding Fundamentals & Theory	5
WELD474	Shielded Metallic Arc Welding I	3
WELD478	Shielded Metallic Arc Welding II	3
WELD479	Shielded Metallic Arc Welding III	2
WELD473	Oxygen-Acetylene Weld/Cutting	2
WELD480	Applied Theory & Metallurgy	5
WELD481	Blueprint Reading	3
WELD486	Shielded Metallic Arc Welding IV	3
WELD487	Shielded Metallic Arc Welding V	3
WELD488	Shielded Metallic Arc Welding VI	2
WELD483	Gas Metallic Arc Welding	2
WELD493	Gas Tungsten Arc Welding	2
WELD497	Advanced Shielded Met Arc Welding I	2
WELD498	Advanced Shielded Met Arc Welding II	3
WELD499	Intro-Shielded Met Arc Pipe Welding	3





# SPECIALIST CERTIFICATES

## ACCOUNTING BASIC

The Accounting Basic certificate option prepares the student for an entry level position in the field of bookkeeping and recordkeeping. Upon completion, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity at the trainee level.

Employment opportunities are currently found in commercial businesses, government offices, public accounting firms and similar enterprises.

### Required Courses

ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
ACCT351	Financial Accounting-Micro Computers	3
BSAD223	Business/Financial Math	3

### Option Courses

Select 1 Course From Each Option

ACCT105	Governmental Accounting	Opt1	3
ACCT103	Intermediate Accounting I	Opt1	4
ACCT203	Cost Accounting I	Opt1	4
DATA101	Intro To Data Processing	Opt2	3
BSAD229	Small Business Management	Opt2	3



## ACCOUNTING ADVANCED

The Accounting Advanced Certificate prepares the student for an entry-level position in the field of accounting and bookkeeping. Upon completion, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity at the entry level.

Technical courses in intermediate accounting, computers, and cost accounting allow students to seek advanced level placement in some cases.

Employment opportunities are currently found in commercial businesses, government offices, and public accounting firms.

### Required Courses

ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT203	Cost Accounting I	4
ACCT351	Financial Accounting-Micro Computers	3
BSAD223	Business/Financial Math	3
DATA101	Intro To Data Processing	3
OFFC324	Office Calculators	1

### Option Courses

Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
ENGL115	Technical & Business Writing	Opt2	3
ENGL118	Composition II	Opt2	3
OFFC206	Written/Oral Communication	Opt2	3
ACCT104	Intermediate Accounting II	Opt3	4
ACCT105	Governmental Accounting	Opt3	3
ACCT204	Cost Accounting II	Opt3	4
ACCT352	Managerial Acct Microcomputers	Opt4	3
BSAD229	Small Business Management	Opt4	3

## ADMINISTRATIVE SUPPORT

The purpose of the Administrative Support program is to provide office workers with training to assume a variety of administrative functions in today's office. Skills taught to previously trained office workers include communication, record keeping, and decision making to enhance their advancement.

### Required Courses

OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC335	Introductory Shorthand	3

### Option Courses

Select 1 Course From Each Option

OFFC309	Office Accounting	Opt1	2
OFFC311	Business Math & Calculators	Opt1	3
OFFC310	Professional Development	Opt2	3
OFFC317	Office Procedures I	Opt2	2
OFFC318	Office Procedures II	Opt2	2
OFFC336	Advanced Shorthand & Transcription	Opt2	3
OFFC337	Word Processing I	Opt2	3

## AIRBRUSH ART

The purpose of the Airbrush Art certificate program is to provide design theory and practice in the techniques of airbrush regardless of the specialized application.

Airbrush is used in practically every phase of the commercial art field;



# SPECIALIST CERTIFICATES

in illustration, such as figure, mechanical, advertising, architectural, and technical illustration, photo retouching (both black and white and color); and in design such as textile, plastic products, greeting cards, and posters.

## Required Courses

CART449	Airbrush I	4
CART451	Airbrush II	4

## BUILDING MAINTENANCE

The Building Maintenance certificate is a series of job related courses which provide a person with an understanding of how to keep a commercial or industrial type of building operating efficiently and effectively. Skill training enables a maintenance specialist to do the job from the first day of employment.

### Required Courses

BLDM325	Boiler Room Maintenance	1
ELEM325	General Electricity	3

### Option Courses

Select 3 Credits From Option 1

BLDM326	Steam Plant Operations	Opt1	2
BLDM327	Plumbing/Electricity/Hardware	Opt1	2
BLDM328	Inventory & Purchasing	Opt1	1
BLDM329	Basic Plumbing	Opt1	2
BLDM330	Building Custodian	Opt1	1
HLCR314	Emergency Care	Opt1	1

## CHEMICAL DEPENDENCY COUNSELING

This one year program is offered cooperatively with Powell III at Iowa Methodist Medical Center. For information and admission, call or write Powell III, Iowa Methodist Medical Center, 1200 Pleasant, Des Moines, Iowa 50308.

A two year option in Chemical Dependency Counseling is offered in cooperation with both Powell III and Mercy Counselor Internship. For information and admission to the Mercy Program, call or write Education Services 8625, Mercy Hospital Medical Center, Department of Health Education, Sixth & University, Des Moines, Iowa 50314.

### Required Courses

ENGL117	Composition I	3
HUMS109	Survey Mental Health Treatment	3
HUMS202	Interviewing/Interper Relation	3
HUMS205	Intervention Theories/Practice I	3
HUMS206	Intervention Theories/Practice II	3
HUMS208	Field Experience	3
HUMS213	Pract: Chemical Depend Counsel I	6
HUMS214	Pract: Chemical Depend Counsel II	6
HUMS216	Survey Of Addictive Disease	3

### Option Courses

Select 1 Course From Each Option

BIOL127	Human Biology	Opt1	3
PSCH103	Developmental Psychology	Opt1	3
PSCH104	Abnormal Psychology	Opt1	3
SOCY102	Social Issues	Opt1	3
SPCH110	Fundamentals Of Speech	Opt1	3
PSCH103	Developmental Psychology	Opt2	3
PSCH104	Abnormal Psychology	Opt2	3

## CHILD CARE SPECIALIST I

The Child Care Specialist I certificate has been designed for those



persons with little or no experience and/or training in the child care field. It provides a comprehensive learning experience for individuals in the care and guidance of young children.

### Required Courses

CHLD240	Emergency Care	1
CHLD334	Development In Early Childhood I	2
CHLD337	Creating The Environment	2
CHLD338	Development In Early Childhood II	1
CHLD343	Assessing Child/Program Planning	1
CHLD347	Planning Group Activities	1
CHLD349	Contemporary Issues In Child Care	1
CHLD360	Guiding Young Children	2

## CHILD CARE SPECIALIST II

The Child Care Specialist II certificate program has been designed for those persons with experience and/or training in the child care field. Classroom instruction is provided on the social, emotional development, and intellectual needs of children. Emphasis is placed on program enrichment and problem solving.

### Required Courses

CHLD268	Professional Relationships	1
CHLD362	Activities For Infant & Toddler	2
CHLD364	Activities For Preschooler/Schoolage	2
CHLD375	Health & Nutrition	2

## CHILD CARE SPECIALIST III

The Child Care Specialist III certificate program has been designed for persons functioning in a supervisory capacity such as lead teachers,



# SPECIALIST CERTIFICATES

coordinators, assistant directors, and directors. An in-depth view of management techniques and operational skills needed to provide quality supervision of a day care center is presented.

## Required Courses

CHLD366	Developing A Child Care Team	1
CHLD367	Becoming A Day Care Director	2
CHLD368	Being The Best You Can Be	1
CHLD369	Remaining Current	1

## Option Courses

Select 1 Course From Option 1		
CHLD370	Getting To Know You & Me	Opt1 1
CHLD371	Personal Coping Skills	Opt1 1
CHLD372	Child Care Independent Study	Opt1 1

## CLERICAL SPECIALIST

The Clerical certificate program is designed to provide the basic skills for entry-level office occupations. At the successful completion of the program, the student will be able to type at 55 words a minute, operate business calculators, and do routine word processing on automatic typewriters.

## Required Courses

OFFC205	Business English	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC303	Typing III	2
OFFC311	Business Math & Calculators	3
OFFC337	Word Processing I	3

## Option Courses

Select 2 Courses From Option 1		
COOP220	Pre-Employment Seminar	Opt1 2
OFFC309	Office Accounting	Opt1 2
OFFC317	Office Procedures I	Opt1 2
OFFC338	Word Processing II	Opt1 3

## COMPUTER LANGUAGES

The purpose of the Computer Languages Specialist certificate program is to provide the student with previous business experience and/or educational background with knowledge of how to design, write, and execute programs to solve specific business problems. It is intended for those wishing to make a career change or for those already employed in the field who wish to upgrade credentials.

## Required Courses

ACCT101	Principles Of Accounting I	4
DATA101	Intro To Data Processing	3
DATA304	COBOL/Beginning	4
DATA306	COBOL/Intermediate	4
DATA319	Assembler/Beginning	4
DATA382	Systems Analysis	4

## Option Courses

Select 2 Courses From Option 1		
DATA103	BASIC	Opt1 3
DATA104	BASIC/Advanced	Opt1 3
DATA106	Microcomputers In Business	Opt1 3
DATA110	Microcomputer Systems Design	Opt1 3
DATA211	FORTRAN	Opt1 3
DATA221	PL/I	Opt1 3
DATA231	RPG/II	Opt1 3
DATA301	DOS Job Control	Opt1 4
DATA308	COBOL/Advanced	Opt1 4

DATA310	Program Logic Design	Opt1 4
DATA321	Assembler/Intermediate	Opt1 4
DATA327	Assembler/Advanced	Opt1 4
DATA338	OS/JCL	Opt1 2

## CORONARY CARE - BASIC

The Coronary Care certificate program is designed to provide a comprehensive learning experience for nurses in a coronary care setting. Nurses planning to earn the Coronary Care Specialist certificate are encouraged to begin with "Coronary Anatomy and Physiology" and "Introduction to Coronary Care" prior to taking the other offerings.

Each course offers the nurse the opportunity to learn the basics of a specific coronary care area and will be continually updated to reflect the latest trends. The classes also will provide an overview of coronary topics covered in the Critical Care Nursery Certificate examination.

Employment opportunities would exist in hospital settings.

## Required Courses

HLCR301	Introduction To Coronary Care	1
HLCR302	Coronary Anatomy & Physiology	1
HLCR303	Arrhythmia Interpretation	3
HLCR304	Nursing Care & Coronary Complication	1

## Option Courses

Select 1 Course From Option 1		
HLCR305	Surgical Intervention	Opt1 1
HLCR306	The Rehabilitation Phase	Opt1 1

## CREDIT UNION OPERATIONS

The Credit Union Operations certificate is designed to prepare credit union employees and prospective employees for front-line and first supervisory level positions in Iowa credit unions. The program combines courses which focus on the application of business principles in the credit union. Persons completing the Operations certificate program will gain an understanding of credit unions' unique operational and philosophical characteristics as well as practical knowledge of state and federal laws affecting credit unions, credit union structure, credit union financial management models, accounting procedures and auditing requirements. Emphasis also will be placed on member relations skills and on traditional credit union services of savings programs and loan operations. Volunteer credit union directors who have operational responsibilities through their roles on the volunteer board of directors also will benefit from and be eligible for the Operations certificate.

## Required Courses

FNSR232	Intro To Credit Unions	3
FNSR233	Credit Union Operations	3
FNSR234	Credit Union Financial Mgmt	3
FNSR274	Credit Union Accounting	3
FNSR275	Credit Union Auditing	3

## DATA ENTRY

The purpose of the Data Entry program is to provide classroom and simulated office experience in preparation for entry-level employment for data entry operator workers.

Graduates of the Data Entry program locate employment in public and private organizations and agencies of all sizes and missions in positions of data entry operator, computer operator, data control clerk, keyboarder, input clerk, media librarian, and word processing trainee. Beyond entry-level positions as operators, one may advance to department supervisor.

This certificate program may be completed in seven weeks on a part-



# SPECIALIST CERTIFICATES

time basis, day classes. Some classes are available evenings.

## Required Courses

COOP220	Pre-Employment Seminar	2
MGMT203	Human Relations In Business	3
OFFC312	Data Entry	3

## DATA PROCESSING

This curriculum is designed with micro computer applications in mind. The student who pursues this course work will, when successfully completing the courses, have a good working knowledge of business applications for the microcomputer as well as the considerations needed when developing a microcomputer system for the business environment.

The student should currently be employed in a field where microcomputers have greatly impacted their occupation and where an additional knowledge base of microcomputers will heighten the individuals productivity and career potentials.

## Required Courses

DATA106	Microcomputers In Business	3
DATA110	Microcomputer Systems Design	3
BSAD150	Intro To Business	3

## Option Courses

Select 1 Course From Option 1 And 3 Courses From Option 2

DATA101	Intro To Data Processing	Opt1	3
COMS181	Intro To Computer Literacy	Opt1	3
DATA103	BASIC	Opt2	3
COMS174	Applied Programming I Pascal	Opt2	3
ACCT351	Financial Accounting-Microcomputers	Opt2	3
ACCT101	Principles Of Accounting I	Opt2	4
ACCT102	Principles Of Accounting II	Opt2	4
ACCT352	Managerial Act Microcomputers	Opt2	3

## DIETARY MANAGER SPECIALIST

The Dietary Manager is responsible for the management of food operations in a dietary department. This includes the management of food service personnel, food/kitchen supplies, and the routine nutritional aspects of food service. Working with a dietary consultant, the dietary manager assists in providing quality nutritional care services in a food service department, hospital and health care facilities.

## Required Courses

DMAS549	Orientation	1
DMAS350	Health Field	1
DMAS351	Food Preparation	1
DMAS352	Sanitation/Meal Service	2
DMAS353	Nutrition Life Cycle	1
DMAS354	Modified Diets	1
DMAS355	Food Production Management	1
DMAS356	Food Service Management	2
DMAS361	Food Prep Field Experience	1
DMAS362	Sanitation/Meal Service Field Exp	1
DMAS363	Nutrition Life Cycle Field Exp	1
DMAS364	Modified Diet/Field Experience	1
DMAS365	Food Production Field Experience	1
DMAS366	Food Service Mgmt Field Experience	1

## ELECTRONIC FUNDAMENTALS

The purpose of the Electronic Fundamentals certificate is to provide the person working as a troubleshooter in any electricity/electronics,

maintenance position with updated technical knowledge to complement existing skills. The program updates information in the digital and microprocessor areas.

## Required Courses

ELEM327	Electricity/Electronics II	3
---------	----------------------------	---

## Option Courses

Select 1 Course From Option 1

ELEM326	Electricity/Electronics I	Opt1	3
ELET357	Digital	Opt1	3
ELET358	Microprocessors I	Opt1	3
ELET359	Microprocessors II	Opt1	3

## EMERGENCY MED TECH AMBULANCE

The Emergency Medical Technician Ambulance certificate is designed to provide an introductory learning experience for persons interested in the field of emergency medicine. This course includes practical and written testing in the classroom as well as clinical experience in the area hospitals. National Registry Certification tests will be administered at course completion in both the written and skill areas. Area ambulance units utilize EMT-A's.

## Required Courses

HLCR307	Emergency Medical Tech Ambulance	6
---------	----------------------------------	---

## FIRE SPECIALIST

The Fire Specialist certificate program provides basic technical knowledge for people working in the fire protection field.

Course work covers the scientific principles that affect fire, its causes and behavior, and the means of minimizing its destructive effects through design, detection, suppression and prevention.

## Required Courses

CHEM131	General Chemistry I	4
FIRE231	Intro To Fire Science	2
FIRE232	Fire Behavior	3
FIRE233	Building Construction	3
FIRE234	Fire Protection Systems	3
FIRE235	Hazardous Materials	3
FIRE236	Fluid Flows	3
FIRE237	Planning For Fire Protection	3
FIRE238	Fire Investigation	2
PHYL106	Survey Of Physical Science	4

## GERONTOLOGICAL NURSING

Understanding gerontology or the process of aging is a major part of health care today. It is appropriate that each nurse have the opportunity to develop a depth of knowledge and be able to apply it to the development and management of patient care. Using the nursing process to assess the needs of the elderly, students learn to plan care, implement, and evaluate that care. Employment opportunities include long-term care, hospital facility, or home health care.

## Required Courses

HLCR308	Process Of Aging	2
HLCR309	Assessment/Geriatric Patient	2
HLCR310	Drugs & The Elderly	1
HLCR311	Developing Management Skills	2

## Option Courses

Select 2 Courses From Option 1

HLCR312	Assertiveness Training	Opt1	1
HLCR313	Infection Control	Opt1	1
HLCR314	Emergency Care	Opt1	1



# SPECIALIST CERTIFICATES

## INSURANCE SALES

The purpose of the Insurance Sales certificate is to 1) provide minimal knowledge necessary to become licensed, and 2) learn human relations and marketing elements essential in prospecting and selling insurance coverage. The certificate is also beneficial to currently employed insurance people wishing to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

BSAD225	Principles Of Insurance	3
MGMT203	Human Relations In Business	3
MKTG103	Principles Of Selling	3

### Option Courses

Select 2 Courses From Option 1 And 1 Course From Option 2

BSAD150	Intro To Business	Opt1	3
BSAD223	Business/Financial Math	Opt1	3
BUSL101	Business Law I	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT341	Business Internship I	Opt1	5
MKTG102	Principles Of Marketing	Opt1	3
MKTG104	Advertising & Sales Promotion	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals Of Speech	Opt2	3

## INTERNATIONAL TRADE

The International Trades certificate program is designed as an upgrading opportunity for persons who already have experience in business and desire to concentrate on specialized courses in International Trade.

### Required Courses

ANTH122	Peoples & Cultures Of Mexico	3
FNSR213	International Banking	3
GEOG147	Developed World	3
GEOG148	Third World	3
ITSP111	Intro To International Business	3
ITSP130	International Marketing	3
ITSP150	International Documentation	3

### Option Courses

Select Option 1 Or Option 2

FORL120	Elementary Spanish I	Opt1	4
FORL121	Elementary Spanish II	Opt1	4
FORL130	French I	Opt2	4
FORL131	French II	Opt2	4

## MID MANAGEMENT

The purpose of the Mid Management certificate is to provide the currently employed person in business with broad knowledge of 1) the principles of management and business functions, and 2) human relations and communication skills necessary to recognition and appointment to successive levels of management. The certificate is also beneficial to people currently employed in management who wish to upgrade credentials and improve chances for further promotion.

Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

Select 1 Course From Each Option

ACCT101	Principles Of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3

BSAD150	Intro To Business	3
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
DATA101	Intro To Data Processing	Opt2 3
DATA103	BASIC	Opt2 3
MGMT101	Personnel Supervision	3
MGMT102	Introduction To Management	3
MGMT203	Human Relations In Business	3

### Option Courses

Select 1 Course From Each Option

BSAD152	Business Statistics	Opt3	4
BSAD153	Office Management	Opt3	3
BSAD243	Quantitative Methods	Opt3	4
MGMT103	Sales Management	Opt3	3
MKTG211	Industrial Marketing	Opt3	3
MKTG321	Retail Management I	Opt3	3
ENGL117	Composition I	Opt4	3
SPCH110	Fundamentals Of Speech	Opt4	3

## MONEY MANAGEMENT

Money Management Counseling is a process in which individuals are trained to utilize appropriate resources to assist the client in achieving immediate and/or long-range monetary-related goals according to mutually agreeable guidelines.

This short-term Money Management program is intended for persons within a service or helping profession who are serving individuals in need of money management guidance. The courses will help students discover and develop individualized styles of working with people on money related problems. Completion of the program will enable the student to assist clients with debt and financial crisis, effective budgeting and buying practices, financial planning, referral avenues, and legal problems and services. Job opportunities exist in banks, credit unions, and human service agencies.

### Required Courses

SEVC356	Intro To Money Mgmt Counseling	2
SEVC357	Dev Skills In Money Mgmt Counseling	2

### Option Courses

Select 1 Course From Option 1

SEVC358	Current Money Management Topics	Opt1	2
SEVC359	Crisis Intervention/Couns Tech	Opt1	2

## MOTOR CONTROL

The Motor Control certificate program has been designed to provide the person who has or will have responsibility for the set up, installation, replacement, or maintenance of electrical motors. The typical student will have some maintenance or electrical experience, and a desire to update and expand knowledge of the function of electric motors.

### Required Courses

ELEM321	Motor Control I	3
ELEM322	Motor Control II	3

### Option Courses

Select 1 Course From Option 1

ELEM320	Basic Electric Motor Theory	Opt1	1
ELEM323	Code Book For Motors	Opt1	1
HLCR314	Emergency Care	Opt1	1

## NURSING ASSISTANT

The Nursing Assistant certificate program provides the opportunity for those interested in a health career or seeking a position in a hospital



# SPECIALIST CERTIFICATES

or nursing home to learn entry-level skills. The areas of study include communication, medical asepsis, anatomy and physiology, personal care, nutrition, geriatrics, and death and dying. This program meets the criteria for seeking a job in central Iowa hospitals and nursing homes. The 120-hour 6-credit component meets the State Health Department requirement for employment in a nursing home.

## Required Courses

HLCR314	Emergency Care	1
HLCR317	Medical Terminology	2
HLCR318	Nursing Assistant	6

## NURSING HOME ADMINISTRATOR

The Nursing Home Administrator certificate is for students with prior degrees who desire eligibility to sit for Nursing Home Administrator Licensure. The student must also meet the Iowa Board of Examiners for Nursing Home Administrator equivalency requirements. Program specific orientation required.

## Required Courses

BUSL101	Business Law I	3
SOCY204	Social Gerontology/Applications	4
HCAD275	Admin: Long-Term Care Facilities	6
HCAD276	Services/Long-Term Care Residents	6
HCAD251	Pract: Social Services	2
HCAD252	Pract: Dietary	2
HCAD253	Pract: Legal Aspects & Govt Organ	2
HCAD254	Pract: Nursing	2
HCAD255	Housekeeping/Laundry/Maintenance	2
HCAD256	Pract: Activ/Community Resources	2
HCAD257	Pract: Business Administration	2
HCAD258	Pract: Administrative Organization	2
HCAD259	Pract: Human Resource Management	2
HCAD281	Seminar In Health Care	3

## Option Courses

Select 1 Of The Following Options

ACCT101	Principles Of Accounting I	Opt1	4
ACCT102	Principles Of Accounting II	Opt1	4
ACCT101	Principles Of Accounting I	Opt2	4
HCAD237	Long-Term Care Financial Management	Opt2	3
ACCT301	Accounting Fundamentals	Opt3	3
HCAD237	Long-Term Care Financial Management	Opt3	3

## PHLEBOTOMY

A phlebotomist draws blood from patients for routine and diagnostic medical tests. Most phlebotomists are employed in hospitals.

## Required Courses

PHLE302	Phlebotomy	2
PHLE304	Phlebotomy Practicum	2

## PRODUCTION ART

The purpose of the Production Art certificate program is to provide training for entry-level positions as production artists in large printing and publishing companies and companies with small publications departments.

## Required Courses

GRPH407	Production Art I	3
GRPH415	Production Art II	3

## PUBLIC SAFETY COMMUNICATION

Advances in communication technology have produced an increasing demand for centralized communication systems. A state plan, developed and approved by the Iowa Legislature in 1973, enabled county and local agencies to centralize communication centers in Iowa which operate 24 hours per day, 7 days per week. Each center employs a minimum of five people.

This program is designed to provide individuals with the information and skills needed to function effectively as a Public Safety Communication Operator. Opportunities for employment exist in over eighty communication centers in Iowa. Specific areas include law enforcement, fire and emergency medical, and disaster control.

## Required Courses

SERC334	Emergency Medical Dispatch	1
SERC335	Basic Communications Operator Skills	2
SERC336	Intermediate Comm. Operator Skills	1
SERC337	Communication Operator Internship	1
SERC338	Training Skills	1
SERC339	Government & Community Resources	1
SERC340	Advanced Comm Operator Skills	1
SERC341	Interpersonal Communications	1

## PURCHASING

The purpose of the Purchasing certificate is to provide the currently employed person with knowledge of principles, minimal accounting skills and legal aspects necessary to make a change to the field of purchasing. The certificate is also beneficial to persons already employed in purchasing who wish to upgrade their credentials. Courses also apply toward the one and two-year programs in marketing and management.

## Required Courses

ACCT101	Principles Of Accounting I	4
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
MKTG212	Purchasing	3

## Option Courses

Select 2 Courses From Option 1 And 1 Course From Option 2

BSAD150	Intro To Business	Opt1	3
BSAD153	Office Management	Opt1	3
DATA101	Intro To Data Processing	Opt1	3
DATA103	BASIC	Opt1	3
MGMT341	Business Internship I	Opt1	5
MKTG102	Principles Of Marketing	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals Of Speech	Opt2	3

## REAL ESTATE SALES

The purpose of the Real Estate Sales certificate is to 1) provide minimal knowledge necessary to become licensed, and 2) study human relations and marketing elements essential in prospecting and selling real estate property. The certificate is also beneficial to currently employed real estate people wishing to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

## Required Courses

BSAD226	Principles Of Real Estate	3
BUSL101	Business Law I	3
MGMT203	Human Relations In Business	3



# SPECIALIST CERTIFICATES

MKTG103 Principles Of Selling 3

## Option Courses

Select 2 Courses From Option 1 And 1 Course From Option 2

BSAD150	Intro To Business	Opt1	3
BSAD223	Business/Financial Math	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT341	Business Internship I	Opt1	5
MKTG104	Advertising & Sales Promotion	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals Of Speech	Opt2	3

## RESIDENTIAL CARE FACILITY ADMIN

The purpose of the Residential Care Facility Administrator certificate is to provide course work to qualify people to be administrators of residential care facilities. Administrators are generally responsible for budgeting and staffing, as well as developing programs to facilitate the care of mentally retarded and developmentally disabled persons.

### Required Courses

ENGL410	Communication Skills	3
BUSL101	Business Law I	3
ACCT301	Accounting Fundamentals	3
HCAD227	Integrating Common Services-MH/MR/DD	4
HCAD275	Admin: Long-Term Care Facilities	6
HCAD277	Service Delivery Systems-MH/MR/DD	6
PSCH104	Abnormal Psychology	3
PSCH107	Principles Of Behavior Modification	3

## SELLING BASIC

The purpose of the Basic Selling certificate is to provide currently employed people with knowledge of 1) the basic principles of selling and marketing, and 2) the elements of human relations and communication required to enter the field of selling. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

MGMT103	Sales Management	3
MGMT203	Human Relations In Business	3
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3

### Option Courses

Select 2 Courses From Option 1

BSAD150	Intro To Business	Opt1	3
MGMT341	Business Internship I	Opt1	5
MKTG104	Advertising & Sales Promotion	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
MKTG321	Retail Management I	Opt1	3
MKTG323	Display & Visual Merchandising	Opt1	2
MKTG334	Prin Of Fashion Merchandising	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH114	Persuasive Speaking	Opt1	3

## SELLING ADVANCED

The purpose of the Advanced Selling certificate is to provide currently employed sales people with knowledge of 1) the principles of business, marketing, selling, and sales management; and 2) human relations skills and communication techniques necessary for establishing and expanding sales success. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

BSAD150	Intro To Business	3
MGMT103	Sales Management	3
MGMT203	Human Relations In Business	3
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3
SPCH110	Fundamentals Of Speech	3
SPCH114	Persuasive Speaking	3

### Option Courses

Select 3 Credits From Option 1

BSAD223	Business/Financial Math	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
MKTG321	Retail Management I	Opt1	3
MKTG323	Display & Visual Merchandising	Opt1	2
MKTG334	Prin Of Fashion Merchandising	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

### Elective Courses

English elective 3

## SMALL BUSINESS MANAGEMENT

The purpose of the Small Business Management certificate is to provide the person wishing to own or manage a small business with 1) the elements of business management, and 2) the essentials of human relations and marketing. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

BSAD229	Small Business Management	3
MGMT203	Human Relations In Business	3
MKTG102	Principles Of Marketing	3

### Option Courses

Select 1 Course From Option 1 And 2 Courses From Option 2

ACCT101	Principles Of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
BSAD223	Business/Financial Math	Opt2	3
BUSL101	Business Law I	Opt2	3
DATA101	Intro To Data Processing	Opt2	3
DATA103	BASIC	Opt2	3
MGMT101	Personnel Supervision	Opt2	3
MGMT341	Business Internship I	Opt2	5
MKTG103	Principles Of Selling	Opt2	3
MKTG104	Advertising & Sales Promotion	Opt2	3
MKTG211	Industrial Marketing	Opt2	3
MKTG212	Purchasing	Opt2	3
MKTG321	Retail Management I	Opt2	3
MKTG323	Display & Visual Merchandising	Opt2	2
MKTG334	Prin Of Fashion Merchandising	Opt2	3
BSAD150	Intro To Business	Opt2	3

### Elective Courses

English elective 3

## SMALL BUSINESS START UP

The Small Business Start Up certificate assists current or prospective small business owners in gaining the skills necessary to successfully operate their business.

The emphasis in the program is on hands on experiences which will provide immediate solutions to the common problems faced by the small business owner. The demand for small business operators is unlimited



# SPECIALIST CERTIFICATES

since the opportunity for beginning an enterprise is a key feature of our economy and society.

## Required Courses

ENTR301	Small Business Finance & Law	3
ENTR302	Human Potential For Business	3
ENTR303	Small Business Marketing	3

## Option Courses

Select 1 Course From Option 1		
BSAD227	Business Communications	Opt1 3
BSAD229	Small Business Management	Opt1 3

## SUPERVISION BASIC

The purpose of the Basic Supervision certificate is to provide the currently employed person in business with knowledge of 1) the principles of supervising others, and 2) the elements of human relations and communication needed for promotion and success in first line supervision. The certificate is also beneficial to people currently working as supervisors who wish to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

## Required Courses

MGMT101	Personnel Supervision	3
MGMT102	Introduction To Management	3
MGMT203	Human Relations In Business	3

## Option Courses

Select 6 Credits From Option 1 And 1 Course From Option 2		
BSAD150	Intro To Business	Opt1 3
BSAD153	Office Management	Opt1 3
BSAD229	Small Business Management	Opt1 3
MGMT103	Sales Management	Opt1 3
MGMT341	Business Internship I	Opt1 5
MKTG103	Principles Of Selling	Opt1 3
MKTG211	Industrial Marketing	Opt1 3
MKTG212	Purchasing	Opt1 3
MKTG321	Retail Management I	Opt1 3
MKTG334	Prin Of Fashion Merchandising	Opt1 3
ENGL117	Composition I	Opt2 3
SPCH110	Fundamentals Of Speech	Opt2 3

## TECHNICAL MANAGEMENT

The Technical Management certificate is designed for employed workers who seek skills in a manufacturing environment.

The emphasis in the program is on course work which is directly related to the supervisory, financial, quantitative and marketing functions which impact on the manufacturing supervisor. The program is responsive to requests from industrial training directors.

## Required Courses

ACCT101	Principles Of Accounting I	4
ACCT102	Principles Of Accounting II	4
BSAD152	Business Statistics	4
BSAD243	Quantitative Methods	4
DATA101	Intro To Data Processing	3
MGMT101	Personnel Supervision	3
MGMT102	Introduction To Management	3
MGMT240	Principles Of Managerial Finance	3
MGMT241	Production Management	3
MKTG102	Principles Of Marketing	3

## TRAVEL PERSONNEL

The purpose of the Travel Personnel certificate is to provide students with a basic understanding of the terminology, procedures, and communication skills needed in the travel industry. Certificate holders are trained to qualify for work needed in private agencies as travel agents and in corporate settings as reservationists, travel counselors, and travel planners.

## Required Courses

OFFC206	Written/Oral Communication	3
OFFC301	Typing I	2
OFFC414	Travel Personnel I	3
OFFC415	Travel Personnel II	3
OFFC416	Selling For Travel Personnel	3
OFFC417	Geography For Travel	3

## Option Courses

Select 1 Course From Option 1		
OFFC309	Office Accounting	Opt1 2
OFFC317	Office Procedures I	Opt1 2

## UPHOLSTERY I

The Upholstery I certificate program is designed to provide instruction on the correct operation of sewing machines. The students will also gain knowledge of lay out, cutting and fitting fabric for sewing machine operation.

## Required Courses

UPHL435	Intro To Upholstery	3
UPHL436	Intro To Upholstery Lab	6

## Option Courses

Select Either Option 1 Or Option 2		
UPHL437	Furniture Repair	Opt1 3
UPHL438	Automotive Upholstery Repair	Opt2 3

## UPHOLSTERY II

The Upholstery II certificate program is designed to provide instruction in either furniture recovering or auto repair and restoration. Students will develop skills in layout, match fabric, and removal and replacement of pillow and channel backs. Students choosing the auto repair and restoration will develop skills in auto restoration and custom auto upholstery.

## Option Courses

Select Either Option 1 Or Option 2		
UPHL439	Upholstery & Repair	Opt1 6
UPHL440	Furniture Recovering	Opt1 2
UPHL441	Auto Upholstery Repair & Restoration	Opt2 4
UPHL442	Auto Upholstery	Opt2 4

## UPHOLSTERY III

This Upholstery III certificate program is designed to provide the student with the necessary knowledge to enter employment in the furniture or automotive upholstery field.

Courses in the Upholstery I, II, III certificate programs also apply toward the one-year Upholstery diploma program.

## Option Courses

Select Either Option 1 Or Option 2		
UPHL443	Furniture Reconstruction	Opt1 6
UPHL444	Advanced Upholstery	Opt1 6
UPHL445	Adv Auto Upholstery Restoration	Opt2 5
UPHL446	Advanced Auto Upholstery Lab	Opt2 7



# SPECIALIST CERTIFICATES

## VOLUNTEER MANAGEMENT

The Volunteer Management certificate is a program intended for people who are involved or intend to be involved in the management of volunteer programs. This program is the only one of its kind in Iowa. The courses in the program will help develop understanding of the problems and challenges inherent in managing a human service program. It is designed to provide a comprehensive learning experience in the development, coordination, and supervision of volunteer programs.

Opportunities for employment as volunteer coordinators or directors exist in human service agencies, churches, government agencies, hospitals, nursing homes, and voluntary service organizations.

### Required Courses

SEVC351	Volunteers In Action	2
SEVC352	Volunteer Coordination	2
SEVC353	Effective Mgmt Of Volunteer Programs	1

### Option Courses

Select 1 Course From Option 1		
PSCH106	Psychology Of Human Relations & Adj	Opt1 3
SEVC340	Volunteer Services Practicum	Opt1 1
SEVC341	Volunteer Independent Study	Opt1 1

## WARD CLERK

The Ward Clerk certificate program provides an opportunity for individuals to learn and practice skills that keep a busy hospital clinical unit running smoothly. The skills are applicable and transferable to other types of health facilities, offices, or insurance companies.

Organizational and communication skills are stressed along with data systems and documentation.

### Required Courses

HLCR316	Ward Clerk	4
HLCR317	Medical Terminology	2

### Option Courses

Select 1 Course From Option 1		
HLCR312	Assertiveness Training	Opt1 1
HLCR314	Emergency Care	Opt1 1

## WASTEWATER TREATMENT OPERATOR

The Wastewater Treatment Operator certificate program provides a series of courses for those working in wastewater treatment plants, sometimes referred to as sewage treatment or water pollution control. Persons working as an operator may use these courses for preparation for the Iowa Department of Water, Air, and Waste Management certification examination and preparation for other state exams for advancement.

Persons interested in entering wastewater treatment operations can complete course work, secure employment, and after working for a minimum of six months can sit for the certification exam.

### Option Courses

Select 10 Credits From Option 1		
HLCR314	Emergency Care	Opt1 1
WATE312	Basic Math For Operators	Opt1 1
WATE313	Math Formulas For Operators	Opt1 1
WATE322	Lab Equipment	Opt1 1
WATE323	Lab Techniques	Opt1 1
WATE331	Pumps & Piping	Opt1 2
WWAR302	Intro To Wastewater Treatment	Opt1 2
WWAR303	Lagoons	Opt1 2
WWAR374	Seminar Topics I	Opt1 1
WWAR375	Seminar Topics II	Opt1 1
WWAR376	Seminar Topics III	Opt1 1

## WATER TREATMENT OPERATOR

The Water Treatment Operator program provides a series of courses for those working in water works (drinking water) systems. Persons working as an operator may use these courses for preparation for Iowa Department of Water, Air and Waste Management certification exam, continuing education for maintaining certification, and preparation for other state exams for advancement.

Persons interested in entering water treatment operations can complete the course work, secure employment, and after a minimum of six months work experience, sit for the Iowa Department of Water and Waste Management certification exam.

### Option Courses

Select 10 Credits From Option 1		
HLCR314	Emergency Care	Opt1 1
WATE302	Introduction To Water Treatment	Opt1 2
WATE312	Basic Math For Operators	Opt1 1
WATE313	Math Formulas For Operators	Opt1 1
WATE317	Basic Water Chemistry	Opt1 1
WATE318	Chemistry & Water Processes	Opt1 1
WATE322	Lab Equipment	Opt1 1
WATE323	Lab Techniques	Opt1 1
WATE331	Pumps & Piping	Opt1 2
WATE366	Seminar Topics I	Opt1 1
WATE364	Seminar Topics II	Opt1 1
WATE365	Seminar Topics III	Opt1 1

## WORD PROCESSING

The purpose of the Word Processing certificate program is to provide students with a basic understanding of word processing concepts and prepare them with the necessary training, knowledge, and skills to work as a word processor. Certificate holders can be word processors or secretaries responsible for the written communications of a company or agency.

### Required Courses

OFFC205	Business English	3
OFFC206	Written/Oral Communication	3
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3

### Option Courses

Select 2 Courses From Option 1 And 1 Course From Option 2		
OFFC309	Office Accounting	Opt1 2
OFFC310	Professional Development	Opt1 3
OFFC317	Office Procedures I	Opt1 2
OFFC340	Intro To Office Computer Application	Opt2 3
OFFC341	Advanced Office Computer Application	Opt2 3

**PUTTING EDUCATION  
AND TRAINING  
to work**



# DESCRIPTION OF COURSES

After selected course titles, numbers may be listed. The first number refers to the Credit the course carries. The second number indicates Lecture Hours, the third number reflects Laboratory Hours, and the fourth number indicates Practicum Hours per week assuming a 15 week term. General = non-core courses identified as freshman-sophomore courses. Open = occupationally specific courses corresponding to courses in certain professional programs at four year institutions. Vocational = occupationally specific courses. Core = traditional liberal arts courses in the first two years of a baccalaureate degree. Adaptor = developmental and remedial courses.

**ACCT090** 2-0-4-0-0  
**Accounting Adaptor Lab** Adaptor

Applied theory and practice of topics covered in ACCT101 Accounting Principles I. The course is primarily intended for students currently enrolled in ACCT 101 who have not had a high school course or other previous exposure to bookkeeping and accounting. COREQUISITE: ACCT101

**ACCT101** 4-3-2-0-0  
**Principles Of Accounting I** General

Introduces the student to the principles of accounting with emphasis placed on the users and uses of accounting information. The double-entry bookkeeping system is presented with a focus on the end result of the accounting cycle, the financial statement.

**ACCT102** 4-3-2-0-0  
**Principles Of Accounting II** General

A continuation of Principles of Accounting I. Introduces additional accounting tasks related to liabilities, corporations, manufacturing, and branch operations. The course also includes capital budgeting, analysis of financial statements and decision-making by managers. PREREQUISITE: ACCT101

**ACCT103** 4-3-2-0-0  
**Intermediate Accounting I** Open

Emphasis on theory, standards and principles—the "why" of accounting. The framework goes beyond the procedural level to the conceptual level. Topics include: income and balance sheets, inventories, statements, changes in financial position, receivables, liabilities and operational assets. PREREQUISITE: ACCT102

**ACCT104** 4-3-2-0-0  
**Intermediate Accounting II** Open

Continuation of Intermediate Accounting I with emphasis in the following areas: corporations-formation, expansion, investments, bonds, pensions, leases, accounting changes, earnings per share and accounting for inflation. PREREQUISITE: ACCT103

**ACCT105** 3-3-0-0-0  
**Governmental Accounting** Open

An introduction to the accounting and reporting principles, standards, and procedures applicable to federal, state, and local government. Also includes nonprofit institutions such as hospitals and universities. PREREQUISITES: ACCT102 or departmental permission

**ACCT203** 4-3-2-0-0  
**Cost Accounting I** Open

An introduction to accounting concepts of product costing systems. Topics include: classification of costs, process costing, job order costing, joint and by-product costs, and standard cost systems, with variable analysis. PREREQUISITE: ACCT102

**ACCT204** 4-3-2-0-0  
**Cost Accounting II** Open

A detailed study of the concepts and techniques of cost analysis. Topics include: production budgeting, capital budgeting, break-even analysis, and other areas of concern to management. PREREQUISITE: ACCT203

**ACCT206** 3-3-0-0-0  
**Income Tax** Open

An introduction to the principles of all areas of federal

taxation. Emphasizes the federal tax outcomes of personal and business financial decisions. PREREQUISITE: ACCT102

**ACCT301** 3-2-2-0-0  
**Accounting Fundamentals** Open

An introductory course in accounting fundamentals and procedures. Includes capturing and analyzing business data, topics in financial statement preparation, manufacturing costs and budgeting.

**ACCT351** 3-3-0-0-0  
**Financial Acct/Microcomputers** Voc/Tech

Introductory course in microcomputer accounting operation. Includes topics in setting up the general ledger, accounts receivable, accounts payable, payroll and fixed asset depreciation. PREREQUISITES: ACCT101, DATA101

**ACCT352** 3-3-0-0-0  
**Managerial Acct/Microcomputers** Voc/Tech

Microcomputer operations with an emphasis on managerial uses. Includes topics in basic spreadsheet modeling, spreadsheet commands, manufacturing systems, budgeting, profit analysis and model building. Word processing and data base management are briefly introduced. PREREQUISITES: ACCT102, DATA101

**ACCT403** 3-0-0-0-14  
**Accounting Internship** Open

An opportunity to gain practical experience through on-the-job training in an approved business or governmental office. PREREQUISITES: Complete first 2 sem. of Acct Spec and/or department permission

**AGET471** 10-5-10-0-0  
**Power Trains** Voc/Tech

To provide instruction in drive trains relating to design, operation, and servicing of components used in agriculture equipment. Included are clutches, various transmissions, differentials and final drives.

**AGET479** 10-5-10-0-0  
**Advanced Engines** Voc/Tech

An in-depth study of the concepts covered in basic engines. Engine application and overhaul procedures according to manufacturers' recommendations are studied. PREREQUISITE: AGPE478

**AGET481** 5-5-0-0-0  
**Diesel Fuel Systems** Voc/Tech

An introductory course to the more commonly used fuel systems on agriculture equipment. Fuel flow and the function of the components of each fuel system will be discussed. PREREQUISITE: AGPE478

**AGET485** 7-5-5-0-0  
**Power Unit Testing** Voc/Tech

The application of principles learned in the basic electricity, hydraulics, engines and power trains courses, the analysis of malfunctions of components and their relationship with other components in agriculture equipment. PREREQUISITES: AGPE474, 478, 479

**AGPE470** 2-2-0-0-0  
**Technical Publications** Voc/Tech

A course in reading and understanding service manuals, parts catalogs, and technical bulletins.

**AGPE474** 10-5-10-0-0  
**Hydraulics** Voc/Tech

Designed to develop knowledge of the principles of fluid power and provide the experience necessary to begin to develop the diagnostic skills required to service high tech agricultural hydraulic systems. Operation, testing, diagnosis, and repair are covered.

**AGPE475** 7-2-10-0-0  
**Harvesting Systems** Voc/Tech

A course covering the principles of operation repairs and adjustments of farm harvesting machines. Field operation is required to study performance of machines in terms of design operating speeds and variation in adjustments.

**AGPE476** 5-3-4-0-0  
**Planting/Tillage Equipment** Voc/Tech

A course in the application, operation, and maintenance of planting and tillage machinery. It includes the theory of operation, reasons for field adjustment, proper maintenance and repair procedures.

**AGPE477** 2-2-0-0-0  
**Air Conditioning** Voc/Tech

Principles of air conditioning as well as design and application will be covered. System pressures and air temperatures will be used to check the efficiency of various systems. Discharging, checking oil levels, and recharging systems will be taught.

**AGPE478** 3-3-0-0-0  
**Basic Engines** Voc/Tech

A course in the principles, operation, and construction of internal combustion engines. Studies also include the air induction, exhaust, fuel and governing, cooling and lubricating systems.

**AGPE479** 5-3-4-0-0  
**Basic Electricity** Voc/Tech

An introduction to basic electricity principles that apply to DC electrical systems used on agricultural equipment. Electrical circuits covered include starting, charging and accessory systems.

**AGPE480** 3-1-4-0-0  
**Advanced Electricity** Voc/Tech

This course covers specialized DC electrical and electronic components and systems used on agricultural equipment. Conventional and high energy spark ignition systems, electronic equipment used to monitor and/or control tractor, combine or planter functions are included. Emphasis on troubleshooting techniques.

**AGPE482** 2-2-0-0-0  
**Shop Management** Voc/Tech

General economic principles that control business operation with special emphasis on how proper shop management can affect the growth of the agriculture equipment dealer.

**AGRI201** 3-3-0-0-0  
**Feeding & Animal Nutrition I** Voc/Tech

The identification and study of feed ingredients, nutrients and additives. Determine feed requirements of various livestock classes. Ration balancing and feed formulation are computed.



