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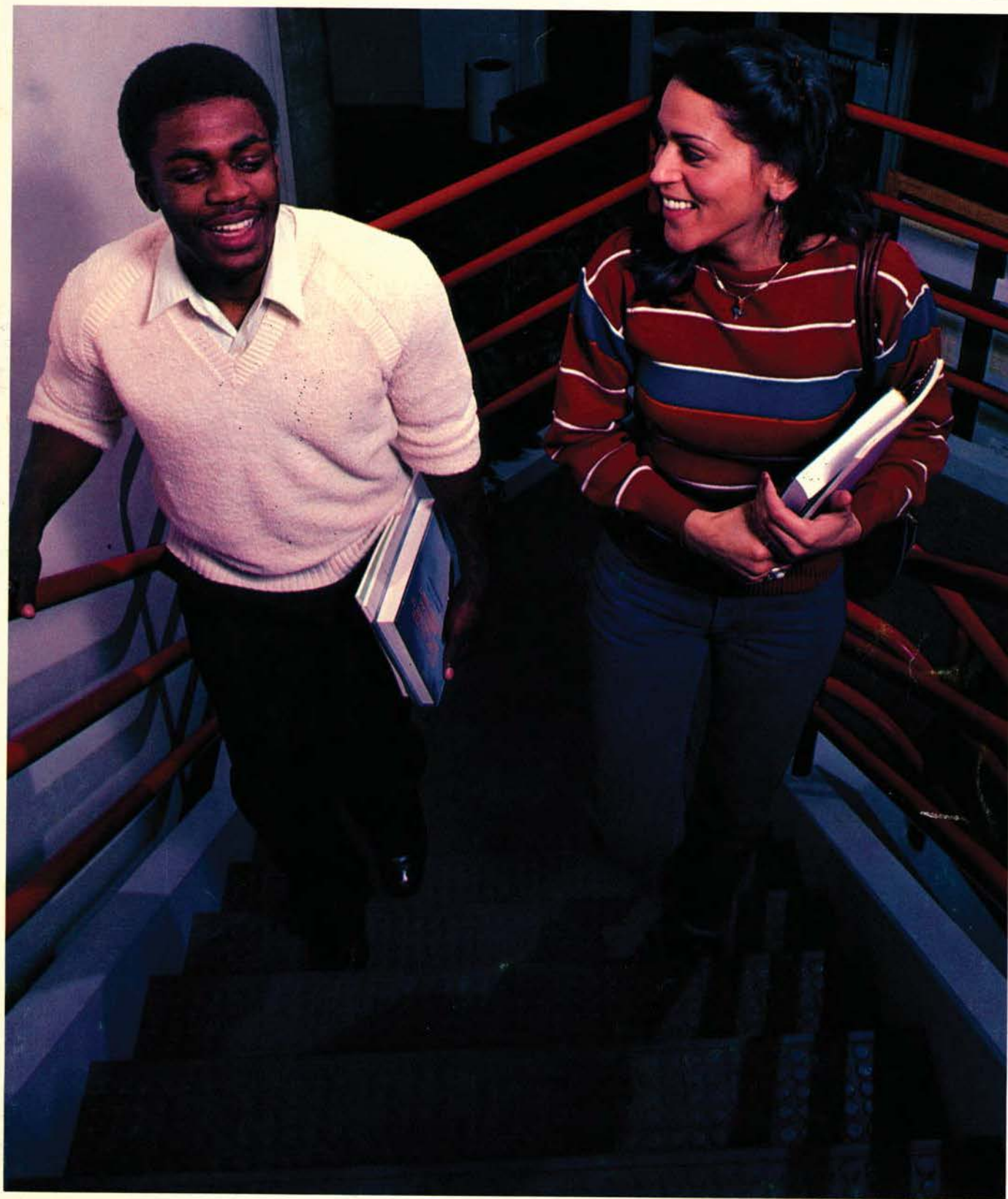
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DES MOINES AREA



COMMUNITY COLLEGE

CATALOG 1983-84



GENERAL INFORMATION

PRESIDENT'S MESSAGE

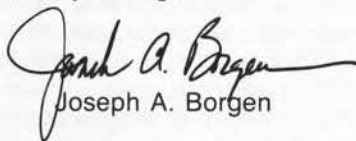


This catalog reflects a massive curriculum evaluation and revision. For the first time, the college will be using a semester term instead of quarters. Thousands of hours of work by our dedicated faculty and staff were required to make it happen. We think it was worth it. The semester system offers many benefits to each of us.

Des Moines Area Community College is a special place that provides quality education at a reasonable rate. It is our objective that each student find the means to obtain employment in a profession that will result in a satisfying career.

To that end, we have a unique educational system. Students attending this college will find that we are proud of our accomplishments and that we look toward the future with anticipation.

Welcome to Des Moines Area Community College.


Joseph A. Borgen

ANKENY CAMPUS

2006 South Ankeny Boulevard
Ankeny, Iowa 50021
(515) 964-6200
or, toll-free in Iowa
1-800-362-2127
1-800-362-2132

BOONE CAMPUS

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

WESTERN ATTENDANCE CENTER

Director's Office
229 N. Main
Carroll, Iowa 51401
(712) 792-1755

Carroll Nursing
South Clark Street
Carroll, Iowa 51401
(712) 792-1424

URBAN CAMPUS

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

BOARD OF DIRECTORS

Eldon Leonard, President
Devere Bendixen
Raymond Clark
Georganne Garst
Theodore Nemmers
Jasper Risdal
Herbert L. Ritland
Donald P. Rowen
Douglas Shull

Des Moines Area Community College is a publicly supported community college serving the Iowa counties of Merged Area XI. The college is fully 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.

In accordance with Title IX of the Educational Amendments of 1972, Section 504 of the Vocational Rehabilitation Act of 1973, and pursuant to Title VI and VII of the Civil Rights Act of 1964, Des Moines Area Community College does not discriminate on the basis of handicap, sex, race, color, religion or national origin in its educational programs, activities, admissions procedures or employment practices.

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.

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GENERAL INFORMATION

IMPORTANT PHONE NUMBERS

Toll-Free.....	1-800-362-2127	GED.....	964-6384
Alumni Affairs.....	964-6376	Handicapped Services (Nurse).....	964-6352
Bookstore.....	964-6302	Housing	
Career Development.....	964-6246	Ankeny.....	964-6347
College Information Center		Boone.....	432-7203
Ankeny.....	964-6241	Iowa College Aid Commision.....	281-3501
Boone.....	432-7203	Job Placement.....	964-6215
Urban.....	244-4226	Job Service.....	964-6395
Development Centers		Library.....	964-6317
Ankeny.....	964-6255	Nurse.....	964-6352
Boone.....	432-7203	Student Records.....	964-6224
Urban.....	244-6297	Veteran's Affairs.....	964-6212
Evening College.....	964-6350	Vocational Rehabilitation.....	964-6366
Financial Aid.....	964-6282		

COLLEGE CALENDAR 1983 - 84

FALL TERM

Classes begin.....	September 1
Labor Day Holiday - College Offices Closed.....	September 5
Thanksgiving Vacation - College Offices Closed.....	November 24 - 25
Last Day of Classes.....	December 20
College Offices Closed.....	December 23 - January 3

SPRING TERM

Classes Begin.....	January 16
Spring Vacation.....	March 12 - 16
Last Day of Classes.....	May 4

SUMMER TERM

Classes begin.....	May 21
Holiday - College Offices Closed.....	May 28
Holiday - College Offices Closed.....	July 4
Last Day of Classes.....	July 31

INTERIM TERM

August 2 - August 29

(Conferences, seminars, classes on a specially scheduled basis only)

FALL TERM, 1984

Classes Begin.....	September 4
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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. The Western Attendance Center in Carroll started 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 meets 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 co-curricular 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 fully accredited by the North Central Association of Universities and Secondary 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.

THE CAMPUSES

The 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.

The 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 Urban Campus is located on a six acre site at Seventh and Laurel Streets in Des Moines.

The Western Attendance Center is based in a leased facility located at 229 North Main Street, Carroll. A variety of educational programs is offered in that facility and other locations, including St. Anthony's Hospital.

Credit classes have been offered on the basis of need in other locations throughout the area, including Ames, Guthrie Center, Knoxville, Nevada, Newton, Perry, Winterset and Woodward. Community Services and continuing education classes are offered in many additional communities within the college district.



GENERAL INFORMATION

DISTRICT CAMPUS

The District Campus provides educational activities for adults. The curriculum is comprised of a wide range of credit and non-credit courses. Programming is delivered through a community-based approach and uses local facilities and planning at various locations.