# DESCRIPTION OF COURSES

<b>AGRI202</b> <b>Soil Fertility</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI430</b> <b>Employment Experience I</b>	<b>4-0-0-0-18</b> <b>Voc/Tech</b>	will be developed. PREREQUISITE: ARCH410
The course develops an understanding of the factors which affect plant growth. Plant nutrients are considered as students gain experience in identifying major and micro nutrient deficiency symptoms in plants by means of soil tests, plant tests and observations.		Employment experience in an agri-business related to the career objectives. PREREQUISITES: AGRI201, 219, or permission of instructor		<b>ARCH460</b> <b>Architectural Drafting Lab I</b>
<b>AGRI203</b> <b>Feeding &amp; Animal Nutrition II</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI436</b> <b>Grain Management</b>	<b>2-2-0-0-0</b> <b>Voc/Tech</b>	<b>3-0-6-0-0</b> <b>Voc/Tech</b>
The practical application of feeding principles. An in-depth study of the various nutrients, their requirements and uses. An analysis of research feeding trials, research procedures and manufacturing terminology. PREREQUISITE: AGRI201		Designed to acquaint the student with the complete cycle of grain from the farm to the country elevator. Major areas of study are the management of facilities, equipment, personnel and finances, warehouse requirements, grain grading, grain conditioning and grain inventory management.		Practical application of the basic skills of drafting involving the mechanics and the necessary thought process.
<b>AGRI204</b> <b>Animal Science I</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI440</b> <b>Physical Facilities</b>	<b>1-1-0-0-0</b> <b>Voc/Tech</b>	<b>ARCH461</b> <b>Architectural Drafting Lab II</b>
An analysis of the livestock industry with emphasis on reproduction, inheritance, performance testing, selection and marketing.		The layout of buildings, driveways and facilities on site. Includes flow of materials and the safe operation and maintenance of machinery and equipment.		<b>5-0-10-0-0</b> <b>Voc/Tech</b>
<b>AGRI205</b> <b>Commodities I</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI454</b> <b>Agriculture Seminar</b>	<b>1-1-0-0-0</b> <b>Voc/Tech</b>	Practical application of techniques necessary to develop a set of residential drawings. PREREQUISITE: ARCH460
Focus on the futures market and how it can be used as a marketing tool. Emphasis is on terminology and hedging.		An overview of the individual's goals as they relate to employment experiences and the instructional program. PREREQUISITE: AGRI455		<b>ARCH462</b> <b>Architectural Drafting III</b>
<b>AGRI206</b> <b>Crop Management</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI455</b> <b>Employment Experience II</b>	<b>4-0-0-0-18</b> <b>Voc/Tech</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>
An introductory course in the general principles of crop production and management. Major areas of study are food production, crop classification, plant growth factors, seed production and variety selection.		Work experience in an agri-business area. PREREQUISITE: AGRI430		Small commercial building drawings will be developed including the mechanical systems and costs. PREREQUISITE: ARCH420
<b>AGRI207</b> <b>Livestock Disease Prevention</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>AGRI464</b> <b>Employment Experience III</b>	<b>4-0-0-0-18</b> <b>Voc/Tech</b>	<b>ARCH463</b> <b>Architectural Drafting Lab III</b>
A survey of diseases of large domestic animals, including discussion of causes, transmission, prevention and control.		Work experience in an agri-business area. PREREQUISITE: AGRI455		<b>5-0-10-0-0</b> <b>Voc/Tech</b>
<b>AGRI214</b> <b>Animal Science II</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>ANTH120</b> <b>Introduction To Anthropology</b>	<b>3-3-0-0-0</b> <b>Core</b>	Involvement in the practical drawing of commercial buildings including the normal system but with emphasis on energy conservation. PREREQUISITE: ARCH461
A study of production methods, management procedures, facilities and equipment for beef, swine and sheep. PREREQUISITE: AGRI204		This course is an introduction to the comparative study of humankind from biological and cultural perspectives. It surveys anthropological theory, methods and major findings regarding human origins and variations, cultural development and change, cultural systems, and cross-cultural comparisons of people throughout the world.		<b>ARCH464</b> <b>Construction Technique I</b>
<b>AGRI215</b> <b>Commodities II</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>ANTH121</b> <b>Cultural Anthropology</b>	<b>3-3-0-0-0</b> <b>Core</b>	<b>2-2-0-0-0</b> <b>Voc/Tech</b>
An in-depth study of the futures market. Major areas of study include hedging, speculation, price forecasting, spreading, technical analysis and fundamental analysis. PREREQUISITE: AGRI205		The application of anthropological theory and perspective to the comparison of different types of cultures throughout the world, and to the analysis of contemporary human problems. Using ethnographic techniques, students conduct research on selected cultural aspects of the surrounding community.		An introduction to building materials through the construction specification institutes' accounting and management systems.
<b>AGRI219</b> <b>Soils &amp; Fertilizers</b>	<b>5-5-0-0-0</b> <b>Voc/Tech</b>	<b>ANTH122</b> <b>Peoples &amp; Cultures Of Mexico</b>	<b>3-3-0-0-0</b> <b>General</b>	<b>ARCH465</b> <b>Building Equipment Technician II</b>
An introductory course in soils and fertilizers. A study of the physical, chemical and biological properties of soils. Also includes the study of fertilizers, their composition, manufacture and use.		This course traces the rise and development of the Indian civilization, the Spanish conquest, and the emergence of Mestizo Mexico through such events as its independence from Spain and its 20th century revolution. Course also examines the varieties of cultures and institutions of contemporary Mexico.		<b>2-2-0-0-0</b> <b>Voc/Tech</b>
<b>AGRI319</b> <b>Soils</b>	<b>2-2-0-0-0</b> <b>Voc/Tech</b>	<b>ANTH126</b> <b>Faces Of Culture</b>	<b>3-3-0-0-0</b> <b>General</b>	Heating and cooling systems with support conditioning elements will be analyzed. PREREQUISITE: ARCH473
An introductory course in soils studying the physical, chemical, and biological properties.		A television course in cultural anthropology which presents culture as the expression of human values, behavior, and social organization existing in unique and varied forms throughout the world. The course focuses on culture as an adaptive mechanism which provides for the survival of the species.		<b>ARCH470</b> <b>Construction Techniques II</b>
<b>AGRI320</b> <b>Fertilizers</b>	<b>3-2-2-0-0</b> <b>Voc/Tech</b>	<b>ARCH410</b> <b>Architectural Drafting I</b>	<b>2-2-0-0-0</b> <b>Voc/Tech</b>	An ongoing look into the construction specification institutes' system of categorizing building materials. PREREQUISITE: ARCH464
An introductory course in fertilizers, their composition, manufacture, and use.		An introduction to drafting and related equipment, along with a preliminary look at site, energy, the building code, and sketching.		<b>ARCH471</b> <b>Construction Techniques III</b>
<b>AGRI411</b> <b>Agricultural Economics</b>	<b>2-2-0-0-0</b> <b>Voc/Tech</b>	<b>ARCH420</b> <b>Architectural Drafting II</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>
A study of economic principles and the application of these principles to the distribution of agricultural supplies.		Complete sets of residential working drawings involving plans, elevations, sections, details, and schedules		Complete the construction specification institutes' uniform system and investigate the preliminary aspects of structural design. PREREQUISITE: ARCH470
<b>AGRI421</b> <b>Chemical Technology</b>	<b>3-3-0-0-0</b> <b>Voc/Tech</b>			<b>ARCH472</b> <b>Construction Estimating</b>
Common features of pests, methods of control, how pesticides work, pesticide labels, application equipment, calibration, laws and regulation governing pesticide use.				<b>2-2-0-0-0</b> <b>Voc/Tech</b>
				An orderly process of accounting for the items involved in the construction project.
				<b>ARCH473</b> <b>Building Equipment Techniques I</b>
				<b>2-2-0-0-0</b> <b>Voc/Tech</b>
				The mechanical systems of the building will be analyzed from the ground beginning with plumbing and electrical.
				<b>ARCH474</b> <b>Drafting Math Algebra</b>
				<b>3-3-0-0-0</b> <b>Voc/Tech</b>
				A review of basic math and an investigation of the principles of algebra. PREREQUISITES: 1 year H.S. algebra or equivalent
				<b>ARCH475</b> <b>Technical Report &amp; Specs</b>
				<b>2-2-0-0-0</b> <b>Voc/Tech</b>
				A look into the forms and contracts used in architecture as well as the technical section called specifications.
				<b>ARCH476</b> <b>Drafting Math Trigonometry</b>
				<b>3-3-0-0-0</b> <b>Voc/Tech</b>
				A search into the relationship between algebra and geometry and how they are combined into a useful tool. PREREQUISITE: ARCH474
				<b>ARTS101</b> <b>Art Appreciation</b>
				<b>3-3-0-0-0</b> <b>Core</b>
				A general survey course which explores in chronological sequence many artists, their lives, cultures and media. Field trip required.



# DESCRIPTION OF COURSES

**ARTS102** 3-0-6-0-0  
**Fundamentals Of Drawing** General  
 Emphasis on new perceptions of reality using nature, still life, and landscapes. Students will explore a variety of media techniques to develop skills.

**ARTS103** 3-0-6-0-0  
**Life Drawing** General  
 Drawing and painting a live model. Emphasis on structure, movement, and expression.

**ARTS104** 3-0-6-0-0  
**Fundamentals Of Painting** General  
 Acrylic or oil painting with emphasis on still life, landscape, and individual composition.

**ARTS109** 3-3-0-0-0  
**Design: Exploring Art Media** General  
 An introduction to basic techniques in media such as paper-making, clay, fibers and soft sculptures. Students will explore variety of traditional approaches to express a contemporary vision.

**ARTS110** 3-2-2-0-0  
**Teaching Arts & Crafts** General  
 Designed for students in education and recreation to assist them with design, construction, and planning of multi-art forms and materials for instructional situations.

**ASDN209** 6-6-0-0-0  
**Human Needs II** Open  
 Focuses on delivery of restorative nursing care to surgical clients and clients with activity, nutrition/elimination and oxygenation/circulation alterations; assessment, problem identification and nursing diagnosis formulation are emphasized. PREREQUISITES: BIOL133, NURS254, 255, PSCH101

**ASDN210** 4-0-0-12-0  
**Nursing Practicum II** Voc/Tech  
 Provides practicum experience for application of Human Needs II theory. Time management and skills for providing nursing care to surgical and isolated clients and those with activity, nutrition/elimination and oxygen/circulation alterations are emphasized. PREREQUISITES: BIOL133, NURS254, 255, PSCH101

**ASDN211** 6-6-0-0-0  
**Human Needs III** Voc/Tech  
 Focuses on the utilization of the nursing process as applied to alterations of self concept/sexuality, nutrition/elimination, activity, and sleep/comfort. The student analyzes pathophysiology and associates signs and symptoms of altered needs. Maternal and newborn care will be introduced. Case studies are used in application of the nursing process. PREREQUISITES: ASDN209, 210, BIOL132, 134, ENGL117, PSCH101, 103

**ASDN212** 6-0-0-18-0  
**Nursing Practicum III** Voc/Tech  
 Provides an opportunity for application of Human Needs III theory in the lab and/or practicum setting. Emphasis will be on utilization of the nursing process for those clients with special interventions, altered self concept/sexuality, altered nutrition/elimination, altered activity and altered sleep/comfort. PREREQUISITES: ASDN209, 210, BIOL132, 134, ENGL117, PSCH101

**ASDN213** 4-4-0-0-0  
**Human Needs IV** Open  
 Stresses the interrelationship of altered needs and utilization of nursing process to integrate knowledge. Nursing care for clients with alterations of oxygenation/circulation and multiple altered needs is emphasized. PREREQUISITES: ASDN211, 212, SOCY101

**ASDN214** 6-0-0-18-0  
**Nursing Practicum IV** Open  
 Provides practicum experience for application of Human Needs IV and Management Accountability theory. Emphasis will be on knowledge integration and use of the nursing process when caring for clients with

altered oxygenation/circulation and multiple altered needs. PREREQUISITES: ASDN211, 212, SOCY101

**ASDN215** 1-1-0-0-0  
**Mgmt/Accountability In Nursing** Open  
 Basic management and accountability principles are examined to assist the student in formulating ethical legal decisions. Transition to employment and current constraints upon health care delivery are also considered. PREREQUISITES: ASDN211, 212, SOCY101

**ASEP312** 3-2-2-0-0  
**GM Specialized Electronics Training** Voc/Tech  
 A study of the electrical and electronics systems used in general motors vehicles. The instruction includes fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors and microprocessors. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP317** 3-2-2-0-0  
**GM Shop Fundamentals & Minor Svc** Voc/Tech  
 A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic troubleshooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP318** 4-3-2-0-0  
**GM Steering/Susp/Brake Systems** Voc/Tech  
 Instruction in the theory of operational service procedures used in the maintenance and repair of General Motors steering suspension and brake systems. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP320** 3-0-0-0-18  
**Technical Internship** Voc/Tech  
 The technician will work in a sponsoring dealership. The work will be full-time, approximately 40 hours per week. The tasks will be consistent with the technician's ability and previous course work. A task list will be issued to each dealer. PREREQUISITES: Admission to Auto Service Educational Program and MATH091 or equivalent, ASEP312, 317, 318

**ASEP326** 3-2-2-0-0  
**GM Auto Air Conditioning Systems** Voc/Tech  
 Theory of operation of General Motors air conditioning systems leading to the diagnosis, service and repair of current models of vehicles. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP312, 317

**ASEP327** 3-2-2-0-0  
**Minor Serv/Repair-GM Engines** Voc/Tech  
 Principles of operation of General Motors four stroke cycle engines. Minor service procedures and engine component repair or replacement will be emphasized. Will also include diagnostic procedures. PREREQUISITES: Admission to Auto Service Educational Program, ASEP317, AUTO463

**ASEP328** 3-2-2-0-0  
**Diagnosis/Repair-GM Electrical Syst** Voc/Tech  
 Instruction in the diagnosis, repair and service of electrical and electronic components and accessories used on current GM vehicles. PREREQUISITES: Admission to Auto Service Educational Program and MATH091 or equivalent, ASEP312, 317

**ASEP330** 3-0-0-0-18  
**Technical Internship II** Voc/Tech  
 Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP320, 326, 327, 328

**ASEP333** 3-2-2-0-0  
**Major Service Procedures/GM Engines** Voc/Tech  
 Evaluating, reconditioning and replacing of major com-

ponents of GM engines will include instruction in machining operations performed in GM dealerships. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP320, 327

**ASEP336** 3-2-2-0-0  
**GM Carb & Fuel Induction Systems** Voc/Tech  
 Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, electro-mechanical carburetors and gasoline fuel injection. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP320, 327, 328

**ASEP337** 4-3-2-0-0  
**GM Tune Up Proc & Emission Control** Voc/Tech  
 Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters and other high technology instruments will be used. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP320, 327, 328

**ASEP340** 3-0-0-0-0  
**Technical Internship III** Voc/Tech  
 Work experience at a sponsoring dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP330, 333, 336, 337, PHYL401

**ASEP341** 12-7-10-0-0  
**Transmissions** Voc/Tech  
 Standard and automatic transmissions including clutch, drive line, transaxle, and rear differential service. Emphasis on troubleshooting and repair procedures.

**ASEP343** 8-7-2-0-0  
**GM Transmissions & Transaxies** Voc/Tech  
 Standard and automatic transmissions and transaxies include all components in front and rear drive power-trains and 4-wheel drive vehicles. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP330

**ASEP350** 3-0-0-0-18  
**Technical Internship IV** Voc/Tech  
 Work experience at sponsoring dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP340, 343, ENGL410, PSCH106

**ASEP354** 5-3-4-0-0  
**Advanced GM Motors Systems** Voc/Tech  
 Instruction in techniques and procedures required to diagnose and service current vehicles. New systems developed by GM will be included. PREREQUISITES: Admission to Automotive Service Educational Program, ASEP350

**AUTC402** 7-3-8-0-0  
**Fundamentals Of Sheet Metal Repair** Voc/Tech  
 Automobile design, the materials used in construction, collision and corrective forces, and procedures for repair and services are analyzed through class and lab study.

**AUTC404** 4-4-0-0-0  
**Fundamentals Of Paint Refinishing** Voc/Tech  
 Proper substrate preparation, prefinishing functions, equipment use and care, modern refinishing materials, color adjusting and blending are studied.

**AUTC406** 4-4-0-0-0  
**Collision Analysis & Measuring** Voc/Tech  
 Unibody design and construction have created new technologies of damage analysis, measuring, and sequencing total collision repair. This course emphasizes these new technologies.

**AUTC407** 3-3-0-0-0  
**Collision Damage Appraisal Estimate** Voc/Tech  
 Vehicle damage and estimating are skills needed to write a written report to serve as a legal document,



# DESCRIPTION OF COURSES

analysis report, repair guide, and business evaluation.

**AUTC409** 5-0-10-0-0  
**Collision Correction** Voc/Tech

The complex repair of damaged components, fabrication of components and component replacement are studied and practiced using current technologies. PREREQUISITES: AUTC402, 406

**AUTC411** 4-0-8-0-0  
**Automotive Paint Refinishing** Voc/Tech

New technologies have greatly affected the paint refinishing of our current automobiles. These technologies are put into practice. PREREQUISITE: AUTC404

**AUTC415** 5-0-10-0-0  
**Major Collision Repair** Voc/Tech

Minor to major unibody collision repair and unibody service, as practiced in industry, are given special attention. PREREQUISITES: AUTC406, 409, 411

**AUTC417** 5-1-8-0-0  
**Collision Repair Specialization** Voc/Tech

Technology updating and special functions of the industry are given special attention to enhance the student's potential. PREREQUISITES: AUTC406, 409, 411, 415

**AUTC419** 2-2-0-0-0  
**Fund/Auto Electrical Component** Voc/Tech

An introduction to automobile electricity, electrical components and electronic devices. The fundamentals taught will benefit individuals wanting to become technicians in the auto collision industry or the individual seeking greater understanding.

**AUTC428** 3-3-0-0-0  
**Unibody Wheel Alignment** Voc/Tech

This covers the suspension, steering, and wheel alignment designs and requirements found in front-drive, rear-drive, unibody constructed vehicles that are in need of analysis, repair, or service.

**AUTO461** 3-3-0-0-0  
**Related Science** Voc/Tech

Designed to acquaint the student with the scientific principles that must be understood to properly diagnose and service the automobile.

**AUTO464** 3-2-2-0-0  
**Automotive Measurement & Tools** Voc/Tech

This course provides instruction in the correct selection and use of mechanics tools and precision measuring devices. Shop safety will be emphasized.

**AUTO466** 3-2-2-0-0  
**Fuel Systems** Voc/Tech

A course designed to acquaint the student with basic fuel system principles. Instruction will be offered in the theory, cleaning, repair and adjustment of automotive fuel systems.

**AUTO468** 6-2-8-0-0  
**Automotive Electricity** Voc/Tech

A course to provide instruction in basic electricity and circuitry used in the automobile. Components, diagnosing, and servicing will be emphasized.

**AUTO472** 4-2-4-0-0  
**Auto Air Conditioning & Heating** Voc/Tech

Provides instruction in the theory of operation of auto air conditioning and heating systems as well as diagnosing and servicing automotive air conditioning and heating systems.

**AUTO474** 3-2-2-0-0  
**Automotive Engine Fundamentals** Voc/Tech

A course to provide instruction in the theory and operation of the 4 stroke cycle engine. Diagnosis procedures, repair, and adjustment will be emphasized. PREREQUISITE: AUTO464

**AUTO476** 5-3-4-0-0  
**Electronic Engine Control** Voc/Tech

This course builds upon the knowledge and skills in previous automotive courses to prepare the student to service electronically controlled vehicles. The theory and operating principles of automotive computers, sensors, and control devices will be emphasized. Lab instruction on late model cars will be included. PREREQUISITES: AUTO466, 468

**AUTO478** 4-2-4-0-0  
**Advanced Tune Up** Voc/Tech

Provides instruction in testing, diagnosis, and repair of the automobile ignition, electrical, and fuel systems. Modern test equipment, procedures, and technology are utilized. PREREQUISITE: AUTO476

**AUTO479** 2-1-2-0-0  
**Service Management** Voc/Tech

Provides instruction in customer relations, service sales, shop management and business practices in the automotive shop. PREREQUISITE: AUTO474

**AUTO481** 2-2-0-0-0  
**Small Business Management** Voc/Tech

A general study of small business structure. Emphasis will be placed on operational costs, insurance, taxation, payroll costs, and legal aspects of small business.

**AUTO482** 3-1-4-0-0  
**Advanced Engines** Voc/Tech

Provides instruction in proper diagnosis of engine malfunction, and repair or replacement of defective components and assemblies. Emphasis will be placed on cylinder head service and repair. PREREQUISITE: AUTO474

**AUTO484** 6-3-6-0-0  
**Basic Power Train** Voc/Tech

Principles of operation and construction of automotive power trains. Includes instruction in the theory of hydraulic and planetary systems in automatic transmissions.

**AUTO486** 3-2-2-0-0  
**Basic Brakes** Voc/Tech

Instruction in the theory of operation and service procedures of automotive brakes.

**AUTO488** 4-2-4-0-0  
**Basic Suspension & Alignment** Voc/Tech

Instruction in the theory of operation and service procedures of automotive alignment and suspension systems.

**AUTO490** 6-2-8-0-0  
**Advanced Power Train** Voc/Tech

The application of engine power is the final drive of the automobile and must be trouble free. Proper diagnosis, service and repair procedures are studied and practiced to accomplish this need. PREREQUISITE: AUTO484

**AUTO492** 5-2-6-0-0  
**Advanced Brakes & Alignment** Voc/Tech

The student will study advanced brakes and alignment theory, practice proper diagnosis, service and repair procedures through hands on experience. PREREQUISITES: AUTO486, 488

**BIOL118** 3-3-0-0-0  
**Environmental Conservation** Core

This course combines the basic principles of ecology with current environmental issues. Issues examined include energy, land use, pesticides, and pollution. Wildlife, fisheries, forestry, soil and water resources are also emphasized. Designed for the non-science major.

**BIOL119** 1-0-2-0-0  
**Environmental Conservation Lab** Core

This lab supplements the discussion course Biol 118. Lab includes measurement of soil nutrients and water pollutants. Selected field trips deal with soil conserva-

tion, wildlife management, wastewater treatment and other aspects of environmental conservation. PREREQUISITES OR COREQUISITE: BIOL118

**BIOL126** 3-2-2-0-0  
**Field Biology** Core

Field and laboratory studies of native plants and animals of Iowa. Emphasis also on ecological relationships. Selected field trips are conducted to forest, prairie, marsh, and riparian habitats in the local area.

**BIOL127** 3-2-2-0-0  
**Human Biology** Core

A study of biology which emphasizes the human body. Topics such as the cell, basic chemistry, basic genetics and human ecology are included. Designed for the non-science and inadequately prepared health science major.

**BIOL128** 3-2-2-0-0  
**Biology Of Animals** Core

A general survey of representative animals of each animal phylum. Emphasis is placed on animal structure, classification, evolution, ecological relationships, and economic importance. Designed for the non-science major.

**BIOL132** 4-3-2-0-0  
**Health Science Microbiology** Open

Basic concepts and applications of medical microbiology. Topics include morphology and physiology of microorganisms, pathology, epidemiology and immunology. Designed for the health science major. PREREQUISITES: H.S. biology and H.S. chemistry recommended

**BIOL133** 3-2-2-0-0  
**Health Science Anatomy** Open

Offers the student basic concepts in human anatomical structure with relation to body functions. The course covers all major body systems with emphasis on structure. The accompanying lab will reinforce lecture with cat dissection. PREREQUISITE: H.S. biology or equivalent

**BIOL134** 3-2-2-0-0  
**Health Science Physiology** Open

Detailed human physiology of the nervous, circulatory, respiratory, digestive, urinary and endocrine systems. Designed for the health science major. PREREQUISITES: BIOL133 OR 154

**BIOL145** 4-3-2-0-0  
**Biology I** Core

The first of a two-term sequence in introductory biology designed for the science major. Emphasis is placed on basic principles of biology at the cellular, organism and population levels. PREREQUISITE: H.S. biology and H.S. chemistry

**BIOL146** 5-3-4-0-0  
**Biology II** Core

The second of a two-semester sequence in introductory biology. This course involves a progressive survey of the animal kingdom. Studies include anatomy, physiology, development, classification, evolution, and ecology. PREREQUISITES: BIOL145 or permission of instructor

**BIOL147** 3-2-2-0-0  
**Introduction To Botany** Core

Morphology and taxonomy of representative species of algae, fungi, byrophytes, and the vascular plants, with emphasis on the local flora. PREREQUISITES: BIOL145 or permission of instructor

**BIOL148** 3-2-2-0-0  
**Fundamentals Of Ecology** Core

A study of the interrelationship between organisms and their physical and biotic environment, including community structure, geographical distribution, climatic factors, and population dynamics. PREREQUISITES: BIOL145 or permission of instructor



# DESCRIPTION OF COURSES

<b>BIOL149</b> <b>General Microbiology</b> A general microbiology course with laboratory designed for the science major. Emphasis is placed on morphology, physiology, microbial genetics, virology and basic immunology, and applications. PREREQUISITES: BIOL145 OR 154	4-2-4-0-0 Core	<b>BLDG455</b> <b>Residential Blueprint Reading/Est</b> A study of the fundamentals of blueprint reading and estimating designed to allow the student to translate house plans into practical job experiences and cost estimates.	2-2-0-0-0 Voc/Tech	<b>BSAD150</b> <b>Intro To Business</b> An overview of the ever-changing world of business. Provides information in the areas of ownership, management, marketing and finance as well as the role of government.	3-3-0-0-0 General
<b>BIOL150</b> <b>Investigations/Field Biology</b> This course involves an extended field trip to study unique natural ecosystems in out-of-state areas. Topics may include field studies of forest, prairie, wetland, and wildlife ecology.	1-0-2-0-0 General	<b>BLDG461</b> <b>Masonry Technology &amp; Practices</b> An introduction to concrete design, placement and finishing. Identification and application of the many types of masonry materials used in today's construction will be emphasized.	4-1-6-0-0 Voc/Tech	<b>BSAD151</b> <b>Personal Finance</b> Management of personal income with emphasis on family financial planning including budgeting, income taxes, types of insurance and investing.	3-3-0-0-0 Open
<b>BIOL154</b> <b>General Anatomy &amp; Physiology</b> A classic integration of human anatomy and physiology at the cellular level and organ/system level. Includes cat dissection. PREREQUISITE: H.S. biology and H.S. chemistry	5-3-4-0-0 Core	<b>BLDG462</b> <b>Residential Drafting &amp; Design</b> An introduction to the fundamentals of residential house design and basic drafting methods. Includes the preparation of the blueprint used to construct the student-built home. PREREQUISITE: BLDG455	2-2-0-0-0 Voc/Tech	<b>BSAD152</b> <b>Business Statistics</b> Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t's, chi-squares and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years of H.S. algebra or MATH119 or dept. permission	4-4-0-0-0 Core
<b>BIOL155</b> <b>Natural History Of Iowa</b> Surveys the major landforms of Iowa including the Mississippi River Valley, Northern prairie lakes region, loess hills, and Southern hills area. Landforms are emphasized from the standpoint of climate, soils, geology, water resources, forestry, wildlife and environmental concerns. One Saturday field trip.	3-3-0-0-0 General	<b>BLDG464</b> <b>Residential Practices</b> Advanced lab experience that emphasizes complex finish carpentry skills. The student will be able to demonstrate the skills and work habits necessary to complete complex tasks in a safe and workmanlike manner and adapt previously learned skills to complete more complex building tasks. PREREQUISITE: BLDG452	3-0-7-0-0 Voc/Tech	<b>BSAD153</b> <b>Office Management</b> Introduces concepts of office management aimed at increasing efficiency and productivity in operation of the office. Areas covered include: planning and organizing, leadership and human relations, and controlling office operations.	3-3-0-0-0 Open
<b>BKKA401</b> <b>Acct Applications I/Cost Acct</b> An introductory course in accounting systems for product costing. Includes topics in manufacturing accounting and job cost systems. Incorporates project approach to the understanding of record keeping. Projects provide training for preparing monthly statements, accounts receivable, and accounts payable. PREREQUISITE: ACCT101	4-3-2-0-0 Voc/Tech	<b>BLDG480</b> <b>Resident Const/Procedure App I</b> This course includes footings, drainage, foundation, basement insulation and decking. (5 week session) PREREQUISITES: BLDG451, 452, 453, 455, 461, 464	5-0-10-0-0 Voc/Tech	<b>BSAD223</b> <b>Business/Financial Math</b> Mathematical computations are reviewed and strengthened with emphasis on facility and accuracy. Includes topics in the mathematics of buying and selling, payroll, bank discount, compound interest, consumer math, financial statement analysis and other related business applications.	3-3-0-0-0 Open
<b>BKKA402</b> <b>Accounting Applications II</b> Provides students with opportunities to apply their knowledge of accounting and bookkeeping through simulated conditions in a model office laboratory. Includes personnel supervision, planning, work-flow, correspondence, office machines and interpersonal relationships. PREREQUISITES: ACCT101, BKKA401, 410	3-1-4-0-0 Voc/Tech	<b>BLDG481</b> <b>Resident Const/Procedure App II</b> This course includes exterior wall construction, interior wall construction, ceiling joist framing, rafter framing, exterior trim, window installation and roofing. (5 week session) PREREQUISITE: BLDG480	5-0-10-0-0 Voc/Tech	<b>BSAD225</b> <b>Principles Of Insurance</b> An introduction to managing risks and making the best use of insurance. Various forms of personal and property insurance coverages are introduced. Insurance coverages as they relate to both business operations and personal situations are discussed.	3-3-0-0-0 Open
<b>BKKA410</b> <b>Taxes/Payroll</b> Introduction to income taxes for the individual. Emphasis on understanding and preparation of generally used income tax forms. Introduction to the accounting and record keeping procedures associated with payroll. Includes topics on wage and hour laws, the social security act and payroll taxes. PREREQUISITE: ACCT101	3-2-2-0-0 Voc/Tech	<b>BLDG482</b> <b>Resident Const/Procedure App III</b> This course includes concrete flatwork, insulation, drywall application, cabinet work and interior trim. (5 week session) PREREQUISITE: BLDG481	5-0-10-0-0 Voc/Tech	<b>BSAD226</b> <b>Principles Of Real Estate</b> Fundamental principles, economics, law, working concepts, and terminology. Focuses on real estate law, and assists those preparing for the apprentice salesperson examination.	3-3-0-0-0 Open
<b>BKKA490</b> <b>Bookkeeping Internship</b> Practical experience through on-the-job training in an approved business, government or similar establishment. PREREQUISITES: Department permission, ACCT101, 102 OR BKKA401	3-0-0-0-14 Voc/Tech	<b>BLDM325</b> <b>Boiler Room Maintenance</b> Basic course to cover boiler accessories, fittings, controls, water treatment and fundamentals.	1-1-0-0-0 Voc/Tech	<b>BSAD227</b> <b>Business Communications</b> A study of the influence of effective communication upon human relations in business. Emphasis is given to form, accuracy, clarity, psychology in handling written letters, reports and telephone communications.	3-3-0-0-0 Open
<b>BLDG451</b> <b>Resid Materials/Const Theory</b> An introduction to the materials used in the construction of residential housing and the methods involved in the application of these building materials.	5-5-0-0-0 Voc/Tech	<b>BLDM326</b> <b>Steam Plant Operations</b> A basic course in the operation of high-pressure steam boilers.	2-2-0-0-0 Voc/Tech	<b>BSAD229</b> <b>Small Business Management</b> Examines the preparation and methods needed to start a business, the management functions needed to keep it operating on a sound basis, financial analysis system, management, sales promotion, purchasing, pricing, personnel management, credit, insurance, inventory control, regulations and taxes, and a simplified record system.	3-3-0-0-0 Open
<b>BLDG452</b> <b>Residential Construction Techniques</b> A practical "hands-on" introductory experience that covers the construction processes of house building including rough and finish carpentry.	7-0-15-0-0 Voc/Tech	<b>BLDM327</b> <b>Plumbing/Electricity/Hardware</b> General building maintenance covering basic repairs and preventative maintenance of plumbing, electrical systems and building hardware such as door/window and other parts subject to wear and breakage.	2-2-0-0-0 Voc/Tech	<b>BSAD243</b> <b>Quantitative Methods</b> An introduction to management research methods which are used in business. Topics include probability, break-even analysis, inventory control, statistics and transportation models. PREREQUISITES: MATH094 or department permission	4-4-0-0-0 General
<b>BLDG453</b> <b>Care/Use Of Hand &amp; Power Tools</b> Proper care, use, and selection of hand power tools with an emphasis on maintenance and safety.	1-0-2-0-0 Voc/Tech	<b>BLDM328</b> <b>Inventory &amp; Purchasing</b> Knowledge and skills necessary to understand new inventory systems, maintain records and orders, and maintain supplies correctly.	1-1-0-0-0 Voc/Tech	<b>BSAD250</b> <b>Real Estate Appraisal</b> Residential appraisal principles of real estate valuations	3-3-0-0-0 Open
		<b>BLDM329</b> <b>Basic Plumbing</b> A basic course in plumbing, plumbing components, and reading blueprints.	2-2-0-0-0 Voc/Tech		
		<b>BLDM330</b> <b>Building Custodian</b> Work procedures, floor covering, detergents, and safety.	1-1-0-0-0 Voc/Tech		



# DESCRIPTION OF COURSES

cost, market data, summation and sales analysis, methods of appraisal, estimating current trends and techniques in appraising residential dwellings.

**BUSL101** 3-3-0-0-0  
**Business Law I** General

Provides introductory overview of legal rights and social forces, the impact of government regulation of business, contractual relationships, personal property, and bailments and sales law.

**BUSL102** 3-3-0-0-0  
**Business Law II** General

Provides for overview of commercial paper, creditors' rights and secured transactions, the law of agency and employment, partnerships, special ventures, corporate law concepts, and introductory real estate law. PREREQUISITE: BUSL101

**CART409** 3-3-0-0-0  
**Advertising** Voc/Tech

A view of advertising from the business world. Gives the student problem solving assignments and an active role in learning about the use of advertising as applied to communication design.

**CART410** 3-0-6-0-0  
**Illustration I** Voc/Tech

Drawing perspective, still life, and the introduction to human figure construction will develop skills of illustration for self-expression.

**CART411** 4-2-4-0-0  
**Communication Design II** Voc/Tech

Using the background gained from Communication Design I, special attention will be given to the relationship of design to advertising. PREREQUISITE: GRPH403

**CART414** 4-2-4-0-0  
**Illustration II** Voc/Tech

Continuing the study of illustration, specifically for advertising and editorial uses. Emphasis on psychology of graphic representation and professional, visualizing techniques.

**CART419** 2-0-4-0-0  
**Lettering & Sign Art** Voc/Tech

Use of various types of lettering skills for the production of posters, signs, certificates and other hand-lettered materials. PREREQUISITE: CART410

**CART424** 6-2-0-0-16  
**Commercial Art Internship** Voc/Tech

On-the-job training for commercial art students. Included is a weekly seminar for the exchange of information, review and evaluation. PREREQUISITE: GRPH421

**CART426** 3-0-6-0-0  
**Communication Design III** Voc/Tech

An advanced course using skills and understanding developed in Communication Design courses I & II. Special emphasis is given to design for publications and further development of portfolio samples. PREREQUISITE: CART411

**CART428** 3-1-4-0-0  
**Illustration III** Voc/Tech

Many forms of illustration exist. Special techniques are studied and practiced to accomplish the skills needed for illustration. PREREQUISITE: CART414

**CART430** 3-0-6-0-0  
**Production Art III** Voc/Tech

Advanced problems in the preparation of material to be printed. Included are live studio projects, lectures, field trips and experiences in the production of printed portfolio samples. PREREQUISITE: GRPH415

**CART431** 3-2-2-0-0  
**Photography I** Voc/Tech

Photography in communication design is essential. Basic knowledge and skills will be developed in

photographing, developing and printing.

**CART436** 3-3-0-0-0  
**Portfolio Preparation I** Voc/Tech

A student seeking employment must have a well prepared portfolio. Such a portfolio will be developed and reviewed by the commercial art advisory committee in this course. PREREQUISITE: CART424

**CART437** 3-0-6-0-0  
**Communication Design IV** Voc/Tech

Further study in design will be accomplished by improving individual portfolio samples as suggested by the commercial art advisory committee. PREREQUISITE: CART426

**CART440** 3-1-4-0-0  
**Production Art IV** Voc/Tech

To complete the study of production art. Emphasis will be on paper selection, color theory, technical illustration and the development of portfolio projects. PREREQUISITE: CART430

**CART442** 3-1-4-0-0  
**Illustration IV** Voc/Tech

Advanced problems in illustration as related to communication design. Concentration in use of techniques and media is used to create special effects. PREREQUISITE: CART428

**CART444** 3-3-0-0-0  
**Portfolio Preparation II** Voc/Tech

"Portfolio night" is the highlight of completing this course. The student will be required to present a completed portfolio to commercial art professionals and prospective employers at the annual event. PREREQUISITE: CART436

**CART445** 3-2-2-0-0  
**Photography II** Voc/Tech

Gives students the opportunity to utilize the basic photography skills learned in Photography I by emphasizing creative application to solution of design problems. PREREQUISITE: CART431

**CART447** 3-3-0-0-0  
**Business Management** Voc/Tech

A small business workshop for all students enrolled in this course. Includes job quotation, record keeping, personal organization, time management, job scheduling, setting up a freelance studio, taxes, and mailing information.

**CART449** 4-2-4-0-0  
**Airbrush I** Voc/Tech

The fundamental principles of airbrush techniques and application to advertising design and use of airbrush as an illustrative tool.

**CART451** 4-2-4-0-0  
**Airbrush II** Voc/Tech

Advanced course in airbrush techniques as they apply to photographs. Emphasis is placed on the art of retouching equipment, buildings and portraits, both in black and white and in color. PREREQUISITE: CART449

**CART456** 3-1-4-0-0  
**Orientation To Computer Graphics** Voc/Tech

This class is designed to acquaint students with computer graphics terminology, industry application and use of personal computer hardware/software for computer graphics.

**CART459** 3-1-4-0-0  
**Computer Graphics I** Voc/Tech

This course focuses on 2D illustration skills required in commercial art. Beginning with basic line and shapes developing into completed drawings using the personal computer. PREREQUISITE: CART456

**CART462** 3-1-4-0-0  
**Computer Graphics II** Voc/Tech

This course focuses on 2D and 3D illustration skills re-

quired in commercial art. Advanced 2D illustrations developing into 3D applications using the personal computer. PREREQUISITE: CART459

**CDEV100** 1-1-0-0-0  
**Orientation To College** Open

This course is designed to introduce students to college resources, services, and expectations and to assist them in gaining maximum benefit from their college experience.

**CDEV110** 1-1-0-0-0  
**Career Planning** Open

Provides help in choosing a career goal. Emphasis will be placed on how to assess interests, abilities and values, explore options, and make decisions that will lead to career satisfaction and success.

**CHEM120** 3-2-2-0-0  
**Survey Of Chemistry** Core

An introduction to chemical topics with little mathematics. Topics include energy, food chemistry, air and water pollution, agricultural chemicals, detergents, and drugs. For students who need one semester of laboratory science.

**CHEM131** 4-3-2-0-0  
**General Chemistry I** Core

A study of the concepts of general chemistry including atomic structure, bonding, reactions, stoichiometry, gas laws, solutions, acids and bases, equilibrium, nuclear chemistry and an introduction to organic chemistry. Problem solving is emphasized. For non-science majors and students in health related programs. PREREQUISITES: 1 year HS algebra or MATH092

**CHEM132** 4-3-2-0-0  
**General Chemistry II** Core

A continuation of the study of organic chemistry and a study of biochemistry. Organic topics include the structure of organic molecules, the nature and reactions of functional groups, and stereochemistry. Biochemistry topics include carbohydrates, proteins, lipids, nucleic acids, enzymes and metabolism. PREREQUISITE: CHEM131 or equivalent

**CHEM151** 4-3-2-0-0  
**General And Inorganic Chemistry I** Core

A thorough treatment of general chemistry including atomic structure, stoichiometry, chemical bonding, states of matter, solutions, acids and bases, reaction rates, equilibrium, thermodynamics and electrochemistry. This course is intended for science, engineering, pre-vet, pre-med, pre-dental and pre-optometry majors. PREREQUISITES: 1 year HS CHEM or CHEM131 & 2 yrs HS algebra or MATH094

**CHEM152** 4-3-2-0-0  
**General And Inorganic Chemistry II** Core

A continuation of General and Inorganic Chemistry I. PREREQUISITE: CHEM151 or the equivalent

**CHEM161** 5-3-4-0-0  
**Organic Chemistry I** Core

A study of the principles of organic chemistry including the nomenclature and chemistry of the various organic functional groups. Structure, bonding, synthesis, reaction mechanisms and spectroscopy are emphasized. The sequence is designed to satisfy the one year of organic chemistry required by most medical schools. PREREQUISITES: CHEM132 or 152 or 1 year college level General Chem.

**CHEM162** 5-3-4-0-0  
**Organic Chemistry II** Core

A continuation of Organic Chemistry I. PREREQUISITE: CHEM161 or the equivalent

**CHLD170** 3-3-0-0-0  
**Child Development** Open

Course includes an overview of child development theory and principles as related to language-cognitive, physical-motor and social-emotional development of the child from conception through adolescence.



# DESCRIPTION OF COURSES

<b>CHLD240</b> <b>Emergency Care</b>	1-1-0-0-0 Open	Techniques for treatment of bleeding, shock, fractures, wounds, burns, exposure, poisonings, epilepsy and environmental injuries. Cardio-pulmonary resuscitation according to Iowa Heart guidelines - BCLS II certification.	
<b>CHLD260</b> <b>Observation/Guidance-Children</b>	3-3-0-0-0 Open	A study of observation and guidance techniques appropriate for use with young children. Various guidance philosophies are studied and applied through work with children. Students acquire the skills of objective observation as well as completing appropriate written evaluations of children's progress.	
<b>CHLD262</b> <b>Curriculum And Activities I</b>	4-4-0-0-0 Open	Course includes structuring of curriculum for infant through school aged groups of children. Planning of both the physical environment and the educational program will be covered. Areas of curriculum include large motor skills, dramatic play, music, cooking and creative arts. PREREQUISITES: Must be taken with or after CHLD170 and 260	
<b>CHLD264</b> <b>Child Nutrition And Health</b>	3-3-0-0-0 Open	A basic study of nutrition and the nourishment of young children and the provision of a healthy and safe environment for children.	
<b>CHLD265</b> <b>Curriculum And Activities II</b>	4-4-0-0-0 Open	A continuation of Curriculum and Activities I, with emphasis on equipping a day care center and program evaluation. Areas of curriculum include literature, language development, small motor skills, science and math awareness. PREREQUISITES: CHLD170, 260, 262	
<b>CHLD266</b> <b>Admin Of Programs/Children</b>	3-3-0-0-0 Open	Course covers basic principles involved in setting up and administering a child care center. Emphasis is placed on funding, bookkeeping, business procedures, insurance, enrollment and record keeping.	
<b>CHLD268</b> <b>Professional Relationships</b>	1-1-0-0-0 Open	A course designed to give students an overview of professional behaviors and responsibilities. Students will focus on communication skills, job performance, job-seeking skills, and professional associations and conferences.	
<b>CHLD334</b> <b>Development In Early Childhood I</b>	2-2-0-0-0 Open	Interrelationship of physical, emotional, intellectual and social growth from birth through 5 years. Includes problems common to early childhood.	
<b>CHLD337</b> <b>Creating The Environment</b>	2-2-0-0-0 Open	Skill development in communication and interpersonal relationships. Emphasis on guidance and behavior control techniques with children. Inquiry into physical environments and their effect on children, staff, and parents. Ways of modifying environments.	
<b>CHLD338</b> <b>Development In Early Childhood II</b>	1-1-0-0-0 Open	Interrelationship of physical, emotional, intellectual and social growth from school age to adolescence. Includes problems common to middle childhood and adolescence. PREREQUISITE: CHLD334	
<b>CHLD343</b> <b>Assessing Child/Program Planning</b>	1-1-0-0-0 Open	Methods and techniques for working with children from varying lifestyles, including the exceptional child. Emphasis on communication with parents.	
<b>CHLD346</b> <b>Developing Leadership Skills</b>	1-1-0-0-0 Open	Focus on principles, skills, and attitudes needed for an effective work environment. Emphasis on self-evaluation, communication and team building.	
<b>CHLD347</b> <b>Planning Group Activities</b>	1-1-0-0-0 Open	Focus on various methods child care providers can utilize to foster creative experiences in small group settings. Emphasis on pleasant, challenging, invigorating and happy activities.	
<b>CHLD348</b> <b>Helping Children Cope With Stress</b>	1-1-0-0-0 Open	Causes of childhood stress will be examined. Exercises and techniques for helping children develop a healthy response to stress will be demonstrated and practiced, including relaxation, imagery, and inner body awareness. Active participation.	
<b>CHLD349</b> <b>Contemporary Issues In Child Care</b>	1-1-0-0-0 Open	Constantly updated to offer the latest information and policy developments in the field of child care provision and protection. Emphasis on the role and impact of individuals in child care.	
<b>CHLD350</b> <b>Identifying/Referring Indiv Child</b>	1-1-0-0-0 Open	Discussion of definitions, characteristics, statistics, and what can realistically be done about the exceptional child and the child in need of special assistance.	
<b>CHLD352</b> <b>Practical Experience In Child Care</b>	1-0-2-0-0 Open	An opportunity for students under qualified supervision to participate in the day-to-day activities of a child care center. Emphasis on student participation and evaluation. Arranged with director and college coordinator.	
<b>CHLD360</b> <b>Guiding Young Children</b>	2-2-0-0-0 Open	A study of guidance techniques appropriate for use with young children. Various guidance philosophies are studied.	
<b>CHLD362</b> <b>Activities For Infant And Toddlers</b>	2-2-0-0-0 Open	Practical ideas for guidance and development of the child from birth to 48 months. Health, safety, and special techniques will be covered.	
<b>CHLD364</b> <b>Activities For Preschooler/Schoolage</b>	2-2-0-0-0 Open	Focus on ideas for working with the child ages 48 months through 12 years. A variety of activities that are designed to keep the child busy after school.	
<b>CHLD366</b> <b>Developing A Child Care Team</b>	1-1-0-0-0 Voc/Tech	Elements of team building including roles in a team and group dynamics; synergy, feedback and specific methods for implementation in child care center.	
<b>CHLD367</b> <b>Becoming A Day Care Director</b>	2-2-0-0-0 Voc/Tech	Self assessment to determine management potential; special topics include personnel management cycle; fiscal management of a center including budgets, liability and funding sources; delegating goal writing; supervision of volunteers, aides, student teachers and staff; policy writing for parents, staff and boards.	
<b>CHLD368</b> <b>Being The Best You Can Be</b>	1-1-0-0-0 Voc/Tech	Develop skill in public relations, parent involvement, curriculum development, and spiral building. Special consideration of methods for developing continuity within the daycare center.	
<b>CHLD369</b> <b>Remaining Current</b>	1-1-0-0-0 Voc/Tech	A look at current issues that impact child care centers, directors and the profession. Topics may include use and abuse of computers in center programs, teacher competency testing, legal issues and marketing.	
<b>CHLD370</b> <b>Getting To Know You And Me</b>	1-1-0-0-0 Voc/Tech	Identify and develop interpersonal skills including verbal and non-verbal communication. Emphasis on effective feedback and conflict resolution.	
<b>CHLD371</b> <b>Personal Coping Skills</b>	1-1-0-0-0 Voc/Tech	Explores a variety of techniques including effective time management, identifying and coping with stress and burnout, and adaptation of self and environment.	
<b>CHLD372</b> <b>Child Care Independent Study</b>	1-0-0-0-4 Voc/Tech	Opportunity to select topic or activity of special interest in child-care field and explore in depth with assistance of mentor. Arranged through college training consultant.	
<b>CHLD375</b> <b>Health And Nutrition</b>	2-2-0-0-0 Open	Designed to explore nutritional needs, feeding and clothing habits, health routines and hygiene. Guidance on food activities with and for young children.	
<b>CHLD460</b> <b>Student Participation I</b>	3-0-6-0-0 Open	Participation with children in a laboratory day care/preschool setting under the supervision of a lead teacher. Students have limited responsibilities for curriculum planning. Daily student-teacher guidance conferences are held.	
<b>CHLD461</b> <b>Student Participation II</b>	3-0-6-0-0 Open	A continuation of Student Participation I in which students assume full responsibility for planning, head teaching and parent communications in the day care/preschool laboratory under the supervision of a head teacher. PREREQUISITES: CHLD170, 260, 262, 460	
<b>CHLD464</b> <b>Practicum</b>	2-0-0-0-8 Open	Placement in a community-based program for children. Emphasis is on development of the competencies necessary for employment in a similar setting. PREREQUISITES: A cumulative G.P.A. of 2.00 in all CHLD courses and CHLD170, 260, 262, 460	
<b>CHLD465</b> <b>Child Development Assoc Practicum</b>	3-0-0-0-12 Open	Placement for the associate degree student in a community-based center designed to further build competencies necessary for employment and to develop competence in the area of program administration. PREREQUISITES: A cumulative G.P.A. of 2.00 in all CHLD courses and CHLD464	
<b>COMH410</b> <b>Greenhouse Production I</b>	3-2-2-0-0 Voc/Tech	An introduction to greenhouse structures, heating and environmental control systems and watering. Winter and spring commercial pot plants, cut flowers, and bedding plant crops will be explored vocationally in the college greenhouses.	
<b>COMH411</b> <b>Horticulture Chemical Tech</b>	2-2-0-0-0 Voc/Tech	Types of chemicals will be identified and how to use and apply them properly will be studied. The safe handling of chemicals and calibration of spray equipment will be covered. Includes study of core manual and category for commercial pesticide license.	



# DESCRIPTION OF COURSES

**COMH437** 3-2-2-0-0  
**Turf I** Voc/Tech

The study of soil and turf relationships as to planning, seed bed preparation, seed selection, fertilization, sowing and establishing of turf and lawn. The student receives practical experience in starting and maintaining new lawn areas.

**COMH440** 2-1-2-0-0  
**Landscape Design I** Voc/Tech

Fundamentals of landscape design for homes are presented. Serves as an introduction to principles of landscaping as they apply to residential landscaping. The student is given the opportunity to draw basic residential landscape plans. PREREQUISITE: COMH488

**COMH450** 2-1-2-0-0  
**Botany** Voc/Tech

A course designed to introduce the student to the principles of botany that are basic to plant life. Topics covered include plant cell chemistry, cell structure, functions, photosynthesis, transpiration.

**COMH452** 2-1-2-0-0  
**Arboriculture And Plant Prop. II** Voc/Tech

A study of tree culture with emphasis on propagation, pruning, environmental concerns, transplanting, and pest control. Summer methods of plant propagation including meristem, softwood cuttings, budding, and layering will be accomplished. PREREQUISITE: COMH479

**COMH453** 2-0-4-0-0  
**Landscape Design/Plant Materials II** Voc/Tech

Course will include design of residential, commercial, public areas and flower beds. Using landscape construction materials in design and material and labor estimates will be developed. Plant materials will be expanded to include annuals. PREREQUISITES: COMH440, 488

**COMH454** 3-0-0-0-15  
**Supervised Employment Experience I** Voc/Tech

Experience in a business setting related to the student's career objective. Taken over a five week period. PREREQUISITES: COMH410, 437, 479, 488

**COMH455** 2-1-2-0-0  
**Turf II** Voc/Tech

Turf management practices on golf and recreation areas with practical experience in maintaining turf on outdoor campus facilities. PREREQUISITE: COMH437

**COMH457** 2-1-2-0-0  
**Fruit & Vegetable Science** Voc/Tech

A study of tree fruits, small fruits and vegetable culture, including varietal selection, planting, pruning, fertilizing, disease and insect control programs.

**COMH459** 1-1-0-0-0  
**Foliage Plant Production And Display** Voc/Tech

The commercial production of foliage plants. Culture, propagation, and nomenclature will be discussed. Interior use, design and display of foliage plants will be studied.

**COMH468** 2-1-2-0-0  
**Commercial Horticult Marketing** Voc/Tech

Problems of distribution used in supplying goods and services, and functions of marketing, costs and their relationship to the consumer market. Services will be examined; middleman functions and the transportation and storage of products will be studied.

**COMH469** 2-2-0-0-0  
**Garden Center Management** Voc/Tech

Display, promotion and merchandising in the modern garden center will be stressed. Organizing a business and management's role in decision making and financial success will be discussed.

**COMH478** 2-1-2-0-0  
**Plant Propagation I** Voc/Tech

An introduction to plant propagation with emphasis on grafting, herbaceous and hardwood cuttings, and greenhouse and nursery seeds. Propagation schedules, equipment, structures and growth regulators will be discussed.

**COMH479** 3-2-2-0-0  
**Nursery Production I** Voc/Tech

Will introduce the student to site selection, equipment and supplies with an introduction to field production, harvesting and marketing. Basic nursery and landscape skills will be developed on and off campus.

**COMH484** 4-0-0-0-20  
**Supervised Employment Exp III** Voc/Tech

Work experiences in an area in which the individual has chosen to specialize. Taken over an eight week period. PREREQUISITE: COMH499

**COMH488** 3-2-2-0-0  
**Plant Materials & Landscape Drafting** Voc/Tech

The study of plant material using the plant materials in their growing environment. It will cover use of identification keys and plant families. Introduction to landscape drafting will be developed.

**COMH490** 3-2-2-0-0  
**Greenhouse Production II** Voc/Tech

Greenhouse maintenance, nutrition, watering, cooling systems and pest control shall be developed further in college greenhouse facilities. Summer and fall crops will be grown by students. PREREQUISITE: COMH410

**COMH494** 1-0-2-0-0  
**Horticulture Prod Alternatives** Voc/Tech

A discussion and comparison of the possibilities and profitability of job opportunities in the various fields of horticulture production in Iowa, i.e., fruit, vegetable, nursery, christmas tree, sod and greenhouse crops.

**COMH496** 2-1-2-0-0  
**Landscape Construction** Voc/Tech

To provide study and experience in choosing materials, planning and construction of landscape facilities.

**COMH497** 1-0-2-0-0  
**Floral Design I** Voc/Tech

Construction and mechanics of merchandising flowers and plants at retail.

**COMH498** 3-0-0-0-15  
**Supervised Employment Experience IV** Voc/Tech

A final opportunity for the student to gain employment experience in their specialization. In many instances they will continue as full time employees upon completion of the program. Taken over a five week period. PREREQUISITE: COMH484

**COMH499** 2-0-0-0-10  
**Supervised Employment Experience II** Voc/Tech

Student will continue on his/her first employment experience. Taken over a three-week period. PREREQUISITE: COMH454

**COMS111** 3-3-0-0-0  
**Computers & Programming I** Open

A block structured language will be used to introduce fundamental structured programming techniques. Structured programs will be developed through an algorithmic approach, then written, tested and debugged. PREREQUISITES: 2 years H.S. algebra or MATH115 or MATH124

**COMS112** 3-3-0-0-0  
**Computers & Programming II** Open

A block structured language will be used to introduce commonly used data structures. Programs using these data structures will be developed, written, tested and debugged. PREREQUISITE: COMS111

**COMS125** 3-3-0-0-0  
**Business Programming Cobol I** Open

Introduces the programming language COBOL through

writing, testing and debugging COBOL programs. Emphasis is given to business applications. PREREQUISITES: COMS111 OR 176

**COMS126** 4-4-0-0-0  
**Business Programming Cobol II** Open

Introduces advanced COBOL programming techniques through the writing, testing and debugging of COBOL programs. Emphasis is given to the SORT verb and ISAM file access techniques. PREREQUISITE: COMS125

**COMS160** 3-3-0-0-0  
**Computational Structures** Open

Relates mathematics as a tool and language to the computer. A block structured language will be used to acquaint students with application areas in computer science. PREREQUISITES: COMS112, MATH129

**COMS172** 2-2-0-0-0  
**Computer Programming-FORTRAN** Open

For students desiring an introductory background in the programming language of FORTRAN. Included are FORTRAN structures, i/d statements, arrays, subscripting, control statements, data storage, and retrieval. PREREQUISITES: MATH129, COMS111

**COMS174** 3-3-0-0-0  
**Applied Programming I Pascal** Open

Introduction to structured programming using a block-structured language. Emphasis will be on an algorithmic approach to program development. Programs will be developed, written, tested and debugged. PREREQUISITES: MATH115, 119, 123

**COMS176** 4-4-0-0-0  
**Applied Programming II** Open

Data structures as related to computer programming will be emphasized. Programs using these data structures will be developed, written, tested and debugged. The programs written will also be business application oriented. PREREQUISITE: COMS174

**COMS180** 2-2-0-0-0  
**The Computer Program** Open

Presents the basic concepts of computers and the effect that computers are having, and will continue to have, in the future. Incorporates theory as well as practice by looking at examples of computers at work in the real world, and explores the principles behind the application.

**COMS181** 3-3-0-0-0  
**Intro To Computer Literacy** Open

Presents the basic concepts of computers and the effect that computers are having, and will continue to have, in the future. Incorporates theory as well as hands-on practice by looking at examples of computers at work in the real world, and exploring the principles behind the application. Includes an introduction to basic programming.

**CONA451** 3-2-2-0-0  
**Fundamentals Of Refrigeration** Voc/Tech

This course consists of the principles of refrigeration, domestic systems and equipment. Installation, operation and trouble shooting with lab work on actual equipment.

**CONA452** 3-2-2-0-0  
**Electricity I** Voc/Tech

A study of basic electricity principles, Ohms law, series and parallel circuits as applied to refrigeration. Hands-on practice with training boards in the lab.

**CONA454** 3-2-2-0-0  
**Fundamentals Of Heating** Voc/Tech

A study of the combustion process, heating values of different fuels, including piping, venting, controlling and trouble shooting with lab work on actual equipment.

**CONA461** 5-3-5-0-0  
**Advanced Refrigeration/Heating** Voc/Tech

Lectures on the compression cycle, different refrigeration and electrical circuits and lubrication problems



# DESCRIPTION OF COURSES

found in supermarket equipment. Lab work on actual equipment. PREREQUISITES: CONA451, 454

**CONA462** 8-3-10-0-0  
**Year Round Air Conditioning I** Voc/Tech

The science of heating and cooling consisting of psychrometrics, humidity control, computation of equipment selection and system cost with a study of installation and service procedures through lab practices. PREREQUISITES: CONA451, 454

**CONA463** 2-2-0-0-0  
**Blueprint Reading** Voc/Tech

A comprehensive study of blueprints consisting of drafting symbols and terminology which prepares the student to make an installation according to a set of blueprints and specifications.

**CONA464** 3-3-0-0-0  
**Related Physics** Voc/Tech

Course consists of the study of gas laws, temperature and pressure relationships, heat, energy, and power as applied to the heating and refrigeration industry. PREREQUISITE: RCMA400

**CONA471** 5-3-5-0-0  
**Air Distribution** Voc/Tech

Involves the study of fans, blowers and dampers. The design of duct systems for proper air delivery and allows for final system balancing. Includes lab practice.

**CONA472** 7-2-10-0-0  
**Year Round Air Conditioning II** Voc/Tech

The theory and function of commercial heating and cooling equipment consisting of heat pumps, cooling towers, evaporators, condensers, related electric and pneumatic controls with lab practice. PREREQUISITE: CONA462

**COOP212** 1-1-0-0-0  
**Coop Career Seminar** Voc/Tech

Designed to provide in-depth exploration of careers. Includes discussion topics such as positive work attitudes, conditions for salary increases, and job promotions. Employer/employee responsibilities and other phases of the work. These discussions will be related to student employment. COREQUISITE: COOP221

**COOP220** 2-2-0-0-0  
**Pre-Employment Seminar** Voc/Tech

Covers all aspects of professional job placement procedures including career goal setting, developing prospective employer lists, resume writing, job application forms, employment tests, wardrobe engineering interviewing and follow-up.

**COOP221** 1-0-0-0-4  
**COOP Career Experience** Voc/Tech

Supervised work experience with employers that enables students to apply their skills and knowledge. Work experiences will relate to the students' academic programs of study. COREQUISITES: COOP212 for some programs, clarify with COOP office

**COOP222** 2-0-0-0-8  
**COOP Career Experience** Voc/Tech

See COOP221

**COOP223** 3-0-0-0-12  
**COOP Career Experience** Voc/Tech

See COOP221

**COOP224** 4-0-0-0-16  
**COOP Career Experience** Voc/Tech

See COOP221

**COOP225** 5-0-0-0-20  
**COOP Career Experience** Voc/Tech

See COOP221

**COOP226** 6-0-0-0-24  
**COOP Career Experience** Voc/Tech

See COOP221

**CRIM101** 3-3-0-0-0  
**Intro To Criminal Justice** General

An in-depth examination of the three components of the criminal justice system and the roles they play in society.

**CRIM103** 3-3-0-0-0  
**Community Relations** Open

Examination of the role of criminal justice personnel in a democratic society; emphasis on ethical uses of discretion, analysis of stress, and the popular perceptions of criminal justice system.

**CRIM104** 3-3-0-0-0  
**Criminal Law** General

An examination of the elements of offenses and the procedural safeguards in the criminal process.

**CRIM105** 3-3-0-0-0  
**Constitutional Law** General

A study of the application of constitutional principles to social and political questions including the powers of the national government vs. state government and the evolution of civil liberties guarantees. Also focus on the incorporation issue.

**CRIM106** 3-3-0-0-0  
**Juvenile Law** General

The social and legal aspects plus theories of juvenile delinquency, examination of procedures, legislation, juvenile court and prevention programs.

**CRIM107** 3-3-0-0-0  
**Theories Of Interviewing** Open

The process of gathering information from others: the interviewee, the setting, types of questions, nonverbal communication, deception, and theories of communication.

**CRIM110** 3-3-0-0-0  
**Penology** Core

The organization and goals of correctional programs. Principles of institutional corrections and the social structure within institutions. Examination of non-institutional alternatives include probation and parole.

**CRIM171** 3-3-0-0-0  
**Comparative Criminal Justice Systems** Open

A comparative analysis of selected foreign criminal justice systems with the U.S. system. Social awareness of the systems, legal procedures, criminal litigation processes, sentencing, and incarceration measures will be scrutinized.

**CRIM211** 3-3-0-0-0  
**Correctional Treatment** Open

Institutional options for preventing recidivism. Sentencing options ranging from close custody confinement to probation. An introduction to therapeutic techniques. Comparison of punishment, Freudian treatments and behavior modification systems. Student presentation required.

**CRIM212** 3-3-0-0-0  
**Correctional Law** Open

Law in the field of corrections: procedural and substantive rights of both convicts and the state, "good time" detainers, multiple sentences and double jeopardy. Emphasis on sentencing and classification; efforts to reduce sentencing disparity.

**CRIM214** 3-3-0-0-0  
**Criminal Investigation** Open

Rudiments of criminal investigation: techniques, principles, problems, sources of information, and evidentiary processes. Theories of investigation with emphasis on specific offenses.

**CRIM226** 3-3-0-0-0  
**Retail Security Investigations** Open

Forms of theft, how it occurs and its impact on business. Internal investigation methods, including undercover, interrogation, polygraph use. Internal theft control, including pre-employment screening, honesty

testing, management's role in preventing internal theft, cash and merchandise controls.

**CRIM230** 3-3-0-0-0  
**Seminar In Criminal Justice** Open

Analysis of present day criminal justice innovations and problems. Development of practical approaches to data gathering. Major paper and student presentation are required. PREREQUISITES: 24 hours of CRIM courses or permission of instructor

**CRIM235** 3-2-2-0-0  
**Survey/Crim Justice Agencies** Open

Study of the criminal justice system through an examination of local agencies, focusing on theoretical vs. real roles and functions of the agencies. Includes on-site visits. PREREQUISITES: 24 hours of CRIM courses or permission of instructor

**CRIM236** 3-0-0-0-12  
**Internship** Open

Involves one-hundred fifty hours of active internship for students in an agency other than one in which they may be employed. Synthesis paper required. PREREQUISITES: Completion of 24 hrs of CRIM courses with min of "C" in each, CRIM235

**CRIM250** 3-3-0-0-0  
**General Identification** Open

Emphasis on casting techniques, obliterated numbers, tool impressions, glass fractures, crime scene sketches as well as collection and preservation of same.

**CRIM260** 3-3-0-0-0  
**Fingerprinting** Open

Classification and identification of fingerprints as well as collection and presentation of latents.

**CRIM270** 3-3-0-0-0  
**Weapons & Firearms** Open

The study of internal and external ballistics, edged weapons, blunt instruments, and the physical evidence produced.

**CRIM280** 3-3-0-0-0  
**Physiological Fluids/Hairs/Fibers** Open

Blood analysis from flow origin and questioned stain determination; collection and preservation of physiological fluids, hairs and fibers. Use of spectrographic and gas chromatography examination required for this course.

**CULA332** 2-0-4-0-0  
**Ala Carte Cooking** Voc/Tech

Application of food preparation with particular emphasis in grill work, deep fat frying, breakfast cookery and convenience items. Upon completion of the course, students have developed skills and increased their efficiency in grill cookery. PREREQUISITES: HRMT316, 320

**CULA340** 2-0-4-0-0  
**Baking** Voc/Tech

This course offers instruction in the baking fundamentals and procedures as applied to bread, rolls, cakes, pastries, and cake decorating. Practical experience in sanitation, safety, and the use of large equipment is also emphasized in this course. PREREQUISITES: HRMT316, 320

**CULA349** 3-0-6-0-0  
**International Cuisine Lab II** Voc/Tech

Application of gourmet cooking through actual quantity preparation of eight course international dinners. Four evening gourmet dinners will be prepared and served during the semester. PREREQUISITES: HRMT316, 320

**CULA365** 3-0-6-0-0  
**Advanced Baking** Voc/Tech

Advanced principle and procedures of producing baked goods, decorative work, and display pieces. PREREQUISITES: HRMT316, 320



# DESCRIPTION OF COURSES

**CULA386** 2-0-4-0-0  
**Buffet Decorating** Voc/Tech

Application of techniques used in preparation of hot and cold hors d'oeuvres, decorative food displays and ice carvings. Emphasis is placed on aspics, galantines and buffet presentations.

**CULA446** 3-0-6-0-0  
**International Cuisine Lab I** Voc/Tech

Application of gourmet cooking through actual quantity preparation of eight course international dinners. Four evening gourmet dinners will be prepared and served during the semester. PREREQUISITES: HRMT316, 320, 326, 328; COREQUISITE: CULA456

**CULA451** 8-0-16-0-0  
**Culinary Cuisine Lab** Voc/Tech

Preparation of intricate and difficult classical cuisine dishes. Students will rotate through the cooking stations of the traditional brigade kitchen and then prepare food for service to the public. A la carte preparation is emphasized COREQUISITE: CULA452

**CULA452** 2-2-0-0-0  
**Advanced Culinary Cuisine** Voc/Tech

Discussion of the more intricate and difficult cooking principles and techniques of classical cuisine and planning for advanced culinary cuisine lab. PREREQUISITES: HRMT337, 357 COREQUISITE: CULA451

**CULA456** 2-2-0-0-0  
**International Cuisine** Voc/Tech

Students research and plan international dinners. Emphasis is on menu and production planning for eight course gourmet dinners. The lecture will also focus on the pronunciation and definition of French terms. PREREQUISITES: HRMT326, 328 COREQUISITE: CULA446

**DATA101** 3-3-0-0-0  
**Intro To Data Processing** General

A study of the development of data processing from early manual methods to present day state of the art. The student is introduced to the concepts, functions and features of the digital computer and microcomputer software.

**DATA102** 3-3-0-0-0  
**New Literacy/Intro To Computers** Voc/Tech

A television course giving a comprehensive introduction to computer principles and presenting a broad overview of data processing concepts.

**DATA103** 3-3-0-0-0  
**BASIC** Voc/Tech

An elementary course in the use of the BASIC programming language. The various commands will be presented; and students design, code, and test several programs including file processing. PREREQUISITES: DATA101 or permission of instructor

**DATA104** 3-3-0-0-0  
**BASIC/Advanced** General

An "applications" approach developed around data file programming. Manipulation of string variables, data entry, formats, error checking routines, sequential and random access files. PREREQUISITE: DATA103

**DATA105** 2-2-0-0-0  
**Link With The Future** Voc/Tech

A correspondence course starting with basics regarding hardware and software; progress to writing a flowchart and a computer program.

**DATA106** 3-2-2-0-0  
**Microcomputers In Business** General

This course will provide the person already familiar with computer fundamentals with added skills needed for purchasing, evaluating and using microcomputer hardware and software for business applications.

**DATA110** 3-3-0-0-0  
**Microcomputer Systems Design** Voc/Tech

Designed to give added depth in the area of micro com-

puter system applications. Will explore the business applications of micros and networking. Software examination of word processing, spreadsheet and data base will be completed. PREREQUISITES: DATA101 or permission of instructor

**DATA211** 3-3-0-0-0  
**FORTRAN** General

An introductory course in the use of the FORTRAN programming language. Students design, code and test several business programs using the various features of the language. PREREQUISITE: DATA101

**DATA221** 3-3-0-0-0  
**PL/I** General

An introductory course in the facilities and techniques in the use of the PL/I language. Students design, code and test several business programs using the features of the PL/I. PREREQUISITE: DATA101

**DATA231** 3-3-0-0-0  
**RPG/II** General

A study of the basic steps of programming. Students design, code and debug various problems written in report program generator language. PREREQUISITE: DATA101

**DATA301** 4-3-2-0-0  
**DOS Job Control** Voc/Tech

Provides an individual with a working knowledge of disk operating systems/virtual storage extended (DOS/VSE) job control language. PREREQUISITE: DATA101

**DATA304** 4-4-0-0-0  
**COBOL/Beginning** Voc/Tech

Introduces the student to structured COBOL design and coding including control break processing. PREREQUISITE: DATA101

**DATA306** 4-4-0-0-0  
**COBOL/Intermediate** Voc/Tech

ANS COBOL programming involving sequential disk, table processing and VSAM file processing. PREREQUISITE: DATA304

**DATA308** 4-4-0-0-0  
**COBOL/Advanced** Voc/Tech

ANS COBOL involving advanced editing programs, table processing, VSAM file process, programs linkage, and report writer. PREREQUISITES: DATA301, 306

**DATA310** 4-4-0-0-0  
**Program Logic Design** Voc/Tech

The study of the logical design of programs using the structured method. Various design tools and applications will be covered.

**DATA319** 4-4-0-0-0  
**Assembler/Beginning** Voc/Tech

An introductory course in the syntax rules of assembler language programming. Business problems are analyzed and programmed. PREREQUISITE: DATA101

**DATA321** 4-4-0-0-0  
**Assembler/Intermediate** Voc/Tech

An intermediate course in the concepts and techniques of using assembler language, including machine language and table processing. PREREQUISITE: DATA319

**DATA327** 4-4-0-0-0  
**Assembler/Advanced** Voc/Tech

An advanced course in the more complex concepts of assembler type instructions, including VSAM and macro processing with inter-program linkage. PREREQUISITE: DATA321

**DATA334** 8-8-0-0-0  
**Applications Programming** Voc/Tech

Individual projects are assigned which require the student to apply the programming knowledge gained in prerequisite courses to the design and implementation of assigned business applications. PREREQUISITES: DATA301, 306, 321, 352

**DATA338** 2-2-0-0-0  
**OS/JCL** Voc/Tech

This course presents the concepts and coding rules of OS Job Control language in an easily understood manner. The course is primarily intended for both operators and programmers with DOS experience who plan to use OS in the near future.

**DATA341** 3-3-0-0-0  
**Data Base Language (DL/I)** Voc/Tech

An introductory course in the concepts, facilities and techniques used in data base language. Students design, organize and create data independent business applications. PREREQUISITES: DATA301, 306, 321

**DATA352** 4-4-0-0-0  
**Telecommunications/CICS Prog** Voc/Tech

Provides theory and working knowledge of telecommunication programming. Students will code programs using CICS. PREREQUISITES: DATA306, 321

**DATA382** 4-4-0-0-0  
**Systems Analysis** Voc/Tech

Designed to acquaint the student with the various considerations in the design of a system. The course considers project initiation, fact gathering, procedures, forms, system implementation and evaluation. PREREQUISITES: DATA101, 304, 319

**DENA302** 4-3-2-0-0  
**Dental Science I** Voc/Tech

Introduction to the various sciences necessary for the dental assistant. Microbiology and oral pathology are covered. PREREQUISITES Or COREQUISITES: DENA304, 320

**DENA304** 2-2-0-0-0  
**Dental Anatomy** Voc/Tech

The study of head, neck and dental anatomy is combined to give the student background information for application in dental assisting courses.

**DENA305** 2-1-2-0-0  
**Dental Radiography II** Voc/Tech

A continuation of Dental Radiography I. Weekly seminars for basic interpretation of radiographs and laboratory experience to develop student competence in making oral radiographic surveys. PREREQUISITES: DENA302, 304, 320, DENH257

**DENA309** 1-1-0-0-0  
**Dental Assisting Seminar** Voc/Tech

Discussion and problem solving from clinical practice. Provides an awareness of types of office situations and discussion of clinical aspects of dental assisting and dentistry. Oral reports and weekly evaluations are required. PREREQUISITES: DENA302, 304, 320, 325, DENH201, 257; COREQUISITE: DENA310

**DENA310** 3-0-0-0-12  
**Dental Assisting Clinical** Voc/Tech

Application of knowledge and skills as students rotate through dental offices, clinics and hospital clinics. General and specialty practices are included in rotations. PREREQUISITES: Current CPR certification, DENA302, 304, 320, 325, DENH201, 257; COREQUISITE: DENA309

**DENA312** 2-2-0-0-0  
**Dental Science II** Voc/Tech

A continuation of Dental Science I. Emphasis on human anatomy and physiology, effects of drugs, emergency procedures related to the body systems, and dental procedures. PREREQUISITES: CPR credentials, DENA302, 304, 320

**DENA316** 1-1-0-0-0  
**Ethics & Clinical Seminar** Voc/Tech

Continuation of DENA 309. Also includes the study of the ethics and legal responsibilities of the dental profession, as well as the functions and jurisprudence of the auxiliary personnel. PREREQUISITES: Second



# DESCRIPTION OF COURSES

semester standing in Dental Assisting program. COREQUISITE: DENA310

**DENA318** 4-0-0-0-16  
**Dental Assisting Clinical II** Voc/Tech

Continuation of DENA 310. COREQUISITE: DENA316  
**DENA320** 6-4-4-0-0

**Preclinical Dental Assisting** Voc/Tech

Basic concepts of chairside assisting are covered with emphasis on the role of the team in delivery systems. Terminology, instruments, equipment and basic procedures are covered. PREREQUISITE Or COREQUISITE: DENA302, 304

**DENA322** 5-3-4-0-0  
**Clinical Dental Assisting** Voc/Tech

A continuation of the Preclinical Dental Assisting with emphasis on operative dentistry, dental specialties and advanced functions. The laboratory phase develops students' competencies in clinical assisting. PREREQUISITES: DENA302, 304, 320, 325, DENH201, 257

**DENA323** 2-2-0-0-0  
**Dental Business Office Procedure** Voc/Tech

Covers the business aspects of the dental office: patient relations, appointment book management, financial records, telephone communications, credits and collections, dental insurance, tax records, supply and inventory systems. PREREQUISITE: 35 wpm typing speed

**DENA325** 1-0-2-0-0  
**Dental Materials Lab** Voc/Tech

Through laboratory experience the student learns techniques in preparation and utilization of dental materials. COREQUISITE: DENH201

**DENA330** 4-2-4-0-0  
**Technical Update-Dental Assistants** Voc/Tech

A technical update for dental assistants who desire update on current trends, techniques and clinical skills to re-enter the work force.

**DENH201** 2-2-0-0-0  
**Dental Materials** Open

A study of materials utilized in the practice of dentistry. Properties of dental materials and ADA requirements are presented. COREQUISITE: DENA325 or DENH203

**DENH203** 1-0-2-0-0  
**Dental Materials Lab** Open

Through laboratory experience the student learns techniques in preparation and utilization of dental materials. COREQUISITE: DENH201

**DENH208** 2-2-0-0-0  
**Principles Of Dental Hygiene** Open

Basic principles of clinical dental hygiene are introduced. The etiology of deposits and their effect on oral tissue and the theory and techniques of instrumentation in removal of deposits are emphasized in the practicum portion. PREREQUISITES: BIOL154, CHEM131; COREQUISITE: DENH209

**DENH209** 3-0-6-0-0  
**Principles/Dental Hygiene Practicum** Open

See DENH 208. PREREQUISITES: BIOL154, CHEM131; COREQUISITE: DENH208

**DENH210** 2-2-0-0-0  
**Oral Histology & Embryology** Open

General and oral histology beginning with a consideration of cytology, which is followed by a study of the fundamentals of oral embryology and the normal microscopic anatomy of oral tissues. PREREQUISITE: BIOL154

**DENH227** 3-2-2-0-0  
**Dental Health Education** Open

An introduction to the principles of instruction in health care. The course will include developing, presenting, and evaluating dental health education programs for public schools and community groups. PREREQUISITES: DENH208, 209

**DENH228** 2-2-0-0-0  
**Dental Hygiene I** Open

Continuation of instrumentation techniques, polishing techniques, topical application of fluoride and supplementary procedures. Application of principles of patient education in chairside instruction. PREREQUISITES: DENH208, 209

**DENH229** 4-0-8-0-0  
**Dental Hygiene I Practicum** Open

See DENH 228. PREREQUISITES: CPR certification, DENH208, 209; COREQUISITE: DENH228

**DENH230** 4-4-0-0-0  
**Dental Anatomy** Open

Programmed dental anatomy supplemented by lectures, quizzes and discussions on the development, morphology, and functions of the teeth. Anatomy and physiology of the head and neck, including mastication. PREREQUISITE: BIOL154

**DENH240** 4-4-0-0-0  
**Nutrition & Preventive Dentistry** Open

Lecture-discussion course relating the nutrients and their effects on general and oral health throughout the life cycle. An introduction to the principles of counseling and instruction in preventive dentistry necessary to maintain optimum oral health. PREREQUISITES: BIOL154, CHEM132

**DENH257** 3-2-2-0-0  
**Dental Radiography I** Open

Lecture includes radiation physics, biological effects, radiation safety and protection, properties of x-ray film and techniques of exposing, processing, mounting and evaluating film. Laboratory experiences develop competence in exposing, processing, mounting and evaluating radiographs. PREREQUISITES Or COREQUISITE: DENA304 or DENH230

**DENH259** 2-1-2-0-0  
**Dental Radiography II** Open

A continuation of Dental Radiography I. Weekly seminars for basic interpretation of radiographs and laboratory experience to develop student competence in taking oral radiographic surveys. PREREQUISITE: DENH257

**DENH278** 2-2-0-0-0  
**Dental Hygiene II** Open

A continuation of clinical practices. Further instruction and application in techniques for a complete oral prophylaxis. Additional topics include marketing and research in dentistry and intraoral photography. PREREQUISITES: DENH228, 229

**DENH279** 2-0-0-6-0  
**Dental Hygiene II Practicum** Open

See DENH 278. PREREQUISITES: DENH228, 229, 278; COREQUISITE: DENH278

**DENH280** 2-2-0-0-0  
**Periodontology** Open

The clinical characteristics, histopathology, etiology, and treatment of periodontal disease are presented. Special emphasis is placed on the role of the dental hygienist in patient education for the prevention and management of gingival problems. PREREQUISITES: DENH208, 209, 210, 228, 229

**DENH281** 5-0-0-15-0  
**Dental Hygiene III Practicum** Open

See DENH 288. PREREQUISITES: DENH278, 279, 288; COREQUISITE: DENH288

**DENH282** 2-2-0-0-0  
**Dental Pharmacology** Open

The study of drugs and their action on living tissue including their use as an aid in the diagnosis, treatment, and prevention of disease or to control or improve any physiological or pathological condition. PREREQUISITES: BIOL154, CHEM132

**DENH288** 2-2-0-0-0  
**Dental Hygiene III** Open

A continuation of Dental Hygiene II. Utilization of the dental hygiene treatment plan for initial periodontal therapy. PREREQUISITES: DENH278, 279

**DENH290** 3-2-2-0-0  
**Community Health Issues** Open

The course relates the concepts of dental public health and preventive dentistry including principles of biostatistics, epidemiology, dental manpower and delivery systems. Students plan, implement and evaluate a community dental health project. PREREQUISITE: DENH227

**DENH291** 5-0-0-15-0  
**Dental Hygiene IV Practicum** Open

See DENH 298. PREREQUISITES: DENH281, 288, 298; COREQUISITE: DENH298

**DENH293** 3-3-0-0-0  
**General & Oral Pathology** Open

Basic concepts of disease process and the oral manifestations of inflammation, degenerative changes, neoplasms and developmental anomalies of the oral cavity. PREREQUISITES: BIOL154, DENH210, 230, 257

**DENH298** 2-2-0-0-0  
**Dental Hygiene IV** Open

A continuation of Dental Hygiene III. Students present and discuss dental hygiene treatment plans. Legal and management aspects of the dental care system are considered. PREREQUISITES: DENH288, 281; COREQUISITE: DENH291

**DEVD201** 3-3-0-0-0  
**Young & Special** Open

A TV course that will prepare students for mainstreaming handicapped preschool children into regular preschool settings. All major categories of special needs are addressed.

**DEVD203** 2-2-0-0-0  
**Beginnings: Handicapped Child** Open

A telecourse designed for the training of teachers and other paraprofessionals who deal with the handicapped child through age five. Experts provide theoretical background, and special education professionals discuss their teaching strategies.

**DEVD260** 3-3-0-0-0  
**The Exceptional Individual** Open

A survey of physical, mental, social and emotional exceptionalities. History, philosophy and current trends in developmental disabilities are presented. Observation, data collection and analysis of behavior will be discussed.

**DEVD261** 3-3-0-0-0  
**Programs For Mentally Retarded** Open

Course emphasizes definition, characteristics, educational/vocational programs and adaptations for the mentally retarded. PREREQUISITES: Must be taken with or after DEVD260 and CHLD 170

**DEVD262** 3-3-0-0-0  
**Health Care** Open

Course stresses practical skill development in areas related to health and general well-being of handicapped individuals of all ages. Nutrition, use of equipment, household maintenance and basic nursing functions are included. PREREQUISITES: Must be taken with or after DEVD260 and CHLD170

**DEVD264** 3-3-0-0-0  
**Programs/Physically Handicapped** Open

Course emphasizes characteristics, identification, educational mainstreaming, vocational programs and adaptations for the physically handicapped. Special emphasis placed on adaptive equipment. PREREQUISITES: CHLD170, DEVD260



# DESCRIPTION OF COURSES

**DEVD265** 3-3-0-0-0  
**Multicategorical Disorders** Open

Course covers characteristics, identification, educational mainstreaming, vocational programs and adaptations for the socially, emotionally, educationally and visually handicapped. PREREQUISITES: CHLD170, DEVD260

**DEVD266** 2-2-0-0-0  
**Speech & Hearing Disorders** Open

Course is designed to familiarize the student with the communication process. Auditory disabilities are included as well as elementary signing techniques. PREREQUISITES: CHLD170, DEVD260

**DEVD267** 3-3-0-0-0  
**Observation/Guidance Of Disabled** Open

A study of observation and guidance techniques appropriate for use with the developmentally disabled child/adult. Various guidance philosophies are studied and applied through work with the disabled. Students acquire the skills of objective observation at specialized agencies or schools.

**DEVD460** 2-0-0-0-8  
**Practicum I** Open

Placement in residential, educational, or community-based program for the developmentally disabled. Students will observe, collect data and set up a behavioral change program as well as develop competencies necessary for future employment in similar settings. PREREQUISITES: Must be taken with or after DEVD260 and CHLD170

**DEVD463** 3-0-0-0-12  
**Practicum II** Open

Additional placement in a residential or community-based program for the developmentally disabled. Emphasis is on further development of competencies necessary for employment. PREREQUISITES: A cumulative G.P.A. of 2.00 in all DEVD courses and DEVD460

**DEVD464** 3-0-0-0-12  
**Developmental Disab Assoc Practicum** Open

Placement for the associate degree student in a residential or community-based setting to develop competence in the student's particular area of emphasis such as learning disabilities, emotional disabilities, mental retardation, etc. PREREQUISITES: A cumulative G.P.A. of 2.00 in all DEVD courses and DEVD463

**DIEM400** 4-3-2-0-0  
**Basic Diemaking** Voc/Tech

Introduction to diemaking principles covering die sets, die components, cutting and forming applications, and material utilization. PREREQUISITE: TOOL483

**DIEM401** 7-0-15-0-0  
**Basic Diemaking Lab** Voc/Tech

Introducing the student to basic diemaking procedures as they construct a blank die, piercing die, and a forming die. PREREQUISITE: TOOL490

**DIEM402** 3-2-3-0-0  
**Advanced Blueprint Reading** Voc/Tech

An interpretation of progressive die blueprints, jig & fixture blueprints including assembly drawings, plan & section views, and detailing. PREREQUISITE: TOOL481

**DIEM403** 4-3-2-0-0  
**Progressive Die Design** Voc/Tech

Hands-on drafting experience in the design, drawing, and detailing of a progressive die. PREREQUISITE: TOOL481

**DIEM404** 4-3-2-0-0  
**Advanced Diemaking** Voc/Tech

Complex die making procedures, including cam actuated dies and exposure to cost estimating and quoting. PREREQUISITE: DIEM400

**DIEM405** 7-0-15-0-0  
**Advanced Diemaking Lab** Voc/Tech

Constructing more complex stamp and die, including a progressive die that has been completely designed and detailed by the student. PREREQUISITE: DIEM401

**DIEM407** 3-2-3-0-0  
**Plastic Moldmaking** Voc/Tech

The student is presented with the basic fundamental of plastic mold construction and molding processes. PREREQUISITE: DIEM413

**DIEM410** 8-2-13-0-0  
**CNC Machine Operations** Voc/Tech

Theory of CNC programming, language and movements. The student will generate programs, load into computer, edit and operate CNC machine. PREREQUISITES: DIEM404, 405 or 2 years mill and lathe experience

**DIEM413** 3-2-3-0-0  
**Electrical Discharge Machining** Voc/Tech

Operation of conventional EDM machine, construction of EDM electrodes. PREREQUISITE: DIEM400

**DISL401** 15-10-10-0-0  
**Diesel Engines** Voc/Tech

An introduction to the theory and design of engines. Operation of both two cycle and four cycle diesel engines and disassembly, inspection and reassembly are included.

**DISL402** 3-2-2-0-0  
**Diesel Electronics** Voc/Tech

Fundamentals of electronics as applied to solid state controls on diesel equipment. Troubleshooting and testing of modules are included. PREREQUISITE: DISL408

**DISL404** 8-3-10-0-0  
**Power Trains** Voc/Tech

Class and lab activities in the design and operation of drive train components including clutches, torque converters, automatic and manual transmissions drive lines, rear axles, and wheel bearings.

**DISL406** 5-3-4-0-0  
**Hydraulics** Voc/Tech

The study of mobile hydraulic systems. Introduces hydraulic principles, components, fluids systems and circuits.

**DISL407** 15-12-6-0-0  
**Diesel Fuel System** Voc/Tech

A course designed to provide basic fuel system theory of commonly used fuel systems as well as general repair and calibration practices. PREREQUISITE: DISL401

**DISL408** 5-2-7-0-0  
**Basic Electricity** Voc/Tech

An introduction to basic electricity principles that apply to DC electrical systems and the diesel equipment. Electrical circuits covered include starting, charging and accessory systems.

**DISL420** 3-1-4-0-0  
**Air Conditioning** Voc/Tech

A course on basic air conditioning theory and design. Emphasis will be placed on various system controls and on service operations.

**DISL428** 6-2-8-0-0  
**Operation & Maintenance** Voc/Tech

Instruction in the proper methods of maintaining trucks and construction equipment. Enough operation of both trucks and heavy equipment will be covered to allow proper testing of each piece of equipment and each vehicle.

**DISL430** 3-1-4-0-0  
**Dynamometer Testing** Voc/Tech

The course familiarizes the student with the engine and chassis dynamometers. Proper use of the

dynamometer and the correct engine testing sequence will be presented.

**DISL460** 2-2-0-0-0  
**Shop Management** Voc/Tech

An opportunity to acquire knowledge about the management of a shop. All phases of management will be presented from organizational structure to manpower efficiency analysis.

**DISL470** 2-1-2-0-0  
**Advanced Electricity** Voc/Tech

The electrical circuitry on trucks and heavy equipment is covered. Included are troubleshooting, diagnosing, and repair procedures components. PREREQUISITE: DISL408

**DISL476** 14-4-20-0-0  
**Truck & Heavy Equipment Repair** Voc/Tech

Instruction in the repair and service of trucks and heavy equipment. This includes all phases normally done in a general repair shop. Instruction is given under structured lab and field conditions. PREREQUISITES: DISL401, 404, 406, 408

**DMAS350** 1-1-0-0-0  
**Health Field** Voc/Tech

Roles of dietary personnel in health facilities, state and federal guidelines. Explore managerial aspects within facilities.

**DMAS351** 1-0-2-0-0  
**Food Preparation** Voc/Tech

Basic principles and development of techniques as they apply to preparation of each food group, criterion for evaluating product quality. Laboratory experience.

**DMAS352** 2-2-0-0-0  
**Sanitation/Meal Service** Voc/Tech

Methods of efficiently serving safe, pleasing food. An awareness of sanitation will be created for all areas of food service.

**DMAS353** 1-1-0-0-0  
**Nutrition Life Cycle** Voc/Tech

An in-depth study (social, physiological and psychological need) of nutritional needs from infancy to geriatric. Explore the therapeutic role of food.

**DMAS354** 1-1-0-0-0  
**Modified Diets** Voc/Tech

An assessment of special diets, using the approved diet manual, a review of food exchanges and hints for making these diets appetizing through the use of seasoning.

**DMAS355** 1-1-0-0-0  
**Food Production Management** Voc/Tech

Total production needs, equipment layout, work methods, food storage, food preparation, service, and sanitation in a laboratory setting.

**DMAS356** 2-2-0-0-0  
**Food Service Management** Voc/Tech

The management functions required to organize and maintain an efficient quality dietary department are developed.

**DMAS361** 1-0-0-0-4  
**Food Prep Field Experience** Voc/Tech

Application and evaluation of food preparation in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.

**DMAS362** 1-0-0-0-4  
**Sanitation/Meal Service Field Exp** Voc/Tech

Application and evaluation of sanitation and meal service in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.

**DMAS363** 1-0-0-0-4  
**Nutrition Life Cycle Field Exp** Voc/Tech

Application and evaluation of nutritional aspects in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.



# DESCRIPTION OF COURSES

**DMAS364** 1-0-0-0-4  
**Modified Diet/Field Experience** Voc/Tech

Application and evaluation of modified diets in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.

**DMAS365** 1-0-0-0-4  
**Food Production Field Experience** Voc/Tech

Application and evaluation of food production in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.

**DMAS366** 1-0-0-0-4  
**Food Service Mgmt Field Experience** Voc/Tech

Application and evaluation of food service management in health care facility. Practical experience in selected health care facility supervised by a registered dietitian.

**DRAM110** 3-3-0-0-0  
**Introduction To Theatre** Core

A survey of the elements and techniques of theatre, with emphasis on acting, directing, and playwrighting. Attendance at dramatic production encouraged.

**DRAM111** 3-3-0-0-0  
**Techniques Of Acting** General

Training of the body, voice, and mind as acting instruments. Course includes acting exercises, scene analysis, and performance.