Programs under the responsibility of the District Campus Department are:

Adult Basic Education

English as a Second Language

High School Equivalency

VET's Agriculture in Stuart, Iowa

Electrical Trades in Knoxville, Iowa

Building Trades at Carroll Public and Kuemper Schools in Carroll, Iowa

Automotive at Carroll Public and Kuemper Schools in Carroll, Iowa

LPN at Western Attendance Center in Carroll, Iowa

All credit classes conducted at Western Attendance Center in Carroll, Iowa

Class size CETA programs: a. Building Maintenance b. Administrative Clerk c. Bookkeeping

Adult Education programs in cooperation with local schools

EVENING COLLEGE

To accommodate many people who would like to study college subjects, but who are prevented from attending classes at conventional times because of work or other obligations, Des Moines Area Community College has created its "Evening College."



A wide selection of subjects is offered in extended sessions so that a student can complete a full semester of a regular college course. Consult the College Information Center for details.

DIVISIONAL STRUCTURE

Most of the curricula of the college are divided among four divisions: 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 49,000 volumes relates to the humanities, social science, natural and health science, and business. In addition, the library maintains subscriptions to more than 500 current periodicals and houses collections of tapes, filmstrips, micro-films, 8 mm loop films, videotapes, slides and necessary related equipment. Materials from other libraries can also be borrowed by the library for use by DMACC 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 reserve book room. Almost 16,000 volumes and 100 periodicals are available to students and faculty members.

The library at the Urban Campus has a collection of 6,000 volumes particularly relevant to the courses offered at that campus. If an Urban Campus student needs additional material, the library staff may request any available material from the Ankeny Campus library.

CAREER DEVELOPMENT CENTER

Career exploration and planning is available through the Career Development Center, located at the Urban Campus. It is designed for the person who is unsure about a career choice and offers information about job qualifications, length of training and salaries.

Persons using the center try actual job tasks from dozens of occupations in four



different areas: business careers, industrial careers, graphic arts careers, and medical and service careers. Equipment used might include calculators, saws, arc and gas welding machines, offset press, cash register, carpentry power equipment or scientific equipment. The Center also offers career counseling and interest testing.

There is no charge for DMACC students. Others are assessed a fee based on contractual arrangements. Job seeking skills classes are offered for those students needing assistance.

DEVELOPMENT CENTERS

Development Centers are available to all students and staff members. Instructors will help in diagnosing basic academic skill difficulties, to establish individual programs of study, and to 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.
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.

GENERAL INFORMATION

FOOD SERVICE

The Ankeny Campus has a snack bar/grill in Building 5 and a cafeteria in Building 7. The snack bar is open for breakfast, lunch and evening meals. The cafeteria serves a continental breakfast beginning at 7:30 a.m. and a full luncheon menu from 10:30 a.m. to 1:30 p.m. Special luncheons or catered events may also be scheduled.

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 in Building 7.

COLLEGE INSTRUCTIONAL CALENDAR

The college instructional calendar is comprised of three terms. The fall semester (which begins in late August) and the spring semester (early January) are each 15 weeks in length with 55 minute class periods. The summer term is 10 weeks long but class periods are approximately 85 minutes. The summer session usually begins in mid-May.

Students in vocational/technical programs must generally attend a college designated sequence of semesters which may include the summer session. Other students may attend various semester 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 is normally one class period or two periods of laboratory work. Program 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 is in the first year of a vocational/technical program.

Sophomore - a student with 32 or more semester hours of credit or is 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 credit student attending DMACC on an interim basis who has already been accepted for admission to another college. Normal admission procedures and the admissions fee will be waived.

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 or center attended.

The Ankeny and Boone 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 will be cause to issue a traffic violation ticket.

Regulations are available at the Security Office in Building 12 on the Ankeny Campus or during 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. Lists of available housing may be obtained at the College Information Center.

The college does not inspect or approve housing facilities.



ADMISSIONS

ADMISSIONS POLICIES

Des Moines Area Community College is committed 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

Admission begins with application.

You may apply for admission to DMACC at your convenience. The procedures are simple.

1. Complete the admissions application form.
2. Attend a "Planning for College Success" (PCS) workshop. This workshop is designed to assist students in assessing their academic abilities and to successfully plan for college. You will receive an invitation to attend the workshop after your application is received.
3. Complete any program prerequisites.

After you have attended the Planning for College Success workshop, admissions

processing personnel will notify you about your acceptance status.

Most of the time you will receive a notice that you have been accepted, or that a place is being reserved for you (a HOLD notice). However, it's 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.

Regular admissions procedures do not apply for community service/continuing education students and part-time students.

All admissions materials are to be submitted to the appropriate office, as indicated below:

Student Enrollment Services:

Ankeny Campus and Urban Campus
Des Moines Area Community College
2006 South Ankeny Boulevard
Ankeny, Iowa 50021

Boone Campus
Des Moines Area Community College
1125 Hancock Drive
Boone, Iowa 50036

Western Attendance Center
229 North Main
Carroll, Iowa 51401

ADMISSIONS INFORMATION

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

Ankeny Campus Information Office
(515) 964-6241 or toll free
1-800-362-2127

Boone Campus Admissions Office
(515) 432-7203

Urban Campus Office
(515) 244-4226

Western Attendance Center (Carroll)
(712) 792-1755

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

TRANSFER OF CREDITS

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 Career Development 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 Career Development 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 advisor 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.

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 the minimum grade point average required for graduation from the selected program. 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.

ADMISSIONS

PART-TIME STUDENTS

Students who wish to enroll in Arts & Sciences courses on a part-time basis may register for up to eleven credit hours of classes without applying for admission. Registration by telephone 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 services. Registration for course work beyond a cumulative maximum of 18 semester credits requires payment of a one-time, non-refundable acceptance fee.

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 indicia

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

FOREIGN STUDENTS

Foreign applicants applying for admission must:

1. Complete an application for admission to the college.
2. Complete a Foreign 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 Development 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.

Foreign students are charged double tuition. Foreign students are not eligible for U.S. or state-of-Iowa financial aid, and work permits are difficult to obtain. Information and forms can be obtained by contacting the Foreign Student Office.

REGISTRATION

Dates of registration for new and returning students are publicized each term. A late fee is charged to students who register during the late registration period designated each term. Registration after the announced late registration period is possible only with authorization from the division dean or the appropriate dean. The late registration fee applies only to courses that follow the regular 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 45th class day during all normal-length semesters. 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 45th class day in all normal-length semesters and receive a grade of "W" for all courses. If a student withdraws after the deadline, the actual grade earned for each course will be recorded.

In unusual circumstances (death, disability, etc.), the college may initiate withdrawal for a student retroactively.

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

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 1983-84

Tuition for credit offerings (resident students)

Full-time enrollment (15 semester credits or more).....	\$405.00
Part-time (per credit).....	\$27.00
Audit (per credit).....	\$27.00
Adult Education Certificate of Specialization Program (per credit).....	\$27.00
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).....	\$1.50
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 semester).....	\$.95 per credit up to 15 credits
Admission (one time only).....	\$25.00
Service fee per semester credit (up to \$45).....	\$3.00
Materials fee.....	varies
Graduation fee (one time fee).....	\$20.00
Late Registration.....	\$5.00
Parking fees* (per year).....	\$5.00
Foreign student processing.....	\$100.00

ALL FEES ARE NON REFUNDABLE

*Parking fees are required for all students, full-time or part-time, day or evening at Ankeny, Boone and Urban.

FINANCIAL AID

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



HOW TO APPLY: To apply for financial aid at DMACC you must complete the FAMILY FINANCIAL STATEMENT. Applications are available from high school counselors or at any DMACC campus.

WHEN TO APPLY: Priority consideration will be given students who apply by **March 1** prior to the fall term. Please be reminded that for each year a student wants to be considered for financial aid it is necessary to reapply.

Grants and Scholarships

Pell Grants. Awarded to students who need money to pay for their education or training after high school. You must be enrolled at least half-time. For undergraduates without a bachelor's degree.

Supplemental Educational Opportunity Grants (SEOG). You must be an undergraduate who does not already have

a bachelor's degree and be enrolled at least half-time.

Iowa Vocational-Technical Grant (IVT). For Iowa students enrolled full-time in vocational-technical courses.

State of Iowa Scholarship Program. For Iowa residents with proven high academic ability. The purpose of the program is to give academic recognition and, if needed, financial help. To be considered, a student must: (1) be a designated State of Iowa Scholar, (2) be entering as a freshman or a sophomore, and (3) plan to enroll full-time. See your high school counselor for assistance.

Maytag Company Foundation Career Education Awards. You must either be high school seniors who are children of Maytag Company employees residing in Iowa, or seniors at Newton High School and planning to enroll in a vocational-technical program in an Iowa Community

TUITION AND FEES

College. Application forms may be obtained from the Maytag Company Foundation Inc., Newton, Iowa 50208.