**DRAM113** 3-3-0-0-0  
**Creative Drama For School/Recreation** General

Elements of improvisational acting. Students will learn approaches for participating in as well as leading creative drama activities.

**DRAM114** 2-0-4-0-0  
**Theatre Production** General

Practical experience in acting, directing, and stage design. Students will be involved in all stages of production, from auditions to final performance. May be repeated for up to eight hours of credit.

**DRAM115** 3-0-6-0-0  
**Theatre Production** General

See DRAM114

**DRAM116** 4-0-8-0-0  
**Theatre Production** General

See DRAM114

**DRAM117** 3-3-0-0-0  
**Play Performance/Perception (TV)** General

Course surveys the many facets of drama. Text supplements television broadcasts of fourteen plays that range from classical to contemporary.

**ECON101** 3-3-0-0-0  
**Principles Of Macro-Economics** Core

An introduction to basic macro-economics' concepts and principles. Deals with problems of resource allocation, supply and demand, national income, employment, price levels, fiscal and monetary policy, money and banking systems, and elements of international finance.

**ECON102** 3-3-0-0-0  
**Principles Of Micro-Economics** Core

Course covers survey of demand and supply conditions, cost structure, market structure, anti-trust laws, crucial court decisions, competition, and how these elements affect the individual firm.

**ECON104** 3-3-0-0-0  
**Economics Of Money & Banking** General

Money and banking institutions and their impact on the macro-economy is investigated. The central bank structure and its policy tools are evaluated with respect to various macro-economic theories. PREREQUISITES: ECON101, 102

**EDCR101** 3-3-0-0-0  
**Intro To Education** Open

Presents a broad overview of the field of education. It

aims to encourage the student to think critically about the role of education in society, the role of the teacher, and educational practices in schools.

**EDCR103** 3-3-0-0-0  
**Contemporary Issues/Education** Open

Provides a forum to clarify points of view, attitudes, and beliefs concerning crucial issues in education. Emphasis will be placed on understanding different viewpoints.

**EDCR104** 3-3-0-0-0  
**Enriching The Curriculum** Open

Provides an introduction to elementary education. Students develop an understanding of techniques and activities aimed at enriching the child's experiences. PREREQUISITE: EDCR101

**EDCR105** 3-3-0-0-0  
**Educational Psychology** Open

The principles of psychology applied to classroom teaching with emphasis on such topics as development, learning, motivation, evaluation, adjustment, and educational techniques and innovations. PREREQUISITE: 3 credits in Psychology

**EDCR207** 3-0-0-0-12  
**Internship Teaching Experiences** Open

Provides opportunity to assist in the school as a teacher aide or to assess one's potential and interest in teaching as a career. PREREQUISITES: EDCR101 and program chairperson permission

**ELEM320** 1-1-0-0-0  
**Basic Electric Motor Theory** Voc/Tech

To familiarize students with electrical motors and their operations. Discussion covers types, industry standards, and application of single and 3 phase motors.

**ELEM321** 3-3-0-0-0  
**Motor Control I** Voc/Tech

Troubleshoot motor controls, use meters for testing, and gain an understanding of schematics. Students should have basic knowledge of electricity to take this course.

**ELEM322** 3-3-0-0-0  
**Motor Control II** Voc/Tech

Work with control circuits and equipment including troubleshooting. Major emphasis is placed on solid state programmable controllers. PREREQUISITE: ELEM321 or working knowledge

**ELEM323** 1-1-0-0-0  
**Code Book For Motors** Voc/Tech

National electric code that pertains to motor control and installation.

**ELEM325** 3-3-0-0-0  
**General Electricity** Voc/Tech

For beginners, theory, controlling electricity, voltage, amps, resistance, wattage, series and parallel circuits, DC and AC batteries, electric lighting, generators, and motors.

**ELEM326** 3-3-0-0-0  
**Electricity/Electronics I** Voc/Tech

Electronic fundamentals, capacitive circuits, inductive circuits, complex AC circuits. Use meters and circuit boards. Should have an understanding of basic algebra.

**ELEM327** 3-3-0-0-0  
**Electricity/Electronics II** Voc/Tech

Power and AC circuits, resonance and filters, poly phase circuits, transistors, amplifiers, digital logic, audio systems.

**ELEM450** 3-3-0-0-0  
**Related Math** Voc/Tech

Mathematics related to basic electronics. It includes basic algebra, right triangle trigonometry, scientific notation, with applications to DC and AC circuitry.

**ELEM451** 3-3-0-0-0  
**DC & AC Fundamentals** Voc/Tech

An introductory course in DC and AC fundamentals. Subject matter includes Ohm's law, series and parallel circuits, and measuring instruments.

**ELEM452** 3-0-6-0-0  
**DC & AC Fundamentals Lab** Voc/Tech

This laboratory will enable the student to analyze basic L-C-R circuitry. Basic test equipment usage will also be presented.

**ELEM453** 3-3-0-0-0  
**Basic Electrical Practices** Voc/Tech

An introduction to block diagram analysis of consumer products. It also includes basic skills such as soldering, mounting components and printed circuit board fabrication.

**ELEM454** 3-0-6-0-0  
**Basic Electrical Practices Lab** Voc/Tech

This laboratory develops the manipulative skills of the student. Soldering, mounting components and printed circuit board fabrication is included.

**ELEM460** 3-3-0-0-0  
**Applied Electronics** Voc/Tech

An introduction to basic solid state devices. This course includes amplifiers, oscillators, etc. both in discrete and integrated circuit packages. PREREQUISITES: ELEM450, 451, 452

**ELEM461** 3-0-6-0-0  
**Applied Electronics Lab** Voc/Tech

This laboratory consists of experiments with transistors and integrated circuit devices. The use of related test equipment is included. PREREQUISITES: ELEM450, 451, 452

**ELEM462** 3-3-0-0-0  
**Digital Electronics** Voc/Tech

An introduction to basic digital circuits. It includes basic gates, counters, registers, and multiplexer configurations. PREREQUISITES: ELEM450, 451, 452

**ELEM463** 3-0-6-0-0  
**Digital Electronics Lab** Voc/Tech

This laboratory consists of experiments on basic TTL digital circuits. It includes gates, counters, registers and multiplexer configurations. PREREQUISITES: ELEM450, 451, 452

**ELEM464** 3-3-0-0-0  
**Industrial Electronics** Voc/Tech

An introduction to basic industrial electronic devices. It includes silicon controlled rectifiers, unijunction transistors and various types of trigger devices. PREREQUISITES: ELEM450, 451, 452

**ELEM465** 3-0-6-0-0  
**Industrial Electronics Lab** Voc/Tech

This laboratory consists of experiments with basic industrial devices. It includes experiments with SCR's, UJT's and various types of trigger devices. PREREQUISITES: ELEM450, 451, 452

**ELEM470** 3-3-0-0-0  
**Communications** Voc/Tech

Familiarization with broadcast and stereo receivers. Circuit analysis and service techniques used in servicing consumer products. PREREQUISITES: ELEM460, 461, 462, 463, 464, 465

**ELEM471** 2-0-4-0-0  
**Communications Lab** Voc/Tech

This laboratory consists of experiments in the stage-by-stage construction and analysis of a communications receiver. PREREQUISITES: ELEM452, 453, 454, 460, 461, 462, 463, 464, 465

**ELEM472** 3-3-0-0-0  
**Color Systems I** Voc/Tech

Instruction in the theory and operation of television receivers. It includes basic color theory, circuit analysis



# DESCRIPTION OF COURSES

and service techniques. PREREQUISITES: ELEM460, 461, 462, 463, 464, 465

**ELEM474** 1-0-2-0-0  
**Color Systems I Lab** Voc/Tech

This laboratory consists of experiments with TV receivers. It includes use of scopes, analyzers and generators to develop proper service techniques. PREREQUISITES: ELEM460, 461, 462, 463, 464, 465

**ELEM480** 6-6-0-0-0  
**Consumer Products** Voc/Tech

Instruction in the theory and operation of consumer products such as VCRs, video disc players, micro-wave ovens and other consumer electronic products. PREREQUISITES: ELEM470, 471, 472, 474

**ELEM481** 3-0-6-0-0  
**Consumer Products Lab** Voc/Tech

A practical laboratory course in servicing and troubleshooting all types of electronics equipment. PREREQUISITES: ELEM452, 453, 454, 470, 471, 472, 474

**ELEM482** 6-6-0-0-0  
**Color Systems II** Voc/Tech

A continuation of Color Systems I. An in-depth study of the various circuits in color televisions. PREREQUISITES: ELEM470, 471, 472, 474

**ELEM483** 3-0-6-0-0  
**Color Systems II Lab** Voc/Tech

A continuation of Color Systems I Lab and troubleshooting consumer products. PREREQUISITES: ELEM452, 453, 454, 470, 471, 472, 474

**ELET357** 3-3-0-0-0  
**Digital** Voc/Tech

Logic circuits, gates, Boolean algebra, flip-flops, and registers. This course plus TELE315 is equivalent to HTTC352. PREREQUISITE: ELEM327

**ELET358** 3-3-0-0-0  
**Microprocessors I** Voc/Tech

An overview of structure such as registers and types of memory and software concern with specific machine level instruction. Participant should have digital background. PREREQUISITE: ELEM357

**ELET359** 3-3-0-0-0  
**Microprocessors II** Voc/Tech

An overview of interface chips - UART, parallel chips such as 8255, A/D, and D/A converters. PREREQUISITE: ELET358 or experience

**ELHT311** 6-6-0-0-0  
**Circuit Analysis I** Voc/Tech

An introduction to direct current fundamentals to include basic series and concepts essential in all phases of electricity and electronics. Subject material includes electricity and magnetism, Ohm's law, batteries, induced EMF, magnetic circuits, DC measuring instruments, motors, and generators. COREQUISITES: ELHT312, 313

**ELHT312** 3-0-6-0-0  
**Circuit Analysis I Lab** Voc/Tech

Basic experiments in circuit analysis. It includes series circuits, parallel circuits, and basic instrumentation familiarization. It also includes experiments in Theyenin's theory, Norton's theory, and Zirchoff's law. COREQUISITES: ELHT311, 313

**ELHT313** 3-3-0-0-0  
**Technical Math I** Voc/Tech

A review of algebra to include factoring, clearing of fractions, simultaneous linear equations, and quadratic equations. Students are also introduced to the use of an electronic calculator.

**ELHT315** 2-0-4-0-0  
**Fabrication Techniques** Voc/Tech

The proper use of the basic mechanical tools and techniques required in the fabrication of chassis and

other selected projects. Practice in the development of techniques and skills in the manipulation of layout tools is provided in the shop.

**ELHT321** 6-6-0-0-0  
**Circuit Analysis II** Voc/Tech

An introduction to AC circuitry. Subject material includes generation, vector representation, complex algebraic manipulation of the sine wave, inductance, capacitance, resonance, transformers, and Ohm's law for alternating current series. PREREQUISITES: ELHT311, 312, 313; COREQUISITE: ELHT322

**ELHT322** 3-0-6-0-0  
**Circuit Analysis II Lab** Voc/Tech

Continuation of Circuit Analysis I. It includes experiments in alternating current. PREREQUISITES: ELHT311, 312, 313; COREQUISITE: ELHT321

**ELHT323** 3-3-0-0-0  
**Technical Math II** Voc/Tech

A continuation of Technical Mathematics I. To include exponents and radicals logarithms, graphs of trigonometric functions, as well as continued use of a calculator. PREREQUISITE: ELHT313

**ELHT324** 3-3-0-0-0  
**Computer Programming** Voc/Tech

Designed to introduce the student to basic programming techniques such as writing algorithms, drawing of flow charts, and developing programs that include loops and subroutines. In addition, it will include machine level languages and their application and software packages such as word processors and assembly interface. PREREQUISITE: ELHT313

**ELHT330** 3-3-0-0-0  
**Digital Circuits I** Voc/Tech

An analysis of those circuits which form basic building blocks for a digital system. To include logical gates, such as OR, NOR, AND, and NAND, storage registers, and counters. PREREQUISITE: ELHT323; COREQUISITE: ELHT362

**ELHT331** 3-3-0-0-0  
**Circuit Analysis III** Voc/Tech

Deals with principles and electrical properties of semiconductor diodes, transistors, integrated circuits, and integrated circuit amplifiers complete with mathematical analysis of equivalent circuits and their evaluation. PREREQUISITES: ELHT321, 322, 323; COREQUISITE: ELHT363

**ELHT340** 5-5-0-0-0  
**Digital Circuits II** Voc/Tech

This course covers two major areas of microprocessors. The first is an investigation of the specific architecture of the microprocessor. The second area is software and is concerned with the specific machine and assembly level instruction as well as using these instructions for common routines. PREREQUISITES: ELHT330, 362; COREQUISITE: ELHT341

**ELHT341** 5-0-10-0-0  
**Digital Circuits II Lab** Voc/Tech

Continuation of Digital I. Also included are experiments in microprocessor architecture and timing. Methods of generating device select pulses, latching data, and interrupt techniques are examined. PREREQUISITES: ELHT330, 362; COREQUISITE: ELHT340

**ELHT342** 3-3-0-0-0  
**Calculus For Electronics** Voc/Tech

An introduction to differential and integral calculus. Subject matter includes the differentiation and integration of algebraic, trigonometric, and exponential functions with electronic applications.

**ELHT343** 3-3-0-0-0  
**Physics For Electronics** Voc/Tech

Designed to develop knowledge and skill in applying the laws of physics to the solving of problems encountered by engineering technicians. Primary subject materials includes mechanics, heat, and optics.

**ELHT345** 3-3-0-0-0  
**Data Communication & Laser** Voc/Tech

This course is concerned with line characteristics and specific devices and modes of operation. The various modes of operation include single side bond frequency shift keying and the different carrier systems such as time division, multiplexing, and frequency shift multiplexing. PREREQUISITES: ELHT330, 331; COREQUISITE: ELHT346

**ELHT346** 2-0-5-0-0  
**Data Communication & Laser Lab** Voc/Tech

An analysis of modulation methods used in data communications. Also included are experiments in multiplexing such as frequency division multiplexing and time division multiplexing. PREREQUISITES: ELHT330, 331; COREQUISITE: ELHT345

**ELHT362** 1-0-2-0-0  
**Digital Circuits Lab** Voc/Tech

Laboratory evaluation of small-scale integrated circuits and medium-scale integrated circuits. In addition to basic and/or gates, it includes comparators, decoders, multiplexors, and arithmetic units. PREREQUISITES: ELHT321, 322, 323; COREQUISITES: ELHT330, 331

**ELHT363** 2-0-4-0-0  
**Circuit Analysis III Lab** Voc/Tech

An analysis of solid state circuitry. It includes both transistor and integrated circuit experiments. Linear amplifiers as well as active filters are evaluated. PREREQUISITES: ELHT321, 322, 323; COREQUISITE: ELHT331

**ENGL070** 3-3-0-0-0  
**Basic Writing** Adaptor

Teaches basic grammar and writing skills; punctuation, spelling, sentence and paragraph structures; writing, revising, and proofreading strategies. Students will compose 3-4 short personal essays, learning to develop main ideas with specific support material. Individualized approach to basic skills. Preparation for ENGL 071 and 117.

**ENGL071** 3-3-0-0-0  
**Writing Skills Review** Adaptor

An introductory course, prepares students for college-level writing. Confidence and skills are built as students write and revise 4-6 essays, learning to develop and organize specific material to support main ideas. Students review sentence and punctuation patterns and learn how to proofread. For students who have taken 070 or meet that course's objectives.

**ENGL080** 3-3-0-0-0  
**Study Skills** Adaptor

Emphasis on improving time management, developing listening skills, and taking class notes and tests. Guidance in developing study habits and using the library and textbooks.

**ENGL084** 3-1-4-0-0  
**English-Second Language I** Adaptor

Course sequence for students whose native language is not English. Written and oral exercises and activities begin on the intermediate level and increase in complexity as the sequence progresses. PREREQUISITES: Minimum scores on the TOEFL or Michigan Test

**ENGL085** 3-1-4-0-0  
**English-Second Language II** Adaptor

See ENGL 084.

**ENGL086** 1-1-0-0-0  
**Writing Tutorial** Adaptor

An individualized writing course tailored to meet individual student's needs. Students can concentrate on improving or exploring specific areas of their own writing.

**ENGL087** 3-3-0-0-0  
**Developmental Reading I** Adaptor

A course designed to improve a student's college level



# DESCRIPTION OF COURSES

vocabulary. Elements of vocabulary studied are phonetics, Latin and Greek word elements, context clues and dictionary skills. The comprehension skills of main idea location and recognition of supporting details will be introduced.

**ENGL088** 3-3-0-0-0  
**Developmental Reading II** Adaptor

For students who want to improve reading and reasoning skills for college work. Reading material includes newspaper and magazine articles as well as textbook passages. Emphasis is on strengthening comprehension. PREREQUISITES: ENGL087 or equivalent score on reading skills test.

**ENGL115** 3-3-0-0-0  
**Technical And Business Writing** Core

A study of technical/business communication including correspondence, informal and formal reports, and printed forms. Also includes illustrations, abstracts, and summaries. Emphasis on current writing practices. PREREQUISITE: ENGL117

**ENGL116** 3-3-0-0-0  
**Speed Reading** General

An advanced reading course designed to improve reading speed and comprehension. Emphasis on adapting to varying content and levels of difficulty. PREREQUISITE: ENGL081 or equivalent

**ENGL117** 3-3-0-0-0  
**Composition I** Core

Designed to help students write effective prose. Exploration of relationship of audience to writer and material. Emphasis on developing concrete detail to support main idea. PREREQUISITE: Satisfactory writing skills

**ENGL118** 3-3-0-0-0  
**Composition II** Core

Expository and persuasive writing developed through investigative and logical thinking. Course explores structure, style, and documentation. PREREQUISITE: ENGL117

**ENGL120** 1-1-0-0-0  
**Library Instruction** General

Study of classification systems, use of the card catalog, periodical indexes, dictionaries, encyclopedias, subject reference books, and the compilation of bibliographies.

**ENGL121** 3-3-0-0-0  
**Creative Writing** General

Techniques of writing poetry and fiction. Students will read the work of professional writers and apply the principles of imaginative writing to their own work. Approaches include workshop evaluations and individual conferences.

**ENGL410** 3-3-0-0-0  
**Communication Skills** Voc/Tech

Reading, writing, speaking, and listening are studied as methods of exploring and evaluating technological advances in trades and industry. Adapting communication for different audiences, evaluating industry-related literature, and basic business writing are emphasized.

**ENGR155** 2-2-0-0-0  
**Engineering Computations** Open

This course presents the organization, solution and presentation of engineering problems. Topics covered includes S.I. units, selected engineering topics and the study of BASIC. PREREQUISITE: MATH123 or equivalent

**ENGR160** 2-2-0-0-0  
**Engineering FORTRAN** Open

The FORTRAN language in batch and interactive modes with an emphasis on solutions to engineering problems. PREREQUISITE: MATH123 or equivalent

**ENGR165** 4-2-4-0-0  
**Engr Graphics/Conceptual Design** Open

An integration of conceptual design and engineering

graphics. This course includes orthographic projection applied to three dimensional geometry and engineering drawing. Instrument and free hand application to an open ended project that includes a formal engineering report.

**ENGR175** 3-3-0-0-0  
**Engineering Statics** Open

This course includes the vector and scalar analysis of coplanar and non-coplanar force systems, equilibrium concepts, friction, centroids, moments and products of inertia, Mohr's circle, radius of gyration, internal forces, shear and bending moment diagram. PREREQUISITE: PHYL121; COREQUISITE: MATH130

**ENGR180** 3-2-0-3-0  
**Fundamentals Of Surveying** Open

Survey with emphasis on engineering surveys and familiarization with basic instrumentation. Field and office procedures for leveling, traversing and mapping. Survey calculations including theory of errors and computer application. An introduction to photogrammetry is included. PREREQUISITES: MATH124 or instructor permission

**ENR301** 3-3-0-0-0  
**Small Business Finance & Law** Voc/Tech

Provides basic information on developing a financial plan, taxes, funding sources, cash flow analysis, financial projections, and credit analysis. Presents basic principles of the legal system as applied to business including topics on contracts, courts, torts, breach, and bankruptcy.

**ENR302** 3-3-0-0-0  
**Human Potential For Business** Voc/Tech

Emphasizes how the potential of the mind can be developed to improve decision making in business. The importance of quality which results from people thinking and working together with common goals and good relationships is stressed.

**ENR303** 3-3-0-0-0  
**Small Business Marketing** Voc/Tech

Marketing as viewed by an entrepreneur is stressed in this course. Emphasis on a marketing philosophy, writing a small business marketing plan, and developing a marketing strategy for a small business are discussed.

**FIRE231** 2-2-0-0-0  
**Intro To Fire Science** Open

First in the fire science series, this course provides a historical and philosophical background of the fire service, reviews the functions of fire protection organizations, examines the nation's fire problem, identifies fire protection careers, and describes the associate degree requirements.

**FIRE232** 3-3-0-0-0  
**Fire Behavior** Open

A qualitative study of chemical and physical aspects of fuels, the combustion process and products of combustion as they relate to causes, spread and extinguishment of fire. The course emphasizes the natural laws that determine fire behavior in any environment. COREQUISITE: CHEM131

**FIRE233** 3-3-0-0-0  
**Building Construction** Open

A study of building materials, components, and design features with regard to their reactions under fire conditions. The course also includes interpretation of the Life Safety Code and its application to proposed and existing structures. PREREQUISITE: FIRE232

**FIRE234** 3-3-0-0-0  
**Fire Protection Systems** Open

An examination of devices and systems installed and utilized to support the fire service in the detection and suppression of fire. PREREQUISITE: FIRE232

**FIRE235** 3-3-0-0-0  
**Hazardous Materials** Open

This course concentrates on principles of response planning for incidents involving the manufacture, transportation, storage, and use of hazardous materials, with the objective of minimizing harm to people, property, and the environment. PREREQUISITES: CHEM131, FIRE232

**FIRE236** 3-3-0-0-0  
**Fluid Flows** Open

A problem-solving course involving application of the laws of hydraulics, design features, flow characteristics, and tests needed to assure adequate water supplies for fire protection. PREREQUISITES: H.S. Algebra or MATH092, PHYL106

**FIRE237** 3-3-0-0-0  
**Planning For Fire Protection** Open

This course is designed to help develop strategic plans for fire protection of an area, community, multiple building complex, and single building. Through the use of data collection systems and other management tools, the student will be able to identify and analyze fire problems and develop alternative solutions.

**FIRE238** 2-2-0-0-0  
**Fire Investigation** Open

This course furnishes a technical background that will enable the student to examine a fire scene and determine the point of origin, cause, and sequence of events of the fire. It also covers fire cause data systems and data use in criminal prosecution, civil liability, and code enforcement. PREREQUISITES: FIRE232, 233

**FNSR201** 3-3-0-0-0  
**Principles Of Banking** Open

This course surveys the banking functions. It provides a comprehensive introduction to the diversified services offered by the banking industry today.

**FNSR203** 3-3-0-0-0  
**Real Estate Finance** Open

This course provides a background in the varied real estate mortgage credit operations of commercial banks. It addresses the manner in which funds are channeled into mortgage markets, the financing of residential and special purpose property, and administrative tasks common to most mortgage departments.

**FNSR204** 3-3-0-0-0  
**Management Fundamentals** Open

Fundamental management concepts and techniques are stressed in this course dealing with the basic functions of planning, organizing, staffing, leading, and controlling. A variety of management theories and approaches is covered.

**FNSR205** 3-3-0-0-0  
**Money & Banking** Open

The course presents basic principles as they relate to banking. It emphasizes the practical aspects of money and banking with an emphasis on basic monetary theory.

**FNSR208** 3-3-0-0-0  
**Marketing For Bankers** Open

A course in basic marketing principles with application to the banking industry.

**FNSR209** 3-3-0-0-0  
**Bank Investments** Open

Presents factors affecting investment strategies and decisions grounded in a framework of fundamental investment concepts such as risk, liquidity, and yield. Basic characteristics of the major types of bank investments are studied.

**FNSR210** 3-3-0-0-0  
**The Trust Business** Open

Provides an overview of the trust department with emphasis on how the trust department fits into banking,



# DESCRIPTION OF COURSES

the services it provides, and how they are delivered. The changing role of the trust department is highlighted.

**FNSR211** 3-3-0-0-0  
**Bank Management** Open

Provides a practical and conceptual grounding in bank management. Issues confronting the bank manager daily, including staffing, management controls, and organizational planning are covered.

**FNSR212** 3-3-0-0-0  
**Analyzing Financial Statements** Open

This course deals with interpretation and evaluation of financial reports of business. Focus is on the use of financial statements in bank decisions. Emphasis is on theory of solving problems using a case study approach. PREREQUISITES: ACCT101, 102 or instructor permission

**FNSR213** 3-3-0-0-0  
**International Banking** Open

This course covers the fundamentals of international banking: how money is transferred from one country to another, how trade is financed, what the international agencies are, and how they supplement the work of commercial banks, international lending, and ways money is changed from one currency to another.

**FNSR214** 3-3-0-0-0  
**Bank Cards** Open

An overview of bank card industry. Basic operational aspects of bank card systems are covered with emphasis on computer processing systems that handle the accounts and on the operations within a major card-issuing bank.

**FNSR215** 3-3-0-0-0  
**Inside Commercial Banking** Open

The purpose of this course is to identify topics and issues which bankers must be prepared to address, and to discuss the quest for solution and responses. Coverage includes a historical overview of American banking, the constituencies of commercial banks, effective management, sources of bank funds, retail banking, uses of funds, and wholesale banking.

**FNSR216** 3-3-0-0-0  
**Loan Officer Development** Open

This course is designed to explain and teach the practical skills essential to new lending officers in the performance of their jobs. Through use of role playing, team efforts, tape-recorded dialogues, and a business simulation game, participants learn to interview and analyze a loan request, and communicate and work with credit analyst.

**FNSR217** 3-3-0-0-0  
**Deposit Operations** Open

This course is designed as an overview of the American payments system and how it works. Students will understand the definitions and changing roles of deposits and depositories and become familiar with all the types of paper and electronic payments.

**FNSR218** 3-3-0-0-0  
**Law & Banking** Open

This course provides an overview of the legal aspects of banking. The course is designed to equip the student with a non-technical, clear understanding of all aspects of the legal system that directly affect banks.

**FNSR219** 3-3-0-0-0  
**Systems Analysis** Open

Covers concepts of systems development using principles of data processing. The planning and implementation of a new system are covered in detail. Students will analyze systems, identify problem areas, and design practical economic solutions. PREREQUISITES: DATA101 or instructor permission.

**FNSR220** 1-1-0-0-0  
**Customer Service For Bank Personnel** Open

This course provides customer contact personnel with

the opportunity to develop further their communication skills so that they can better serve their customers' financial and personal needs, help their bank compete profitably, and experience greater job satisfaction.

**FNSR221** 1-1-0-0-0  
**Banker & EFT (Electronic Funds Tran)** Open

This is a how-to-be comfortable-with course designed to provide student with an overview of the EFT arena. An understanding of EFT and a realization of the services and functions allowed through the various EFT products.

**FNSR222** 1-1-0-0-0  
**New Deposit Instruments** Open

This current issues course is designed to fill a training void in areas of banking with high customer visibility. Aimed at customer contact personnel, the course stresses identifying eligible customers for each instrument and handling customer inquiries.

**FNSR223** 1-1-0-0-0  
**Loan Documentation** Open

Approaching loan documentation as a logical process, this course introduces new loan officers to commercial loan documentation and provides guidelines for the development of a bank manual on loan documentation.

**FNSR224** 1-1-0-0-0  
**Knowing The Competition** Open

This course is designed to provide an awareness of the competitive changes that have been taking place in the market for financial services, including both bank and nonbank providers.

**FNSR225** 1-1-0-0-0  
**Asset/Liability Management** Open

This overview program is designed to acquaint bankers with the elements of asset/liability management. It promotes an understanding of the origins, necessities, and operations of proper asset/liability management techniques.

**FNSR226** 1-1-0-0-0  
**Fundamentals Of Data Processing** Open

Presenting the basic data processing concepts and terminology in a non-technical manner, this program is designed to familiarize the student with basic data processing information with particular emphasis on banking applications.

**FNSR227** 1-1-0-0-0  
**Fund. Of Analyzing Finc. Statements** Open

Provides a basic understanding of financial statements and their use in a bank. It shows how financial statements are used in analyzing the lending situation and making the loan decision.

**FNSR228** 1-1-0-0-0  
**Securities: Stocks & Bonds** Open

Presents a bank-oriented approach to the subject of stocks and bonds. Covers the basics of stocks and bonds.

**FNSR229** 1-1-0-0-0  
**Writing For Results** Open

Utilizes a "thought pattern development" approach. This course addresses the logical organization and writing of letters and reports. Orienting the letter or report to the purpose and recipient is emphasized.

**FNSR230** 1-1-0-0-0  
**Selling Bank Services** Open

Teaches sales techniques for customer contact personnel. Emphasis is on identifying customer needs from a bank transaction or from conversation with the customer.

**FNSR231** 1-1-0-0-0  
**Consumer Bankruptcy** Open

Addresses the bankruptcy act as it relates to consumer bankruptcies. Students participate in developing a strategy for avoiding bankruptcies and for lessening their impact on the bank.

**FNSR232** 3-3-0-0-0  
**Intro To Credit Unions** Open

An overview of the credit union movement in the United States. Includes the structure of the credit union, legal basis for operation, services and characteristics, management, financial system, and insurance and bonding.

**FNSR233** 3-3-0-0-0  
**Credit Union Operations** Open

This course deals with granting of loans, financial counseling, and collections. Current regulations under equal opportunity act and truth-in-lending laws will be covered. Relation of other laws to credit union operations will be discussed.

**FNSR234** 3-3-0-0-0  
**Credit Union Financial Mgmt** Open

This course is designed to develop an understanding of the financial management skills needed to operate a credit union, with emphasis on basic credit union accounting and bookkeeping, including financial statement analysis, and budgeting. Risk management and insurance are discussed along with investment guidelines.

**FNSR235** 2-2-0-0-0  
**Adventures In Attitudes** Open

Understand others by understanding yourself. Gain new insights into effective communication, managing your mind, attitudes and leadership, goal-setting, and motivation. The group project method is used to accomplish the goals of the course.

**FNSR236** 1-1-0-0-0  
**Supervisory Training** Open

The goal of this course is to transmit managerial skills and concepts to first-line supervisors, by integrating sound managerial concepts with practical experience. Application of managerial skills to the job situation of the new supervisor is emphasized.

**FNSR237** 3-3-0-0-0  
**Consumer Lending** Open

Designed to provide an overview of the consumer credit operation. This course examines the role of consumer credit in overall banking operations. Not a how-to training program. It offers an improved understanding of the consumer credit function within a bank.

**FNSR238** 3-3-0-0-0  
**Corporate Banking** Open

This course provides the new or less-experienced commercial lender with a firm grasp of the sequential nature of the lending process, giving bankers a solid foundation on which to construct sound lending practices. Emphasis is practical and technical rather than theoretical.

**FNSR239** 1-1-0-0-0  
**Speaking To Communicate** Open

This program addresses identification and analysis of the message and the respondent, and focuses on personal communications trouble spots. Using cross-evaluation and peer reaction, emphasis is on both the goal of the communication and the reaction of the listener.

**FNSR240** 1-1-0-0-0  
**Loss Prevention** Open

The objective of this course is to teach bank employees the needed skills and information to help them prevent losses caused by bad checks and bank swindlers, and what to do in the event of a bank hold-up. Emphasis is on practical skills: learning what checks to cash and when to cash them.

**FNSR241** 2-2-0-0-0  
**Bank Control & Audit** Open

Designed for non-auditors, the course attempts to establish a basic frame of reference from which the student can develop a deeper appreciation for the role, duties, and responsibilities of the auditor. The student will develop an awareness of the basic dynamics of the



# DESCRIPTION OF COURSES

auditing function.

**FNSR242** 2-2-0-0-0  
**Introduction To Commercial Lending** Open

This course explains the role of the commercial lending function within the banking industry as well as discussing its importance in the total economy. Also provided is an understanding of the technical skills necessary to be a successful commercial lender in today's competitive environment.

**FNSR243** 1-1-0-0-0  
**Preparing For Supervision** Open

This course is designed to prepare participants for the supervisory role. Activities such as case studies, role playing, and discussion allow participants to practice skills as they learn.

**FNSR244** 1-1-0-0-0  
**Collector's Training Program** Open

This course focuses on the financial counseling method. Discusses human relations as a means to collect delinquent loans while aiding the banker in complying with the fair debt collection practices act.

**FNSR245** 3-3-0-0-0  
**Bank Accounting** Open

This course builds upon the participant's knowledge of basic accounting principles and teaches the techniques of bank accounting through the analysis of bank financial statements. PREREQUISITES: ACCT101 and one to three years of banking experience

**FNSR246** 3-3-0-0-0  
**Fundamentals Of Bank Data Processing** Open

Presents the essential concepts of computers and the data processing operations in a non-technical manner. The program is designed to familiarize the student with basic data processing information and terminology, with particular emphasis on banking applications.

**FNSR247** 1-1-0-0-0  
**Effective Public Relations & Commun** Open

A practical guide to developing and carrying out effective public relations programs, designed to meet the communication needs of any bank, regardless of its size, budget, or location. The course focuses on public relations as a management activity that calls for analyzing the policies and actions of the bank.

**FNSR248** 1-1-0-0-0  
**Problem Loans** Open

Using a case study approach, this course stresses problem loan prevention by examining common mistakes which cause problem loans. Participants will also learn how to minimize losses and effectively deal with a problem loan once it arises.

**FNSR249** 1-1-0-0-0  
**Product Knowledge-Key To Success Sell** Open

This course is comprised of three modules: Consumer Products, Corporate Products, and Trust Products. It is designed to provide students with a generic knowledge of the range of services their bank offers so they can better meet their customers' needs and maximize sales opportunities.

**FNSR250** 1-1-0-0-0  
**Bank Security** Open

This course is designed to prevent security problems from arising by developing good security habits in bank personnel. It also develops participant's ability to detect security threats and to handle them in a way that ensures their personal safety and minimizes the loss of depositors' funds.

**FNSR251** 3-3-0-0-0  
**Principles Of Credit & Collection** Open

Covers the different types of commercial credit, evaluation of potential credit customers, and the different sources of credit information. Discusses the organization of credit departments, collection procedures, and negotiable instruments.

**FNSR252** 3-3-0-0-0  
**Advanced Credit & Collection** Open

Provides an understanding of the role of credit in financial management, the four responsibilities of the credit function, and the purpose and value of financial statements. Covers the different financial statements. PREREQUISITE: FNSR251

**FNSR253** 3-3-0-0-0  
**Mgmt Of The Credit Function** Open

Working methods of credit management and control are developed from knowledge acquired from two other credit courses. Methods developed are applied to cases that involve making credit decisions, filing credit limits through financial analysis, settlements, assignments, reorganization, and bankruptcies. PREREQUISITE: FNSR252

**FNSR254** 1-1-0-0-0  
**Letters Of Credit** Open

Provides a general background on the use of letters of credit, the basic operations of letters of credit, and the detailed examination of related documents.

**FNSR255** 1-1-0-0-0  
**Asset Based Lending** Open

Introduces and reinforces fundamental principles of asset-based financing in today's commercial lending environment. Examines basic differences between secured and unsecured lending, focusing on the primary information necessary to understand and practice this specialized form of lending.

**FNSR256** 1-1-0-0-0  
**Consumer Compliance** Open

Provides an updated overview of the major federal regulations affecting the compliance area. Focuses on basic requirements of the major consumer credit/civil rights laws, regulations, policies and procedures that can help avoid common violations.

**FNSR257** 1-1-0-0-0  
**Consumer Variable Rate Lending** Open

Provides customer contact personnel with information necessary to market consumer variable rate loans. The course will deal with the structure of variable rate loans, legal and regulator considerations, and applicable marketing strategies.

**FNSR258** 1-1-0-0-0  
**Negotiable Instruments & Payment Mech** Open

An introduction to the nature of a negotiable instrument and how it is collected through the payments mechanism.

**FNSR274** 3-3-0-0-0  
**Credit Union Accounting** Open

Terms and procedures basic to accounting and unique to credit unions are explained. Topics include an intro to credit union accounting, the accounting cycle, journal records, members' ledger cards, interest refunds and dividends, reserves and undivided earnings, statement of financial condition, closing the books, accounting bases, and internal controls.

**FNSR275** 3-3-0-0-0  
**Credit Union Auditing** Open

This course is designed to give credit union personnel the needed information to perform their ongoing responsibilities and to understand and work with various financial reports. This course details the steps included in preparing the audit, conducting the audit, and reporting the audit.

**FNSR393** 4-0-0-0-16  
**Field Experience I** Open

Work experience in a financial institution based on an approved training plan. PREREQUISITE: COOP220

**FNSR395** 4-0-0-0-16  
**Field Experience II** Open

Work experience in a financial institution based on an approved training plan. PREREQUISITE: FNSR393

**FORL120** 4-4-0-0-0  
**Elementary Spanish I** Core

Development of the basic skills of understanding, speaking, reading, and writing Spanish. Grammar analysis, classroom conversational practice, and some exploration of the Hispanic culture.

**FORL121** 4-4-0-0-0  
**Elementary Spanish II** Core

Continued practice of the four basic skills and grammar analysis. Introduction of short prose selections with conversational emphasis. PREREQUISITE: FORL120

**FORL122** 4-4-0-0-0  
**Intermediate Conversation & Comp.** Core

Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of Hispanic literary and cultural materials to develop skills in listening, comprehension, speaking, reading and writing. PREREQUISITE: FORL121

**FORL130** 4-4-0-0-0  
**French I** Core

An introduction to the basic skills in understanding, speaking, reading, and writing French. Grammar analysis, classroom conversational practice, and some exploration of French culture.

**FORL131** 4-4-0-0-0  
**French II** Core

Continued practice of the four basic skills and grammar analysis begun in French I. Introduction of short prose selections with conversational emphasis. PREREQUISITE: FORL130

**FORL140** 4-4-0-0-0  
**Elementary German I** Core

Designed for students with no previous German, this course develops the basic skills of understanding, speaking, reading, and writing. It includes grammatical analysis, laboratory and classroom conversational practice, major contrasts between German and English, and cultural aspects of the German-speaking world.

**GEOG141** 3-3-0-0-0  
**Intro To Geography** Core

This course utilizes the basic concepts of cultural geography (area, landscape, ecology, diffusion, and integration) in a systematic examination of the contemporary world. The course is intended to provide an elementary acquaintance with the field of geography.

**GEOG147** 3-3-0-0-0  
**Developed World** Core

This course systematically surveys the peoples, cultures, resources, and problems of the cultural realms commonly designated as the developed world (Anglo-America, Europe, Russia, Japan, and Australia).

**GEOG148** 3-3-0-0-0  
**Third World** Core

This course systematically surveys the peoples, cultures, resources, and problems of the cultural realms commonly designated as the Third World (Latin America, Black Africa, the Islamic World, India, and China).

**GLOS120** 3-3-0-0-0  
**War & Peace In A Global Society** General

A review of topics dealing with peace, war, disarmament, and the transition to a more just global order. This will include cultural values and belief systems, national security, the nuclear arms races, global interdependence, and nonviolent alternatives to conflict resolution.

**GLOS126** 3-3-0-0-0  
**Global Perspectives** General

Course will focus each term on a given area of study (people, cultures, institutions, inter-global relations) in the Middle East, Latin America, Soviet Union. May be repeated in various areas for up to 9 hours of credit.



# DESCRIPTION OF COURSES

**GLOS199** 2-2-0-0-0  
**Japan: The Changing Tradition** General

Focuses on history and changing cultural traditions of Japan's modern era and the brief period during which Japan has developed its own distinctive urbanized, industrialized, and democratic society.

**GRPH401** 3-3-0-0-0  
**Graphic Arts Orientation** Voc/Tech

A prerequisite for all graphic communications courses. It is essential that proper graphic arts terminology, tools, and techniques be fully understood.

**GRPH403** 3-0-6-0-0  
**Communication Design I** Voc/Tech

This course will create awareness of design use. Lectures and projects will give the student experience in two-dimensional design.

**GRPH405** 2-1-2-0-0  
**Typography I** Voc/Tech

A study of the history of typography as it relates to advertising design. Includes emphasis on copyfitting and use of typography in design.

**GRPH407** 3-1-4-0-0  
**Production Art I** Voc/Tech

A two semester course which will enable the student to seek an entry level position in production art. Problems and solutions in the preparation of camera-ready art for printing are studied.

**GRPH409** 4-2-4-0-0  
**Printing Processes** Voc/Tech

This course introduces beginning students to the basic skills of pre-press, press, and photocomposition. Emphasis is on camera, stripping, and small press operation.

**GRPH411** 2-1-2-0-0  
**Typography II** Voc/Tech

A continuation course including the typographic principles and basic skills in photo composition. PREREQUISITE: GRPH405

**GRPH415** 3-1-4-0-0  
**Production Art II** Voc/Tech

This will add to the student's qualifications from taking Production Art I by emphasizing camera-ready art for printing. PREREQUISITE: GRPH407

**GRPH421** 2-1-2-0-0  
**Internship Preparation** Voc/Tech

Students seeking an internship will be required to develop job interviewing techniques and presentation portfolio. The student develops a knowledge of human relations in the profession through use of goal setting, interpersonal and group skills. PREREQUISITES: One of PRTG464, PRTG465, PRTG466 or GRPH415, CART411

**HCAD227** 4-4-0-0-0  
**Integrating Common Services-MH/MR/DD** Open

Emphasis will be placed on physical, psychosocial and cultural dynamics of mental health, mental retardation, and developmental disabilities and the various disciplinary perspectives that may be encountered. Special attention will be given to the integration of community based services. PREREQUISITE: Program specific orientation

**HCAD237** 3-3-0-0-0  
**Long-Term Care Financial Management** Open

Emphasis on financial practices in the long-term care facility. Cost and labor hour controls, third-party payment, evaluation of profit/loss, and fiscal reports will be addressed. PREREQUISITE: ACCT301

**HCAD251** 2-1-0-0-4  
**Pract: Social Services** Open

Focus on social services and rehabilitation programs in the long-term care facility.

**HCAD252** 2-1-0-0-4  
**Pract: Dietary** Open

Focus on the dietary department in the long-term care facility. Food ordering, inventory processes, food preparation, serving, and staffing patterns will be explored.

**HCAD253** 2-1-0-0-4  
**Pract: Legal Aspects & Govt Organ** Open

Emphasis on the legal aspects and government organizations affecting long-term care facilities.

**HCAD254** 2-1-0-0-4  
**Pract: Nursing** Open

Nursing services in the long-term care facility. The relationship of nursing services to administration.

**HCAD255** 2-1-0-0-4  
**Housekeeping/Laundry/Maintenance** Open

Emphasis on the administrator's responsibilities in the housekeeping, laundry, and maintenance departments.

**HCAD256** 2-1-0-0-4  
**Pract: Activ/Community Resources** Open

Activity and volunteer programs in the long-term care facility. The use of community resources will be explored.

**HCAD257** 2-1-0-0-4  
**Pract: Business Administration** Open

Emphasis on business practices in the long-term care facility.

**HCAD258** 2-1-0-0-4  
**Pract: Administrative Organization** Open

Emphasis on concepts and practices involved in the administration of a long-term care facility. PREREQUISITE: ACCT301 or 101

**HCAD259** 2-1-0-0-4  
**Pract: Human Resource Management** Open

Emphasis on theories and practices in Human Resource Management in the long-term care facility.

**HCAD275** 6-6-0-0-0  
**Admin: Long-Term Care Facilities** Open

Relates fundamental management principles to special challenges and concerns of long-term care. Includes study of long-term care organizations, the management process, organizational behavior, human resource management, and quality assurance.

**HCAD277** 6-6-0-0-0  
**Service Delivery Systems-MH/MR/DD** Open

Provides a comprehensive overview of MH/MR/DD resident needs and presents an interdisciplinary approach to developing, implementing and evaluating accountable services. Reviews behavior modification techniques and addresses future trends. PREREQUISITE: Program specific orientation

**HCAD281** 3-3-0-0-0  
**Seminar In Health Care** Open

Emphasis on principles and practices involved in long-term care administration and resident services with special attention to the review of federal and state regulations. PREREQUISITE: Take final semester

**HIST121** 4-4-0-0-0  
**Western Civ Beg To 1715** Core

The student surveys the great civilizations from Greece and Rome through the rise of Christianity, to Europe in the Middle Ages, the Renaissance and Reformation, the modern state, the new science and the secular outlook, parliamentary government in England, and political absolutism in France and eastern Europe.

**HIST122** 4-4-0-0-0  
**Western Civ 1715 To Present** Core

Survey of political, economic, social, and intellectual developments from the 18th century to the present. Enlightenment, revolutions and reactions, national unifications, national rivalries, world wars, and post-war developments.

**HIST124** 4-4-0-0-0  
**American History 1492 To 1877** Core

A survey of main themes of American history from 1492 to 1877 with emphasis on the political, social, economic, religious, and intellectual aspects of the pre-settlement, Colonial, Revolutionary, Antebellum Civil War, and Reconstruction eras.

**HIST125** 4-4-0-0-0  
**American Hist 1877 To Present** Core

A survey of main themes of American history from 1877 to the present with emphasis on political, social, economic, religious, and intellectual aspects of the Gilded Age, the Progressive Era, WWI, the Roaring Twenties, the Great Depression, WWII, and post WWII era.

**HIST126** 3-3-0-0-0  
**Iowa History** General

A broad survey of Iowa history from Indian cultures and pioneer farming through modern agriculture, gradual social changes, and long-term political trends.

**HIST130** 3-3-0-0-0  
**Historical Perspectives** General

Course will focus each term on a specific history: Russia, beginning to 1917; Russia, 1917 to present; Afro-America, beginning to 1865; Afro-America, 1865 to present; women. May be repeated in varying areas for up to 9 semester hours.

**HIST135** 2-2-0-0-0  
**Heritage: Civilization & The Jews** General

Civilization and the Jews is an introductory level survey of Jewish history, thought, and culture against the backdrop of the civilization in which the Jews lived. Explores 5,000 years of Jewish civilization.

**HLCR301** 1-1-0-0-0  
**Introduction To Coronary Care** Voc/Tech

Course designed to introduce the nurse to the coronary care setting. Topics include a review of coronary heart disease and an introduction to the care unit environment.

**HLCR302** 1-1-0-0-0  
**Coronary Anatomy & Physiology** Voc/Tech

Provides an in-depth review of the anatomy and physiology of cardiovascular system. Comprehensive update of fluids and electrolytes.

**HLCR303** 3-3-0-0-0  
**Arrhythmia Interpretation** Voc/Tech

Designed to provide a base for understanding electrophysiology and the most common arrhythmias and antiarrhythmic drugs.

**HLCR304** 1-1-0-0-0  
**Nursing Care & Coronary Complication** Voc/Tech

Topics include cardiogenic shock, congestive heart failure, invasive and noninvasive procedures, monitoring, and patient assessment.

**HLCR305** 1-1-0-0-0  
**Surgical Intervention** Voc/Tech

Discuss aspects of coronary artery disease and valvular disease as related to cardiac surgery. Includes pathophysiology, clinical manifestation, diagnostic procedures, surgical techniques, nursing, and medical management.

**HLCR306** 1-1-0-0-0  
**The Rehabilitation Phase** Voc/Tech

Designed to familiarize the nurse with the development and structure of a cardiac rehabilitation program. Emphasis is on patient teaching and new trends and research in cardiac rehabilitation.

**HLCR307** 6-4-4-0-0  
**Emergency Medical Tech Ambulance** Voc/Tech

Prepares rescue personnel for the role and responsibilities of an EMT-A. Includes specific patient assessment and emergency treatment procedures. Students should be 18 years of age prior to course completion. State Health Department Certification exam after suc-



# DESCRIPTION OF COURSES

successful course completion.

<b>HLCR308</b>	<b>2-2-0-0-0</b>
<b>Process Of Aging</b>	<b>Voc/Tech</b>
The problems of the elderly patient or client remain with us—lack of decision making, privacy, broken hips, bed sores, states of confusion, wandering, and loneliness. Preventing and improving the conditions that cause these problems are goals. This course deals with the psychosociological events in this process.	
<b>HLCR309</b>	<b>2-2-0-0-0</b>
<b>Assessment/Geriatric Patient</b>	<b>Voc/Tech</b>
Review the health status of a given patient and incorporate techniques of interviewing, observation, and examination in determining the health needs of the patient.	
<b>HLCR310</b>	<b>1-1-0-0-0</b>
<b>Drugs &amp; The Elderly</b>	<b>Voc/Tech</b>
For those working with the geriatric client. Identify drug reactions and interactions as related to the aging process. Review his/her role in patient assessment as related to drug administration.	
<b>HLCR311</b>	<b>2-2-0-0-0</b>
<b>Developing Management Skills</b>	<b>Voc/Tech</b>
For those striving to advance in a most important dimension of their career—the dimension of management. Recommended for nurses preparing for first level or mid-management positions.	
<b>HLCR312</b>	<b>1-1-0-0-0</b>
<b>Assertiveness Training</b>	<b>Voc/Tech</b>
Develop a positive attitude and the communication skills to enhance your ability to communicate and understand your ideas and feelings.	
<b>HLCR313</b>	<b>1-1-0-0-0</b>
<b>Infection Control</b>	<b>Voc/Tech</b>
Overview of legal aspects, microbiology, policies, surveillance, isolation, and employee health regarding infection control.	
<b>HLCR314</b>	<b>1-1-0-0-0</b>
<b>Emergency Care</b>	<b>Voc/Tech</b>
Learn to perform care for medical emergencies: fractures, burns, resuscitation, basic CPR (Cardio-Pulmonary Resuscitation, American Heart Level II standards) certification.	
<b>HLCR316</b>	<b>4-4-0-0-0</b>
<b>Ward Clerk</b>	<b>Voc/Tech</b>
Introduction to records and routines that keep a hospital nursing unit running smoothly. Emphasis is on communication skills, medical terminology, and background information about health and disease. Observation in the clinical area provided.	
<b>HLCR317</b>	<b>2-2-0-0-0</b>
<b>Medical Terminology</b>	<b>Voc/Tech</b>
For individuals who work in or are preparing to work in medical records, doctor's offices, and insurance companies. Medical terminology and office methods will be presented with a brief survey of anatomy and physiology.	
<b>HLCR318</b>	<b>6-4-4-0-0</b>
<b>Nursing Assistant</b>	<b>Voc/Tech</b>
Entry level skills and concepts of communication, medical asepsis, anatomy and physiology, personal care, nutrition, basic procedures, body mechanics, geriatrics, and care of the dying. Two weeks classroom and two weeks supervised clinical experience.	
<b>HLCR328</b>	<b>4-3-2-0-0</b>
<b>Mental Health Skills</b>	<b>Voc/Tech</b>
Provide opportunity for the health industry worker to learn basic skills and mental health concepts to seek employment as a psychiatric technician.	
<b>HLCR329</b>	<b>1-1-0-0-0</b>
<b>Mgmt Aggressive/Nonaggressive People</b>	<b>Voc/Tech</b>
Effectively and safely deal with both nonaggressive and	

aggressive persons (clients, patients, residents, and students) by using a system of graded alternatives designed to protect both the staff and other persons from injury by using the least amount of external control necessary.

<b>HLCR330</b>	<b>1-1-0-0-0</b>
<b>Documentation</b>	<b>Voc/Tech</b>
Write to document client care for scrutiny by outside groups and professionals in a supervisory role has necessitated an increased level of training.	
<b>HLSC201</b>	<b>3-3-0-0-0</b>
<b>Intro To Health Occupations</b>	<b>Voc/Tech</b>
An overview of health occupations including roles and responsibilities. Information will be made available to conduct a personal health career search.	
<b>HLSC202</b>	<b>3-3-0-0-0</b>
<b>Holistic Health</b>	<b>Voc/Tech</b>
Define concepts involved in the holistic health movement with a focus on lifestyles that promote high level wellness.	
<b>HLSC203</b>	<b>3-3-0-0-0</b>
<b>Diet &amp; Your Health</b>	<b>Voc/Tech</b>
Understand the links between diet and disease, specific eating disorders, common special diets, and referral networks through a survey course.	
<b>HLSC204</b>	<b>3-3-0-0-0</b>
<b>Ethical Dimensions In Health</b>	<b>Voc/Tech</b>
A course designed to prepare health consumers and professionals for ethical decision making involving technology, societal structures, and modern life.	
<b>HLSC205</b>	<b>3-2-2-0-0</b>
<b>Health Application Of Computer</b>	<b>Voc/Tech</b>
Designed to provide the basic skills necessary to use computers in allied health careers. Topics will include computer literacy, utilization of mainframe terminals, and BASIC language with applications.	
<b>HLSC303</b>	<b>3-3-0-0-0</b>
<b>Personal Health &amp; Wellbeing</b>	<b>Open</b>
An approach to wellness that recognizes every aspect of the person interacting in his/her environment.	
<b>HNRS100</b>	<b>2-2-0-0-0</b>
<b>Honors Seminar</b>	<b>General</b>
Discussion seminar whose topics will include a range of subjects determined by students' interest. Students will write in preparation for and response to in-class discussions.	
<b>HRMT315</b>	<b>2-2-0-0-0</b>
<b>Sanitation &amp; Equipment</b>	<b>Voc/Tech</b>
Principles and methods of sanitation safety and equipment. Equipment selection and facilities planning. Also includes preventive maintenance.	
<b>HRMT316</b>	<b>3-3-0-0-0</b>
<b>Food Preparation I</b>	<b>Voc/Tech</b>
Development of basic food preparation procedures as apply in cookery of starch products, fruits, vegetables, cheese, milk, eggs, meat, fish, and poultry products plus criteria for evaluating product quality. COREQUISITE: HRMT320	
<b>HRMT319</b>	<b>1-0-2-0-0</b>
<b>Sanitation &amp; Equipment Lab</b>	<b>Voc/Tech</b>
Application of sanitation and safety methods in the food production kitchen. COREQUISITE: HRMT315	
<b>HRMT320</b>	<b>3-0-6-0-0</b>
<b>Food Preparation I Lab</b>	<b>Voc/Tech</b>
Application of basic food preparation procedures as they apply in cookery of starch products, fruits, vegetables, cheese, milk, eggs, meat, fish, and poultry products. COREQUISITE: HRMT316	
<b>HRMT326</b>	<b>2-2-0-0-0</b>
<b>Food Preparation II</b>	<b>Voc/Tech</b>
The study of the principles and procedures of quantity food production as they apply to salads, soups,	

vegetables, entrees, and desserts. Emphasis is on organization and time management skills and recipe standardization. PREREQUISITES: HRMT316, 320

<b>HRMT328</b>	<b>2-0-4-0-0</b>
<b>Food Preparation II Lab</b>	<b>Voc/Tech</b>
The production of quick breads, desserts, salads, vegetables, soups, and main entrees to be sold to the public. Time is spent on an individual recipe-production project. PREREQUISITES: HRMT316, 320; COREQUISITE: HRMT326	
<b>HRMT330</b>	<b>2-2-0-0-0</b>
<b>Introduction To Hotel Operations</b>	<b>Voc/Tech</b>
This course represents a systematic approach to front office procedures by detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures. Also places front office procedures within the context of the overall operation of a hotel and examines front office management.	
<b>HRMT334</b>	<b>3-3-0-0-0</b>
<b>Human Nutrition</b>	<b>General</b>
Understanding and implementing present day knowledge of nutrition; the use of food for health and satisfaction of the individual and the family.	
<b>HRMT335</b>	<b>2-2-0-0-0</b>
<b>Restaurant Management</b>	<b>Voc/Tech</b>
Students will plan menus and meal service in actual restaurant experience. Emphasis is on using sound management techniques for producing high quality food and service to the public. PREREQUISITES: HRMT316, 320, 326; COREQUISITE: HRMT357	
<b>HRMT342</b>	<b>1-1-0-0-0</b>
<b>Work Experience Seminar</b>	<b>Voc/Tech</b>
Discussion of work experience and problems encountered on the job. Examination of management functions as they apply to various aspects of the business.	
<b>HRMT347</b>	<b>5-0-0-0-20</b>
<b>Work Experience</b>	<b>Voc/Tech</b>
An approved program of experience in one of the many hospitality areas: restaurant, hospital, club, school food service, hotel, or motel.	
<b>HRMT348</b>	<b>3-3-0-0-0</b>
<b>Purchasing/Cost Control</b>	<b>Voc/Tech</b>
Principles and methods of food purchasing with emphasis on specifications and grading of various food products. Includes financial procedures and controls used in the food service industry.	
<b>HRMT349</b>	<b>3-3-0-0-0</b>
<b>Nutrition &amp; Menu Planning</b>	<b>Voc/Tech</b>
An overview of nutrition-related topics including the psychology of eating and evaluation of food intake. Fundamentals of menu writing in a variety of food service operations including format and design.	
<b>HRMT357</b>	<b>5-0-10-0-0</b>
<b>Restaurant Management Lab</b>	<b>Voc/Tech</b>
Students produce and serve meals for the public in an actual restaurant experience. Emphasis is on the various management functions required to serve quality foods efficiently. PREREQUISITES: HRMT316, 320, 326; COREQUISITE: HRMT335	
<b>HRMT360</b>	<b>3-3-0-0-0</b>
<b>Layout Equipment &amp; Design</b>	<b>Voc/Tech</b>
This course is designed to emphasize the importance of equipment layout, equipment selection, and facility planning in relation to the efficient operation of a restaurant or hotel. Course content will also include preventive maintenance and energy conservation.	
<b>HRMT364</b>	<b>2-2-0-0-0</b>
<b>Hotel Administration</b>	<b>Voc/Tech</b>
A continuation of the study of the operations of the hotel and motel industry. It will include management functions as they apply to the various aspects of the	



# DESCRIPTION OF COURSES

business. PREREQUISITE: HRMT330; COREQUISITE: HRMT366

**HRMT366** 4-0-0-0-16  
**Hotel Administration Lab** Voc/Tech

An approved program of work experience in one of the many hotel/motel properties in the area. PREREQUISITE: HRMT330; COREQUISITE: HRMT366

**HTBM353** 3-3-0-0-0  
**Biomed Instrumentation I** Voc/Tech

This course trains the biomedical student in the repair, calibration, and preventative maintenance of patient monitoring equipment such as ECG, blood pressure, defibrillators, ICU and CCU central monitoring stations, respiratory instrumentation, and electrical safety testing. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTBM354

**HTBM354** 5-0-10-0-0  
**Biomed Instrumentation I Lab** Voc/Tech

Experiments in basic instrumentation. It includes experiments in maintenance and repair of patient monitoring equipment. Central monitoring stations, electrical safety testing and preventative maintenance are also covered. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTBM353

**HTBM355** 2-2-0-0-0  
**Electro-Mechanical Systems I** Voc/Tech

The basic theories and concepts of various types of transducers, active and passive, used in biomedical instrumentation are presented. Additionally, the basic principles of mechanical relationships, and fluid power instrumentation are considered. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTBM356

**HTBM356** 2-0-4-0-0  
**Electro-Mechanical Systems I Lab** Voc/Tech

Basic transducer principles are evaluated including experiments in pressure, flow, velocity, and mechanical relationships. Gears, levers, and linkages are examined. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTBM355

**HTBM358** 3-0-0-0-12  
**Internship** Voc/Tech

A supervised hands-on experience in a hospital. Work on a wide range of medical equipment under the supervision of a biomedical engineer or technician. PREREQUISITES: Completion of 4th semester in Biomed Technology

**HTBM362** 3-3-0-0-0  
**Health Care Delivery** Voc/Tech

Students acquire knowledge of the practice and trends within the health care delivery-system. The student taking the 3-hour credit format will have the opportunity in a highly structured environment to communicate with other members of the health team and observe and assist the health worker in the safe delivery of health care of related functions. PREREQUISITES: HTBM353, 354

**HTBM363** 2-2-0-0-0  
**Biomed Instrumentation II** Voc/Tech

A continuation of Biomed I. It includes laboratory instrumentation, such as spectrophotometers, blood gas analyzers, and cell counters, in addition to electro-surgery, infusion pumps, x-ray, ultrasound, hemodialysis, and the use of the computer in biomedical instrumentation. PREREQUISITES: HTBM353, 354; COREQUISITE: HTBM364

**HTBM364** 2-0-4-0-0  
**Biomed Instrumentation II Lab** Voc/Tech

A continuation of Biomed I lab. It includes experiments in the maintenance and repair of laboratory instrumentation, blood gas, x-ray, ultra-sound, electro-surgery, and infusion pumps. It also includes the use of the microprocessor in biomedical instrumentation. PREREQUISITES: HTBM353, 354; COREQUISITE: HTBM363

**HTCT351** 5-5-0-0-0  
**Major Computer Systems I** Voc/Tech

A detailed Module-level study of the PDP-11 computer system. Topics include the Internal Bus Structure, Control and Status Registers, Instruction decode, data flow, and Basic Timing Functions. Also system console interfaces, memory concepts, and general interfacing techniques are included. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTCT352

**HTCT352** 5-0-10-0-0  
**Major Computer Systems I Lab** Voc/Tech

An evaluation of Mainframe hardware. This lab stresses component level troubleshooting using software diagnostics in conjunction with scope and logic analyzer instrumentation. Board-level troubleshooting and preventative maintenance techniques are introduced. Also diagnostic software as well as machine & assembly language programming are included. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTCT351

**HTCT353** 5-5-0-0-0  
**Microprocessors** Voc/Tech

An introduction to microprocessor interface methods. It includes UART and USART interface techniques, programmable peripheral interface using 8255, and interface techniques using A/D and D/A converters. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTCT354

**HTCT354** 2-0-5-0-0  
**Microprocessors Lab** Voc/Tech

An evaluation of microprocessor interface techniques. The experiments include serial interface using varts, parallel interface using PIA's, and A/D and C/A conversion techniques. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTCT353

**HTCT361** 3-3-0-0-0  
**Major Computer Systems II** Voc/Tech

A detailed module level study of the VAX computer system is introduced. Topics include instruction and data flow between the CPU, CacheMem, and MainMemory on the VAX BUS structure, and data flow to peripherals on the integral UNIBUS. The VAX instruction set is introduced. Disk drive, CRT, printer, magtape technologies and VMS are included. PREREQUISITES: HTCT351, 352; COREQUISITE: HTCT362

**HTCT362** 3-0-6-0-0  
**Major Computer Systems II Lab** Voc/Tech

Component level analysis of the VAX system is introduced using scope and logic analyzer instrumentation. Disk drive, printer, and magtape component level analysis is included. This course includes VMS software operating techniques. Assembly level programming is introduced with an emphasis on the diagnostic analysis of hardware characteristics. PREREQUISITES: HTCT351, 352; COREQUISITE: HTCT361

**HTCT364** 3-3-0-0-0  
**Microcomputer Systems** Voc/Tech

A comprehensive study of small computer systems. It includes troubleshooting techniques such as signature analysis, logic analyzers, and waveform recognition. Use of computer diagnostics is also emphasized. PREREQUISITES: HTCT353, 354; COREQUISITE: HTCT365

**HTCT365** 3-0-6-0-0  
**Microcomputer Systems Lab** Voc/Tech

An evaluation of an 8-bit microcomputer system. It includes disk and mainframe diagnostics as well as familiarization experiments in software including the operating system. PREREQUISITES: HTCT353, 354; COREQUISITE: HTCT364

**HTPC351** 3-3-0-0-0  
**Hydraulics & Pneumatics** Voc/Tech

The basic principles of fluid power and the operation

and application of fluid power components are introduced. Devices such as valves, linear, and rotary actuator are evaluated in the laboratory. In addition, pneumatic position control servomechanisms are evaluated. PREREQUISITE: ELHT313; COREQUISITE: HTPC352

**HTPC352** 3-0-6-0-0  
**Hydraulics & Pneumatics Lab** Voc/Tech

The basic principles of fluid power and the operation and application of fluid power components are introduced. Devices such as valves, linear, and rotary actuators are evaluated in the lab. PREREQUISITE: ELHT313; COREQUISITE: HTPC351

**HTPC354** 3-3-0-0-0  
**Motor Control & PLC'S** Voc/Tech

The objective of this course is to enable the student to understand the control circuitry used in both production machines and control systems. The first phase, motor control, covers different types of motors and their characteristics plus the operational devices such as switches, contractors and controllers used in switching and controlling power. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTPC356

**HTPC355** 3-3-0-0-0  
**Process Control Instrumentation** Voc/Tech

A comprehensive study of process control characteristics such as elements, modes, and stability along with detailed knowledge of measurement technique, control mode implementation, and final control element functions. In keeping with modern trends, the digital aspects of process control technology are stressed. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTPC357

**HTPC356** 3-0-6-0-0  
**Motor Control & PLC Lab** Voc/Tech

This lab includes basic control circuits using devices such as contactors, timers, starters, limits switches, pressure switches, etc. Also included are experiments utilizing programmable logic controllers to implement control circuits. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTPC354

**HTPC357** 2-0-4-0-0  
**Process Control Instr Lab** Voc/Tech

This lab includes experiments on transducers used in process control as well as experiments on proportional, integral, and derivative control. PREREQUISITES: ELHT340, 341, 345, 346; COREQUISITE: HTPC355

**HTPC360** 2-2-0-0-0  
**Industrial Electronics** Voc/Tech

The devices and circuits used in thyristor control of machines are presented. It includes phase control of DC motors, triac control of AC motors as well as various speed control circuits. PREREQUISITES: HTPC354, 356

**HTPC361** 3-3-0-0-0  
**Robotics** Voc/Tech

The theory of operation of industrial robots is presented. This includes basic microprocessor architecture, control systems theory, and manipulator geometry. Systems from basic pick-and-place to servo-controlled are considered. Principles of cell development are also presented. PREREQUISITES: HTPC351, 352, ELHT340, 341; COREQUISITE: HTCT362

**HTPC362** 2-0-4-0-0  
**Robotics Lab** Voc/Tech

The student will program, operate and maintain manipulative application systems and industrial robots of up to six degrees of freedom. Student will use testing instrumentation for repair sequences on industrial robots. An analysis of the systems will include microprocessor architecture, load (actuator) requirements, and control theory considerations. PREREQUISITES: HTPC351, 352, ELHT340, 341; COREQUISITE: HTCT361



# DESCRIPTION OF COURSES

**HTPC363** 3-3-0-0-0  
**Mechanisms** Voc/Tech

This introductory course covers linear and angular displacement, velocities, and accelerations of linkages, gear trains, and belt and friction drives. Included topics are vectors, simple and complex machines, and toggle and intermittent motion mechanisms. PREREQUISITE: ELHT313; COREQUISITE: HTPC364

**HTPC364** 2-0-4-0-0  
**Mechanisms Lab** Voc/Tech

The principles of drives and linkages discussed in HTPC 363 are evaluated using precision components. Major principles evaluated are speed ratios, torque, power, and efficiency. Lab projects are applications of principles of process control and robotics interfacing mechanical motion and energy requirements with programmable control concepts. PREREQUISITE: ELHT313; COREQUISITE: HTPC363

**HUMN115** 3-2-2-0-0  
**Introduction To Films** Core

An introduction to the conventions, scope, purposes, and techniques of films. Includes viewing and writing about a variety of films.

**HUMN131** 3-3-0-0-0  
**Humanities Through Arts** General

An interdisciplinary course exploring the human condition through literature, painting, sculpture, architecture, music and dance. The course examines the cultural context of individual works and movements, on the thematic relationships between the arts, and the relevance of the arts in our lives today.

**HUMN132** 3-3-0-0-0  
**The Art Of Being Human (TV)** General

Introducing the concept of the humanities as an overall approach to living and appreciating life. This telecourse explores several common themes from eastern and western cultures, including aesthetics, myth, morality, love and death. Each theme is explored through art, music, literature, philosophy, drama and religion.

**HUMN133** 3-2-2-0-0  
**America In The Movies** Core

An interdisciplinary course that combines the insights of history and literature by examining popular American movies. The course explores the social, cultural, and ethical questions raised in such films.

**HUMN135** 1-1-0-0-0  
**Russian Language & People (TV)** General

A television course on the beginner's level linking the way of Russian life with an understanding of written and spoken Russian language.

**HUMN137** 3-3-0-0-0  
**Mythology** General

An introduction to world mythology. The course explores classical, Nordic, Eastern, African, and American/British myths.

**HUMS101** 3-3-0-0-0  
**Introduction To Human Services** General

History and introduction to the social welfare institution. Theoretical perspectives, concepts, values, and intervention strategies are examined. Systems theory is used to explore legislation and services designed to meet client needs.

**HUMS104** 3-3-0-0-0  
**Community Organization** Open

A study of various theories, methods, and techniques to bring about needed and desirable changes in political, economic, social, and bureaucratic structures and processes. Emphasis is placed upon application of learned skills. PREREQUISITE: 6 hours of social sciences

**HUMS109** 3-3-0-0-0  
**Survey Mental Health Treatment** Open

Introduction to major counseling theories including

psychoanalysis, gestalt, transactional analysis, family therapy, reality therapy, behavior therapy, and crisis intervention. Applications in mental health and social services settings are considered.

**HUMS202** 3-3-0-0-0  
**Interviewing/Interper Relation** Open

Study of interviewing theories including roles and relationships between the interviewer and the interviewee. Methodology of developing questions, conducting interviews, recording data and analyzing it, and writing assessments and histories are emphasized.

**HUMS205** 3-3-0-0-0  
**Intervention Theories/Practice I** Open

Study of several management and planning theories and practices which are used to assess client needs, establish goals, identify resources, and make appropriate referrals. Community resources are explored. PREREQUISITES: HUMS101, 202

**HUMS206** 3-3-0-0-0  
**Intervention Theories/Practice II** Open

Theories and values of the social sciences, including human services, are used to interpret and respond to client behaviors. Written analysis is emphasized. Evaluation theory and its applications are also stressed. Must be taken concurrently with HUMS208 or volunteer human services work. PREREQUISITES: HUMS202, 205

**HUMS208** 3-0-0-0-13  
**Field Experience** Open

Supervised experience in a human services agency enables students to apply their skills and knowledge by working directly with clients. Must be taken concurrently with HUMS206. PREREQUISITES: HUMS202, 205 or permission of program chairperson

**HUMS210** 3-3-0-0-0  
**Counseling Techniques** Open

Several counseling models are considered. The theories, methods, and applications of client-centered and directive counseling are emphasized. PREREQUISITE: HUMS202

**HUMS211** 3-3-0-0-0  
**Counseling With Women** Open

This course explores selected concerns that women are likely to bring into a counseling situation. Topics include sex roles, gender and socialization, and their impact on women's lives.

**HUMS213** 6-0-0-0-27  
**Pract: Chemical Depend Counsel I** Open

Supervised experience in three of these treatment programs for chemically dependent people: inpatient, outpatient, follow-up care, adolescent, halfway house, and family therapy. PREREQUISITES: Admission-Iowa Methodist Powell III or Mercy Recovery

**HUMS214** 6-0-0-0-27  
**Pract: Chemical Depend Counsel II** Open

See HUMS 213.

**HUMS215** 3-3-0-0-0  
**Eating Disorders** Open

Eating disorders including anorexia nervosa and bulimia are considered from historical, psychological, and sociological perspectives. A variety of diagnostic and treatment modalities are considered.

**HUMS216** 3-3-0-0-0  
**Survey Of Addictive Disease** Open

A historical and theoretical background to current concepts of addiction. A variety of addictive behaviors are examined with special focus on psychoactive drug dependency.

**ITSP111** 3-3-0-0-0  
**Intro To International Business** General

An introductory course designed to acquaint students with currency transfer restrictions, custom and tariff regulations, and banking and shipping documentations.

Non-economic considerations such as cross cultural communication, political affiliation and socio-religious restrictions are included.

**ITSP130** 3-3-0-0-0  
**International Marketing** General

A course of intensive training in global marketing. National sovereignty, geographical location, cultural heritage and economic systems are used to place an international perspective on the role of supply and demand. This course is recommended for those who are now in the existing field or plan to make exporting their career goal.

**ITSP150** 3-3-0-0-0  
**International Documentation** General

A course designed to train students for transfer of goods and title to the international buyer. Proper documentation for transactional banking and shipping, with an emphasis on clarity of expression and intent are included.

**ITSP151** 3-3-0-0-0  
**International Transportation** General

Focus is on imparting detailed documentation and procedural knowledge of moving goods in an international setting with emphasis on partner's rights and obligations.

**JNAD120** 3-3-0-0-0  
**Intro To Mass Communication** Open

A non-technical introduction to mass media. Special emphasis on print media, with radio and television included; new trends in the media, freedom of press and media principles.

**JNAD121** 3-3-0-0-0  
**Basic Reporting Principles** Open

Designed to provide students with experiences in gathering, organizing, and writing news stories.

**JNAD122** 3-3-0-0-0  
**Advanced Reporting** Open

Study of various story types, including consumer, feature, review/editorial and investigative. Further development of news elements, interviewing techniques, and legal and ethical considerations in journalism. PREREQUISITE: JNAD121

**JNAD123** 3-1-4-0-0  
**Publications Production** Open

Special work in journalism. Students will produce DMACC newspaper, the Campus Chronicle, and will gain experience in writing, copy-editing, layout and design. May be repeated for three additional semesters.

**JNAD124** 3-3-0-0-0  
**Layout & Design** Open

Design and production of publications, understanding and critical awareness of contemporary practices in print media for advertising and journalism. Design-oriented assignments.

**JNAD125** 3-3-0-0-0  
**Principles Of Advertising** Open

Course explores advertising as a tool and socio-economic force.

**LABS220** 3-3-0-0-0  
**Survey Of Labor Studies** Open

A survey course designed to explain the field of labor studies. Topics covered in the course include: labor history, labor law, contract negotiations and administration, and the future of the labor movement.

**LABS221** 3-3-0-0-0  
**Grievance Handling & Arbitration** Open

A practical study of contract terminology and administration, all aspects of arbitration and grievance handling. Responsibilities, tactics and strategies are analyzed through a simulated grievance arbitration case.



# DESCRIPTION OF COURSES

<b>LABS222</b> <b>History/Devel Of Labor Movement</b> The development of the American Labor Movement is analyzed in successive time frames, from the colonial era to the present. While tracing the nature and conditions of labor in historical sequence, some attention is also devoted to exploring the meaning of work, the rise of trade unionism, and contemporary labor issues.	3-3-0-0-0 Open	cluding case briefing, court structure, and civil, criminal and administrative procedure. An examination of ethical and professional practice standards applicable to the legal profession. Understanding of the roles of the judge, jury, attorney, and legal assistant.	C or better in all LEGA courses and minimum of 8 LEGA classes completed
<b>LABS223</b> <b>Protective Labor Relations Legislation</b> A survey of legislation designed to provide economic security against industrial accidents, disability, illness, old age, unemployment, and the laws governing labor relations, with an introduction of the legal system and constitutional problems of governmental regulations.	3-3-0-0-0 Open	<b>LEGA242</b> <b>Torts &amp; Litigation I</b> A study of the basic law relating to personal and property damage. Topics include intentional torts, negligence, nuisance, strict liability, and automobile law. Principles of trial practice including drafting basic pleadings, gathering and organization of materials for trial. PREREQUISITES: Instructor permission or LEGA240, 260	<b>LEGA251</b> <b>Wills, Estate Planning &amp; Taxation</b> Basic principles of estate planning in order to minimize estate and gift tax consequences. Preparation of federal estate, gift tax returns and Iowa inheritance tax returns. Drafting of wills designed to carry out estate plans. PREREQUISITE: LEGA249
<b>LABS224</b> <b>Publ Sect Labor Leg/Col Barg</b> Reviews the development of legal framework, surveys the law governing labor relations in the public sector and an overview of the process of collective bargaining in the public sector. Responsibilities, tactics and strategies are analyzed through public sector mock bargaining sessions.	3-3-0-0-0 Open	<b>LEGA243</b> <b>Torts &amp; Litigation II</b> A continuation of Torts and Litigation I. Areas of concentration will be premise liability, family torts, defamation, governmental immunity, malpractice, and wrongful death. Advanced trial practice including drafting of pleadings and discovery documents. PREREQUISITE: LEGA242	<b>LEGA252</b> <b>Administrative Practice</b> A study of administrative remedies and procedures for administrative hearings in various governmental agencies including the areas of insurance, housing, welfare, unemployment, and worker's compensation. Researching government regulations will be discussed. PREREQUISITES: Instructor permission or LEGA240, 260
<b>LABS225</b> <b>Union Psychology/Indust Sociology</b> This course deals with the relations between the individual and the organization. It describes and examines the individual as a formal and informal group leader as it relates to the structure of the labor movement. It also is an examination of the way industry, unions, and the economy relate to other social institutions in America's society.	3-3-0-0-0 Open	<b>LEGA244</b> <b>Domestic Relations</b> The legal aspects of the family relationship. The rights and duties of the parties in marriage, annulment, divorce, child custody, and adoption. The course will emphasize the use of domestic law forms. PREREQUISITES: Instructor permission or LEGA240, 260	<b>LEGA254</b> <b>Evidence: Theory &amp; Practice</b> A study of the substantive and procedural laws of evidence. Introduction to the Rules of Evidence. Methods of discovering, preserving, and presenting evidence in civil and criminal trials. PREREQUISITES: Instructor permission or LEGA240, 260
<b>LABS226</b> <b>Labor Economics/Collective Bargain</b> This course first studies the economic sources of union bargaining strength and union preparation for economic bargaining and then looks at the overview of the process of collective bargaining and what it might be in the future. Responsibilities, tactics and strategies are analyzed through mock bargaining sessions.	3-3-0-0-0 Open	<b>LEGA245</b> <b>Income Tax Law</b> Study of the fundamental theory of income tax coupled with instruction in its practical application. Personal and business taxation are covered on both the federal and state levels.	<b>LEGA256</b> <b>Debtor/Creditor Law</b> Procedures in non-bankruptcy debt collection. Fundamentals of bankruptcy law and bankruptcy procedure. Examination of alternatives to formal bankruptcy proceedings. PREREQUISITES: Instructor permission or LEGA240, 260
<b>LABS227</b> <b>Union Administration</b> American unions in theory and practice on local, state and national levels. A study of structure and roles on different levels of the organizations.	3-3-0-0-0 Open	<b>LEGA246</b> <b>Business &amp; Corporate Law I</b> A study of the fundamentals of the law of contracts, the uniform commercial code and the rights of creditors in transactions. PREREQUISITES: Instructor permission or LEGA240, 260	<b>LEGA257</b> <b>Paralegalism in Practice</b> Practical application of the law as it is used in the day to day work of a legal assistant. Emphasis will be on the development and use of systems and forms. A seminar-type approach will be used with a variety of topics to be covered. PREREQUISITES: Instructor permission or LEGA240, 260
<b>LABS228</b> <b>Unions/Politics/Comp Labor Movement</b> An examination of the party structure of American politics, legislative processes, formation of public opinion, and an analysis of the history and development of various labor movements throughout the world.	3-3-0-0-0 Open	<b>LEGA247</b> <b>Business &amp; Corporate Law II</b> Continuation of Business and Corporate Law I. Survey of rights of debtors and creditors in collections and bankruptcy. Formation of proprietorships, partnerships, and corporations and a survey of the law applicable to each. Preparation of documents necessary to the organization and operation of each. PREREQUISITE: LEGA246	<b>LEGA258</b> <b>Computerized Legal Research</b> Introduction to computer assisted legal research. Training in legal research search strategies using both the Lexis and Westlaw systems. PREREQUISITE: LEGA260
<b>LABS229</b> <b>Labor Studies Problems</b> An individual study of special problems in labor studies, and an opportunity for a student to apply knowledge and experience to actual specific labor problems. PREREQUISITES: 18 hours in LABS and consent of instructor	3-3-0-0-0 Open	<b>LEGA248</b> <b>Real Estate Law</b> A study of the law of real property and a survey of the more common types of real estate transactions. Emphasis is on the preparation of the instruments necessary to complete various real estate transactions. PREREQUISITES: Instructor permission or LEGA240, 260	<b>LEGA259</b> <b>Advanced Legal Research &amp; Writing</b> Research and analysis of complex and multiple factual and legal issues. Preparation of legal documents using analysis and application of legal research. Use of specialized research sources. PREREQUISITE: LEGA261
<b>LABS230</b> <b>Union Counseling</b> The purpose of the community services counseling course is to acquaint students with the services available in the community and teach them the fundamentals of referral work and counseling.	3-3-0-0-0 Open	<b>LEGA249</b> <b>Probate Procedure</b> A study of wills including validity requirements, modification, and revocation. Formation of trusts and the characteristics and requirements of each type. Laws of testate and intestate succession. Forms and procedures for probating an estate. PREREQUISITES: Instructor permission or LEGA240, 260	<b>LEGA260</b> <b>Legal Research &amp; Writing I</b> The nature of legal authority and tools and techniques of basic legal research and writing. Emphasis will be on Iowa law.
<b>LABS231</b> <b>Advanced Union Counseling</b> The purpose of the advanced class is to provide the local union counselor with sufficient information and the basic skills to enjoy being an effective, productive community board or committee member.	3-3-0-0-0 Open	<b>LEGA250</b> <b>Legal Internship &amp; Ethics</b> Application of the theoretical knowledge gained in the classroom by interning in a private law office, governmental agency, or private business which utilizes attorneys. Students will participate in seminars concerning their internship experience and legal ethics. Total internship requirement is 225 hours. PREREQUISITES:	<b>LEGA261</b> <b>Legal Research &amp; Writing II</b> Advanced application of principles of legal research. Preparation of interoffice memorandums and demand letters. Out of state and federal law. PREREQUISITES: LEGA240, 260
<b>LEGA240</b> <b>Introduction To Law</b> A general introduction to the American legal system in-	3-3-0-0-0 Open		<b>LEGA270</b> <b>Legal Interviewing/Clinical Exper</b> Classroom study of techniques of legal interviewing and recording and reporting interviews. Students will work 100 hours in an agency applying interviewing techniques. PREREQUISITES: LEGA240, 260
			<b>LITR120</b> <b>Intro To Literature</b> An introduction to the study and appreciation of fiction,



# DESCRIPTION OF COURSES

poetry, and drama. Basic critical approaches—the work by itself, as an imitation of life, as expression, and as influence—are emphasized. A broad range of authors from a variety of cultural and ethnic groups and a wide span of historical periods is presented.

**LITR121** 3-3-0-0-0  
**Major British Writers** Core

In-depth study of works of selected major writers from the post-renaissance through the contemporary period. Common critical approaches for reading, understanding, and evaluating each work are taught.

**LITR122** 3-3-0-0-0  
**Major American Writers I** Core

Examines American literature from its beginnings in New England through the realism of the late 19th century. Emphasizes major literary works and their social and cultural contexts.

**LITR123** 3-3-0-0-0  
**Major American Writers II** Core

Examines American literature from the early 20th century through contemporary America. Emphasizes major literary works and their social and cultural contexts.

**LITR124** 3-3-0-0-0  
**Children's Literature** General

A survey of children's literature. Students will read and evaluate a wide variety of books and will explore techniques by which parents and teachers can share literature with children.

**LITR125** 3-3-0-0-0  
**Contemporary Literature** Core

A study of the significant contemporary writers and literary movements since 1945. The course considers the way today's fiction mirrors today's society.

**LITR126** 3-3-0-0-0  
**Literary Genres** Core

Course will focus each term on a type of literature: poetry, drama, detective fiction or science fiction. Exploration of relationship between content and form. May be repeated in varying areas for up to 9 hours of credit.

**LITR127** 3-3-0-0-0  
**Literary Viewpoints** Core

Course will examine a body of literature linked by a specialized concern or approach, e.g., modern southern literature, black literature, humor in literature, literature of working America. May be repeated in varying subject areas for up to 9 hours of credit.

**LRST141** 3-3-0-0-0  
**Recreation Leadership** Open

The course is designed to provide the student with a knowledge of human dynamics, leadership abilities, and the identification of types of groups. Leadership applications in this course deal with the obtaining of a practical knowledge of group situations and the principles necessary for effective leadership.

**LRST142** 1-0-0-0-4  
**Supervised Field Experience I** Open

This course is designed to acquaint the student with the variety of recreation services available in the recreation field. The student will be required to observe and evaluate ongoing recreation programs in public agencies, private agencies, commercial agencies, voluntary agencies and health facilities. PREREQUISITE: Program chairperson permission

**LRST144** 3-3-0-0-0  
**Prog Planning/Organization** Open

Underlying principles for effective recreation programming. Overview of the variety of program areas associated with recreation with attention given to recreation interests and the needs of participants. Emphasis on understanding the steps in programming to include: formation of leagues/tournaments, research tools, evaluations and marketing.

**LRST146** 3-3-0-0-0  
**Intro/Therapeutic Recreation** Open

Basic concepts of the role of recreation in rehabilitation. Emphasis will be placed on a review of the recipients of therapeutic recreation services, the settings in which it takes place and developing recreation programs for special groups.

**LRST149** 11-0-0-0-44  
**Supervised Field Experience II** Open

A program designed to provide experience in working with and directing specific programs in a recreation setting. The student is expected to work in a chosen agency under the direct supervision of a recreation professional for 660 clock hours. PREREQUISITE: Program chairperson permission

**LRST151** 2-2-0-0-0  
**Introduction To Recreation** Open

Introduce the student to the historical and philosophical foundations of leisure and recreation. The student will be offered an opportunity to develop concepts concerning recreation, the meaning of leisure and recreation, social institutions providing recreation services and the types of areas and facilities used in recreation.

**LRST152** 3-3-0-0-0  
**Recreation/Special Populations** Open

This course is designed to explore the total scope of a barrier-free environment. Current trends and issues shaping society and the potential impact on existing and future recreation services will be explained.

**MACD451** 3-1-4-0-0  
**Drafting Basics** Voc/Tech

This is a generic course applicable to all fields of drafting. Drafting equipment (machines, triangles, scales) use will be covered. Line quality, geometric construction, and lettering will be taught on a variety of media. Blue line prints will be prepared.

**MACD452** 3-1-4-0-0  
**Basic Shape/Design Description** Voc/Tech

Sketching techniques, fundamentals of orthographic projection and dimensioning procedures are stressed. PREREQUISITE: MACD451

**MACD453** 3-1-4-0-0  
**Adv Shape & Size Description** Voc/Tech

Basic tolerances, auxiliary views, and sectional views are presented with emphasis toward the machine drafter. PREREQUISITE: MACD452

**MACD456** 3-3-0-0-0  
**Materials & Processes** Voc/Tech

Survey of materials and methods used in forming the various products produced in the manufacturing field. A number of field trips to local factories are included to observe their processes.

**MACD458** 3-3-0-0-0  
**Drafting Math I** Voc/Tech

Review of arithmetic fundamentals including fractions, decimals and units of measurement. Basics of algebra are emphasized from an application standpoint. Linear equations and problem-solving techniques are covered. PREREQUISITE: MATH091 or equivalent

**MACD461** 3-1-4-0-0  
**Mfg Dimensions & Tolerances** Voc/Tech

Dimensioning techniques are presented as they apply to product manufacturing. ANSI Y-14 guidelines will be used in the selection and application of the dimensions. Geometric dimensioning and tolerancing will be introduced. PREREQUISITE: MACD453

**MACD462** 3-1-4-0-0  
**Mechanical Components** Voc/Tech

Fasteners are presented along with materials and specifications as they apply to product drafting. Locating information in various reference materials will be stressed. PREREQUISITES: MACD458, 461

**MACD463** 3-1-4-0-0  
**Advanced Mechanical Components** Voc/Tech

Power transmission components will be covered which include gears, cams, bearings, chain and v-belt drives. PREREQUISITE: MACD462

**MACD466** 3-1-4-0-0  
**Descriptive Geometry** Voc/Tech

Basic principles of descriptive geometry as they apply to problem solving in drafting with the emphasis on intersections and sheet metal development. PREREQUISITE: MACD453

**MACD468** 3-3-0-0-0  
**Drafting Math II** Voc/Tech

This course covers more advanced algebra topics of quadratics and formula manipulation, reviews basic geometric principles, and applies right and oblique triangle trigonometry to practical problems. PREREQUISITE: MACD458

**MACD471** 4-1-6-0-0  
**Layouts & Working Drawings** Voc/Tech

Detailing individual parts, types of assembly drawings, and parts lists will be covered on an individual project basis. These projects will be very similar to the type of work a drafter will encounter the first year on the job. PREREQUISITES: MACD463, 468

**MACD472** 2-1-2-0-0  
**Presentation Drawings** Voc/Tech

Basic techniques of technical illustration are covered, with emphasis on the preparation of "exploded" assemblies. PREREQUISITE: MACD471

**MACD479** 3-3-0-0-0  
**Statics** Voc/Tech

The design of all machine components and their interconnections depend on a knowledge of the forces acting on those components. Statics considers those that are in equilibrium and are stationary. PREREQUISITE: MACD468 or equivalent

**MACD480** 3-2-2-0-0  
**Computer-Aided Drafting** Voc/Tech

The fundamentals of CAD are explored by means of two-dimensional software and a micro-computer. PREREQUISITE: MACD453, 468 or equivalent

**MATH091** 2-2-0-0-0  
**Arithmetic** Adaptor

A review of the fundamental operations of arithmetic including addition, subtraction, multiplication and division of whole numbers, decimals and fractions. This is an adaptor course designed for those students who need to review and improve their knowledge of the fundamentals of mathematics.

**MATH092** 4-4-0-0-0  
**Introductory Algebra** Adaptor

A beginning algebra course covering most elementary topics of algebra. This includes the real number system, solving equations and inequalities, polynomials, fractional equations, and radical expressions. This is an adaptor course designed for students with no algebra background or for students who need review.