DMACC Scholarships and Grants. Various agencies, organizations and individuals donate money to DMACC for the purpose of financial aid for students.

DMACC Alumni Association Scholarships. The DMACC Alumni Association annually awards scholarships to outstanding DMACC students. These scholarship awards are made possible through special alumni fundraising activities and gifts to the Association for scholarship purposes.

Loans

National Direct Student Loans (NDSL). These loans are made through the DMACC Financial Aid Office. You must attend college half-time. Repayment must begin six months after ceasing college enrollment.

Guaranteed Student Loans (GSL). Loans made by a bank or credit union. Repayment of these must begin six months after terminating enrollment. You must attend college at least half-time. The loans are \$2,500 maximum yearly with \$12,500 maximum for undergraduates.

Nursing Loans. Made to Associate Degree Nursing (ADN) students enrolled at least half-time.

Short-Term Loan Fund. Available to students who encounter unanticipated expenses during the school year. These loans are interest free up to \$25 and payment in full is due within six weeks from the date of the loan.

Employment

College Work Study (CWS). To be eligible, you must be an undergraduate and enrolled at least half-time.

Veterans Affairs

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

These services are available at the Ankeny Campus for students attending any DMACC attendance site. Students attend-

ing Boone Campus can receive services at Boone.

Application for veterans benefits should be completed at the time of admission application. Because it generally takes six to eight weeks for the Veterans Administration to issue a check, appropriate paperwork should be submitted as early as possible. Advance payment may be requested 30 to 120 days prior to the beginning of the student's first term. Advance payment includes payment for the first partial month and the next full month. Otherwise, the V.A. pays at the first of the month for the previous month.

It is the student's responsibility to keep the college 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. Amount of monthly payments will depend on course type, number of hours enrolled, and number of dependents. Details may be obtained at the college or Veterans Administration regarding full-time requirements, payment procedures, and eligibility for veterans, spouses, or children.

STUDENT INSURANCE (ACCIDENT & HEALTH)

Des Moines Area Community College makes available a low cost accident and sickness insurance plan that may be purchased for the student and family. Insurance applications are available at all DMACC attendance centers.

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 semesters, may be eligible for a tuition refund.

The amount of refund will be determined by the number of credits for which a student is enrolled 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 charged per credit hour dropped. Total tuition charges accrued cannot exceed the approved maximum tuition charges currently in effect.

Day of Semester	Tuition Percentage Assessed
1 - 10 days	25%
11 - 20 days	50%
21-30 days	75%
31 or over	100%

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.

Once classes start, fees are non-refundable.

During the registration process, students are responsible for payment of tuition and fees and failure to do so will result in cancellation of classes. Payments **ARE NOT** deferred pending processing of V.A. records and/or the receipt of checks.



STUDENT ACTIVITIES/SERVICES

STUDENT ACTIVITIES

Much of student 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 semester in addition to regular tuition. Student representatives elected to the student government 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 GOVERNMENT ASSOCIATION

The Student Government Association, as the primary student governing 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 SGA serves as a liaison between the faculty and the student body in areas of mutual interest.

The purposes of the organization are to promote college spirit, provide a focal point for discussion 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 SGA and take part in discussion, but only members may vote.

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 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 should be picked up at the Information Center, Building 1, Ankeny Campus; the Student Life Office, Room 109 on the Urban Campus; or the Business Office on the Boone Campus. They are usually available at the start of each term. 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.

INTRAMURAL SPORTS AND ATHLETICS

Intramural and Campus Recreation Programs

The intramural and campus recreation program provides 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.

LIFE PLANNING FOR HEALTH

The Student Health Service is based on the Ankeny Campus in Building 5 with some services extended to the Urban Campus and Boone Campus. Emphasis is placed on education for a lifetime of good health. Students and staff members are in-



STUDENT ACTIVITIES/SERVICES

vited to keep in shape through weight/blood pressure control and fitness programs sponsored by the Health Service. Confidential counseling 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 the carrying out of instructions of the student's personal or family physician whenever appropriate.

COUNSELING SERVICES

The Career Development staff is a group of people consisting of educational advisors, secretaries and counselors who can assist you in a variety of ways. Those include:

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

Tutorial Services.

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 assist you in time management, stress management, career planning and decision making, personal counseling, assertiveness training and value clarification.

SOS (See Our School) is a program offered two times a month for prospective students, parents and others wishing to inquire about the educational opportunities and services offered at DMACC. Arrangements can be made by calling the Information Center at 964-6241 or 1-800-362-2127, ext. 241.

SUPPORT SERVICES FOR HANDICAPPED STUDENTS

This is a resource for students who are 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 Career Development Office.

Through a special agreement with the Iowa Division of Rehabilitation, Education and Services Branch, a rehabilitation counselor is assigned to the college to provide rehabilitation services to eligible handicapped students. These services include assistance in obtaining medical evaluations, vocational evaluations, physical restoration, job training, financial assistance and job placement.

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

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

The Family Educational Rights and Privacy Act of 1974 is a federal law which states (a) that a written institutional policy relative to the privacy rights of students must be established, and (b) that a statement of adopted procedures for implementation of this policy is to be made available. The law also provides that the institution will maintain the confidentiality of student records.

In accordance with Board Policy Series No. 502, DMACC will adhere to the following regulations:

1. Any student who wishes to have a copy of "The Family Educational Rights and Privacy Act of 1974 as Amended," and (the) "Final Rule on Educational Records Privacy Rights of Parents and Students" may obtain such in the Student Records and Services Office.* There will be a charge of \$1.00 per copy.
2. The Student has the right to inspect and review his educational records. The Student Records and Services Office at DMACC has been designated by the institution to coordinate the inspection and review procedures for student educational records. Students wishing to review their education records must make written requests to the Student Records and Services Office. Only records covered by the Act will be made available within 45 days

of the receipt of the written request. Educational records do not include records of instructional, administrative, and educational personnel which are the sole possession of the maker and are not accessible or revealed to any individual except a temporary substitute, records of the Security Office, student health records, employment records or alumni records. Health records, however, may be reviewed by physicians of the student's choosing.

The student has the right to request and receive a response that explains or interprets his educational records.

3. Students **may not** inspect and review the following as outlined by the Act: financial information submitted by their parents; confidential letters and recommendations associated with admissions, employment or job placement, or honors to which they have waived their rights of inspection and review; or education records containing information about more than one student, in which case DMACC will permit access **only** to that part of the record which pertains to the inquiring student. DMACC will not permit students to inspect and review confidential letters and recommendations placed in their files prior to January 1, 1975, provided those letters were collected under established policies of confidentiality and were used only for the purposes for which they were collected.
4. Students who believe that their education records contain information that is inaccurate or misleading, or is otherwise in violation of their privacy or other rights may discuss their problems informally with the Manager, Student Records and Services. If the decisions are in agreement with the student's request, the appropriate records will be amended. If not, the student will be notified within a reasonable period of time that the records will not be amended; and the student will be informed by the Manager, Student Records and Services, of his right to a formal hearing.

STUDENT ACTIVITIES/SERVICES

5. Student requests for a formal hearing must be made **in writing** to the Executive Vice-President, Management Services, who, within a reasonable period of time after receiving such requests, will inform the student of the date, place and time of the hearing. Students may present evidence relevant to the issues raised and may be assisted or represented at the hearing by one or more persons of their choice, including attorneys, at the student's expense. The hearing panels which will adjudicate such challenges will contain five members from the staff of DMACC appointed by the Executive Vice-President, Management Services, who will insure that the panel members have no vested interest in the outcome of the hearing.
6. Decisions of the hearing panels will be final, will be based solely on the evidence presented at the hearing, and will consist of written statements summarizing the evidence and stating the reasons for the decisions, and will be delivered, in writing, to all parties concerned. If the decision is in favor of the student, the education records will be corrected or amended in accordance with the decision of the hearing panel. If the decision is unsatisfactory to the student, the student may place with the education records statements commenting on the information in the records, or statements setting forth any reasons for disagreeing with the decision of the hearing panel. The statements will be placed in the education records and released whenever the records in question are disclosed.
7. A student who believes that the adjudication of his challenge was unfair, or not in keeping with the provisions of the Act may request **in writing**, assistance from the President of DMACC. Further, students who believe their rights have been abridged, may file complaints with the Family Educational Rights and Privacy Act Office, Department of Health, Education and Welfare, Washington, D.C. 20201, concerning the alleged failure of DMACC to comply with the Act.