**MATH093** 3-3-0-0-0  
**High School Geometry** Adaptor

Elements of Euclidean geometry including congruence, parallel lines, circles, similar polygons, perimeters, areas and volumes. This is an adaptor course for students who do not have adequate knowledge of topics from high school geometry. PREREQUISITES: 1 year H.S. algebra or MATH092

**MATH094** 4-4-0-0-0  
**Intermediate Algebra** Adaptor

A review of elementary algebra along with the new topics including exponents and radicals, functions and graphs, quadratic equations, inequalities and systems of equations. PREREQUISITES: One year H.S. algebra or department permission or MATH092



# DESCRIPTION OF COURSES

**MATH115** 4-4-0-0-0  
**Finite Mathematics** Core

A general education course in mathematics for those students not majoring in mathematics or science. This course will include such topics as set operations and applications, methods of counting, probability, systems of linear equations, matrices, geometric linear programming, and an introduction to Markov chains. PREREQUISITES: 1 year H.S. algebra or MATH092

**MATH117** 3-2-2-0-0  
**Programming in Basic** Open

Computer systems, problem solving, system dependent, variable and file names, DOS commands, BASIC statements, LET, REM, GOTO, FOR-NEXT, READ, IF-THEN, ETC., printing formats, arrays, subroutines, string variables, random numbers, sorting and searching. PREREQUISITES: 1 year of H.S. algebra or MATH092

**MATH118** 4-4-0-0-0  
**Math For Elementary Educators** Core

Provides future elementary teachers with a modern approach to mathematics. Emphasis on understanding basic concepts of mathematics and using these concepts in problem solving. Sets, relations, number systems, nature of proof, algorithms, elements of algebra and geometry, basic computational skills and fundamentals of logic. PREREQUISITES: 1 year H.S. algebra or department permission or MATH092

**MATH121** 4-4-0-0-0  
**Elementary Statistics** Core

Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t, chi-square and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years H.S. algebra or department permission or MATH094

**MATH122** 4-4-0-0-0  
**Calculus For Business/Social Science** Open

Functions, graphs, differential calculus, integral calculus, introduction to max-min theory for functions of two variables. Emphasis on application of calculus to business problems. Not a substitute for MATH 129 and MATH 130. PREREQUISITES: Two years H.S. algebra and MATH115, or MATH115 and MATH094

**MATH123** 3-3-0-0-0  
**Trigonometry** Core

Circular functions and their inverses, trigonometric identities, trigonometric equations, solving triangles and graphing. PREREQUISITES: 2 years H.S. algebra or department permission or MATH094

**MATH124** 5-5-0-0-0  
**Precalculus** Core

Real and complex number systems, inequalities, exponential and logarithmic functions, mathematical induction, limits, sequences, elementary theory of equations, linear systems, matrices, vectors and topics of analytic geometry. PREREQUISITES: MATH123 or equivalent H.S. or college or dept permission

**MATH129** 5-5-0-0-0  
**Calculus I** Core

Absolute values, inequalities, functions, limits, continuity, differentiation, definite integral, exponential and logarithmic functions. PREREQUISITES: MATH124 or equivalent H.S. or college class or dept permission

**MATH130** 5-5-0-0-0  
**Calculus II** Core

Continuation of MATH 129. Techniques of integration, hyperbolic functions, polar coordinates, indeterminate forms, improper integrals, infinite series, partial derivatives, multiple integrals. PREREQUISITE: MATH129

**MATH132** 4-4-0-0-0  
**Differential Equat/LaPlace Trans** Core

Ordinary differential equations, systems of ordinary differential equations, LaPlace transforms, numerical methods and applications. PREREQUISITE: MATH130 or COREQUISITES: Enrollment in MATH130 with departmental permission

**MEDA461** 4-4-0-0-0  
**Human Body-Health & Disease I** Voc/Tech

Basic biological concepts, structure of the body and its functions are studied. Interrelationship of the systems in the healthy individual is stressed. Symptoms of disease, functional and organic reactions of the body relating to systems, diagnostic aids used by the physician, and possible methods of treatment are presented. PREREQUISITE: H.S. biology or equivalent

**MEDA462** 1-0-2-0-0  
**Medical Terminology** Voc/Tech

Designed to help logically understand medical terms. Basic prefixes, suffixes and root words are emphasized as a method of acquiring and retaining knowledge. Exercises stressing the spelling, pronunciation and use of medical terms are included.

**MEDA464** 4-3-2-0-0  
**Medical Laboratory Procedures I** Voc/Tech

Introduction to medical laboratory procedures, ethics, and laboratory personnel. Includes use of basic laboratory equipment, and application of basic microbiological principles. Routine urinalysis: physical, chemical and microscopic examination.

**MEDA465** 3-2-2-0-0  
**Medical Office Procedures I** Voc/Tech

Designed as a basis for understanding and performing examining room techniques and in providing patient education in concert with the wishes of the physician employer. The responsibility of the medical assistant and those of other health professionals in providing the patient with optimal therapy is emphasized.

**MEDA466** 2-1-2-0-0  
**Medical Office Management I** Voc/Tech

Emphasizes administrative responsibilities of the medical assistant. Includes classroom work in records management, banking and payroll. Introduction to the computer with practical application in word processing, billing and insurance filing.

**MEDA467** 3-3-0-0-0  
**Professional Development I** Voc/Tech

Emphasizes professional opportunities and responsibilities of the Medical Assistant. Medical specialties are studied. Study of first aid procedures prepares the student to cope with emergency situations in the office as well as in the community. Medical ethics and law are studied as they affect the practice of medicine.

**MEDA471** 4-4-0-0-0  
**Human Body In Health & Disease II** Voc/Tech

The study of the body systems is completed. PREREQUISITE: MEDA461

**MEDA472** 2-2-0-0-0  
**Diagnostic Radiography I** Voc/Tech

This course includes radiological principles, film evaluation, processing and techniques, positioning of patients, and radiation protection of patients and workers. This course partially meets the requirements for a "limited diagnostic radiographer" set by the radiologic division of the Iowa Department of Health. PREREQUISITE: MEDA461

**MEDA473** 4-3-2-0-0  
**Medical Office Management II** Voc/Tech

Study of health and accident insurance, service plans, worker's compensation, medicare and medicaid, proper use of telephone, appointment scheduling, pegboard record keeping. Through practice sets, the student keeps the patient's medical and financial

records and types manuscripts. Includes transcription. PREREQUISITE: MEDA466

**MEDA474** 3-2-2-0-0  
**Medical Laboratory Procedures II** Voc/Tech

Blood collection by venipuncture and finger puncture. Complete blood counts, slide agglutination tests. Theory of electrocardiography and production of satisfactory electrocardiograms. Practical experience in cell counts and blood chemistries by automated methods. PREREQUISITE: MEDA464

**MEDA475** 3-2-2-0-0  
**Medical Office Procedures II** Voc/Tech

The student learns how to assist with examination, tests and treatments, and how to care for and use medical and surgical instruments and other equipment used in the examining room. Techniques applicable to specialty areas as obstetrics, pediatrics, orthopedics, etc., are included. PREREQUISITE: MEDA465

**MEDA480** 1-0-2-0-0  
**Professional Development III** Voc/Tech

Provides an opportunity for the student to discuss problems that arise in the clinical experience. Oral reports by students are supplemented by a review of weekly clinical evaluations. In addition, the student is made aware of community health services available to the patient. COREQUISITE: MEDA485

**MEDA482** 2-2-0-0-0  
**Diagnostic Radiography II** Voc/Tech

A continuation of Diagnostic Radiology I with emphasis on evaluation of films exposed by the student under supervision in a physician's office. PREREQUISITE: MEDA472

**MEDA483** 1-0-2-0-0  
**Medical Office Management III** Voc/Tech

Provides an opportunity for the student to become adept in using dictation transcription equipment. Actual case histories, consultations, physical examination, surgical and autopsy reports on prepared tapes are used to provide material that is of immediate practical use. PREREQUISITE: MEDA473

**MEDA485** 5-0-0-0-21  
**Practicum** Voc/Tech

A course of study designed especially for the preparation of students involving the supervised practical application of previously studied theory and in which new material is integrated as the student progresses. The student receives experience in a physician's office working under the direct supervision of the physician and office staff. PREREQUISITES: Satisfactory completion of all courses in first 2 terms

**MEDA493** 3-3-0-0-0  
**Insurance Coding** Voc/Tech

The student will learn advanced insurance coding techniques using both ICD-9-CM and CPT code books. Emphasis will be placed on the prospective payment system and the accurate filing of all types of insurance claim forms. PREREQUISITE: MEDA473

**MEDA494** 3-2-2-0-0  
**Medical Lab Procedures III** Voc/Tech

The students will learn to use a variety of automated equipment being used in this area. An emphasis will be placed on slide tests, hematology and quality control. PREREQUISITE: MEDA474

**MEDA495** 3-3-0-0-0  
**Medical Office Procedures III** Voc/Tech

The students will learn instrumentation and techniques for surgical procedures performed in the physician's office. Emphasis will also be placed on pre and post-op medications and other drugs prescribed. PREREQUISITE: MEDA475

**MEDA496** 3-3-0-0-0  
**Patient Education** Voc/Tech

The student will acquire knowledge of expected patterns of growth and development from infancy to



# DESCRIPTION OF COURSES

adulthood. Health maintenance through proper diet, exercise, and recognition of symptoms of impending illness and/or abnormalities will be emphasized.

**MGMT101** 3-3-0-0-0  
**Personnel Supervision** Open

A unique view of organizational structure, the managerial function, and the role of the supervisor as it relates to the human relationship between supervisors, peers and subordinates and the practice of sound personnel techniques.

**MGMT102** 3-3-0-0-0  
**Introduction To Management** General

Introduction to management terms and basic concepts of planning, organizing, influencing, controlling. Applications of management concepts to various business situations. Identification and evaluation of alternative solutions to common problems. (Also available by telecourse)

**MGMT103** 3-3-0-0-0  
**Sales Management** Open

Expands on the basic steps in the selling process. Explores the profession of sales management to include recruitment and selection of the salespeople, training and motivation, compensation plans, measurement of sales and performance evaluations.

**MGMT203** 3-3-0-0-0  
**Human Relations in Business** Open

Emphasizes the importance of the development of proper attitudes toward self, others, and organizational settings. Stresses the development of a good self image and the relationship this has to energy levels, emotions, defensiveness, verbal and nonverbal communication.

**MGMT241** 3-3-0-0-0  
**Production Management** Open

An introductory course in production management with emphasis on facilities layout and planning, forecasting, inventory systems, and quality control.

**MGMT322** 1-0-2-0-0  
**Office Procedures** Voc/Tech

Prepares the student with an employable proficiency in the techniques and operation of the typewriter, calculator, and ten-key adding machine.

**MGMT341** 5-0-0-0-20  
**Business Internship I** Voc/Tech

One semester of full-time successful introductory on-the-job training in a cooperating retail training station. Emphasis is placed on stockroom procedures and retail salesmanship techniques.

**MGMT342** 2-1-2-0-0  
**Internship Seminar I** Voc/Tech

Field experience problems will be discussed, new occupational information will be presented, and business people will speak on the functions, institutions, and products found in the field of retail marketing. COREQUISITE: MGMT341

**MGMT344** 2-1-2-0-0  
**Field Experience I Seminar** Voc/Tech

Field experience problems will be discussed, new occupational information will be presented, and business people will speak on the functions, institutions, and products found in the field of industrial marketing. COREQUISITE: MGMT345

**MGMT345** 5-0-0-0-20  
**Field Experience I** Voc/Tech

Consists of one term of full-time successful introductory on-the-job training in a cooperating industrial training station. Development and supervision of a training plan will be made by a teacher-coordinator. PREREQUISITE: COOP220

**MGMT348** 1-1-0-0-0  
**Retail Internship Seminar I** Voc/Tech

Internship experiences will be discussed as they relate to the training plan. New occupational information will

be presented, and topics related to retail merchandising will be discussed. COREQUISITE: MGMT361

**MGMT353** 4-0-0-0-16  
**Business Internship II** Voc/Tech

Retail training of the level prescribed in the individual training plan. Exposure will be given to fall merchandising techniques. The training will be scheduled in an approved cooperating training station. Supervision of the training plan will be made by a teacher-coordinator.

**MGMT356** 1-1-0-0-0  
**Field Experience II Seminar** Voc/Tech

Field experience problems will be discussed, new occupational information will be presented, and topics relating to industrial marketing will be discussed. COREQUISITE: MGMT363

**MGMT358** 1-1-0-0-0  
**Internship Seminar II** Voc/Tech

Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business. COREQUISITE: MGMT353

**MGMT361** 5-0-0-0-20  
**Retail Merchandise Internship I** Voc/Tech

Retail training of the level prescribed in the individual training plan. Exposure will be given to summer merchandising techniques. The training will be scheduled in an approved cooperating training station. Supervision of the training plan will be made by a teacher-coordinator.

**MGMT362** 4-0-0-0-16  
**Business Internship III** Voc/Tech

Consists of one term of part-time on-the-job training of the level prescribed in the individual training plan. Exposure will be given to holiday merchandising control and supervision. Supervision of the training plan will be made by a teacher-coordinator.

**MGMT363** 4-0-0-0-16  
**Field Experience II** Voc/Tech

Consists of field training of the level prescribed in the individual training plan. The training is scheduled in an approved cooperating industrial marketing training station. The training plan will be supervised by a teacher-coordinator.

**MGMT364** 4-0-0-0-16  
**Field Experience III** Voc/Tech

Consists of field training of the level scheduled in the individual field training plan. The training is scheduled for a half day and will be supervised by a teacher-coordinator. PREREQUISITE: MGMT363

**MGMT367** 1-1-0-0-0  
**Internship Seminar III** Voc/Tech

Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business internship experiences. COREQUISITE: MGMT362

**MGMT369** 1-1-0-0-0  
**Field Experience III Seminar** Voc/Tech

Field experience problems will be discussed. New occupational information will be presented and topics relating to industrial marketing will be discussed. COREQUISITE: MGMT364

**MGMT406** 2-2-0-0-0  
**Human Potential** Voc/Tech

Covers the development of the I'm OK, You're OK, the organization is OK approach to life. Includes the awareness of communication styles and how to manage successful interpersonal and organizational relationships.

**MGMT407** 1-1-0-0-0  
**Professional Development Seminar** Voc/Tech

Presents insights into how individuals with the right insights sense and fit into organizations. A researched set of organizational values used by excellent companies will be presented and used as a model for

development of individual career values.

**MKTG102** 3-3-0-0-0  
**Principles Of Marketing** General

Examines marketing's role in the economy and in the company, what effect it has on a company's products, prices, types of promotion, and forms of distribution. Also studies the impact consumers have on these activities.

**MKTG103** 3-3-0-0-0  
**Principles Of Selling** Open

Emphasizes the "consultative style" of personal selling. Covers the importance of establishing good relationships, finding prospect needs, providing a solution to these needs, and closing a high percentage of sales interviews.

**MKTG104** 3-3-0-0-0  
**Advertising & Sales Promotion** Open

The area of promotional communication is studied to achieve an understanding of the market place, the various advertising media and the development of an effective promotional message.

**MKTG211** 3-3-0-0-0  
**Industrial Marketing** Open

Presents functional methods of industrial marketing. Examines all forms of wholesaler and manufacturer type marketing activities.

**MKTG212** 3-3-0-0-0  
**Purchasing** Open

This course examines the fields of traffic, transportation, warehousing, and purchasing. It explores their relationships and the effect they have on materials management. Methods of packaging, physical distribution and purchasing systems are examined.

**MKTG231** 3-3-0-0-0  
**Principles/Clothing Selection** Voc/Tech

Emphasis is placed on all phases of the clothing industry from production to consumption; on an introductory level, applying art principles to clothing selection and design, analyzing fashion trends and studying modern designers and their contributions of fashion.

**MKTG301** 3-3-0-0-0  
**Retail Product Analysis** Voc/Tech

Examines and identifies the basic technology concerning headline merchandise as it relates to the retail store and retail business. Emphasis is placed on the student becoming knowledgeable about the various products studies.

**MKTG321** 3-3-0-0-0  
**Retail Management I** Voc/Tech

Study of the developments of retailing, organization of retail institutions, the merchandise handling process, understanding the retail customer, some personal and non-personal selling, and the direction retailing is taking in the future.

**MKTG322** 3-3-0-0-0  
**Retail Management II** Voc/Tech

A problem-solving approach to the operative principles and methods in the retail field. Management decision making is emphasized through lecture, the use of case problems, business simulation games, and compiling a handbook. PREREQUISITE: MKTG321

**MKTG323** 2-1-2-0-0  
**Display & Visual Merchandising** Voc/Tech

Includes display planning activities, store fixturing and the total merchandise presentation in a store. Emphasis is placed on actual preparation of window and interior displays by students.

**MKTG324** 3-3-0-0-0  
**Buying & Merchandise Control** Voc/Tech

The technical procedures of merchandising are studied, including consumer buying habits, a study of current trends, vendor relations, and buying and pricing the goods. Emphasis is also placed on how to main-



# DESCRIPTION OF COURSES

tain a merchandise control system in maximizing profits.

**MKTG332** 3-3-0-0-0  
**Textiles** Voc/Tech

To develop a skill and knowledge of characteristics of natural and man-made fibers; the qualities, cost, and weaves in manufacturing and finishing processes of textiles, fibers, yarns, and fabrics; and a knowledge of appropriate fabrics for various uses.

**MKTG333** 3-3-0-0-0  
**Fashion Show Procedures** Voc/Tech

Presenting fashion show methods, planning the dramatized theme and commentary, selecting merchandise, accessories and models, promotional planning and the actual student presentation of a fashion show.

**MKTG334** 3-3-0-0-0  
**Prin Of Fashion Merchandising** Voc/Tech

A study of clothing based on five areas—sociological, psychological, aesthetic, economical, and managerial. Emphasis is also placed on fashion's historical development, and how fashion has been influenced by political, social and economic events of history to present.

**MKTG335** 3-3-0-0-0  
**Industrial Product Analysis** Voc/Tech

An investigation of product information which typically is useful in business: where that information can be obtained; how it can be collected from references, observation, users, manufacturers, and sales personnel; and how it can be compared and analyzed.

**MKTG336** 3-3-0-0-0  
**Industrial Mgmt Operations** Voc/Tech

A "problem" approach to various aspects of industrial operations. The functions involved, their natures, and how they are interrelated. Particular emphasis on forecasting and planning, coordination, inventory and production requirements, space and manpower requirements.

**MKTG345** 3-3-0-0-0  
**Fashion Study Tour** Voc/Tech

The student will participate in a supervised study tour, location to be announced, in which a concentrated time will be spent touring a market center and researching a variety of fashion businesses from manufacturing and marketing to merchandising, promoting and selling apparel. PREREQUISITES: MKTG231 or instructor permission

**MLTS400** 6-4-4-0-0  
**Intro To Medical Laboratory** Open

A course designed to acquaint the student with the field of laboratory medicine, laboratory structure, and staffing. Instrumentation, medical terminology, clinical chemistry assays, kidney function tests, and basic hematology procedures are presented. PREREQUISITE: H.S. biology and chemistry or equivalent

**MLTS411** 6-4-4-0-0  
**Hematology** Open

A review of basic procedures, followed by a study of normal and abnormal blood smears as they relate to anemias and leukemias. Hematology instrumentation, quality control and coagulation are studied. PREREQUISITE: MLTS400

**MLTS422** 8-6-4-0-0  
**Clinical Chemistry** Open

The study and analysis of electrolytes, protein, lipids, enzymes, hormones, and drugs. The test results are related to the patient's condition. PREREQUISITE: MLTS400

**MLTS431** 4-3-3-0-0  
**Clinical Microbiology** Open

A study of clinically important microorganisms. Techniques used to isolate and identify pathogenic bacteria, parasites and fungus. Immune responses are studied. PREREQUISITE: BIOL132

**MLTS442** 4-3-2-0-0  
**Immunohematology** Open

Principles of Immunohematology with the practices of blood banking are presented. ABO and RH typing and transfusing testing procedures are performed. Blood group antigens and antibodies are studied. PREREQUISITE: MLTS411

**MLTS450** 2-0-0-0-8  
**Clinical Practicum I** Open

Students report to a local hospital to join the phlebotomy team to practice patient approach and to draw blood specimens. PREREQUISITE: MLTS400

**MLTS455** 8-0-0-0-32  
**Clinical Practicum II** Open

Students rotate through the various departments (hematology, chemistry, microbiology, blood bank, and urinalysis) of the hospital laboratory applying the knowledge and skills learned in the classroom. PREREQUISITES: Completion of first 4 terms of MLTS curriculum

**MLTS456** 4-0-0-0-17  
**Clinical Practicum III** Open

A continuation of MLTS455. PREREQUISITE: MLTS455

**MLTS460** 1-1-0-0-0  
**Clinical Seminar** Open

Students share their experience in the clinical area and present topics of interest. Case studies are presented for knowledge and review. PREREQUISITE: MLTS455 assignment

**MLTS461** 1-1-0-0-0  
**Med Lab Review** Open

Medical laboratory subjects are reviewed; a mock registry examination is given. COREQUISITE: MLTS455

**MLTS463** 1-1-0-0-0  
**Professional Development** Open

The student studies human relations, job seeking skills, continuing education opportunities, legal responsibilities, and professional organizations. PREREQUISITE: MLTS455

**MUSI130** 3-3-0-0-0  
**Music Appreciation** Core

A survey of the development of music through study of representative compositions of many periods and styles. Includes definitions of musical terminology.

**MUSI131** 3-3-0-0-0  
**Introduction To Music** Core

This course introduces students to the elements of music through performance on recorder and piano. Basic information regarding the teaching of music included.

**MUSI132** 3-3-0-0-0  
**Introduction To Guitar** General

This class will teach students to read and play simple melodies and help them build a repertoire of songs with a variety of chords, strums, and picking patterns.

**MUSI133** 3-3-0-0-0  
**Modern Popular Music** General

An introduction to popular music of the twentieth century including jazz, rock, Broadway musicals, and country western music.

**MUSI136** 1-0-2-0-0  
**Voice** General

Individual instruction in voice. Weekly half-hour lessons in tone production, breath control, diction, literature, and stage presence. May be repeated for a maximum of 4 credits.

**MUSI137** 1-0-2-0-0  
**Piano** General

Individual instruction in piano. Weekly half hour lessons. beginning, intermediate, and advanced

students accepted. May be repeated for a maximum of 4 credits.

**MUSI139** 1-0-2-0-0  
**Instrumental Music** General

Individual instruction in all instruments. Weekly one half hour lessons.

**MUSI142** 1-0-2-0-0  
**Suzuki Strings For Adults** General

Beginning group instruction in violin using the Suzuki method. Course includes proper positioning, repertoire, ensemble playing, and introduction to Suzuki philosophy.

**MUSI143** 2-1-2-0-0  
**Introduction To Piano** General

This course is especially for the beginner in piano. Students will be introduced to the fundamentals of piano playing, including beginning note reading, and appropriate scales, exercises, and repertoire.

**MUSI144** 2-1-2-0-0  
**Concert Choir** General

The concert choir is open to all students. Varied literature is chosen. A performance serves as the final exam. May be repeated for a maximum of 4 credits.

**MUSI145** 1-0-2-0-0  
**Chamber Choir** General

This course is open to members of the Concert Choir (MUSI 144) who are selected for it by special audition with the director. The Chamber Choir sings a wide variety of musical styles, and the music is generally more difficult than the music prepared in Concert Choir. Prior experience in select high school and/or church choirs is most helpful. PREREQUISITE: Permission of instructor

**NURS214** 2-2-0-0-0  
**Nursing Diagnosis** Voc/Tech

Follow nursing diagnosis from its origin through present form. Evaluate why nursing diagnosis is necessary, what the future might bring, and what effect it may have on our present practice. Practice construction of nursing diagnosis using accurate data collection, correct format, and preparation for patient care planning.

**NURS251** 2-2-0-0-0  
**Parent-Child Health** Voc/Tech

Provides for the discussion of the various aspects of parent-child health. Emphasis is placed on the promotion and maintenance of biopsychosocial health in children and the prevention of illness and disease.

**NURS252** 2-1-2-0-0  
**Basic Care-Giving Skills** Voc/Tech

Provides an introduction to basic care-giving principles, techniques, and skills essential to the care of patients.

**NURS253** 1-1-0-0-0  
**Nursing Care Planning** Voc/Tech

A comprehensive study of nursing care planning including format choices, patient oriented guides, and goal writing. The course will include practice in writing goals, identifying appropriate nursing orders supported by scientific rationale, and completing a care plan.

**NURS254** 6-6-0-0-0  
**Human Needs I** Open

Focus is supportive nursing care to individuals with basic human needs and restorative care for sleep/comfort alterations. Safety, health care systems and roles, communication, pharmacology, legal-ethical concepts, and data collection are stressed.

**NURS255** 3-0-0-9-0  
**Nursing Practicum I** Voc/Tech

Provides experience in lab and structured health care settings for application of Human Needs I theory. Skills necessary for safe delivery of supportive nursing care to clients with basic needs and restorative care for altered sleep/comfort needs are emphasized.



# DESCRIPTION OF COURSES

<b>NURS256</b> <b>Human Needs II</b>	6-6-0-0-0 Open				
Focus is on the implementation phase and role in the application of the nursing process to the surgical client and individuals with alterations of activity, nutrition/elimination, and oxygenation/circulation. PREREQUISITES: BIOL133, NURS254, 255, PSCH101					
<b>NURS257</b> <b>Nursing Practicum II</b>	4-0-0-12-0 Open				
Focuses on time management, data collection and application of theory in the delivery of nursing care to the surgical or isolated client and those who have alterations in activity, nutrition/elimination and oxygenation/circulation needs. PREREQUISITES: BIOL133, NURS254, 255, PSCH101					
<b>NURS258</b> <b>Human Needs III</b>	4-4-0-0-0 Open				
Students will integrate data collection/observations, nursing interventions, and evaluation to deliver care to multiple need clients, normal pregnancy and newborn care. PREREQUISITES: NURS256, 257, ENGL117, PSCH103					
<b>NURS259</b> <b>Nursing Practicum III</b>	5-0-0-15-0 Open				
Provides an opportunity for application of theory in the practicum setting. Emphasis is on data collection/observations, nursing interventions, and self evaluation of care given to obstetrical, normal newborn and multiple need clients. PREREQUISITES: NURS256, 257, ENGL117, PSCH103					
<b>NURS260</b> <b>Accountability In Nursing</b>	1-1-0-0-0 Open				
Provides a framework upon which the practical nurse can make sound ethical/legal decisions and recognize the personal accountability and transition necessary to function within the scope of practice. PREREQUISITES: NURS256, 257, ENGL117, PSCH103					
<b>OFFC203</b> <b>Admin Office Management</b>	3-3-0-0-0 Voc/Tech				
This course involves the office environment where the "flow of paperwork" is paramount to the success of any business operation.					
<b>OFFC204</b> <b>Office Procedures</b>	4-4-0-0-0 Voc/Tech				
Presents information related to the various tasks, procedures, concepts and duties required in an office. Topics include mail procedures, telephone techniques, filing, receptionist duties, and general office techniques. PREREQUISITES: OFFC205, 301					
<b>OFFC205</b> <b>Business English</b>	3-3-0-0-0 Voc/Tech				
The fundamentals of grammar, spelling, punctuation, word usage, capitalization, abbreviations and number usage.					
<b>OFFC206</b> <b>Written/Oral Communication</b>	3-3-0-0-0 Voc/Tech				
The principles and procedures of effective business letter writing and oral communication in the office. PREREQUISITE: OFFC205					
<b>OFFC209</b> <b>Law &amp; Citations Research Lab</b>	3-0-6-0-0 Voc/Tech				
Dictation, transcription and typing of legal materials relative to situations in criminal litigation. Citations are typed from reference materials recommended by the legal profession. PREREQUISITES: OFFC303, 331, 335; COREQUISITES: OFFC234, 237					
<b>OFFC210</b> <b>Estate Planning, Probate &amp; R E Lab</b>	3-0-6-0-0 Voc/Tech				
Dictation, transcription and typing of legal materials relative to estate planning, probate proceedings and real estate transactions. PREREQUISITES: OFFC303, 331, 335; COREQUISITES: OFFC232, 243, 233					
<b>OFFC211</b> <b>Civil Liti Business Organization Lab</b>	3-0-6-0-0 Voc/Tech				
Dictation, transcription and typing of legal materials relative to situations in civil law, family law and business organizations. PREREQUISITES: OFFC303, 331, 335; COREQUISITES: OFFC236, 239, 238					
<b>OFFC221</b> <b>Medical Terminology I</b>	3-3-0-0-0 Voc/Tech				
Builds a medical vocabulary through an understanding of anatomic roots for words denoting body structures, prefixes, suffixes, and Greek and Latin verbal adjectival derivatives.					
<b>OFFC222</b> <b>Medical Terminology II</b>	3-3-0-0-0 Voc/Tech				
Continues to build a medical language vocabulary by studying body systems such as musculoskeletal, endocrine and integumentary systems. PREREQUISITE: OFFC221					
<b>OFFC223</b> <b>Medical Transcription III</b>	2-1-2-0-0 Voc/Tech				
A continuation of Medical Transcription II. Concentrates on transcription of case histories and physicals, discharge summaries and operative reports from English-speaking foreigners. PREREQUISITE: OFFC431					
<b>OFFC230</b> <b>Legal Procedures</b>	3-3-0-0-0 Voc/Tech				
Covers personality, duties and responsibilities of a legal secretary; trends influencing working women; and procedures for mail, communications, receptionist work, travel, banking, insurance, and meetings. PREREQUISITES: OFFC301, 331					
<b>OFFC231</b> <b>Legal Management</b>	3-3-0-0-0 Voc/Tech				
Emphasis on how attorneys determine fees, accounting of time, tickler procedures, equipment needs, automated methods and equipment, interior/exterior law office planning, future trends, decision making, setting priorities, working with law office personnel and employee supervision. PREREQUISITE: OFFC230					
<b>OFFC232</b> <b>Real Estate</b>	1-1-0-0-0 Voc/Tech				
An introduction to real estate law with an emphasis on real estate purchase, selling, lease and rental. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC210					
<b>OFFC233</b> <b>Probate</b>	1-1-0-0-0 Voc/Tech				
An introduction to probate law with an emphasis on probate procedures required to settle an estate. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC210					
<b>OFFC234</b> <b>Intro To Law &amp; Citations/Research</b>	1-1-0-0-0 Voc/Tech				
An introduction to law and legal research with an emphasis on legal research and the use of the law library and judicial, legislative and administrative processes. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC209					
<b>OFFC236</b> <b>Domestic Relations</b>	1-1-0-0-0 Voc/Tech				
An introduction to family law with an emphasis on domestic relations, dissolutions, and adoptions. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC211					
<b>OFFC237</b> <b>Criminal Law</b>	1-1-0-0-0 Voc/Tech				
An introduction to criminal situations with emphasis on state and federal procedures, preparation for trials, and appeals. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC209					
<b>OFFC238</b> <b>Civil Litigation</b>	1-1-0-0-0 Voc/Tech				
An introduction to civil law with an emphasis on civil					
litigation and court procedures. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC211					
<b>OFFC239</b> <b>Business Organization</b>	1-1-0-0-0 Voc/Tech				
An introduction to business organizations with an emphasis on the formation, structure, operation, and control of various types of business. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC211					
<b>OFFC242</b> <b>Income Tax</b>	3-3-0-0-0 Voc/Tech				
Accounting procedures relative to the preparation of various tax returns for individuals and business. Instruction is based on IRS fundamentals of tax preparation. PREREQUISITES: OFFC309, 324, BSAD223					
<b>OFFC243</b> <b>Estate Planning</b>	1-1-0-0-0 Voc/Tech				
An introduction to estate planning with an emphasis on wills, codicils, and tax laws influencing estate planning. PREREQUISITES: OFFC230, 331; COREQUISITE: OFFC210					
<b>OFFC301</b> <b>Typing I</b>	2-0-4-0-0 Voc/Tech				
Basic machine operation and correct techniques of typewriting. Cover the fundamentals of typing business correspondence, centering, tabulation, and manuscripts.					
<b>OFFC302</b> <b>Typing II</b>	2-0-4-0-0 Voc/Tech				
A comprehensive course in typewriting for the business office involving business forms and reports, business correspondence, and the efficient production of typed materials. PREREQUISITE: OFFC301 or skill level					
<b>OFFC303</b> <b>Typing III</b>	2-0-4-0-0 Voc/Tech				
Typing for the business office, stressing the efficient production of mailable copy. Emphasizes office typing with a minimum of instruction. PREREQUISITE: OFFC302 or skill level					
<b>OFFC309</b> <b>Office Accounting</b>	2-1-2-0-0 Voc/Tech				
Basic theory of accounting emphasizing the accounting cycle. Includes payroll, specialized journals and banking procedures. PREREQUISITES Or COREQUISITE: OFFC311, BSAD223, OFFC324					
<b>OFFC310</b> <b>Professional Development</b>	3-3-0-0-0 Voc/Tech				
This course is to alert the student to the qualities and techniques of decision-making and advancement. PREREQUISITE Or COREQUISITE: MGMT203					
<b>OFFC311</b> <b>Business Math &amp; Calculators</b>	3-1-4-0-0 Voc/Tech				
The solving of business math problems using electronic calculators. Includes instruction on how to efficiently operate the electronic calculator.					
<b>OFFC312</b> <b>Data Entry</b>	3-0-6-0-0 Voc/Tech				
Competency based course to give students an introduction to current practices, equipment and various job related applications in data entry. The main focus is on speed and accuracy in entering data in a terminal. PREREQUISITES: Must type 40 wpm 3 errors or less for 5 min. or OFFC301					
<b>OFFC317</b> <b>Office Procedures I</b>	2-2-0-0-0 Voc/Tech				
Presents information related to various tasks, procedures, concepts and duties required in the office. PREREQUISITES: Skill level or OFFC301					
<b>OFFC318</b> <b>Office Procedures II</b>	2-2-0-0-0 Voc/Tech				
A continuation of OFFC 317.					
<b>OFFC320</b> <b>Human Body In Health &amp; Disease</b>	3-3-0-0-0 Voc/Tech				
Designed to provide specialized knowledge of the					



# DESCRIPTION OF COURSES

human body relating to disease processes and possible methods of treatment. Includes CPR and emergency treatment training. Drug terminology is added to give students basic knowledge of symbols and abbreviations. PREREQUISITE: OFFC221

**OFFC321** 1-0-2-0-0  
**Office Technology Applications** Voc/Tech

An exposure to many brands of equipment and software applications found in business. The student will get hands-on experience using electronic typewriters and personal computers to learn applications of electronic mail, appointment calendar, alpha/numeric applications and how to use the terminal as a calculator.

**OFFC324** 1-0-2-0-0  
**Office Calculators** Voc/Tech

Electronic calculator operations. Emphasis on speed and accuracy. Includes topics in addition, subtraction, multiplication and division; also the use of constants, chain computations and prations.

**OFFC325** 3-2-2-0-0  
**Medical Word Processing** Voc/Tech

This course presents basic and practical word processing language and techniques required in various medical facilities. Theory and hands-on experience via examples of materials in operation will be studied. PREREQUISITES: OFFC221, 337

**OFFC326** 3-3-0-0-0  
**Medical Insurance** Voc/Tech

This course provides a practical approach in medical insurance billing. Emphasis will be placed on current procedural codes (CPT-4) and international classification of diseases codes (ICD-9-CM) used to facilitate proper coding in submitting claims. Pertinent billing tips will be offered for each type of insurance. PREREQUISITES: OFFC221, 301, 432

**OFFC328** 4-0-0-0-16  
**Internship For Medical Secretaries** Voc/Tech

Working in a medical facility to learn the many office procedures and policies as they exist in a work situation. PREREQUISITES: OFFC222, 320, 431, 433

**OFFC329** 1-0-2-0-0  
**Keyboarding I** Voc/Tech

Basic instruction on a personal computer to learn the touch system for the alphabetic keyboard, number keyboard and ten key numeric pad.

**OFFC330** 3-0-6-0-0  
**Bankrupt, Worker Compen/Docket Lab** Voc/Tech

Bankruptcy, workers' compensation and docket control are taught to the legal secretarial student by incorporating vocabulary, office procedures and documents. Students will type/transcribe from shorthand notes and tape and fill out legal forms in each of the areas. PREREQUISITES: OFFC230, 301

**OFFC331** 3-3-0-0-0  
**Legal Terminology** Voc/Tech

Provides training in spelling, defining, and pronouncing terms common in the legal field. Transcription and typing legal material to the terms discussed. PREREQUISITE: OFFC301

**OFFC335** 3-3-0-0-0  
**Introductory Shorthand** Voc/Tech

Covers the principles of shorthand theory. Emphasis is on the correct writing of the shorthand outline with instant recall.

**OFFC336** 3-2-2-0-0  
**Advanced Shorthand & Transcription** Voc/Tech

Uses the principles of shorthand theory to build speed in taking dictation and producing a typed transcript. Includes the integration of grammar skills with shorthand to produce mailable copy. PREREQUISITE: OFFC335

**OFFC337** 3-2-2-0-0  
**Word Processing I** Voc/Tech

The use of automated equipment, e.g., dedicated word

processors, personal computers, transcribers and other word processing media. Students will be introduced to data entry. Information word processing concepts and terminology incorporated. PREREQUISITES: OFFC205, 301

**OFFC338** 3-2-2-0-0  
**Word Processing II** Voc/Tech

A continuation of Word Processing I with an emphasis on developing speed, accuracy, and proofreading techniques in the preparation of business communications. Automated equipment will be used. Students will continue to study concepts and information processing vocabulary and will develop a broader understanding of the equipment capabilities. PREREQUISITE: OFFC337

**OFFC340** 3-3-0-0-0  
**Intro To Office Computer Application** Voc/Tech

Presents the basic data processing cycle and systems terminology with emphasis on microcomputer applications including word processing concepts.

**OFFC341** 3-3-0-0-0  
**Advanced Office Computer Application** Voc/Tech

To develop a high skill of decision-making using computer applications. Emphasizes taking real business simulations or office jobs and using the available software to produce final documents by intergrating files management, telecommunications (using modems), graphics (using plotter), data base, word processing, etc. PREREQUISITES: DATA101, 106, OFFC340 or permission instructor

**OFFC401** 3-1-5-0-0  
**Model Office** Voc/Tech

Provides the student with an introduction to the concepts of workflow, basic procedures and unexpected events which often arise in the daily office routine by a simulated office environment. PREREQUISITES: OFFC302, COOP220

**OFFC403** 1-1-0-0-0  
**Professionalism I** Voc/Tech

These courses are designed to develop the professional growth of the student in the areas of leadership, service, cooperation, knowledge, friendship, love, hope, faith and patriotism.

**OFFC404** 1-1-0-0-0  
**Professionalism II** Voc/Tech

See OFFC 403.

**OFFC405** 1-1-0-0-0  
**Professionalism III** Voc/Tech

See OFFC 403

**OFFC409** 4-0-0-0-16  
**Internship** Voc/Tech

Practical experience through on-the-job training in an approved office setting. PREREQUISITES: OFFC303, 338, COOP220

**OFFC414** 3-3-0-0-0  
**Travel Personnel I** Voc/Tech

An introduction to terminology, use of reference materials, itinerary preparation and reservation procedures. Also a study of the skills and knowledge travel personnel need to perform successfully on the job.

**OFFC415** 3-3-0-0-0  
**Travel Personnel II** Voc/Tech

Building upon the knowledge and skills learned in OFFC 414, the student will learn to develop international itineraries and to make arrangements for group and charter travel. The student will also learn computer applications in ticketing and reservations. PREREQUISITE: OFFC414

**OFFC416** 3-3-0-0-0  
**Selling For Travel Personnel** Voc/Tech

Focuses on the principles of selling as they apply to the travel industry. Covers the importance of establishing relationships, addressing clients' needs,

problem solving and bringing closure to the sale.

**OFFC417** 3-3-0-0-0  
**Geography For Travel** Voc/Tech

Provides agents, sales representatives and those employed in travel related fields with a broader perspective on geography. COREQUISITES: May be taken concurrently with OFFC414 or OFFC415

**OFFC421** 4-0-0-0-16  
**Legal Internship** Voc/Tech

Part-time placement in a legal environment working with an employer and under the supervision of legal teaching coordinators. PREREQUISITES: OFFC231, 338, COOP220

**OFFC430** 3-3-0-0-0  
**Medical Transcription I** Voc/Tech

Designed to prepare the student to take medical dictation from transcription tapes. The course covers the various medical specialties and introduces the student to a variety of typing forms for medical materials. PREREQUISITES: Skill level or OFFC221, 301

**OFFC431** 3-3-0-0-0  
**Medical Transcription II** Voc/Tech

A continuation of Medical Transcription I. PREREQUISITE: OFFC430

**OFFC432** 3-3-0-0-0  
**Medical Office Techniques I** Voc/Tech

A study of medical science, ethics and medical law. Various management duties and responsibilities, such as filing, insurance processing, mail schedules, pegboard accounting and telephone procedures. PREREQUISITE: OFFC301

**OFFC433** 3-3-0-0-0  
**Medical Office Tech II** Voc/Tech

Continuation of Medical Office Techniques I. PREREQUISITE: OFFC432

**PHIL110** 3-3-0-0-0  
**Introduction To Philosophy** Core

General introduction to philosophy. Exploration of problems in metaphysics, theory of knowledge, and ethics. Emphasis upon western philosophical tradition.

**PHIL111** 3-3-0-0-0  
**Introduction To Logic** Core

The study of logical valid ways of thinking. Exposure to fallacies, inductive inference, and deductive methods of reasoning with applications to practical problems. Recommend: 100 level MATH course.

**PHIL112** 3-3-0-0-0  
**Ethical Problems** Core

Study of values as they affect the individual and society. Exposure to schools of ethics, cultural ethos, and the functions of norms, morals, and law. Application to contemporary ethical problems.

**PHIL113** 3-3-0-0-0  
**Comparative Religions** Core

Study of the origins of religions, institutional forms, and their commonalities and contrasts. Examination of major living religions.

**PHLE302** 2-1-2-0-0  
**Phlebotomy** Voc/Tech

The student develops the knowledge and skills to perform the technique of blood collection, venipuncture, and finger puncture. Also included are communication skills, terminology, ethics, and safety procedures.

**PHLE304** 2-1-0-0-6  
**Phlebotomy Practicum** Voc/Tech

Students report to a local hospital to join the phlebotomy team to learn to approach and to draw blood from a variety of patients. The students meet on a regular basis to share their practicum experience. PREREQUISITE: PHLE302

**PHOT105** 3-2-2-46-0  
**Principles Of Photography** Open



# DESCRIPTION OF COURSES

Photography as a communication medium. Principles of picture-taking, printing, and dry mounting of finished prints.

**PHOT106** 3-2-2-0-0  
**Advanced Photography** Open

For students who have mastered the basic photographic principles and processes. Topics will include photographic lighting and filtration, photographic approaches, advanced darkroom techniques, and print finishing and display. PREREQUISITE: PHOT105

**PHYE128** 3-1-4-0-0  
**Lifeguard Train/Water Safety Inst** Open

Provides the student with the practical, cognitive, behavioral and decision making skills needed for lifeguarding and the necessary skills to conduct/instruct all levels of Red Cross swimming and water safety lesson programs. Upon satisfactory completion, student will receive Red Cross certification in lifeguarding and water safety instructor.

**PHYE129** 1-0-2-0-0  
**Advanced Lifesaving** Open

Purpose is to provide the student with the skills/techniques to successfully rescue a person in need. Focus on water safety, personal & self rescue, swimming rescues, and artificial resuscitation. Upon satisfactory completion, the student will receive Red Cross certification. PREREQUISITE: Students must pass a swim test

**PHYE130** 1-0-2-0-0  
**Physical Fitness** Open

Various exercises and activities to improve physical fitness.

**PHYE131** 1-0-2-0-0  
**Tennis And Badminton** Open

Beginning skills only.

**PHYE132** 1-0-2-0-0  
**Flag Football And Basketball** Open

Beginning skills only.

**PHYE133** 1-0-2-0-0  
**Bowling** Open

Beginning skills only

**PHYE135** 1-0-2-0-0  
**Cheerleading** Open

Men and women desiring to be basketball cheerleaders for Varsity Basketball season.

**PHYE136** 1-0-2-0-0  
**Weight Training** Open

Introduction to basics of weight training. Emphasizes increasing physical capacity, that is increased muscular strength and power.

**PHYE137** 1-0-2-0-0  
**Recreational Swimming** Open

No instruction. Recreational swimming at Boone County "Y".

**PHYE138** 1-0-2-0-0  
**Varsity Men's Basketball** Open

For students on Varsity Men's Basketball team only.

**PHYE139** 1-0-2-0-0  
**Varsity Women's Basketball** Open

For students on Varsity Women's Basketball team only.

**PHYE140** 3-3-0-0-0  
**Sports Officiating** Open

Study of the rules and official's mechanics for high school football, basketball and baseball. Provides opportunity for students to become licensed officials in Iowa for these sports.

**PHYE142** 1-0-2-0-0  
**Varsity Baseball** Open

For students on Varsity Baseball team only.

**PHYE143** 1-0-2-0-0  
**Varsity Women's Softball** Open

For students on Varsity Women's Softball team only.

**PHYE144** 3-3-0-0-0  
**Intro To Physical Education** Open

History of physical education. Careers and professional leadership in physical education, with emphasizes on teaching. Examines the four areas of most vital concern to the physical educator: recreation and leisure, sports, curriculum, and research and evaluation.

**PHYE145** 2-2-0-0-0  
**First Aid** Open

First aid training with an emphasis in standard first aid and cardiopulmonary resuscitation. Red Cross certification will be awarded to those who qualify.

**PHYE146** 3-3-0-0-0  
**Personal & Community Health** Open

Physical, emotional, and social factors as they relate to our state of personal health. To better understand and aid in the alleviation of communicable and chronic diseases, drug use, and environmental problems.

**PHYE149** 3-3-0-0-0  
**Wellness Prog/Planning/Organiz** Open

The purpose of this course is to familiarize the student with wellness programs in the workplace. Emphasis will be on program design, health assessment, corporate management issues and promotion.

**PHYE150** 3-3-0-0-0  
**Fitness Testing/Programming** Open

The purpose of this course is to prepare the student to be able to organize and implement fitness programs for employees in agencies and organizations. Emphasis will be on introduction/recruitment of employees, fitness testing, prescription of individual and group fitness programs, and fitness retesting procedures.

**PHYE157** 2-1-2-0-0  
**Introduction To Athletic Training** Open

Entry level course designed to introduce the potential coach or athletic trainer to the field of athletic training. Basic care and prevention of athletic injuries will be dealt with in order to equip the coach or trainer with the knowledge to make intelligent decisions regarding common athletic injuries.

**PHYE158** 1-0-2-0-0  
**Golf** Open

Beginning skills only.

**PHYE159** 1-0-2-0-0  
**Jokari** Open

Racketball without walls. An introduction to the game of racketball without the use of walls.

**PHYE160** 1-0-2-0-0  
**Volleyball** Open

Beginning skills only.

**PHYE161** 1-0-2-0-0  
**Aerobics** Open

Introduces aerobic concept of physical fitness. Includes aerobic activities, aerobic exercising, and aerobic dance. Course designed for men and women.

**PHYL100** 2-2-0-0-0  
**Intro To Astronomy: Proj Universe** General

A survey of the constituents of the universe from the earth, to the solar system and the galaxies. Included is a study of stellar evolution and cosmology.

**PHYL102** 3-2-2-0-0  
**Survey Of Earth Science** Core

The study of selected concepts and procedures in astronomy, geology, meteorology and oceanography.

**PHYL103** 3-3-0-0-0  
**Energy Today** General

This course is intended to give the student an overview of the impact of energy use on people and the environment. Topics include the history of energy consumption, present and future sources, risk-benefit analysis, and cost projections.

**PHYL106** 4-3-2-0-0  
**Survey Of Physical Science** Core

The student is exposed to the scientific method with an emphasis on elementary problem solving. Along with a review of basic mathematics, the topics of weights and measures, mechanics, heat, gas laws, electricity, magnetism, sound, light and modern physics are covered.

**PHYL111** 4-3-2-0-0  
**College Physics I** Core

This course is the first semester of a two semester sequence in non-calculus physics. Topics include forces, linear and rotational motion, energy, momentum, fluids, gases, and heat. PREREQUISITE: MATH123 or trigonometry.

**PHYL112** 4-3-2-0-0  
**College Physics II** Core

This course is the second semester of a two semester sequence in non-calculus physics. Topics include wave motion, sound, electricity, magnetism, optics and modern physics. PREREQUISITES: PHYL111 or instructor permission

**PHYL121** 6-5-2-0-0  
**Classical Physics I** Core

This course is calculus oriented and intended for engineering and science majors. Topics covered include statics, dynamics, kinematics, fluid behavior, wave motion, vibrating systems, heat and thermodynamics. COREQUISITE: MATH129

**PHYL122** 6-5-2-0-0  
**Classical Physics II** Core

This course is a continuation of Classical Physics I. Topics covered include static electricity, electrical circuits magnetism, time-dependent electric and magnetic fields, optics, relativity, bohr theory and quantum mechanics. PREREQUISITES: PHYL121 or instructor's permission. COREQUISITE: MATH130

**PHYL203** 2-1-2-0-0  
**Physics/Respiratory Therapy** Open

Basic physics with applications to respiratory therapy. Topics covered include fluid behavior, fluidics, electricity, magnetism, instrumentation, sound and radioactivity. PREREQUISITE: PHYL106; COREQUISITES: Registration in a RESP program

**PHYL401** 3-2-2-0-0  
**Physics For Technicians** Voc/Tech

A physics course for students of technology. Topics include: forces, work, energy, heat, electricity, and magnetism with a strong emphasis on practical applications. PREREQUISITE: MATH091 or equivalent

**PLSC111** 3-3-0-0-0  
**American National Government** Core

A study of the American political system and how and why the citizenry relate to the government as they do. Emphasis is placed upon the organization and functioning of the presidential, legislative, and judicial sub-systems. (Also available by telecourse)

**PLSC112** 3-3-0-0-0  
**State And Local Government** Core

A study of the organization, operations and politics of state and local governments. Emphasis is placed on an analysis of the legislative, executive and judicial roles and processes.

**PLSC121** 3-3-0-0-0  
**World Polittics** Core

The international system is examined from several perspectives including those of the United States, the Soviet Union, and China. Emphasis is placed upon ideology, national interest, the use of power, international law and organization.

**PLSC122** 3-3-0-0-0  
**Comparative Political Systems** Core

Examination of the government and politics of such



# DESCRIPTION OF COURSES

countries as Great Britain, France, Germany, and Soviet Union. Each nation is viewed in terms of its political culture, party system, executive, legislative, and legal organization.

**PLSC125** 3-3-0-0-0  
**Presidential Elections** General

Course analyzes the impact of candidate personality, societal issues, media, political party and voter attitudes on presidential choice. Offered every four years as appropriate.

**PLSC126** 3-3-0-0-0  
**Intro To Public Administration** Core

Study of the theory & practice of public administration examining alternate organizational theories & practices, personnel administration, problems of communications within organizations, and styles of leadership. The course will emphasize the interrelationships of professional & political influences on decision making.

**PLSC142** 3-3-0-0-0  
**Congress: We The People** General

A telecourse that presents an inside view of the United States Congress and the complex range of individuals, interactions, organizations, and processes it embodies. Topics will include congressional elections, committees, leadership, lobbying, constituency relationships, law making, and budgeting.

**PLSC145** 3-3-0-0-0  
**The Legal System** Open

An overview of the American Legal system innerworkings. Students will learn to recognize legal issues which arise in various areas of the business community.

**PRTG400** 2-2-0-0-0  
**Photo-Offset Fundamentals I** Voc/Tech

Introduces the beginning student to the basic skills of offset lithography reproduction with emphasis on shop safety, line photography and offset press operations.

**PRTG401** 3-1-4-0-0  
**Pre-Press I** Voc/Tech

This lab course introduces the beginning student to the basic skills of pre-press offset lithography. The emphasis is on paste-up, camera, stripping and platemaking.

**PRTG403** 4-1-6-0-0  
**Press I** Voc/Tech

This lab course introduces the beginning student to the basic skills of press offset lithography. The emphasis is on small offset press operations.

**PRTG454** 12-4-0-0-32  
**Career Experience** Voc/Tech

Supervised hands-on printing work experience with employers that enables students to apply their skills. Development and supervision of a training plan will be made by a printing teacher-coordinator. Included is a required seminar. PREREQUISITE: GRPH421

**PRTG464** 10-4-12-0-0  
**Press Specialization** Voc/Tech

Student will specialize in the operation of a small offset press. Specializing in work and turn, work and roll, and tight registration. PREREQUISITE: PRTG403

**PRTG465** 10-4-12-0-0  
**Pre Press Specialization** Voc/Tech

Lab course designed to give the student specialized training in multi-color stripping, negative duping and contacting. PREREQUISITE: PRTG401

**PRTG466** 10-4-12-0-0  
**Photocomposition, Paste Up Special** Voc/Tech

Lab course designed to give experience in production paste-up, overlays, screens, multi-color register. Advanced photo type setting, tabular forms, complicated leading and type size changes. PREREQUISITES: GRPH411, 415

**PRTG468** 12-4-16-0-0  
**Print Shop Operations** Voc/Tech

This lab course is designed to give students experience in the operation of printing production situations. Requires students to operate as a printing company. PREREQUISITE: GRPH421

**PSCH101** 3-3-0-0-0  
**General Psychology** Core

A survey of psychology including theoretical and experimental findings and applications from areas such as physiological, learning, memory, personality, social, abnormal, and therapy.

**PSCH102** 3-3-0-0-0  
**Psychology Of Thinking** Core

This course is designed to increase the students' understanding of thinking as a process and to strengthen their thinking skills, with emphasis on such topics as elements of thinking and cognitive style; problem solving; creativity; memory; concentration; and visual, verbal, numerical and analytical thinking.

**PSCH103** 3-3-0-0-0  
**Developmental Psychology** Core

The study of factors that affect human development from conception to death, with emphasis on topics such as physical, cognitive, and social changes, methods of study and current issues. PREREQUISITE: PSCH101 recommended

**PSCH104** 3-3-0-0-0  
**Abnormal Psychology** Core

An introduction to the study of abnormal behavior, with emphasis on abnormal behaviors such as anxiety, depression, and schizophrenia. Includes dynamics of mental disorder and psychological factors involved in the treatment of disorders. PREREQUISITE: PSCH101 recommended.

**PSCH105** 3-3-0-0-0  
**Personality & Social Psychology** Core

Introduction to theoretical approaches in personality, including psychoanalytic, dispositional, humanistic, and behavioral strategies. Selected topics in social psychology. Applications to personality assessment and counseling. PREREQUISITE: PSCH101 recommended.

**PSCH106** 3-3-0-0-0  
**Psychology Of Human Relations & Adj** General

Emphasizes an awareness of the problems inherent in human-to-human relationships, and the known laws and generalizations about the action patterns of individuals and groups. Effort is made to develop an awareness of the techniques of effective interpersonal relations.

**PSCH107** 3-3-0-0-0  
**Principles Of Behavior Modification** General

The principles of learning theory with a major emphasis on operant conditioning will be studied. Emphasis will be on the practical application of these principles to the areas of mental health, counseling and teaching. PREREQUISITE: PSCH101 recommended.

**PSCH108** 3-3-0-0-0  
**Human Sexuality And Sex Roles** Core

This course provides students with definitive and precise information about the nature of human sexuality and sex roles. An interdisciplinary approach will be used to present a more comprehensive view, stressing the biological, social, and psychological aspects of sexuality and sex roles.

**PSCH109** 3-3-0-0-0  
**Educational Psychology** General

The principles of psychology applied to classroom teaching, with emphasis on such topics as development, learning, motivation, evaluation, adjustment, and educational techniques and innovations.

**PSCH110** 3-3-0-0-0  
**Stress And Stress Management** General

This course provides basic instruction in understanding stress reactions, & their cause & effects in the theory & application of stress management techniques. Components will include theories of stress & stress reduction, physiological & psychological reactions to stress, the measurement of stress reactions, and application of stress reduction.

**PSCH120** 3-3-0-0-0  
**Understanding Human Behavior** General

An introductory level television course encouraging an understanding and appreciation of the scientific approach to the study of human behavior. Dramatizations and other techniques clarify fundamental concepts and philosophies, highlighting the contributions of major figures in psychology.

**PSCH121** 3-3-0-0-0  
**The Growing Years** General

How and why children develop is the subject of this television course. Experts are interviewed on such topics as language, socialization, play, reading, problem solving, genetics/heredity, and environment. The focus is on the child's physical, mental, social and emotional development.

**PSCH122** 2-2-0-0-0  
**Brain, Mind, Behavior** General

A telecourse designed to give beginning students a comprehensive understanding of the human brain, its functions, its common pathologies and its many mysteries. Topics will include vision, movement, sleep, stress and anxiety, addiction, language, aging and memory, sex differences, and mental diseases.

**RCEL401** 1-1-0-0-0  
**Basic Electricity & Magnetism** Voc/Tech

This course will provide instruction in the basics of electricity and magnetism. It is designed as a foundation course for the student who wishes to become familiar with the electrical systems. Course can be taken for exploratory or enrichment experience also. (1 week session)

**RCMA400** 3-3-0-0-0  
**Related Math** Voc/Tech

This course in arithmetic consists of operations with whole numbers, fractions, decimals, percents and integers. It is designed to strengthen skills used by workers and technicians. It includes computations involving proportion, units of measurement, and basic algebra.

**RESP300** 3-3-0-0-0  
**Fundamentals Of Respiratory Therapy** Open

This is the initial course for the student in the respiratory therapy program. Major topics are history of the profession, medical specialties, communication, terminology and the evaluation of the patient. Students will become skilled in evaluating vital signs and clinical data. PREREQUISITES: HS biology and chemistry or equivalent

**RESP302** 4-3-2-0-0  
**Cardiopulmonary Therapeutics I** Open

This course introduces the student to basic therapeutic techniques utilized in respiratory care. Major topics include medical gas therapy, humidity and aerosol, cylinder systems and physical principles of gases and liquids. Students will be required to demonstrate competence in the techniques to receive a passing grade in the course PREREQUISITES: One year of HS biology and algebra with minimum "C" grade or equivalent

**RESP304** 3-2-2-0-0  
**Cardiopulmonary Therapeutics II** Open

The second course of a sequence of basic patient care therapeutic techniques utilized in respiratory care. Topics include positive pressure breathing, incentive



# DESCRIPTION OF COURSES

spirometry, postural drainage and percussion, airway care, pulmonary rehabilitation and home care. Students will be required to demonstrate competence in the techniques to pass. PREREQUISITE: RESP302

**RESP310** 5-5-0-0-0  
**Cardiopulmonary Renal Pathophysiology** Open

An in-depth study of the normal functioning of the cardiovascular, pulmonary and renal systems emphasizing their interactions is presented. Progresses to study of the common adolescent and adult diseases affecting the three systems. Interpretation of the results of arterial blood gas data will be taught. PREREQUISITES: RESP302, BIOL133; COREQUISITE: BIOL134

**RESP315** 3-3-0-0-0  
**Respiratory Therapy Pharmacology** Open

This course provides a study of the actions and interactions of drugs with and within the body. Theories of drug action, pharmacodynamics and methods for drug administration will be taught. Drugs affecting the cardiovascular, pulmonary and renal systems will be emphasized. PREREQUISITES: RESP302, BIOL133; COREQUISITE: BIOL134

**RESP320** 5-4-2-0-0  
**Advanced Respiratory Therapy** Open

Overview of analysis of arterial blood gas samples and basic electrocardiography will be presented. Use of adjuncts in the treatment of cardiorespiratory arrest will be taught. Principles of mechanical ventilation along with techniques of PEEP, CPAP, SIMV and initiation and maintenance of ventilation will be taught. PREREQUISITES: RESP304, 310, BIOL134, PHYL106

**RESP325** 3-3-0-0-0  
**Neonatal/Pediatric Resp Therapy** Open

Embryonic development of the respiratory and cardiovascular systems will begin this course which progresses to the teaching of normal function and a consideration of the common neonatal and pediatric diseases. Therapeutic techniques and monitoring of the patients will be taught. PREREQUISITES: RESP310, BIOL134

**RESP330** 3-3-0-0-0  
**Cardiopulmonary Diagnostics** Open

Principles and techniques of testing of cardiovascular and pulmonary function will be taught with an emphasis on the evaluation and interpretation of the results of the tests. Integration of test results with clinical picture with emphasis on therapeutics, and principles of polysomnography will be taught. PREREQUISITES: RESP310, BIOL134, PHYL106

**RESP335** 3-3-0-0-0  
**Respiratory Therapy Mgmt & Ethics** Open

Begins with study of the organization and management of a respiratory therapy department. Consideration of issues of jurisprudence and medicolegal aspects of health care. Tactful interactions and ethical practices will be emphasized. Will also serve to review much of what has been assimilated in the program. PREREQUISITE: RESP370

**RESP361** 6-2-0-12-0  
**Respiratory Therapy Practicum I** Open

This is the initial hospital experience. Consists of supervised care of patients with respiratory disorders. Students will administer IPPB, aerosol, postural drainage and incentive breathing therapies. Other therapeutic modalities which have been learned will be utilized as well. PREREQUISITES: RESP304 with "C" or better, BIOL134

**RESP371** 7-2-0-16-0  
**Respiratory Therapy Practicum II** Open

The second hospital experience for students in supervised clinical care. Techniques from RESP 361 will continue to be emphasized along with arterial puncture and

analysis of blood samples. ECG and other basic cardiac diagnostic tests will be observed. PREREQUISITE: RESP361

**RESP381** 10-2-0-24-0  
**Respiratory Therapy Practicum III** Open

Hospital respiratory care with the addition of mechanical ventilation and care of patients in critical care units will complement the techniques from the prior two clinicals. Observation and performance of pulmonary function testing will be introduced. PREREQUISITES: RESP371, 320

**RESP391** 7-2-0-16-0  
**Respiratory Therapy Practicum IV** Open

The fourth clinical experience with emphasis on the care of patients in critical care areas of the hospital. All techniques and procedures previously performed will continue to be administered to patients. PREREQUISITE: RESP381

**SERC334** 1-1-0-0-0  
**Emergency Medical Dispatch** Voc/Tech

Techniques for treatment of bleeding, shock, fractures, wounds, burns, exposure, poisoning, epilepsy and environmental injuries. Cardiopulmonary resuscitation according to Iowa Heart guidelines. Meets OSHA requirements.

**SERC335** 2-2-0-0-0  
**Basic Communications Operator Skills** Voc/Tech

Overview of public safety communications. Open to communication operators and those not employed in law enforcement. Specific topics include an introduction to radio systems and the dispatch process; civil and criminal law; liability in job stress; human resources and emergency services; and an explanation of the Iowa on-line warrant and articles.

**SERC336** 1-1-0-0-0  
**Intermediate Comm. Operator Skills** Voc/Tech

Specific course for state, county and municipal law enforcement employees, covering technical and procedural aspects of the Iowa System. Designed as an enhancement to the Basic Communications Operator skills course. Includes practical discussions of the Iowa System and the operator's role in officer survival. PREREQUISITE: SECR335

**SERC337** 1-0-0-0-4  
**Communication Operator Internship** Voc/Tech

Sixty hours of internship to be completed at area communication center. Arranged by college coordinator. PREREQUISITES: SECR335, 336

**SERC338** 1-1-0-0-0  
**Training Skills** Voc/Tech

Topics include the theories of learning, giving and receiving feedback; and techniques for effective on-the-job training in the communications center. Practical training experience provided.

**SERC339** 1-1-0-0-0  
**Government & Community Resources** Voc/Tech

An overview of state and local government and their interaction. Discussion of relative federal regulatory and law enforcement agencies.

**SERC340** 1-1-0-0-0  
**Advanced Comm Operator Skills** Voc/Tech

An in-depth view of public safety communications with emphasis on special techniques, advanced concepts and special features of the Iowa system including off-line search, system formats and files, and current events. PREREQUISITES: SECR335, 336

**SERC341** 1-1-0-0-0  
**Interpersonal Communications** Voc/Tech

Emphasis on awareness of the problems inherent in human relationships and techniques of effective interpersonal communications. Concentration on understanding communication barriers, importance of feedback, improvement of everyday communications,

listening skills and understanding small group processes. Special emphasis on conflict resolution.

**SEVC340** 1-0-0-0-4  
**Volunteer Services Practicum** Voc/Tech

A hands-on course to provide practical and developmental experience in the management of volunteer programs with special emphasis on development of skills and understandings. PREREQUISITE: Complete 2 required courses

**SEVC341** 1-0-0-0-4  
**Volunteer Independent Study** Voc/Tech

This course provides the student with an opportunity to integrate and assimilate course material into actual program planning. Each student will select a special topic for study and implementation in the field of volunteer administration. PREREQUISITE: Complete 2 required courses

**SEVC351** 2-2-0-0-0  
**Volunteers in Action** Voc/Tech

Information and skills needed for development, organization, and operation of an effective volunteer program. Basic elements of a volunteer program including planning, needs assessment, record keeping, interviewing, placement, retention, publicity and promotion, position description, recruitment, recognition, and eval. A practical "nuts and bolts" course.

**SEVC352** 2-2-0-0-0  
**Volunteer Coordination** Voc/Tech

Development and application of specific skills. Topics include motivation, time management, conflict resolution, stress and burnout, communication, delegation, leadership, creativity and networking.

**SEVC353** 1-1-0-0-0  
**Effective Mgmt Of Volunteer Programs** Voc/Tech

Specifics on overview of volunteer program operation. Topics include trends, administrative volunteers, credibility and image of volunteers, volunteer programs and volunteer directors, liability, organizational climate and structure, and certification.

**SEVC356** 2-2-0-0-0  
**Intro To Money Mgmt Counseling** Voc/Tech

Introduction to common types of financial problems and possible solutions. Learn how to develop and implement financial plans. Explore possibilities and limitations for counselors and clients.

**SEVC357** 2-2-0-0-0  
**Dev Skills In Money Mgmt Counseling** Voc/Tech

Application of counseling and consumer skills to multi-problem situations. Emphasis on skill development in working with clients. Exploration of resources available, legal environment, and consumer problems.

**SEVC358** 2-2-0-0-0  
**Current Money Management Topics** Voc/Tech

Exploration of economic scene & implications for money management, financial and socioeconomic factors including income transfer program insurance, and credit.

**SEVC359** 2-2-0-0-0  
**Crisis Intervention/Couns Tech** Voc/Tech

Techniques for dealing with changes within the family such as illness, aging, and depression; changes within the family structure such as children, divorce, and death. Emphasis on strategies and resources.

**SEVC360** 4-4-0-0-0  
**Homemaker Aide** Voc/Tech

Course provides knowledge and skill development in human relations, ethics and confidentiality, home management, food and nutrition, and methods for working with children and adults.

**SEVC397** 2-2-0-0-0  
**Educational Interpreting** Voc/Tech

Expand skills in interpretive classifiers and locatives.



# DESCRIPTION OF COURSES

**SOCY101** 3-3-0-0-0  
**Introduction To Sociology** Core

A scientific approach to the analysis of culture, socialization, social organization, the development of society, study of social processes, human groups, social institutions, and the effects of group relations on human behavior.

**SOCY102** 3-3-0-0-0  
**Social Issues** Core

This course is an analysis of the nature, dimensions, causes, and characteristics of selected social problems of major interest. Consideration is given to theories research and programs for prevention and treatment.

**SOCY103** 3-3-0-0-0  
**Courtship, Marriage & Family** Core

This course analyzes the sociological, physical, psychological, legal and economic aspects of the American family. Included are investigations of courtship and marriage relationships, preparation for marriage, family, parenthood, interpersonal relationships, and marital adjustment.

**SOCY104** 3-3-0-0-0  
**Social Psychology Of Small Groups** General

The study of the social self, body language, interactive patterns, group dynamics, membership and leadership using social psychological and sociological theory. PREREQUISITE: SOCY101 or PSCH101

**SOCY105** 3-3-0-0-0  
**Race, Ethnic & Gender Relations** Core

Study of the relationship between cultural, sexual and racial categories. Focus on stereotypes, prejudices, discrimination and exploitation. Social-psychological, sociological and economic theories are employed. Major emphasis upon United States. PREREQUISITES: SOCY101 or instructor permission

**SOCY106** 3-3-0-0-0  
**Juvenile Delinquency** General

An investigation of juvenile delinquency in American society, sociological theories and research of delinquency, impact of groups, juvenile justice system, and prevention programs. PREREQUISITES: SOCY101 or instructor permission

**SOCY107** 3-3-0-0-0  
**Criminology** General

The nature and extent of crime and criminality, society's efforts to repress crime, theories of causation, emphasis on social processes, systems, and philosophy of methods of correction. PREREQUISITES: SOCY101 or instructor permission

**SOCY109** 3-3-0-0-0  
**Aging In American Society** General

An interdisciplinary approach to aging in American society. Course focuses on sociological, psychological, cultural, biological, and economic aspects associated with aging and needs and social programs for older Americans.

**SOCY110** 3-3-0-0-0  
**Group Dynamics** General

This course is a study of human behavior within groups and organizations such as families, social groups and work places. It is the study of the interpersonal dynamics of everyday life.

**SOCY204** 4-4-0-0-0  
**Social Gerontology/Applications** Open

Societal aspects of aging as they relate to the delivery of services to the aging. Students will develop a project which serves a specific community need.

**SOCY302** 3-3-0-0-0  
**Industrial Relations** Voc/Tech

This course explores the relationships that exist in a work environment. Special emphasis is placed on relationships with supervisors, co-workers and trade associations.

**SPCH110** 3-3-0-0-0  
**Fundamentals Of Speech** Core

Theory and practice of communication processes such as selection of topic, audience analysis, dealing with stage fright, determination of purpose, good listening, selection and organization of supports, problem solving, and good delivery. Also a telecourse.

**SPCH111** 3-3-0-0-0  
**Public Communication** General

Analysis, preparation and practice of all forms of public address, with emphasis on critical thinking, audience adaptation, speaker style, and nonverbal enhancement. Students will deliver impromptu, occasional, and persuasive speeches. Included will be dealing with hostile audiences, adapting to special situations. PREREQUISITES: SPCH 110 permission of instructor

**SPCH115** 3-3-0-0-0  
**Intercultural Communication** General

An introduction to the study of the application of theories and principles of human communication to interactions between people from contrasting cultures.

**SPCH117** 3-3-0-0-0  
**Interpersonal Speech/Sm Grp Commun** Core

Concentration on understanding communication barriers, the importance of feedback, improving everyday communication, good listening, understanding group function and process. Students will practice various communication styles, learn to deal with conflict and to enhance leadership and participation.

**TELE311** 3-3-0-0-0  
**Basic Electricity/Electronic I** Voc/Tech

For beginners to solve basic electronic problems involving voltage, resistance and power. Relationships between electricity and magnetism, operation of resistors, meters, switches, relays, capacitors, inductors and batteries will be explained.

**TELE312** 2-2-0-0-0  
**Basic Electricity/Electronic II** Voc/Tech

For those who have an understanding of VOLTS, OHMS, AMPS, and series parallel circuits. Explain the difference between alternating current (AC) and direct current (DC), the AC generator; analyze simple AC currents, transformer action, series and parallel resonant circuits. May also be taken as a study course.

**TELE313** 1-1-0-0-0  
**Introduction To Telephone** Voc/Tech

An overview of the telephone systems. Explains how a call can go from one place to another. Topics covered are station equipment, carrier and repeater line. A prior understanding of electricity/electronics is desired. Recommended for those desiring to enter the college's full-time day program or the telephone industry.

**TELE315** 3-3-0-0-0  
**Carrier Systems** Voc/Tech

Transmission principles, carrier systems, high frequency "N" type carrier, and digital transmission. Carrier Terminals Transmission facilities. This course plus ELET 357 is equivalent to HTTC 352.

**TELE316** 2-2-0-0-0  
**Electronic Circuits** Voc/Tech

Basic and operational amplifiers, power supplies, oscillators, pulse circuits, and modulation. Must have prior knowledge in electricity/electronics. PREREQUISITE: TELE312

**TELE318** 3-3-0-0-0  
**Semiconductor Devices** Voc/Tech

N-type, P-type, PN junction, diodes, zener diode, transistors, bipolar characteristics, field effect, thyristors, integrated circuits, and opto electronics. Should have knowledge in AC/DC electronics.

**TELE381** 1-1-0-0-0  
**Seminar Topics I** Voc/Tech

For those who attend short term sessions which are

directly related to the telephone industry. Registration times and evaluation criteria must be agreed upon before attending the seminar. Typically, the participant grading will be on a pass/fail basis.

**TELE382** 1-1-0-0-0  
**Seminar Topics II** Voc/Tech

See TELE 381

**TELE383** 1-1-0-0-0  
**Seminar Topics III** Voc/Tech

See TELE 381

**TELE419** 3-2-2-0-0  
**DC Fundamentals For Telephony** Voc/Tech

An introductory course in electricity covering electron theory, basic circuit parameters, Ohm's law, series and parallel resistance networks, magnetic circuits and electrical measurements.

**TELE429** 4-4-0-0-0  
**Telephony II** Voc/Tech

Covers key system principles and practices (1A2 and Electronic) and Digital PBX principles and practice for Rolm VSCBX Digital PBX. PREREQUISITE: TELE481

**TELE439** 2-2-0-0-0  
**Math For Telephony I** Voc/Tech

Mathematics related to Ohm's law, power and other basic electronic principles used in telephony/electronics. PREREQUISITE: 1 year HS algebra

**TELE440** 3-3-0-0-0  
**Math For Telephony II** Voc/Tech

A continuation of Mathematics I with emphasis on principles of trigonometry necessary for understanding of resonance, filters and other AC applications. PREREQUISITE: TELE439

**TELE451** 4-3-2-0-0  
**Basic Digital Logic Electronics** Voc/Tech

Operation of digital logic circuits, gates, boolean algebra, flip-flop and registers and logic circuitry and digital design. PREREQUISITE: TELE419

**TELE452** 4-3-2-0-0  
**AC & DC Applications** Voc/Tech

An introductory course into alternating current covering sine wave parameters, reactance, impedance, vector algebra, impedance networks, resonance, and transformer action. PREREQUISITE: TELE419

**TELE453** 4-4-0-0-0  
**Telephony III** Voc/Tech

Covers digital switching principles and practices for Northern telecom, DMS-10 digital multiplex switching system. PREREQUISITE: TELE429

**TELE454** 7-0-14-0-0  
**Telephony Experience II** Voc/Tech

This experience develops knowledge and skills in private branch exchange operations and maintenance. Also develops skill and knowledge of key systems installation, maintenance and repair. Hands on experience with a ROLM VSCBX. PREREQUISITE: TELE483

**TELE455** 7-0-14-0-0  
**Telephony Experience III** Voc/Tech

This experience helps develop knowledge and skills in dial central office exchange operation, maintenance and repair. Also helps develop skill in digital switching operations, maintenance and repair. PREREQUISITE: TELE454

**TELE481** 2-2-0-0-0  
**Telephony I** Voc/Tech

A course covering the constructing of aerial and underground plants, splicing procedures, color coding, conductor identification, splicing, soldering and other skills.

**TELE483** 5-0-10-0-0  
**Telephony Experience I** Voc/Tech

Proper use of hand tools and experience on telephony.



# DESCRIPTION OF COURSES

Outside plant operation including buried cable splicing, construction, and troubleshooting station apparatus, house wiring, and phone installation.

**TOOL403** 3-2-2-0-0  
**Machine Shop Math** Voc/Tech

Review of fundamental operation of Math, i.e. addition, subtraction, multiplication and division of whole numbers, fractions and decimals, and basics of algebra are emphasized. Problem solving techniques as they apply to speeds and feeds, metal removing rate, chip and tooth loads, tapers, cutting clearance, and other machine related problems are covered.

**TOOL480** 3-1-4-0-0  
**Blueprint Reading I** Voc/Tech

A beginning and intermediate blueprint reading course covering basic visualization of shapes and sizes, and freehand sketching of objects. Includes section lining, print alterations and projections.

**TOOL481** 3-1-4-0-0  
**Blueprint Reading II** Voc/Tech

An advanced blueprint reading course involving study of industrial metal work drawings as they apply to planning and laying out of jigs and fixtures. PREREQUISITE: TOOL480

**TOOL482** 3-2-3-0-0  
**Machine Shop Measurements I** Voc/Tech

A study of measurements as used in industry. Units of instruction include tools, gauges, comparators, gauge blocks, and inspection practices.

**TOOL483** 3-2-3-0-0  
**Machine Shop Measurements II** Voc/Tech

Analyzing and calculating sides and angles of triangles, as applied to metalworking trades. Units of instruction dealing with properties, measurements, and relationships of points, lines, planes, and solids. PREREQUISITE: TOOL482

**TOOL484** 3-2-3-0-0  
**Machine Tool Operations I** Voc/Tech

Machine shop procedures beginning with hand tools and benchwork. Lecture on safety, layout, and tool grinding operations on saws, drill press, grinders and lathes.

**TOOL485** 4-3-2-0-0  
**Machine Tool Operations II** Voc/Tech

Theoretical procedures of the tool and cutter grinder and the vertical and horizontal milling machines. PREREQUISITE: TOOL484

**TOOL486** 5-0-10-0-0  
**Machine Tool Operations Lab I** Voc/Tech

Machine shop procedures beginning with hand tool and benchwork. Lab activities in safety, layout, and tool grinding operations on saws, drill press, grinders and lathes.

**TOOL487** 7-0-15-0-0  
**Machine Tool Operations Lab II** Voc/Tech

Practical experience with the following machine shop equipment: tool and cutter grinder, vertical and horizontal milling machines. PREREQUISITE: TOOL486

**TOOL489** 3-1-4-0-0  
**Heat Treatment Of Materials** Voc/Tech

An introduction to the physical and mechanical characteristics of metals that are directly associated with the area of heat treatment. Includes structure and composition of metals, testing, hardening, tempering, and annealing. PREREQUISITE: TOOL486

**TOOL490** 7-0-15-0-0  
**Machine Tool Operation Lab III** Voc/Tech

Advanced practical experience with grinders, electrical discharge, and CNC mill. PREREQUISITE: TOOL487

**TOOL491** 4-4-1-0-0  
**Machine Tool Operations III** Voc/Tech

Advanced theoretical explanation of procedures in

grinding, electrical discharge, CNC milling, and exposure to heat treatment of steels. PREREQUISITE: TOOL485

**UPHL432** 4-3-2-0-0  
**Technical Problems** Voc/Tech

Instruction will be provided in project estimating, materials and equipment purchasing, small business operation, and solving typical upholstery problems. PREREQUISITES: UPHL435, 436, RCMA400

**UPHL433** 2-1-2-0-0  
**Recordkeeping & Filing** Voc/Tech

Skills and knowledge will be demonstrated in basic practices of record keeping and filing as applied to a small business.

**UPHL435** 3-3-0-0-0  
**Intro To Upholstery** Voc/Tech

Instruction on the correct operation of the sewing machine. Laying out, cutting and fitting fabric for sewing machine operation.

**UPHL436** 6-0-12-0-0  
**Intro To Upholstery Lab** Voc/Tech

Practical exercises in the operation of sewing machine, application of topics discussed in UPHL 435. PREREQUISITE: UPHL435; COREQUISITE: UPHL435

**UPHL437** 3-1-4-0-0  
**Furniture Repair** Voc/Tech

The student will repair wooded structures and replace broken parts. Springs, webbing, and padding will be replaced in projects to develop reconstruction skills. PREREQUISITE: UPHL436

**UPHL438** 3-1-4-0-0  
**Automotive Upholstery Repair** Voc/Tech

Projects will develop skills in cutting and assembling to ensure proper tightness of auto seats. Repair and replacement of springs and padding will be done as needed. Demonstrations and practice in blind sewing on curves are some of the additional skills taught. PREREQUISITE: UPHL436

**UPHL439** 6-3-6-0-0  
**Upholstery And Repair** Voc/Tech

Instruction in layout and making of closed, pleated, open, and box skirts for furniture will be given. Students will develop skills in removal and replacement of pillow backs and channel backs in chairs. PREREQUISITE: UPHL437

**UPHL440** 2-0-4-0-0  
**Furniture Recovering** Voc/Tech

Recovering a large chair with vinyl or cloth and a davenport with floral pattern or stripes will give experience in matching fabrics. PREREQUISITE: UPHL437

**UPHL441** 4-2-4-0-0  
**Auto Upholstery Repair & Restoration** Voc/Tech

Students will work with bucket seats, headliners, door panels, and truck liners to broaden their knowledge of auto restoration. PREREQUISITE: UPHL438

**UPHL442** 4-2-4-0-0  
**Auto Upholstery** Voc/Tech

Emphasis is placed on vinyl tops, carpeting, and window shelves to expand students knowledge and experience with custom auto upholstery. PREREQUISITE: UPHL438

**UPHL443** 6-2-8-0-0  
**Furniture Reconstruction** Voc/Tech

Emphasis is placed on using all of the skills acquired previously to complete an entire project. PREREQUISITE: UPHL439

**UPHL444** 6-2-8-0-0  
**Advanced Upholstery** Voc/Tech

Further refinement of the total skills of upholstery to increase the students' speed and efficiency. PREREQUISITE: UPHL440

**UPHL445** 5-5-0-0-0  
**Adv Auto Upholstery Restoration** Voc/Tech

All the skills learned previously are put to use in complete projects from start to finished restoration. PREREQUISITE: UPHL441

**UPHL446** 7-0-14-0-0  
**Advanced Auto Upholstery Lab** Voc/Tech

Additional experience is gained by more difficult and challenging projects in custom auto upholstery. PREREQUISITE: UPHL442

**WATE302** 2-2-0-0-0  
**Introduction To Water Treatment** Voc/Tech

A familiarization of the water system. Introduces fundamentals in wells, chlorination, iron and manganese removal, and softening. This course is a must for those who are new to water treatment supply.

**WATE312** 1-1-0-0-0  
**Basic Math For Operators** Voc/Tech

Practical course allows the operator to learn math and solve problems that are basic to water and waste water operations.

**WATE313** 1-1-0-0-0  
**Math Formulas For Operators** Voc/Tech

Higher math using formulas needed for solving problems. Student should have taken basic math or have a math aptitude test before enrolling in class.

**WATE317** 1-1-0-0-0  
**Basic Water Chemistry** Voc/Tech

A course that talks your language and is not over your head. You will learn about chemistry in a practical way.

**WATE318** 1-1-0-0-0  
**Chemistry & Water Processes** Voc/Tech

Learn the why's of the everyday tasks one performs in a water treatment plant. PREREQUISITE: WATE317

**WATE322** 1-1-0-0-0  
**Lab Equipment** Voc/Tech

An introductory course for operators. Acquaints individuals with different types of labeling chemicals, collecting samples, making dilutions and using incubators and balances.

**WATE323** 1-1-0-0-0  
**Lab Techniques** Voc/Tech

Learn how to use and maintain water/wastewater laboratory equipment. Get involved in making lab analyses. PREREQUISITE: WATE322

**WATE331** 2-2-0-0-0  
**Pumps & Piping** Voc/Tech

An introductory course to the water treatment process found in a Grade 1 or a Grade 2 water treatment facility. Introduces fundamentals in well supplies, iron, magnesia, manganese removal, iron exchange, softening, disinfection, filterization, and pumping. For those who are new to the water treatment or who desire a water operator's certificate.

**WATE364** 1-1-0-0-0  
**Seminar Topics II** Voc/Tech

See WATE 366

**WATE365** 1-1-0-0-0  
**Seminar Topics III** Voc/Tech

See WATE 366

**WATE366** 1-1-0-0-0  
**Seminar Topics I** Voc/Tech

For those who attend short-term sessions which are directly related to water treatment and desire college credit. Registration times and evaluation criteria must be agreed upon prior to seminar attendance.

**WELD467** 2-1-2-0-0  
**Related Weld-Transportation Trades** Voc/Tech

Skills will be developed in oxy-acetylene fusion and braze welding, shielded metallic arc welding, as well as oxy-fuel flame cutting. Safety is emphasized and basic welding theory will be discussed. Warnings con-



# DESCRIPTION OF COURSES

cerning the danger and liability involved in welding high strength steels will be stressed (i.e. Auto bodies and chassis, etc.)

**WELD470** 5-5-0-0-0  
**Welding Fundamentals & Theory** Voc/Tech

An introductory course stressing the theory and application of oxygen-acetylene and shielded metallic arc welding. Welding equipment and tool handling safety are also included.

**WELD473** 2-0-5-0-0  
**Oxygen-Acetylene Weld/Cutting** Voc/Tech

Skills will be developed in oxy-acetylene welding, cutting and repair. Safety is emphasized.

**WELD474** 3-1-4-0-0  
**Shielded Metallic Arc Welding I** Voc/Tech

Skills will be developed in welding beads and buildup surfacing in the flat position.

**WELD477** 3-1-4-0-0  
**Ag Welding** Voc/Tech

Skills will be developed in oxy-acetylene braze welding, shielded metallic arc welding (stick), and oxy-acetylene flame cutting. Safety is emphasized and basic welding theory will be discussed.

**WELD478** 3-0-6-0-0  
**Shielded Metallic Arc Welding II** Voc/Tech

Skills will be developed in welding multiple pass tee fillet welds in the flat position. PREREQUISITE: WELD474

**WELD479** 2-0-4-0-0  
**Shielded Metallic Arc Welding III** Voc/Tech

Skills will be developed in welding corner fillet joints, weld rounds, and sheet metal weldments in the flat position. PREREQUISITE: WELD478

**WELD480** 5-5-0-0-0  
**Applied Theory & Metallurgy** Voc/Tech

Practices and principles in gas tungsten arc and gas metallic arc welding processes will be taught. Basic metallurgy as it relates to welding will be covered. PREREQUISITE: WELD470

**WELD481** 3-3-0-0-0  
**Blueprint Reading** Voc/Tech

The basic skills needed to read shop drawings (including welding symbols) will be learned. PREREQUISITE: RCMA400

**WELD483** 2-0-5-0-0  
**Gas Metallic Arc Welding** Voc/Tech

Practical application in the use of the gas metallic arc welding process (including submerged arc and flux cored arc).

**WELD486** 3-1-4-0-0  
**Shielded Metallic Arc Welding IV** Voc/Tech

Skills will be developed in welding beads, buildup surfacing, and fillet weldments in the horizontal position. PREREQUISITE: WELD479

**WELD487** 3-0-6-0-0  
**Shielded Metallic Arc Welding V** Voc/Tech

Skills will be developed in welding fillet joints in the vertical downhill and vertical uphill position. PREREQUISITE: WELD486

**WELD488** 2-0-4-0-0  
**Shielded Metallic Arc Welding VI** Voc/Tech

Skills will be developed in welding fillet joints in the overhead position. Air carbon arc gouging and plasma arc cutting will also be practiced. PREREQUISITE: WELD487

**WELD493** 2-0-5-0-0  
**Gas Tungsten Arc Welding** Voc/Tech

A course to develop skills in the gas tungsten arc welding process using mild steel, stainless steel and aluminum.

**WELD497** 2-0-4-0-0  
**Advanced Shielded Met Arc Welding I** Voc/Tech

Skills will be developed in welding and testing vee groove joints in the flat and horizontal positions. PREREQUISITE: WELD488

**WELD498** 3-0-6-0-0  
**Advanced Shielded Met Arc Welding II** Voc/Tech

Skills will be developed in welding and testing in the

vertical and overhead positions. PREREQUISITE: WELD497

**WELD499** 3-1-4-0-0  
**Intro-Shielded Met Arc Pipe Welding** Voc/Tech

Welding practice and testing on open groove plate weldments in the 1G, 2G, 3G, and 4G positions, and, as time permits, on pipe weldments in the 2G, 5G, and 6G positions. PREREQUISITE: WELD498

**WWAR302** 2-2-0-0-0  
**Intro To Wastewater Treatment** Voc/Tech

An overview of wastewater treatment operations. Includes purposes, processes, wastewater collection, manholes and first aid. For those wanting a general but thorough knowledge of wastewater.

**WWAR303** 2-2-0-0-0  
**Lagoons** Voc/Tech

Treatment of stabilization ponds with problems and solutions, chemical additions, maintenance procedures and safety.

**WWAR374** 1-1-0-0-0  
**Seminar Topics I** Voc/Tech

For those who attend short-term sessions which are directly related to wastewater treatment and desire college credit. Registration times and evaluation criteria must be agreed upon prior to seminar attendance.