8. Except as provided for within the Act, personally identifiable information about students will not be released without the student's written permission. At its discretion, DMACC may release Directory Information in accordance with provisions of the Act. DMACC considers the following Directory Information: student name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and awards received, previous educational agencies or institutions attended by the student, participation in officially recognized activities and sports, and weight and height of members of athletic teams. Students may withhold Directory Information by notifying the Student Records and Services Office **in writing** within the first calendar week of any term. Requests for non-disclosure will be honored by the institution for only **one** calendar year after the date of the written request; therefore, authorization to withhold Directory Information must be filed annually in the Student Records and Services Office.



9. DMACC will maintain a record of access to students' education records. This record is accessible only to the student and the staff in the Student Records and Services Office, or as provided for in the Act. The record of access will not carry access to educational records by personnel at DMACC who have a legitimate educational interest.
10. A student may request and receive copies of all or part of his educational records, with certain exceptions, (e.g. a copy of academic records for which a financial "hold" exists, or a transcript of an original or source document which exists elsewhere). There will be a fee of 10 cents per sheet for records that are copied.
11. Revisions and clarifications of these regulations will be published as experience with the law and institutional policy warrants.

***Students attending the Boone Campus will exercise all rights expressed above through the Student Records and Services at the Boone Campus.**

ACADEMIC REGULATIONS

GRADING POLICIES

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
G - No Credit	P - Pass
L - Credit for prior education or occupational experience	

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 and the Registrar. "In progress" grades automatically become "No Credit" 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

Des Moines Area Community College has established minimum levels of academic performance for satisfactory progress and completion of its educational programs. Students have primary responsibility for their academic progress; however, the college has instituted the series of "academic actions" listed below which are designed to notify the student of academic status. Any questions about academic status should be directed to the Academic Records Officer, a counselor, or the appropriate program chairperson. The grade point averages listed here are those required for graduation and are the minimum standards mentioned in the academic actions following.

Associate Degree Programs: The cumulative grade point must average (GPA) 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.

WARNING STATUS

Instructional personnel may place students on "Warning Status" at midterm if they are not meeting program standards. Students are subject to "Withdrawal Action" if they do not meet program expectations by the end of the term.

Students who do not maintain a cumulative 2.0 grade point average will be notified each term by the office of academic records. Students are subject to "Withdrawal Action" if they do not demonstrate satisfactory progress.

Students on "Warning Status" should visit with appropriate instructional personnel and/or a counselor to develop a plan for improvement. This plan may involve any or all of the following:

1. Begin a Developmental Program through the Learning Center.
2. Utilize a tutor.
3. Reduce course load.

WITHDRAWAL ACTION

Instructional personnel will notify the office of Academic Records of students who will be required to withdraw from a program of study. The following steps will be necessary to implement the withdrawal action.

1. Within 5 calendar days of the end of the term, instructional personnel will file an Academic Action Report with the Academic Records Office. All funding agencies will be notified of this action.
2. The Academic Records Office will officially notify the student of his or her withdrawal. If the student has registered and paid fees for the succeeding semester, the Academic Records Office will inform the student of the refund policies.
3. Withdrawal action will be noted in the student's permanent record.

GRADUATION APPLICATION

Each student who plans to earn an Associate Degree, Diploma or Certificate of Specialization must file a "Graduation Application" with the Office of the Coordinator of Academic Records by midterm

ACADEMIC REGULATIONS

of the term preceding the term in which the student expects to complete graduation requirements. A student will be considered a candidate for graduation only upon proper completion and filing of the "Graduation Application" form.

While a student may complete requirements for graduation during any term, commencement exercises will be held only at the end of spring and summer terms.

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 full-time students who have completed at least 30 semester hours of community 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.

B. DEAN'S LIST

Full-time students who earn a 3.25 grade point average in any semester are honored by being named to the Dean's List issued each term.

C. 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 for the purposes of school, job, and/or

military placement, to a maximum of six transcripts. A charge will be made for transcripts for purposes other than indicated above, and for all transcripts after graduation or withdrawal from college, with the exception that the first transcript requested will be furnished free of charge. 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.



PHYSICAL EDUCATION - BOONE CAMPUS

All full-time students in Associate Degree programs on the Boone Campus are required to take a one-hour physical education activity course in any two terms of enrollment. Students may be exempted for the following reasons only:

1. Health exemption: Students may be exempt from physical education by filing with the Student Personnel Office a signed statement from a medical doctor.
2. Veteran's Exemption: Military veterans who have served at least 12 consecutive months of active duty are exempt from physical education.
3. Age Exemption: All students over age 25 are exempt from physical education.



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

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

A minimum of twelve hours of credit must be earned before challenge test credit

ACADEMIC REGULATIONS

will be placed on the official transcript.

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 grades of A, B, or C will be entered on the student's transcript. Challenge test grades will be used in computing grade point averages. The challenge test **can not** be used as a course retake.

A fee is charged for the test. For details about challenge test procedures, contact program chairpeople or the appropriate department dean.

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 Office of Student Records and Services.

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 seven different testing centers.

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 and 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 petition the Coordinator of Academic Records for such credit and 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 Coordinator of Academic Records. 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.

EDUCATIONAL PROGRAMS

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 in medical services.

The objectives of the programs are:

- To teach the essential skills and operational theory needed by the student to insure 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.

All courses are identified by a combination of letters and numbers. For example:

COURSES		CODE INTERPRETATION
MATH: 098 Introductory Algebra	0	College Adaptor
ENGL: 110 Composition I	1	Courses designed for transfer credit
HMSR: 205 Counseling Techniques	2	Courses designed for transfer credit
ELET: 317 Electronics Drafting I	3	Courses designed for occupational career credit
DENA: 456 Dental Office Management I	4	Courses designed for occupational career credits

Please check with transfer institution for specific information on transfer credit.

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 face serious shortages of 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 arts 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 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 senior 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.

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 our four major locations in Ankeny, Boone, Des Moines and Carroll.

EDUCATIONAL PROGRAMS

ADULT LEARNING CENTERS

Three learning centers: The Ankeny Campus Learning Center, the Urban Campus Learning Center, and the Boone Campus Learning Center 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 reading, mathematics, English grammar, composition and science. Students may enroll in course work which is considered to be a prerequisite to admission to the college in either the Career or Liberal Arts programs. Students enrolled in college programs who are having difficulty with their studies may drop into the centers for assistance. College adaptor courses are offered through the campus learning centers.

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 six hours of credit toward the associate degree. Courses available include:

ENGL:	080	Study Skills	3
ENGL:	081	Developmental Reading	3
ENGL:	082	English Fundamentals	3
ENGL:	083	College Preparatory Writing	3
ENGL:	084	English as a Second Language I	3
ENGL:	085	English as a Second Language II	3
MATH:	091	Arithmetic	2
MATH:	092	Introductory Algebra	4
MATH:	093	High School Geometry	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.

ADULT HIGH SCHOOL DIPLOMA PROGRAM

Many adults in the Des Moines Area Community College district have not had the opportunity to complete the formal requirements for a high school diploma. Because educational experiences which are meaningful in the regular secondary system are not always suited to the needs of adults, the Adult High School Diploma Program offers a flexible program of study. The program is administered through Learning Centers, which have been designed to meet the individual needs of adults.

HIGH SCHOOL EQUIVALENCY

Adults may receive evaluation services and instruction in preparation for the General Education Development (GED) tests at learning centers and classes located throughout the college district. Successful completion of the GED test entitles adults to receive the Iowa High School Equivalency Diploma.

EXTERNAL STUDIES PROGRAM

College credit classes are available in your home through television and correspondence courses offered each term. A variety of courses televised by Iowa Public Television and Heritage Cablevision is part of the regular class schedule.

The instructor serves as a facilitator for each course, giving assignments, answering questions, providing guidance and evaluating your accomplishments. That instructor acts as your personal contact by mail, telephone and some optional on-campus review sessions.

The college credit earned in a television or correspondence course may apply toward an Associate of Arts or Associate of Science Degree. Credits are generally transferable to senior institutions.

Contact the External Studies Program at (515) 964-6422 for more information.

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 were developed 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.



EDUCATIONAL PROGRAMS

SPECIALIST CERTIFICATE PROGRAMS

Specialist Certificate programs are short-term credit programs intended to provide individuals with the latest information and skills needed to function more effectively in their jobs.

Each Specialist Certificate program includes several courses, some required and some optional. The courses are designed to provide comprehensive up-to-date information in an occupational area.

Although individuals are encouraged to complete the entire certificate program, any course within the program may be taken individually. They will provide you and an employer with evidence of your continued education in a specific job field. The education you gain will increase your ability to function in a given area and broaden your marketable job skills.

Most classes are held late afternoons, evenings or Saturdays.

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.

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 that portion of the higher learning commonly shared by educated men and women. It may be distinguished from specialized education which prepares people for employment in definable fields or occupations. A general education seeks to equip the learner with the intellectual tools which make possible the efficient processing of new information and ideas. A general education seeks to impart these skills while adding to the learner's general store of knowledge about a given subject area.