**WWAR375** 1-1-0-0-0  
**Seminar Topics II** Voc/Tech

See WWAR 374

**WWAR376** 1-1-0-0-0  
**Seminar Topics III** Voc/Tech





# FACULTY/PROFESSIONAL STAFF

- ADAMS, JOAN (1973), Nursing, R.N., Philadelphia College of Osteopathy Nursing School; Elizabethtown College; B.S., College of St. Francis; M.A., Goddard College.
- ADHAV, JAGDEESH (1979), English, B.A., University of Poona; M.A., Drake University.
- ALBERTS, MARK (1983), Math, B.S., Northwest Missouri State; M.S., Western Illinois University; Iowa State University.
- ALBERTSON, MARCIA (1974), Lab Assistant, Office Occupations, B.A., University of Northern Iowa.
- ALBRECHT, L. LYNN (1974), Dean Student Services, B.S., M.A., University of Iowa.
- ALEXANDER, C.J. (1978), Chemistry, B.Sc., M.Sc., Madras Christian College, South India; M.S., University of Minnesota; Ph.D., University of New Orleans.
- ALLEN, CONNIE (1969), Benefits Officer, Human Resources.
- ALLEY, LOUIS W. (1974), Chairperson, Leisure Studies, B.S., M.A., University of Iowa.
- AMDAHL, MAYNARD E. (1978), Tool & Die, Diploma, Dunwoody Industrial Institute; Certificate, U.S. Department of Labor Journeyman Tool & Die Maker.
- ANDERSON, DUANE (1972), Horticulture, B.S., Colorado State A and M; M.S., Colorado State University; University of Wyoming; University of Northern Iowa, Iowa State University; Drake University.
- ANDERSON, EVELYN (1972), Counselor, B.S., Mount Mercy College; M.S.E., Drake University.
- ANDERSON, LARRY J. (1981), Accounting, C.M.A., A.S., Fort Dodge Community College; B.S.B.A., M.B.A., Drake University; University of Northern Iowa; Iowa State University; University of Iowa.
- ANDERSON, M. ROBERT (1967), Chairperson, Machine Drafting, B.S., Iowa State University; M.A., Colorado State College.
- ANDERSON, NANCY L. (1986), Coordinator/Instructor, Dental Assisting, B.A., Buena Vista College.
- ANDERSON, ROBERT L. (1974), Hospitality Careers, A.O.S., Culinary Institute of America; Mankato Area Vocational-Technical Institute.
- ANDREWS-PITZ, JANE (1973), Coordinator, Learning Assistance Projects, B.A., University of Northern Iowa; M.S., Iowa State University; Drake University; Appalachian State University.
- ARBuckle, JOHN (1969), Electronics, A.A.S., B.S., M.S., Iowa State University.
- AURELIUS, RUTH (1970), Speech, B.A., M.A., University of Iowa.
- BAILEY, JOANN (1979), Employment Officer, Human Resources, A.A., Kirkwood Community College; Drake University.
- BARDO, LAURA T. (1986), Coordinator, Student Activities, B.A., Western Michigan University.
- BAUGOUS, CHARLES (1968), Director, Community Services, B.S., Upper Iowa University; M.A., University of Iowa; Drake University.
- BECK, THOMAS (1970), Social Science, Political Science, B.A., M.A., Wartburg College; University of Northern Iowa.
- BENGTSON, LEONARD (1967), Manager, Research, Planning & Reporting, B.S., M.S., Iowa State University; University of Iowa.
- BENNETT, CARROLL (1967), Dean, Business/Management, B.S.C., M.A., University of Iowa; Iowa State University; University of Northern Iowa.
- BENNETT, JAMES S. (1980), Data Processing, B.S., Northwest Missouri State University; A.A., Des Moines Area Community College; Iowa State University.
- BENNETT, VIRGINIA C. (1984), Music, B.M.E., M.M.E., Drake University; University of Iowa.
- BERGE, WILLIAM (1970), English, B.A., M.A., University of Iowa.
- BILSTAD, MARY H. (1969), Educational Advisor, B.S., Iowa State University.
- BINER, WILLARD (1969), Automotive, B.E., Colorado State University.
- BLACK, WINSTON JR. (1984), Associate Dean, Urban Campus, B.S.E., Arkansas State University; M.S.E., Drake University.
- BOLDT, EUGENE (1969), Manager, Human Resources, B.A., University of Iowa; M.B.A., Drake University.
- BORTH, CONNIE J. (1982), Nursing, B.S.N., Creighton University; M.S.N., University of Nebraska Medical Center.
- BORGEN, JOSEPH A. (1981), President, B.S., M.S., Stout State University; Ph.D., University of Illinois.
- BOWDRE, LEONARD E. (1984), Electronics Maintenance, Certified by International Society of Certified Electronic Technicians (ISCET); U.S. Army Signal Corps; Iowa State University.
- BRANDMEYER, VIVIAN (1974), Office Occupations, B.A., University of Northern Iowa.
- BROWN, GEORGIA K. (1970), Learning Center, B.A., Simpson; Drake University.
- BROWN, JOANNE H. (1978), Dean, Public and Human Services, B.S., Northwestern University; M.A.-D.A., Drake University; University of Iowa.
- BROWN, JOYCE (1970), Counselor, B.A., M.S.E., Drake University.
- BROWN, KENNETH O. (1980), Director, Plant Operations Maintenance, B.A., Washington University.
- BURDICK, MARILYN (1971), Counselor, B.S., M.S., Iowa State University; Drake University; University of Iowa.
- CAMPBELL, LAUREL (1975), Office Occupations, B.S., Black Hills State College.
- CAREW, MARIAN L. (1980), Fashion Merchandising, A.A.S., Kirkwood Community College.
- CARPENTER, RICHARD (1973), Automotive, Iowa State University; Industry Service Schools.
- CARSON, LINDA A. (1972), Child Development, Developmental Disabilities, B.S., M.S., Iowa State University.
- CHACKO, SANDRA J. (1980), Nursing, R.N., Iowa Lutheran Hospital School of Nursing; B.S.N., M.A., University of Iowa.
- CHALUP, CLAIRE (1973), Banking, B.S., Iowa State University; University of Wisconsin.
- CHAPMAN, RICHARD (1970), English, B.A., M.A., University of Iowa.
- CLAASSEN, ALAN D. (1983), Learning Center, A.A., B.A., University of Northern Iowa.
- CLARK, JEAN (1971), Office Occupations, B.A., Parsons College; M.A., Northeast Missouri University; University of Northern Iowa.
- CLARK, KENNETH (1971), Counselor, B.S.E., M.S.E., Drake University; Montana University.
- CLAUSON, LARRY (1974), Counselor, B.A., University of Northern Iowa; M.S., Drake University; University of Iowa; Iowa State University.
- CLINKENBEARD, THEODORE (1969), Mathematics, B.A., Yankton College; M.A., University of South Dakota.
- CLUPPER, BEATRICE (1983), Chairperson, Communications & Humanities, B.A., M.A., University of Iowa; Ph.D., University of Illinois.
- COLE, VALERIE (1979), Coordinator, Student Records & Enrollment Services, College of Further Education, Birmingham, England.
- COLLIER, KENNETH (1971), Welding, Des Moines Area Community College; Iowa State University.
- CORDES, CYNTHIA (1983), English, B.A., M.A., University of Northern Iowa.
- CORWIN, DEBORAH K. (1972), Coordinator, Student Financial Aid, Des Moines Area Community College; University of Minnesota.
- CORWIN, MARILYN K. (1984), Dental Hygiene, B.A., University of Iowa.
- CORY, CYNTHIA (1980), Nursing, B.S.N., University of Iowa.
- COWMAN, RICK D. (1975), Chairperson, Welding.
- COX, PATRICIA J. (1983), Nursing, A.A., B.S.N., Grand View College.
- CRALL, KATHLEEN (1983), Business/Management, B.S., University of Northern Iowa; M.A., Colorado State University; University of Wisconsin-Superior; Drake University; University of Iowa.
- CUSTER, HARRIETT (1972), Learning Center, B.A., Wm. Penn College; M.A., Drake University; Iowa State University.
- CUTLIP, MARGARET (1969), Training Consultant, Economic Development Group, B.S., West Virginia University.
- DAEHLER, JEANNETTE M. (1986), Medical Laboratory Technician, B.S., Iowa State University.
- DALLY, JUDITH (1973), Child Development, B.S., Iowa State University.
- DARLING, DAVID A. (1985), Computer Science, B.A., University of Northern Iowa.
- DETRICK, ANITA (1978), Nursing, R.N., Iowa Lutheran Hospital School of Nursing.
- DELANEY, MICHAEL (1972), Sociology, B.A., St. Joseph's College, M.A., Sociology, Northern Illinois University.
- DeVRIES, RUTH M. (1982), Accounting, B.S., M.S., Drake University.
- DINSMORE, DORIS M. (1986), Consultant, ABE Cooperative and Volunteer Programs, B.S., St. Louis University; M.A., St. Xavier College.
- DIXON, MICHAEL (1976), Coordinator, College Publications, B.A., Drake University.
- DOBBINS, WILLIS (1970), Learning Center, B.S.E., Drake University; Northern Illinois University; Drake University; Grand View College.
- DOIDGE, MARY A. (1986), Child Development, B.S., Iowa State University.
- DORAN, JOHN M. (1980), Mathematics, B.A., University of Northern Iowa; M.A., San Diego State University.
- DOWIS, JAMES (1986), Data Processing, B.S., M.S.E., Drake University; Milwaukee Institute of Technology; Iowa State University.
- DOWNING, DIANNE (1982), Coordinator, Publicity, A.A., Des Moines Area Community College; Iowa State University.
- DOYLE, JUDITH (1974), Nursing, Diploma, West Suburban Hospital; Cedarville College; Marycrest College; B.S.N., University of Dubuque; M.S.N., University of Minnesota.
- DRINNIN, BEVERLY (1983), Psychology, B.S., M.Ed., University of Illinois.
- DUNSMORE, THOMAS (1968), Chairperson, Electronics Technology, Electronics Maintenance, USAF Communication & Radar School; Iowa State University; Boone Junior College; Centerville Junior College; University of Northern Iowa.
- EAST, PATRICIA A. (1985), Educational Advisor, Associate of Business, American Institute of Business.
- ENGSTROM, CARL (1981), Heavy Equipment Technology, University of Iowa; Iowa State University; University of Northern Iowa.
- ESBECK, DAVID M. (1985), Library Technician, B.A., M.A., University of Iowa.
- EVERETT, CARLETON S. (1975), Marketing, B.M.E., M.S., Cornell University.
- FAIRBANKS, TERRY (1975), Criminal Justice, A.A.S., Hawkeye Institute of Technology; B.A., Wartburg College; M.A., Central Missouri State University.
- FARIDI, FIROUZ A. (1985), Math/Science, B.A., M.A., University of Northern Iowa.
- FERGUSON, ANITA M. (1975), Medical-Surgical Nursing, Diploma, Michael Reese Hospital School of Nursing; B.S.N., Indiana University; M.S., Drake University.
- FINNESTAD, RICHARD (1971), Coordinator, Student Services, B.A., Buena Vista College; M.A., University of Northern Colorado; University of Montana; Drake University; University of Northern Iowa.
- FORTNER, DOLORES (1973), Chairperson, Office Occupations, C.P.S., B.S., Drake University.
- FREIER, RONALD (1975), English, B.S., Southern State College; M.A., University of South Dakota; University of Nebraska; Iowa State University; University of Northern Iowa.
- FRETTE, LLOYD (1969), Auto Body, Iowa State University; Des Moines Tech School.
- FRISBIE, JANET (1970), Nursing, R.N., Methodist Hospital School of Nursing, Sioux City; B.S.N., University of Dubuque.
- GAINES, PEGGY (1972), Learning Center, A.A., Des Moines Area Community College; B.S.E., graduate work Drake University.
- GARVEY, PATRICK (1974), Chemistry, B.S., DePaul University; M.S., Iowa State University.
- GEORGE, KERRY (RRT) (1977), Chairperson, Respiratory Therapy, B.S., University of Illinois; University of Chicago Hospital and Clinic Schools, Iowa State University.
- GHANATABADI, JOLYNE L. (1973), Office Occupations, B.S., M.S., Drake University; University of Northern Iowa; Iowa State University.
- GIBBONS, SUE A. (1977), Training Consultant, Economic Development Group, Conference Center, B.S., University of Missouri; University of Southern Illinois; Iowa State University.
- GIUDICISSI, RICHARD (1980), Management and Marketing, B.B.A., University of Iowa.
- GLENN, KAREN R. (1986), Lab Assistant, Child Care, A.S., Des Moines Area Community College.
- GRATTAN, HELEN G. (1985), Office Occupations, M.A., Andrews University, Michigan.
- GRAVES, LINDA S. (1986), Training Consultant, Economic Development Group, B.A., University of Iowa.
- GREEN, MARY JANE (1985), Office Occupations, B.A., Buena Vista College.
- GRIMM, CAROL (1982), Counselor, Developmental Studies, B.A., Quincy College; M.Ed., University of Illinois; Iowa State University.
- HAGER, TIMOTHY J. (1985), Director of Purchasing & Campus Services, B.A., Cedarville College; M.S., Iowa State University.
- HAINES, WAYNE R. (1968), Executive Director, Golden Circle, Incubator, B.S., Iowa State University; Rutgers-Stonier School.
- HALVERSON, PATRICIA (1978), Chairperson, Learning Center, M.S., Illinois State University; B.S., University of South Dakota.
- HAMANN, RICHARD (1977), Accounting, B.S., Mankato State College; University of Iowa.
- HANN, BRUCE (1969), English, B.A., Simpson College; M.A., University of New Mexico; Ed.S., Drake University.
- HANN, SHARON (1983), Art, B.A., University of Northern Iowa; M.A., University of New Mexico.
- HANSEN, DENNIS (1973), Related Instruction, B.B.A., University of Iowa.
- HANSON, NOLA J. (1980), Office Occupations, B.S., Drake University; University of Northern Iowa.
- HARPER, JOSEPH B. (1985), FARM/CAP Director; Instructor, Agri-Business, B.S., M.S., Iowa State University.
- HARRIS, JOHN R. (1981), Heavy Equipment Technology, Vocational Certified; Iowa State University.
- HARRIS, RUDOLPH (1972), Sociology, B.A., Bemidji State University; M.A., University of South Dakota; University of North Dakota; Howard University; Iowa State University.
- HARTOGH, ANNJEAN M. (1984), Laboratory Assistant, Science, A.A., Elsworth Community College; B.A., St. Mary's College.
- HAVENS, ROY D. (1979), Auto Mechanics, Des Moines Area Community College; Northwest Missouri State University.
- HEDLUND, ROSEMARY (1973), Hospitality Careers, B.S., Iowa State University.
- HENDRICK, WILLIAM (1979), Auto Mechanics, A.A.S., Des Moines Area Community College.
- HENRICH, MARTHA (1980), Lab Assistant, Paralegal, A.A., Des Moines Area Community College; B.A., University of Northern Iowa.
- HENRY, BETTY J. (1970), Learning Center, B.S., Jarris Christian College.
- HENRY, C. DEAN (1986), Diesel Equipment Mechanics, B.S., Iowa State University; Drake University.
- HEUER, KAREN K. (1976), Fashion Merchandising, B.S., Iowa State University.
- HEYSINGER, SUE (1986), Counselor, B.A., American University; M.A., University of Iowa.
- HILDRETH, CAROLYN J. (1986), Campus Nurse, R.N., Iowa Lutheran Hospital School of Nursing; Grandview College.
- HILDRETH, THOMAS G. (1985), High Tech Biomedical, B.M.E.T., United Electronics Institute; McPherson College; University of Iowa; Iowa State University.
- HILGERS, DANIEL (1983), Distributive Education, Office Occupations, B.S., Moorhead State University; Business/Management, M.S., Emporia State University.
- HILL, CURTIS (1983), Computer Science, B.S., University of Iowa; M.S., University of Nebraska.
- HILL, JOHN (1974), Electronics, Grand View College; Morningside College; Iowa State University; United States Navy Schools.
- HOFFERBER, BARBARA A. (1987), Nursing, B.S., R.N., Fort Hays Kansas State College; M.N., Wichita State University.
- HOLMES, PATRICIA H. (1972), Accounting, B.A., Simpson College; M.A., Iowa State University; Des Moines Area Community College; Drake University; University of Iowa; Iowa State University; New York University.
- HOSHAW, BRENDA L. (1986), Nursing, B.S.N., Grandview College.
- HOTOPP, DENISE I. (1986), Coordinator, Project Self-sufficiency, M.S., University of Nebraska at Omaha; B.S., Iowa State University; A.A., Marshalltown Community College.
- HOY, DONALD A. (1986), Business Law, B.S., Iowa State University; J.D., University of Iowa.
- HUGHES, LARRY W. (1977), Physical Education, B.S., Drake University; M.S., University of Missouri.
- IRWIN, DONALD (1974), Psychology, B.S., M.S., Ph.D., Iowa State University.
- JANSEN, ROBERT (1974), Learning Center, B.A., Simpson College; Colorado State College; M.G.S., Drake University.
- JINKINSON, JANE (1974), Dental Hygiene, B.A., M.A., University of Iowa.
- JOHNSON, DOLORES (1970), Chairperson, Commercial and Advertising Art, Drake University; B.S., Iowa State University.
- JOHNSON, FAYE E. (1983), Educational Advisor, B.A., University of Northern Iowa.
- JOHNSON, HAROLD (1969), Biological Science, Athletic Director, A.A., Emmetsburg Junior College; B.S., M.E., University of South Dakota; South Dakota State College; Iowa State University; University of Oklahoma.
- JOHNSON, KENNETH (1973), Hospitality Careers, Iowa State University; Drake University; Wayne University; Western Illinois University; Armed Forces Schools.
- JOHNSON, ROSALEA (1974), Chairperson, Human Services, B.A., Berea College; M.S., University of Kentucky; Colorado State University; Iowa State University; University of Iowa.
- JOHNSON, WILLIAM (1967), Director, A.B.E., G.E.D./H.S. Completion, B.M., M.M., Drake University; University of Iowa.
- JORGENSEN, FRANK (1975), Automotive, B.A., Northwest Missouri State University.
- KEEFE, EDWARD (1971), Data Processing/Computer Science, B.A., St. Ambrose College; M.A., University of Iowa.
- KERR, DONALD (1969), Dean, Evening/Weekend College, B.A., Wm. Penn College; M.A., Northeast Missouri State University.
- KEUL, RALPH (1969), Data Processing, B.S., Drake University; M.S., Ph.D., Iowa State University.
- KLINKER, JANET R. (1979), Office Occupations, B.S., Drake University.
- KNORR, LOUANN V. (1985), Office Occupations, B.A., Concordia College; Moorhead State University; Bemidji State University.
- KNUTSEN, MONNA M. (1986), Instructor/Program Advisor, Medical Secretary Program, B.A., University of Northern Iowa.
- KONOPKA, DEL N. (1987), Nursing, B.S., Bradley University; M.S., Northern Illinois University.
- KRAGENBRINK, MELODY (1987), Director, Project Training, Economic Development Group, B.S., Northeast Missouri State University; M.A., University of Iowa.
- LEE, WILLIAM (1974), Data Processing, B.S., Iowa State University; Drake University; Grand View College.
- LEGGETT, SANDRA K. (1981), Chairperson, Dental Hygiene, R.D.H., University of Iowa; B.G.S., Drake University; M.A., University of Northern Iowa.
- LEISY, PATRICIA S. (1986), Respiratory Therapy, A.A.S., S.U.N.Y. Upstate Medical Center; B.S., University of Central Florida.
- LENIHAN, VICKIE L. (1986), Nursing, B.S.N., Grandview College.
- LIEPA, JOHN (1971), Social Science, History/Political Science, B.S., M.A., Iowa State University.
- LINDUSKA, KIM J. (1981), Coordinator, Project STRIVE, B.A., Augustana College; M.S., Iowa State University.
- LOFTUS, VIRGINIA L. (1985), Executive Director, District Administration, A.A., Springfield College; B.A., University of Illinois; M.P.A., Sangamon State University; Ph.D., Illinois State University.
- LONSDALE, MARY (1977), Coordinator, Foundation and Alumni Affairs.
- LOSS, FLORENCE (1974), Psychology, B.S., B.A., M.S., Creighton University; Ed.D., Drake University.



# FACULTY/PROFESSIONAL STAFF

LUCAS, CYNTHIA C. (1987), Nursing, B.A., Central College; M.Ed., East Carolina University; B.S.N., Grandview College.

LUIKEN, NORMAN (1972), Director, Experimental & New Program Development, B.S., Iowa State University; Long Beach City College; Iowa State University.

MANN, ROBERT S. (1975), Reading Specialist, B.A., M.A., Ed.S., University of Iowa.

MANNING, JERRY (1967), Chairperson, Marketing, B.S., Bemidji State College; M.S., Drake University.

MARLOW, JERRY (1974), Electronics, B.A., University of Northern Iowa.

MARMON, JAMES (1961), GM Technical Training Instructor, A.A.S., Des Moines Area Community College.

MARTEN, DENNIS (1967), Office Occupations, B.A., Buena Vista College; Drake University; University of Iowa; Northeast Missouri State University.

MASTROFSKI, JACK (1971), Commercial and Advertising Art, B.F.A., Drake University.

MATHIAS, PATRICK W. (1985), Composition/Technical Writing, B.A., M.A., Mankato State University, Moraine Valley Community College.

MAYNARD, LYLE (1977), Developmental Disabilities, B.S., M.S., Ph.D., Iowa State University; University of Northern Iowa.

McFARLIN, CHARLES H. (1986), Director, Automotive Education & Training, ASEP Coordinator, B.S., University of Minnesota.

McNAIR, R. LEE (1982), Sociology and Anthropology, B.A., M.A., University of Missouri-Columbia.

McNALLY, MARY K. (1974), Training Consultant, Economic Development Group, B.S., R.N., College of St. Francis, Joliet, Illinois; Mt. Mercy College.

MEREDITH, SHARON K. (1984), Resource Instructor, STRIVE, B.A., University of Iowa; Wm. Penn College.

MESSERSMITH, DIANA (1973), Librarian, B.A., University of Northern Iowa; M.A., University of Iowa.

MEYER, BARBARA (1970), Counselor, B.S., Iowa State University; M.S.E., Drake University.

MIDDENDORF, CHERYL (1975), Nursing, B.S., Kearney State College; St. Joseph Hospital School of Nursing.

MILLER, LLOYD (1970), Anthropology and Spanish, B.A., M.A., University of Wisconsin; University of Veracruz, Mexico; University of Rio Grande do Sul, Brazil; University of Florida; Iowa State University.

MOTDLAND, OLE (1967), Automotive, Industry Service Schools; Iowa State University; U.S. Air Force Schools; Drake University.

MOOREHEAD, RUSSELL P. (1984), Marketing, B.A., Marketing and Distributive Education; B.A., University of Northern Iowa.

MOSKUS, JERRY R. (1985), Executive Vice President, Educational Services, B.S., M.S., Ph.D., Illinois State University; Sangamon State University; University of Illinois.

MOSMAN, MICHELLE (1980), Learning Center/Mathematics, A.A., Grand View College; B.S., Iowa State University; M.S., Drake University.

MUEHLTHALER, SHIRLEY (1967), Chairperson, Medical Assistant, R.N., Iowa Lutheran School of Nursing; Boone Junior College; Iowa State University; Grand View College; B.A., Stephens College.

MUELLER, KAY E. (1985), Speech and Theatre, B.A., Iowa State University; M.A., Purdue.

MYERS, DOUGLAS (1982), Data Processing, A.A., Iowa Central; B.S., University of South Dakota; M.S., Mankato State University.

NEAL, WAYNE (1976), Training Consultant, Economic Development Group, B.A., University of Northern Iowa; Drake University.

NELSON, BONNIE (1970), Nursing, R.N., Virginia Mason Hospital School of Nursing; Seattle University; University of Washington; Iowa State University.

NELSON, GARY M. (1975), Ecology/Zoology, B.S., M.A., St. Cloud State University.

NELSON, JOYCE (1974), Staff Assistant, Economic Development Group, A.A., Des Moines Area Community College; B.S., Upper Iowa University; Iowa State University.

NELSON, TOM (1975), Director, Community & College Relations, B.S., Black Hills State College; M.S., University of Utah; Iowa State University.

NIELSEN, LORI J. (1985), English, M.A., Iowa State University; B.A., Dana College.

NORING, VERLYN M. (1985), Chairperson, Business Administration, B.A., M.A., University of Northern Iowa.

OCKEN, SCOTT J. (1985), Automotive, Certificate, Des Moines Area Community College; General Motors.

O'REILLY, FAITH (1985), Chairperson, Legal Assistant, B.S., Western Carolina University; J.D., Drake Law School.

PALMER, DAVID L. (1970), History, B.A., Grinnell College; M.A., University of Iowa.

PATEL, PANKAJKUMAR S. (1986), Lab Assistant, Hi Tech Electronics, A.V.P.I.I., Rajkol, India.

PECKUMN, JOSEPHINE (1969), Lab Assistant, Office Occupations.

PERRY, MICHAEL (1971), Counselor, B.S., M.S., Iowa State University; University of Iowa; University of Northern Iowa; Drake University; Northeast Missouri State University.

PETERSEN, G. SHIRLEY (1979), Librarian, B.A., University of Northern Iowa; M.L.S., University of Hawaii-Manoa.

PETERSON, THOMAS D. (1979), Chairperson, Architectural Drafting, B.S., Idaho State University.

PHARES, THERESE (1976), Data Processing, B.S., M.S., Iowa State University.

PHILIPS, KRIS (1974), Dean, Boone Campus, B.S., M.A., Northeast Missouri State University; University of Iowa; University of Utah; Drake University; Iowa State University.

PITTMAN, DAYNA L. (1985), English, B.A., Northeast Missouri State University; M.A., NMSU.

POGGE, MARK (1979), Director, Media Services, B.A., University of Iowa.

POWERS, DOLORES B. (SUNNY) (1976), Learning Center, English, B.S., M.A., Iowa State University.

PRAGER, HENRY J., C.P.A. (1979), Business Administration, A.A., Graceland College; B.S.B.A., Northwestern University; M.A., Drake University; Ed.D., Northern Illinois University.

PRATT, EWA J. (1983), English As A Second Language, B.A., M.A., Adam Mickiewicz University - Poland.

PRIESTLEY, RUSSELL (1971), Secretarial-Clerical, B.S., Kansas State Teachers College; M.S., Colorado State College; Kansas State College; University of Northern Iowa.

PUTZIER, BRIAN (1983), High Technology, Mankato Area Vocational Technical Institute; DEC Disk Drive School; DEC Processor School; Sperry Processor Schools.

RAGNER, DAVID E. (1982), Chairperson, Conditioned Air Program, University of Wisconsin; Iowa State University.

RAYMOND, ROGER A. (1979), Manager, Data Services, B.A., M.A., University of South Dakota.

REDDING, CARL (1977), Accounting, B.S., Drake University.

REES, MERRILL (1969), Director, Library, B.A., Drake University; M.Ed., University of Iowa.

RHOADS, SANDRA L. (1985), Lab Assistant, Child Care, A.A., Des Moines Area Community College; B.A., University of Northern Iowa.

RICHARDSON, RALPH R. (1960), Auto Mechanics, Des Moines Tech. GI Training; Industry Certificates; Specialized Areas, Chrysler, GM, AMC.

ROBINSON, JON (1970), Related Education, B.A., Drake University; Iowa State University; University of Minnesota.

ROSS, KENNETH J. (1979), Agricultural Equipment Technology, B.S.I.T., Pittsburg State University.

ROWE, GORDON (1974), Training Consultant, Economic Development Group, B.A., University of Northern Iowa; University of California, California State College.

ROWE, MARGARET (1967), Chairperson, Medical Laboratory Technician, University of Iowa; M.T. (ASCP) Iowa Methodist Hospital; Northwest Institute of Medical Technology; Drake University; Iowa State University; Colorado State University.

RYAN, BILL (1969), Science, A.B., Indiana University; M.A., University of Northern Iowa; Drake University; North Dakota State University; North Carolina State University; University of Wisconsin; University of New Mexico; University of Oklahoma.

SARTAIN, HAROLD (1971), Speech, English, B.S., M.A., University of Minnesota.

SAVILLE, LARRY D. (1970), Business Administration, B.S., Northwest Missouri State University; M.Ed., University of Missouri.

SAWYER, TOM (1967), Producer Director, B.S., Iowa State University.

SAYLOR, COLLETTE (1983), Training Consultant, Economic Development Group, B.A., M.P.A., Drake University.

SCHIEFFER, WILLIAM (1975), Lab Assistant, Building Trades.

SCHODDE, ANN L. (1985), Vice President, Development Services, B.A., University of Wisconsin; M.Ed., Cornell University.

SCHREURS, CHRISTIAN (1973), Coordinator, Recreation/Convocations, B.A., Wayne State College; Iowa State University.

SCIARROTTA, SHERRI (1986), Lab Assistant, Child Care, A.S., Des Moines Area Community College.

SCOVILLE, LEWIS (1969), Diesel Mechanics, Nebraska Vocational Technical School; University of Omaha, Iowa State University.

SCROGGS, RICHARD (1971), Printing.

SELIGER, RICHARD (1974), Chairperson, Tool & Die, Iowa State University.

SHEAFF, JAMES (1974), Criminal Justice, B.A., Creighton University; M.A., Boston University; University of Nebraska.

SHEETS, JUDITH (1983), Dental Radiology, A.A., Iowa Central Community College, Certificate in Radiology.

SHLAES, BEN (1968), Chairperson, Bookkeeping-Accounting, Accounting Specialist Program, C.P.A., B.S.C., University of Iowa; M.B.A., Drake University; Iowa State University; University of Northern Iowa; Augustana College; Des Moines Area Community College.

SHRIVER, BURGESS, II (1970), Dean, Health Services and Sciences, B.S., University of Oklahoma; M.S., Iowa State University.

SILBERHORN, GEORGE (1972), Counselor, A.A., Muscatine Community College; B.S.E., M.S.E., Drake University; Iowa State University.

SILBERHORN, VIRGINIA A. (1987), Learning Center, B.S., Iowa State University.

SILVER, RICHARD, SR. (1976), Tool & Die, Iowa State University, University of Northern Iowa, Des Moines Area Community College.

SIMONS, JANET (1976), Psychology, B.A., Wittenberg University; M.S., Ph.D., Iowa State University.

SMALL, SHARON (1983), English, B.A., M.A., Iowa State University.

SMART, CHARLES (1973), Chairperson, Upholstery, Iowa State University; Des Moines Area Community College.

SMITH, CURT (1977), Lab Assistant, Auto Parts, Ford Marketing Institute; Iowa State University.

SMITH, JAYNE M. (1985), Librarian, B.A., University of Northern Iowa; M.A., University of South Dakota.

SMITH, JOHN (1969), Business Administration, B.S., Southern State College; M.A., Colorado State College; University of South Dakota; University of Minnesota; Northern State College; University of Northern Colorado.

SMITH, VERLE (1976), Auto Mechanics.

SPENCER, CAROL J. (1985), Dean, Industrial & Technical, B.S., M.A., University of Nebraska; Ohio State University.

STASKO, GARY F. (1986), Director, Holst Farm Management Institute, Economics/Business, B.S., M.S., Iowa State University.

STEINBERG, IRV (1966), Controller, B.S., Auburn University.

STICK, JR. JAMES W. (1984), English, B.A., M.A., University of Iowa.

STILES, BETTY A. (1983), Office Occupations, A.A., Des Moines Area Community College; B.S., Drake University.

STOCK, KATHRYN (1970), Nursing, R.N., Mercy Hospital School of Nursing; B.S.N., University of Dubuque.

STROM, BYRON M. (1975), Chemistry, B.S., Sioux Falls College; M.S., Iowa State University.

SUBY, ALLEN (1968), Training Consultant, Economic Development Group, B.S., M.S., Iowa State University.

SUFKA, PAMELA L. (1982), Lab Assistant, Computer Laboratories, A.A.S., Des Moines Area Community College.

TAYLOR, ROBERT (1973), Chairperson, Diesel Equipment Mechanics/Ag Equipment Tech, Iowa State University; Des Moines Area Community College.

TAYLOR, W. ROBERT (1984), Psychology, B.A., Nebraska State Teachers College; M.A., Colorado State College; Ed.D., University of Northern Colorado.

THORSHEIM, RUDOLPH (1973), Agri-Business, A.A., Waldorf College; B.S., Iowa State University; University of Northern Iowa.

THORNTON, DOROTHY (1974), Educational/Placement Advisor.

TOMES, CYNTHIA (1975), Business/Management, A.A., Southwestern Community College; B.S., University of Northwest Missouri; M.B.A., Drake University.

TRIEFF, RICHARD T. (1985), Economics, B.A., Simpson College; M.S., Iowa State University.

TROTTER, WILLIAM L. (1986), Biology, B.A., M.A., Drake University.

TROWER, RON D. (1984), Ford Motor Company Technician Training, Southwestern Community College.

TRUMPY, FRANKLIN (1972), Physics, B.S., Western Illinois University; M.S., Iowa State University.

TURNER, THOMAS (1974), Accounting, B.S., University of Dubuque; University of Northern Iowa; Iowa State University.

TWEDT, ARLEN (1973), Counselor, B.B.A., University of Iowa; M.A.Ed., University of Northern Iowa; Grand View College; Chapman College; Iowa State University; Drake University; Northeast Missouri State University.

TWEDT, JOHN (1980), Building Trades, B.S., Iowa State University.

VAN AST MYERS, PAMELA (1980), Training Consultant, Economic Development Group, A.A., R.N., University of South Dakota; University of Iowa, BLS.

VANDER PLOEG, DIANE (1977), Medical Assistant, Certified Medical Assistant, B.B.A., Iowa State University.

VANDERWILT, DARYL J. (1985), Director, Grants and Contracts, B.A., M.A., Ph.D., University of Iowa.

VANDIVIER, CURT (1972), Executive Dean, Instructional Support Services, B.S., Westmar College; M.S., Iowa State University.

VAN TUYL, SHARON (1973), Educational Advisor/Tutor Coordinator.

VON GRABOW, JOAN (1972), Director of Nursing Education, B.S.N., Ball State University; M.S., Iowa State University.

WADDELL, N. CAROLYN (1987), Dean, Student and Educational Development, B.S., M.S.Ed., East Central State University, Oklahoma; M.A., University of Houston/Clear Lake.

WAGER, SUSAN E. (1976), Chairperson, Practical & Associate Degree Nursing, B.S.N., M.A., University of Iowa.

WAGNER, DALE (1971), Counselor, B.S., M.S., Iowa State University.

WAGNER, RICHARD (1971), History, B.S., Wisconsin State University; M.A., University of Wisconsin; University of Iowa; Iowa State University; Western Illinois University; University of Chicago; University of Colorado.

WALDRON, BARBARA (1977), Nursing, R.N., B.S.N., University of Nebraska.

WALKER, RICHARD W. (1986), Anatomy and Physiology, B.A., University of Iowa; B.S., M.S., Ph.D., Iowa State University.

WESTERGARD, JOANNE E. (1977), Chairperson, Health Care Administration, M.P.H., University of Minnesota; B.A., University of Michigan; Iowa State University; Drake University; University of Iowa; University of Northern Iowa.

WHALEN, JEROLD (1975), Electrical Trades, Knoxville, A.A., Iowa Central; B.A., University of Northern Iowa; Iowa State University.

WIBERG, CURTIS (1972), Philosophy, A.B., Augustana College; M.Div. Lutheran School of Theology; Ph.D., University of Iowa.

WICKHAM, SUSAN (1971), Learning Center, B.A., M.S.E., Drake University.

WILK, MARY BETH (1975), English, Speech, B.A., University of Nebraska; M.A., University of New Mexico; Ph.D., University of Massachusetts.

WILT, MAUREEN G. (1984), STRIVE, B.A., Texas Tech University; M.S., Iowa State University.

WISER, KIM (1982), Administrative Assistant, Educational Services, A.A., Des Moines Area Community College; B.S., Iowa State University.

WISNIESKI, GERALD (1970), Mathematics, B.A., Wayne State College; M.N.S., University of South Dakota; Ph.D., Iowa State University; Ohio State University; University of Chicago.

WOLLASTON, ROBERT B. (1982), Microbiology and Biological Sciences, B.A., St. Vincent College; M.S., Clanton State University; Gannon University; Iowa State University.

WOOD, CHRISTINE (1977), Nursing, A.D., Iowa Central Community College; B.S.N., University of Iowa.

WORLEY, BARBARA W. (1978), Mathematics, B.S., Phillips University; M.S., Butler University.

WRIGHT, NANCY J. (1977), Training Consultant, Economic Development Group, B.S., Ed., Drake University.

WYCKOFF, ALVIN L. (1975), Commercial Horticulture, B.S., M.Ed., University of Missouri.

YARROW, MARVIN D. (1984), Building Trades, Diploma, Nebraska Vocational Technical School.

YOUNG, ROBERT (1973), Accounting Specialist, B.S.B.A., Drake University.

ZEKA, YVONNE F. (1983), Learning Center, B.S., N.W. Missouri State University.

ZUCK, DON (1969), Vice President, Business Services, B.S., Iowa State University; M.B.A., Drake University.



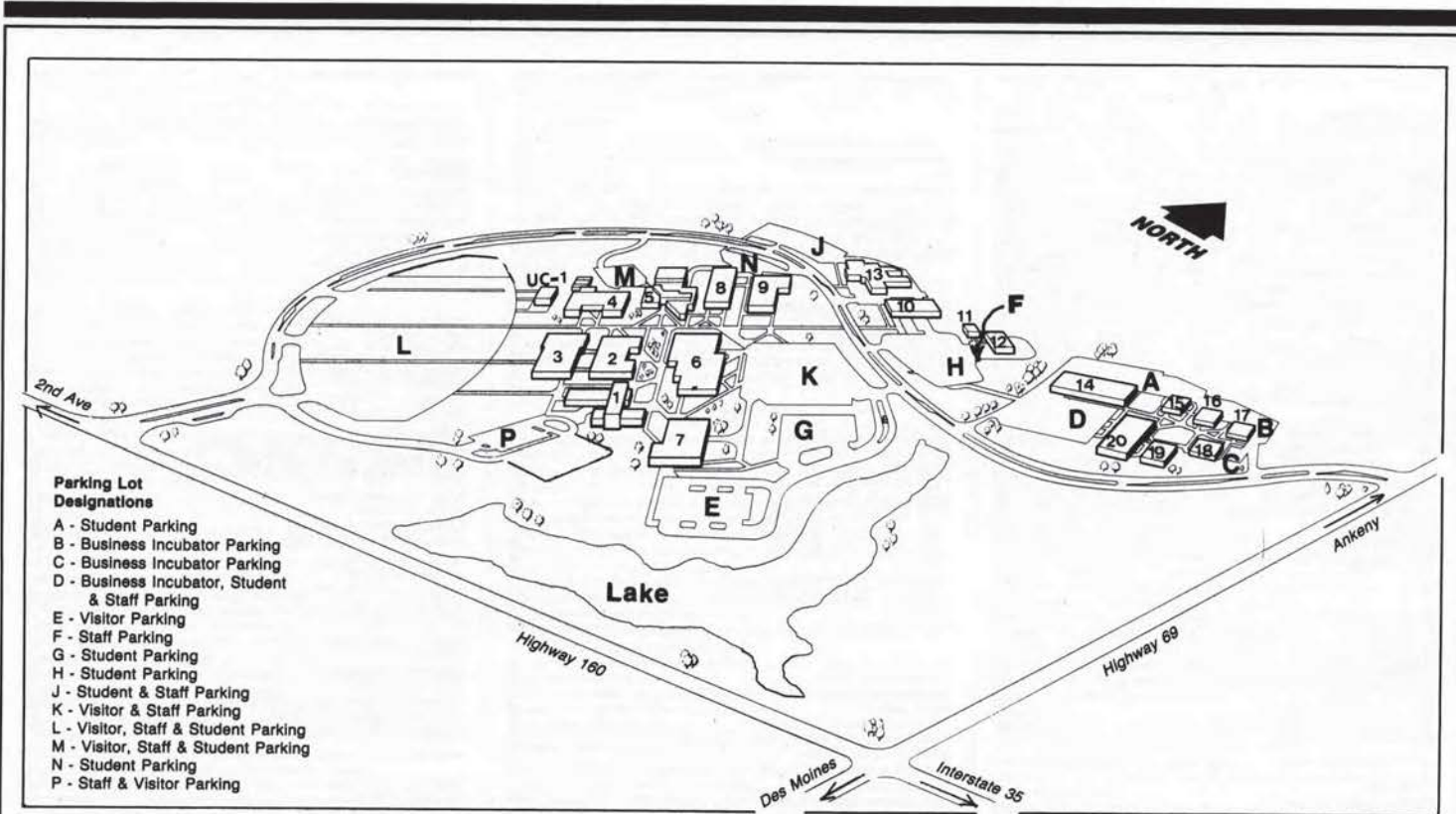


# INDEX

<b>A</b>	Academic Honors.....16	Evening/Weekend College.....4	Purchasing Certificate.....69
	Academic Regulations.....15-18	Executive Assistant.....40	<b>R</b>
	Accounting Advanced Certificate.....64	<b>F</b>	Readmission.....9
	Accounting Basic Certificate.....64	Faculty and Professional Staff.....107	Real Estate Sales Certificate.....69
	Accounting Specialist.....26	Fashion Merchandising.....41	Refund Policy.....11
	Accreditation.....3	Fees.....10	Registration.....8,9
	Adaptor Courses.....20	Financial Aid.....10	Residency Regulations.....8
	Administrative Support.....64	Financial Services.....41	Resident Care Facility Admin.....70
	Admissions.....7-9	Fire Science Technology.....42	Respiratory Therapy.....56
	Admissions Application Form.....111	Fire Specialist.....67	Restaurant Management Preparation.....57
	Adult Basic Education.....20	Food Services.....5	Retail Management.....57
	Adult & Continuing Education.....20	<b>G</b>	Retail Merchandising.....58
	Adult High School Diploma.....21	General Educational Development Test.....18	<b>S</b>
	Adult Learning Centers.....20	General Information.....1-6	Sales and Management.....58
	Agri-Business.....26	Grade Reporting.....15	Scholarships.....10
	Agriculture Equipment Technology.....27	Grading System.....15	Scholastic Standards.....15
	Agriculture Power and Equipment.....27	Graduation.....16	Secretary - Administrative.....59
	Air Brush Art Certificate.....64	Grants.....10	Secretary - Legal.....59
	Alumni Association.....13	<b>H</b>	Secretary - Medical.....60
	Ankeny Campus.....4	Handicapped Students.....13	Selling - Advanced.....70
	Architectural Drafting.....28	Health Care Administration.....42	Selling - Basic.....70
	ASEP-General Motors.....28	Health Services.....12	Servicemembers Opportunity Colleges.....8
	Associate in Applied Arts Degree.....24	High School Equivalency.....21	Small Business Entrepreneurship.....60
	Associate in Applied Science Degree.....24	High School Students.....9	Small Business Management Certificate.....70
	Associate in Arts Degree.....22	High Technology Biomedical.....42	Small Business Startup.....70
	Associate in Science Degree.....23	High Technology Computer.....43	Social Activities.....13
	Auditing a Course.....15	High Technology Robotics.....44	Social Work-Preparation.....61
	Auto Collision Repair.....29	Honors.....16	Specialist Certificate Programs.....25,64-72
	Auto Mechanics Technology.....28	Hospitality Apprenticeship.....44	Sports and Athletics.....13
<b>B</b>	Board of Directors.....1	Hotel and Restaurant Management.....45	Student Accounts.....11
	Bookkeeping & Accounting.....29	Housing.....6	Student Action Board.....12
	Bookstore.....5	Human Services.....46	Student Activities/Services.....12-14
	Boone Campus.....4	<b>I</b>	Student Centers.....12
	Building Maintenance Certificate.....65	Independent Study.....17	Student Classification.....6
	Building Trades.....30	Industrial Management & Marketing.....46	Student Handbook.....13
	Business Administration.....30	Information.....7	Student Identification.....14
	Business Administration-Preparation.....30	Information/Word Processing.....47	Student Records.....13
	Business & Computers.....31	In Progress and Failing Mark Policies.....15	Student Rights & Responsibilities.....14,18
<b>C</b>	Calendar.....2	Instructional Calendar.....6	Supervision/Basic Certificate.....71
	Campus Map (Ankeny).....110	Insurance Sales Certificate.....68	Supplemental Courses.....21
	Campuses.....1,4	International Students.....8	<b>T</b>
	Carroll Campus.....4	International Trade Studies.....47	Table of Contents.....1
	Certificate of Completion.....24	International Trade Studies Certificate.....68	Teacher Associate.....61
	Certificate of Specialization.....24	Intramural Program.....13	Technical Management.....71
	Challenge Testing.....17	<b>J</b>	Telephony.....61
	Changes in Registration.....9	Job Shop Machinist.....48	Telephone Numbers.....2
	Chemical Dependency Counseling.....65	Journalism-Preparation.....48	Tool and Die.....62
	Child Care Specialist.....65	<b>L</b>	Transcript Requests.....17
	Child Development.....31	Labor Studies.....49	Transfer Requirements.....8
	Child Development Associate.....32	Law-Preparation.....49	Transfer Students.....7,19
	Classification of Students.....6	Learning Centers.....5,20	Transferring to Other Institutions.....7
	CLEP.....18	Legal Assistant.....49	Transferring from Military Schools.....8,19
	Clerical.....32	Leisure Studies.....50	Travel Personnel Certificate.....71
	Clerical Specialist.....66	Libraries.....4	Tuition and Fees.....10,11
	Clubs and Organizations.....12	Listing of Programs.....25	<b>U</b>
	College Departments.....4	Loans.....10	Unit of Credit.....6
	College Purpose/Philosophy/History/Accreditation.....3	<b>M</b>	Upholstery.....62,71
	College Transfer.....19	Machine Drafting.....51	Urban Campus.....4
	Commercial Art.....33	Map (Ankeny Campus).....51	U.S.A.F.I.....18
	Commercial Horticulture.....33	Medical Assistant.....51	<b>V</b>
	Computer Language Certificate.....66	Medical Assistant Associate.....52	Veteran's Affairs.....11
	Computer Programming.....34	Medical Laboratory Technician.....53	Veterinary Medicine-Preparation.....63
	Computer Science-Preparation.....35	Medicine-Preparation.....53	Volunteer Management Certificate.....72
	Computer Science Technology.....35	Mid-Management Certificate.....68	<b>W</b>
	Conditioned Air.....35	Money Management Certificate.....68	Ward Clerk Certificate.....72
	Cooperative Education.....21,35	Motor Control Certificate.....68	Waste Water Treatment Operator Certificate.....72
	Coronary Care.....66	<b>N</b>	Water Treatment Operator Certificate.....72
	Counseling, Advising & Placement.....13	Nursing	Welding.....63
	Course Classifications.....21	AD Advanced Standing.....54	Word Processing Certificate.....72
	Course Descriptions.....73-106	ADN.....53	
	Course Identification System.....73	Preparation.....53	
	Credit.....6	PN.....55	
	Credit Union Operations.....66	Nursing, Assistant.....68	
	Criminal Justice.....36	Nursing, Gerontological.....67	
	Culinary Arts.....36	Nursing Home Administrator.....69	
<b>D</b>		<b>O</b>	
	Data Entry Certificate.....66	Occupational Careers.....19	
	Data Processing.....67	Office Management.....55	
	Dean's List.....17	<b>P</b>	
	Degrees.....22	Para-Professional Programs.....19	
	Dental Assistant.....37	Parking.....6	
	Dental Hygiene.....38	Personal Enrichment.....21	
	Dentistry-Preparation.....38	Pharmacy-Preparation.....55	
	Development Disabilities Associate.....39	Phlebotomy Certificate.....69	
	Development Disabilities Diploma.....38	Physician Assistant.....56	
	Diesel Equipment Mechanic.....39	Placement Services.....13	
	Dietary Manager Certificate.....67	President's List.....17	
	Diploma.....24	Printing.....56	
<b>E</b>		Probationary Status.....16	
	Economic Development Group.....4	Production Art Certificate.....69	
	Educational Programs.....26-63	Professional Preparation.....19	
	Electronic Fundamentals.....67	Program Information.....19-25	
	Electronics Maintenance.....40	Public Safety Communication.....69	
	Emergency Medical Technology-Ambulance.....67		
	Employment.....11		
	Engineering-Preparation.....40		



# ANKENY CAMPUS MAP



**Building 1**  
 Administration  
 Business Office  
 College Relations  
 Data Systems  
 Development Services  
 Financial Aids  
 Human Resources  
 Information  
 Registration  
 Student Records

**Building UC-1**  
 Utility Center

**Building 2**  
 Architectural Drafting  
 Criminal Justice  
 English  
 Health Care Admin.  
 Public Service Programs  
 Social Science

**Building 3**  
 Commercial Art  
 Electronics Programs  
 Printing Programs  
 Telephony

**Building 4**  
 Agri-Business  
 Commercial Horticulture

Machine Drafting  
 Math  
 Science

**Building 5**  
 Art  
 Bookstore  
 Counseling, Advising & Placement  
 Game Room  
 Gym  
 Music  
 Snack Bar/Grill  
 Student Activities  
 Student Health Services  
 Student Lounge

**Building 6**  
 Auditorium  
 Copy Room  
 Econ. Development Group  
 Media Services  
 Learning Center  
 Library  
 Marketing  
 STRIVE  
 Word Processing

**Building 7**  
 Conference Center  
 Food Services Programs

**Building 8**  
 Bookkeeping/Accounting  
 Data Entry/Data Processing  
 Office Occupations Programs

**Building 9**  
 Child Care Programs  
 Dental Programs  
 Medical Assistant  
 Medical Laboratory Programs  
 Nursing Programs  
 Respiratory Therapy  
 Surgical Technician

**Building 10**  
 Conditioned Air  
 Job Shop Machinist  
 Tool and Die  
 Welding

**Building 11**  
 Utility Center

**Building 12**  
 Physical Plant Services

**Building 13**  
**Auto Body**  
 Auto Mechanics  
 Auto Mechanics

**Building 14**  
 Agri. Equip. Technology  
 Agri. Power & Equipment  
 Heavy Equip. Technology  
 Upholstery

**Building 15**  
 Business Incubator

**Building 16**  
 Business Incubator

**Building 17**  
 Business Incubator

**Building 18**  
 Business Incubator

**Building 19**  
 Business Incubator

**Building 20**  
 Building Trades  
 Business Incubator