In general education at the college level, the emphasis is on acquiring intellectual skills. Those include the comprehension, application, analysis, synthesis and evaluation of new information. Courses comprising the AA Degree at Des Moines Area Community College are not designed to prepare individuals for a particular career or profession. They are intended to encourage inquiry, broaden perspectives and raise questions common to the human experience.

To receive an AA degree a student must:

- 1) Maintain a 2.0 grade point average on all work applicable for the AA Degree. "F" grades are not applicable to the degree, but do count in the G.P.A.
- 2) Take at least 21 semester hours of work at DMACC.

- 3) Take the last 10 semester hours of work at DMACC.
- 4) Satisfy the following CORE requirements:

A. Communications - 8 credits

Required: ENGL: 117, ENGL: 118

Required: SPCH: 110

B. Social and Behavioral Sciences - 8 credits

To satisfy this portion of this core requirement, students must complete at least 3 courses, each from a different discipline (reflected by a distinct acronym). Students may select any additional fourth course, if needed, to fulfill the Social and Behavioral Sciences requirements.

ANTH:120 GEOG:145 PLSC:111,112,121,122,126

CRIM:203, 210 HIST:ALL 121-125 PSYH:ALL 101-104

ECON:101,102 HUMS:101,207 SOCY:101,102,103,105,107

C. Mathematics and Sciences - 8 credits

1) One laboratory course (from BIOL, CHEM, or PHYL designated with "L") must be taken as part of the 8 credits.

2) The student must either:

- a) have taken 2 years of high school algebra, or
- b) take at least one math course numbered 100 or above.

3) Select other courses from:

BIOL:ALL 100-190 MATH:ALL 100-190

BSAD:152 PHIL:ALL 100-190

CHEM:ALL 100-190 ENGR:155, 175

D. Humanities - 8 credits

Select from the following:

ARTS:101 DRAM:110 LITR:ALL 100-190

FORL:100-190 HIST:121,122 MUSI:130

JNAD:120 HUMN:ALL 100-190 PHIL:ALL 100-190

E. Physical Education - 2 credits BOONE CAMPUS ONLY

Select any PHYE activity courses.

F. Distributed Requirement - 8 credits

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

CORE REQUIREMENT 40 credits (42 Boone)

ELECTIVES

- 5) Accumulate at least 24 (22 Boone) additional credits. A listing of acceptable courses is available.
- 6) Up to 4 credits of Adaptor courses (numbered 080-099) may be used as elective credit.
- 7) Students completing the AS degree in a paraprofessional program may also earn an AA degree in liberal arts by completing the 40 hour core requirement for that degree.
- 8) Courses numbered 198 and 199 may not be used for core credit (categories A-F) but may be used toward elective

EDUCATIONAL PROGRAMS

credit (see item 5).

- 9) Total degree requirement is 64 credits.

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 collegiate level courses tailored to fulfill a variety of professional and occupational goals (numbered from 200 to 299). 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:

- 1) Maintain a 2.0 grade point average (GPA) on all work applicable for the AS degree. "F" grades are not applicable to the degree, but do count in the GPA.
- 2) Take at least 21 semester credit hours of work at DMACC.
- 3) Take the last 10 semester credit hours of work at DMACC.
- 4) Satisfy the following Core Requirements:

A. Communications - 8 credits

Required: ENGL:117, SPCH:110
Select one additional course from:
ENGL:115, ENGL:118

B. Social Sciences - 8 credits

ANTH:ALL Anthropology (100 level)
BSAD:150 Introduction to Business
CRIM:101 Introduction to Criminal Justice System
ECON:101, 102 Economics I, II
EDCR:101 Introduction to Education
GEOG:ALL Geography (100 level)
HIST:ALL History (100 level)
HMSS:101 Introduction to Human Services
POLS:ALL Political Science (100 level)
PSYH:ALL Psychology (100 level)
SOCI:ALL Sociology (100 level)

C. Math/Science - 5 credits

BIOL:ALL Biology
CHEM:ALL Chemistry
MATH:ALL Math (except 091 and 092)
PHYL:ALL Physical Science (except 203)

D. Humanities - 4 credits

ARTS:ALL Art
FORL:100-190
JNAD:120 Introduction to Mass Communication



DRAM:ALL Dramatic Arts
HIST:121, 122 Western Civilization
HUMN:ALL HUMN titled courses
LITR:ALL Literature
MUSI:ALL Music
PHIL:ALL Philosophy

E. Physical Education - 2 credits - Boone Campus Only

CORE REQUIREMENT 25 credits (27 Boone)

ELECTIVES:

- 5) Accumulate at least 39 (37 Boone) additional credits. A listing of the acceptable courses is available.
- 6) Up to 16 credits of vocational technical courses (mainly numbered 300 and 400) may be applied to meet the elective credit.
- 7) If a student has completed a vocational technical program at DMACC and has received an Associate in Applied Science Degree, that student may be awarded the AS degree upon completion of the AS degree core requirements.
- 8) Courses numbered 198 and 199 may not be used for core credit (categories A-E) but may be used toward elective credit (see item 5).
- 9) Up to 4 credits of Adaptor courses (numbered 090-099) may be used as elective credit.
- 10) Students completing the AS degree in a para-professional program may also earn an AA degree in liberal arts by completing the 40 hour core requirement for that degree.
- 11) Total degree requirement is 64 semester credits.

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 five-term program offers technical courses in intermediate accounting, cost accounting, computers and auditing allowing students to seek advanced level placement in some cases. 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 when 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. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start either fall or spring term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

ACCT101	Principles of Accounting I	4
BKKA420	Typing for Accountants	2
BSAD150	Intro. to Business	3
OFFC311	Business Math and Calculators	3

SECOND TERM

ACCT102	Principles of Accounting II	4
BUSL101	Business Law I	3
DATA101	Introduction to Data Processing	3
ENGL117	Composition I	3
	or	
OFFC205	Business English	3
MGMT291	Pre-Employment Seminar	1

THIRD TERM

ACCT403	Accounting Internship	3
BSAD153	Office Management	3
BSAD243	Quantitative Methods	4
	or	
MATH121	Elementary Statistics	4
ENGL118	Composition II	3
	or	
OFFC206	Written & Verbal Communications	3

FOURTH TERM

ACCT103	Intermediate Accounting I	4
ACCT203	Cost Accounting I	4
ACCT350	Computers & Acct. Applications	3
MGMT202	Psychology & Human Relations	3
	or	
PSYH101	General Psychology: Applied Psychology	3

FIFTH TERM

ACCT104	Intermediate Accounting II	4
ACCT205	Auditing Procedures	3
ACCT206	Income Tax	3
SPCH110	Fundamentals of Speech	3

ELECTIVES

ACCT204	Cost Accounting II	4
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AGRI-BUSINESS

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

The 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: technical representative for the chemical, fertilizer, feed or supply industry; agricultural supply representative contacting farmers and agricultural suppliers; assistant or manager of agricultural supply centers handling feed, seed, grain, fertilizer, chemicals or petroleum products; and account specialists for commodity brokers. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

AGRI201	Feeding & Animal Nutrition I	3
AGRI219	Soils & Fertilizers	5
AGRI301	Personnel and Industrial Relations	3
BUSL101	Business Law I	3
SPCH110	Fund of Speech	3

SECOND TERM

AGRI204	Animal Science I	3
AGRI205	Commodities I	3
AGRI421	Chemical Technology	3
AGRI430	Employment Experience I	4
BSAD227	Business Communications	3
MGMT291	Pre-Employment Seminar	1

THIRD TERM

AGRI202	Soil Fertility	3
AGRI214	Animal Science II	3
AGRI215	Commodities II	3
AGRI453	Employment Experience II	3

FOURTH TERM

AGRI435	Physical Facilities	2
AGRI436	Grain Management	2
AGRI463	Employment Experience III	5
OFFC204	Office Procedures	3
ACCT301	Accounting Fundamentals	4

FIFTH TERM

AGRI203	Feeding & Animal Nutrition II	3
AGRI206	Crop Management	3
AGRI411	Agricultural Economics	2
AGRI454	Agriculture Seminar	1
AGRI473	Employment Experience IV	3
DATA101	Introduction to Data Processing	3
MKTG103	Principles of Selling	3

EDUCATIONAL PROGRAMS

AGRICULTURE EQUIPMENT TECHNOLOGY

The Agriculture Equipment Technology program is designed to provide skills in specialized agricultural equipment, including equipment repair and operation.

This five-term program places emphasis on the hydraulics and electrical equipment components and controls, transmissions, final drives, diesel engine diagnosis and repair, and industrial equipment repair as applied to agricultural operation.

Graduates will be capable of filling entry level jobs such as farm tractor and agricultural equipment mechanic, technical representative for agricultural equipment manufacturers, and agriculture equipment maintenance. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

AGPE466	Planting & Tillage Systems	7
AGPE468	Related Math	3
AGPE469	Basic Electricity	3
AGPE470	Technical Publications	2
ENGL410	Communication Skills	3

SECOND TERM

AGPE471	Power Trains	10
AGPE473	Hydraulics	7

THIRD TERM

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

FOURTH TERM

AGET479	Advanced Engines	10
AGET481	Diesel Fuel Systems	5
AGET482	Shop Management	3

FIFTH TERM

AGET483	Light Industrial Equipment	10
AGET485	Power Unit Testing	7

AGRICULTURE POWER AND EQUIPMENT

The Agriculture Power and Equipment program is designed to give the basic skills for a career as an agricultural machinery mechanic.

The systems necessary for powering and controlling tillage, planting and harvesting equipment are covered. This program is the basis for the Agriculture Equipment Technology course. Successful completion of the Agriculture Power and Equipment program makes the student eligible for a diploma or the student could receive an AAS degree by completing the Agriculture Equipment Technology program.

Graduates of this three-term program will be capable of filling entry-level jobs such as farm tractor mechanic, farm equipment mechanic and self-employed farmer equipment maintenance. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

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

FIRST TERM

AGPE466	Planting & Tillage Systems	7
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AGPE468	Related Math	3
AGPE469	Basic Electricity	3
AGPE470	Technical Publications	2
ENGL410	Communication Skills	3

SECOND TERM

AGPE471	Power Trains	10
AGPE473	Hydraulics	7

THIRD TERM

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

ARCHITECTURAL DRAFTING

The Architectural Drafting curriculum provides a summer session and two terms of intensive study 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, sub-contractors, building equipment and material suppliers, and building code officials. Students periodically visit construction sites to observe. Location: Ankeny

Program Entry Requirements

Complete an application form, submit proof of high school algebra or equivalent with the grade 'C' or better, attend a Planning for College Success (PCS) Workshop. Students start summer term.

Graduate Requirements

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

FIRST TERM

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

SECOND TERM

ARCH420	Architectural Drafting II Lecture	3
ARCH461	Architectural Drafting II Lab	5
ARCH470	Construction Techniques II	2
ARCH473	Building Equipment Technology	2
ARCH474	Drafting Math-Algebra	3
ENGL410	Communications Skills	3

THIRD TERM

ARCH462	Architectural Drafting III Lecture	3
ARCH463	Architectural Drafting III Lab	5
ARCH471	Construction Techniques III	3
ARCH465	Building Equipment Technology	2
ARCH475	Technical Reporting and Specification	2
ARCH476	Drafting Math-Trigonometry	3

EDUCATIONAL PROGRAMS

AUTO MECHANICS TECHNOLOGY

This program is designed to prepare students for employment in the automotive industry and to upgrade the competency of those already employed.

Auto Engines & Tune-up: This two-term, one-summer session option prepares students to enter the industry in tune-up and engine repair. To earn this diploma, students will complete all courses as prescribed.

This two-term, one-summer session option prepares students to enter the industry in tune-up and engine repair. To earn this diploma, students will complete all courses as prescribed.

Auto Chassis and Power Train: This two-term, one-summer session option prepares students to enter the industry for chassis and power train work. To earn the Auto Chassis and Power Train diploma, students will successfully complete courses as prescribed.

Automotive Mechanics AAS Degree: Students that successfully complete both of the above diploma programs may also earn the AAS degree. Completion of the Automotive Mechanics Technology sequence exposes students to the full range of mechanical techniques and technology. Location: Ankeny

Program Entry Requirements

Complete all necessary application forms and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To qualify for the AAS degree, complete all courses as prescribed and attain a 2.0 grade point average.

NOTE: Example shown is for a student starting fall term. Students entering spring and summer terms will take courses in a similar sequence.

AUTO ENGINES & TUNE-UP

FIRST TERM

AUTO401	Electronics I	5
AUTO402	Electronics II	5
AUTO410	Electronic Engine Controls	2
AUTO419	Hand Tools	2
AUTO404	Related Science	3

SECOND TERM

AUTO403	Engines I	5
AUTO405	Engines II	5
AUTO407	Advanced Engines	5
AUTO408	Related Math	3

THIRD TERM

AUTO406	Advanced Tune-Up	5
AUTO409	Air Conditioning	5
AUTO417	Service Management	3

AUTO CHASSIS & POWER TRAIN

FIRST TERM

AUTO412	Automotive Brake and Suspension	8
AUTO413	Basic Power Train	8
AUTO414	Small Business Management	2

SECOND TERM

AUTO415	Advanced Brakes and Suspension	7
AUTO416	Advanced Power Train	8
ENGL410	Communication Skills	3

THIRD TERM

AUTO418	Advanced Diagnosis Brakes and Suspension	5
AUTO420	Basic Welding	2
AUTO411	Intro to Diesel	2

AUTOMOTIVE COLLISION REPAIR

The automobile-body professional repairs damaged car bodies and body

parts according to repair manuals. The job is to remove upholstery, accessories, electrical and hydraulic window and seat operating equipment, and trim to gain access to vehicle body and fenders.

A feature of the program allows individuals to progress at a pace equal to their ability. To assure the best learning opportunities, the listed sequence of course offerings may be altered.

Technical courses during the three-term program prepare the graduate for entry level positions such as glass installer, body and frame helper, automobile painter. Graduates may also choose to become self-employed, continue their education, or work in retail supply stores.

Related course work in communication skills, math, and human relations provides valuable information needed to round out the technical skills of the automobile-body professional. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall or spring term.

Graduation Requirements

To earn the Automotive Collision Repair diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

AUTC412	Intro to Autobody	4
AUTC414	Fundamentals of Repair	3
AUTC416	Autobody Welding	3
AUTC418	Basic Repair Operations	4
ENGL410	Communications Skills	3

SECOND TERM

AUTC420	Related Math	3
AUTC422	Paint Refinishing Theory	3
AUTC424	Paint Refinishing Production	3
AUTC426	Service Operations Repair	5
SOCY302	Industrial Relations	3

THIRD TERM

AUTC432	Major Production Operations	4
AUTC434	Collision Estimating	3
AUTC436	Specialization Practice	3



EDUCATIONAL PROGRAMS

BOOKKEEPING & ACCOUNTING

The three-term 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-workers, supervisors, and the public.

Technical courses in taxes, payroll, computers, 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. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the Bookkeeping and Accounting diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

ACCT101	Principles of Accounting I	4
BKKA460	Principles of Accounting (Lab)	3
MGMT291	Pre-Employment Seminar	1
OFFC205	Business English	3
OFFC301	Typing I	2
OFFC311	Business Math & Calculations	3

SECOND TERM

BKKA401	Accounting Applications I and Cost Accounting	4
BKKA410	Taxes/Payroll	3
BKKA482	Typing for Account	2
BKKA461	Accounting Applications I Lab	3
DATA101	Introduction to Data Processing	3
OFFC206	Written & Verbal Communications	3

THIRD TERM

ACCT350	Computers & Acct. Applications	3
BKKA402	Accounting Applications II	3
BKKA490	Bookkeeping Internship	3
MGMT202	Psychology & Human Relations	3

BUILDING TRADES

The Building Trades program is a three-term curriculum 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 feature energy efficient construction methods. This 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 form and attend a Planning for College Success (PCS) Workshop. Students start fall or spring term.

Graduation Requirements

To earn a Building Trades diploma, complete all courses as prescribed and attain a 2.0 grade point average.

FIRST TERM

BLDG451	Residential Materials and Construction Theory	5
BLDG452	Residential Construction Techniques	7
BLDG453	Care & Use of Hand & Power Tools	1
BLDG454	Math for Carpenters	3
BLDG455	Blueprint Reading and Estimating	2

SECOND TERM

BLDG461	Masonry Technology and Practices	4
BLDG462	Residential Drafting and Design	2
BLDG463	Residential Practices	4
BLDG472	Business Practices for the Building Trades	2

THIRD TERM

BLDG471	Residential Const. Procedures & Application	15
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BUSINESS ADMINISTRATION

The Pre-Business Administration program is designed for students who wish to major in business at a college or university and plan to work toward a baccalaureate degree. Students should contact the four-year institution for more information on transferability. Location: Ankeny, Boone, Urban

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS is not required for Boone students. Start any term.

Graduation Requirements

Complete core requirements for the AA or AS degree and selected electives.

Suggested courses:

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
BUSL101	Business Law I	3
BUSL102	Business Law II	3
ECON101	Principles of Macro-Economics	3
ECON102	Principles of Micro-Economics	3
BSAD150	Introduction to Business	3
DATA101	Introduction to Data Processing	3
BSAD152	Business Statistics	5
MKTG102	Principles of Marketing	3
MGMT101	Personnel Supervision	3
BSAD205	Quantitative Methods	4
BSAD223	Business and Financial Math	3
BSAD225	Principles of Insurance	3
MKTG103	Principles of Selling	3
MGMT102	Introduction to Management	3
DATA103	BASIC Programming	3
DATA304	COBOL-Beginning	3

EDUCATIONAL PROGRAMS

CHILD DEVELOPMENT - DIPLOMA

The Child Development program prepares you for a career working with children. By the end of the two-term program, you can assume a position of responsibility within the field of early childhood education.

Course work assists you in developing knowledge and skills in the areas of human development, observation and guidance techniques, curriculum planning, nutrition and emergency care.

Practical experience is the key to the development of competence in your field. You will participate in the Des Moines Area Community College Day Care Center both terms and will also complete a Practicum for one-half of a term in a community child care program.

When course work is complete, you may be employed in day care centers, preschools, or public and private schools working with infants, preschoolers, or school-aged children. A second career option, Child Development Associate, is also available. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To qualify for a diploma in Child Development, a student must complete the credit hours prescribed and attain a grade point average of 2.0.

FIRST TERM

CHLD160	Human Growth	4
CHLD244	Emergency Care	1
CHLD260	Observation and Guidance of Children	3
CHLD261	Observation and Guidance Lab	1
CHLD262	Curriculum and Activities I	4
CHLD460	Student Participation I	3

SECOND TERM

CHLD263	Professional Relationships	2
CHLD264	Child Nutrition and Health	3
CHLD265	Curriculum and Activities II	4
CHLD461	Student Participation II	3
CHLD462	Practicum	3
CHLD266	Administration of Programs for Children	3

CHILD DEVELOPMENT ASSOCIATE

The Child Development Associate program is designed to build on those skills developed in the Child Development program and to broaden your 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.

When you have completed the two-term Child Development program and the other requirements listed, you will be awarded a Child Development Associate in Science degree and may choose to transfer to a four-year institution or work with children in one of the many facets of early childhood education. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Core requirements can be completed either before or after Child Development.

Graduation Requirements

To qualify for the Child Development Associate AS degree, a student must complete the standard core requirements for the degree, plus the Child Development base and electives, and maintain a grade point average of 2.0.

CHLD463	Child Development Associate Practicum	4
CHLD266	Administration of Programs for Children	3



CLERICAL

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

A two-term 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. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

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

FIRST TERM

OFFC202	Records Mgmt.	3
OFFC205	Business English	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC311	Business Math & Calculators	3
OFFC403	Professionalism I	1
MGMT202	Psychology and Human Relations	3

SECOND TERM

OFFC306	Infor. Proc. I	2
OFFC309	Office Accounting	2
OFFC401	Model Office	2
MGMT291	Pre-Employment Seminar	1
OFFC404	Professionalism II	1
OFFC303	Typing III	2
OFFC207	Introduction to Computers	3
OFFC208	Clerical Procedures	2

EDUCATIONAL PROGRAMS



COMMERCIAL ART

The Commercial Art program prepares students for a career in the commercial art world. By the end of the five-term 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 such as communication design, illustration, photography, and business management allow students to seek advanced level placement. The development of a portfolio is stressed throughout the program.

The internship program in the summer 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, sign and display businesses, publishing firms, and other establishments in need of creative communications. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a commercial art realities exploration day, and obtain a passing score on art portfolio. Students start fall term.

Graduation Requirements

To qualify for the AAA degree in Commercial Art, a student must complete course work as prescribed and attain a grade point average of 2.0.

FIRST TERM

CART400	Commercial Art Exploration (C.A.R.E.)	0
CART401	Commercial Art Orientation	3

CART403	Communication Design 1	4
CART405	Drawing 1	4
CART407	Production Art 1	4
CART409	Advertising	3

SECOND TERM

CART411	Communication Design 2	4
CART413	Drawing 2	4
CART415	Production Art 2	4
CART417	Typography	2
CART419	Lettering & Sign Art	2
CART421	Internship Preparation	2

THIRD TERM

CART423	Commercial Art Internship	10
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FOURTH TERM

CART425	Communication Design 3	4
CART427	Illustration 1	3
CART429	Production Art 3	4
CART431	Photography I	3
CART433	Trademark Systems	2
CART435	Portfolio Preparation 1	2

FIFTH TERM

CART437	Communication Design 4	3
CART439	Production Art 4	3
CART441	Illustration 2	3
CART443	Portfolio Preparation 2	2
CART445	Photography 2	3
CART447	Business Management	3

COMMERCIAL COOKING

The Commercial Cooking program prepares students to enter the food service industry at a job entry level position.

By the end of the two-term program the graduates will complete courses in food preparation, sanitation and safety, buffet decorating, purchasing/cost control, business math and pre-employment seminar. Positions that are filled by graduates are: line cooks, salad area, and preparation cook. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn a Commercial Cooking diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation and Equipment	2
HRMT319	Sanitation & Equipment Lab	1
HRMT348	Purchasing/Cost Control	3
BSAD223	Business/Financial Math	3
MGMT202	Psychology & Human Relations	3

SECOND TERM

CULA355	Buffet Decorating I	2
CULA356	Buffet Decorating I Lab	4
HRMT325	Food Preparation II	3
HRMT328	Food Preparation II Lab	2
HRMT349	Nutrition and Menu Planning	3
ENGL117	Composition I	3
BSAD227	Business Communications	3
MGMT291	Pre-Employment Seminar	1

EDUCATIONAL PROGRAMS

COMMERCIAL HORTICULTURE

The five-term 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 form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

COMH425	Turf I	3
COMH471	Nursery Prod. I	3
COMH472	Plant Materials & Landscape Draft.	3
AGRI219	Soils & Fertilizers	5
AGRI416	Soils Lab	1
ENGL410	Communication Skills	3

SECOND TERM

COMH410	Greenhouse Production I	3
COMH418	Hort Chemical Technology	2
COMH420	Landscape Design I	2
COMH435	Botany	2
COMH460	Supervised Emp. Exp. I	4
COMH478	Plant Prop. I	3
DATA101	Intro to Data Processing	3

THIRD TERM

COMH452	Arboriculture and Plant Prop. II	2
COMH453	Landscape Design & Plant Materials II	2
COMH455	Turf II	2
COMH461	Supervised Emp. Exp. II	3
COMH482	Greenhouse Prod. II	3

FOURTH TERM

COMH456	Foliage Plant Production & Display	2
COMH457	Fruit & Vegetable Science	2
COMH458	Cost of Product, Estimating & Contracting	1
COMH439	Landscape Const. and Equipment Maintenance	2
COMH468	Commercial Hort. Marketing	2
COMH480	Supervised Empl. Exp. III	7

FIFTH TERM

COMH495	Merchandising & Display Flowers & Plants	1
ACCT301	Accounting Fundamentals	4
BUSL101	Business Law I	3
MGMT202	Personnel & Industrial Relations	3
COMH491	Supervised Employee Experience IV	4
MKTG103	Prin. of Selling	3
COMH467	Garden Center Management	3

COMPUTER PROGRAMMING

The five-term Computer Programming curriculum prepares students for positions as computer programmers or programmer analysts. With additional experience, graduates can advance to positions as systems analysts and programming managers.

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 relate to specific business problems. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall or spring term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

DATA310	Program Logic Design	3
DATA101	Introduction to Data Processing	3
ACCT101	Prin. of Accounting	4
BSAD150	Intro. to Business	3
BSAD323	Business/Financial Math	3
	or	
MATH119	Intermediate Algebra	4

SECOND TERM

DATA303	Job Control Lang.	3
DATA304	COBOL-Beginning	4
DATA319	Assembler-Beginning	3

THIRD TERM

DATA306	COBOL-Intermediate	4
DATA321	Assembler Intermediate	4

FOURTH TERM

DATA308	COBOL-Advanced	4
	or	
DATA327	Assembler-Advanced	4
DATA352	Telecommunications/ CICS Programming	4
DATA382	Systems Analysis	3

FIFTH TERM

DATA334	Applications Prog.	8
DATA341	Data Base Lang. (DC/I)	3
MGMT291	Pre-Employment Seminar	1

ELECTIVES

DATA103	BASIC	3
DATA210	Survey of Programming Languages	3
DATA211	FORTRAN	3
DATA221	PL/I	3
DATA231	RPG/II	3

EDUCATIONAL PROGRAMS

COMPUTER SCIENCE TECHNOLOGY

The Computer Science program is divided into two areas: the Business and Computer program and the Computer Science Technology program. Both programs are designed to meet individual needs in the computer science field by developing specific skills for job competency. Location: Boone

Program Entry Requirements

Complete an application form and submit proof of algebra requirements for Business and Computers. Students start alternate fall terms.

Graduation Requirements

To earn the AS degree, complete all course work as prescribed and attain a 2.0 grade point average.

Business and Computers

The program requires four terms of study and is designed to allow students to transfer to a four-year program and additionally qualifies the students for positions as programmer and programmer analysts. 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.

Prior to entering the program, students are required to successfully complete one year of high school algebra or MATH:098, Introductory Algebra.

FIRST TERM

DATA101	Intro to Data Processing	3
ENGL117	Composition I	3
MATH115	Finite Mathematics	4
COMS175	Applied Business Programming I	3
	Social Science Elective	3

SECOND TERM

COMS176	Applied Business Programming II	4
ENGL118	Composition II	3
BSAD150	Intro to Business	3
BSAD152	Business Statistics	4
	Humanities Elective	3

THIRD TERM

COMS125	COBOL I	3
SPCH110	Speech	3
ACCT101	Principles of Accounting I	4
COMS172	Programming in FORTRAN	2
	Physical Education	3

FOURTH TERM

COMS115	Statistical App. of Computers	5
ACCT350	Computers & Acctg. Applications	3
ENGL115	Technical Report Writing	3
	Social Science Elective	3
	Humanities Elective	2

Computer Science Technology

The program requires four terms of study and is designed to allow students to transfer to a four-year program and additionally qualifies the students for positions as programmer and programmer analysts. The program emphasizes scientific 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.

Prior to entering the program, students are required to successfully complete two years of high school algebra or MATH:103, Intermediate Algebra.

FIRST TERM

DATA101	Intro to Data Processing	3
MATH119	Intermediate Algebra or Higher Math	4
COMS111	Computers & Prog I	3
ENGL117	Composition I	3
	Elective	3

SECOND TERM

COMS112	Computers & Prog II	3
MATH121	Elementary Statistics	4
ENGL118	Composition II	3
	Social Science Elective	6

THIRD TERM

COMS160	Computational Structures	3
MATH129	Calculus I	5
SPCH110	Speech	3
	Social Science Elective	3
	Humanities Elective	3

FOURTH TERM

COMS172	Prog in FORTRAN	2
MATH130	Calculus II	5
COMS115	Statistical App of Computers	5
	Humanities Elective	3

CONDITIONED AIR

The three-term Conditioned Air program provides the theory, knowledge, and skills of refrigeration, air conditioning, 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 form and attend a Planning for College Success (PCS) Workshop. Students start summer term.

Graduation Requirements

To earn the Conditioned Air diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

CONA452	Electricity I	3
CONA453	Related Math	3
CONA451	Fundamentals of Refrigeration	3
CONA454	Fundamentals of Heating	3

SECOND TERM

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

THIRD TERM

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

EDUCATIONAL PROGRAMS

CRIMINAL JUSTICE

The Criminal Justice program prepares students for a career in some part of the justice system, either public or private, law enforcement, judicial or corrections, and dealing with juveniles or adults. The program allows students to choose either an AA or an AS degree. All students complete Criminal Justice base requirements then select other Criminal Justice classes in areas of primary interest. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To qualify for the Criminal Justice AA or AS degree students must complete the standard core requirements for the degree, plus the Criminal Justice base and electives, and maintain a grade point average of 2.0. See program chairperson for specific requirements.

CRIM101	Introduction to Criminal Justice	3
CRIM102	Organization and Administration	3
CRIM103	Community Relations	3
CRIM104	Criminal Law	3
CRIM105	Constitutional Law	3
CRIM106	Juvenile Law and Delinquency	3
CRIM107	Theories of Interviewing	3
CRIM110	Penology	3
CRIM211	Correctional Treatment	3
CRIM212	Correctional Law	3
CRIM214	Criminal Investigation	3
CRIM215	Identification and Preparation of Evidence	3
CRIM216	Fingerprinting and Identification Tech.	3
CRIM217	Identification of Weapons and Firearms	3
CRIM218	Identification of Physiological Fluids, Hair, and Fiber	3
CRIM226	Retail Security Investigations	3
CRIM230	Seminar in Criminal Justice	3
CRIM235	Practicum	3
CRIM236	Internship	3

CULINARY ARTS

Most graduates of Culinary Arts enter the industry in culinary positions with hotels, restaurants, clubs, or institutional feeding.

Some select jobs in dining room service, catering, or management. By the end of the five-term 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

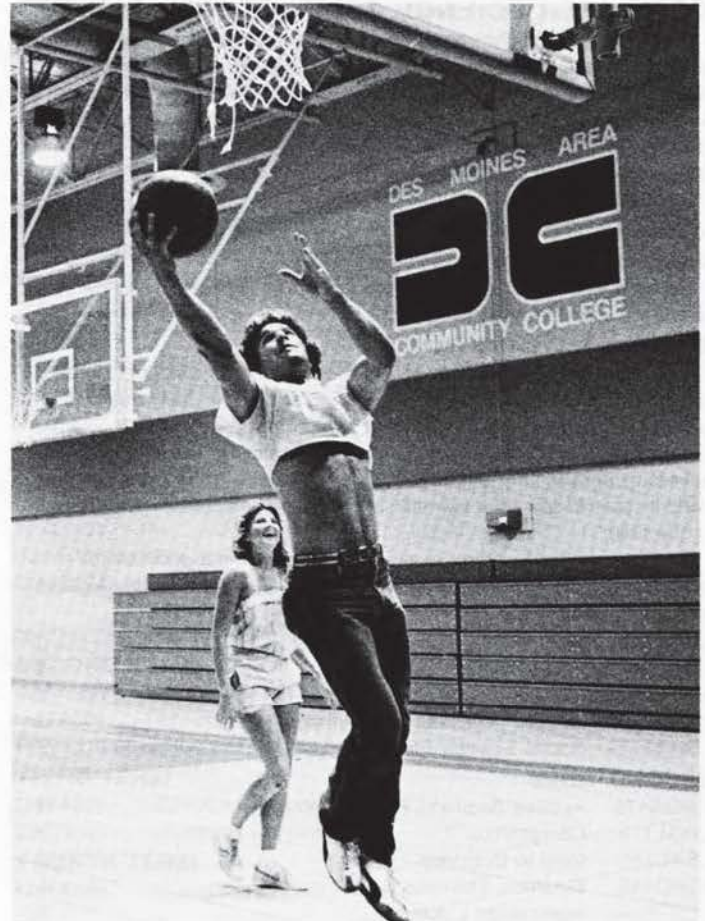
Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAA degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation and Equipment	2
HRMT319	Sanitation and Equipment Lab	1
HRMT348	Purchasing/Cost Control	3
BSAD223	Business/Financial Math	3
MGMT202	Psychology & Human Relations	3



SECOND TERM

CULA355	Buffet Decorating I	2
CULA356	Buffet Decorating I Lab	4
HRMT325	Food Preparation II	3
HRMT328	Food Preparation II Lab	2
HRMT349	Nutrition and Menu Planning	3
BSAD227	Business Communications or	3
ENGL117	Composition I	3
MGMT291	Pre-Employment Seminar	1

THIRD TERM

HRMT341	Work Experience	7
HRMT342	Seminar	1

FOURTH TERM

CULA443	International Cuisine	2
CULA437	International Cuisine Lab	3
HRMT337	Restaurant Management	3
HRMT357	Restaurant Mgt. Lab	5
MGMT101	Personnel Supervision	3

FIFTH TERM

BSAD229	Small Business Management	3
CULA445	Advance Culinary Cuisine	3
CULA438	Advance Culinary Cuisine Lab	8
CULA363	Buffet Decorating II	1
CULA364	Buffet Decorating Lab II	2

EDUCATIONAL PROGRAMS

DENTAL ASSISTANT

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

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

The three-term curriculum meets the requirements of the Commission of Dental Accreditation of the American Dental Association. Students are eligible to take the Dental Assisting National Board Examination at the completion of the program. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school biology or equivalent completed in the last five years, show proof of one year high school typing or equivalent or demonstrate typing speed at 55 wpm with no more than 5 errors. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

To earn the Dental Assistant diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

DENA301	Pre Clinical Dental Assistant	4
DENA302	Dental Science I	4
DENH200	Dental Materials	3
DENH230	Dental Anatomy	4
DENH257	Dental Radiography I	3

SECOND TERM

DENA303	Business Office Procedures	4
DENA305	Dental Radiography II	2
DENA306	Dental Assisting Seminar	1
DENA307	Dental Assisting Clinical I	2
DENA311	Clinical Dental Assisting & Dental Spec.	4
DENA312	Dental Science II	1
ENGL117	Composition I	3

THIRD TERM

DENA316	Ethics & Clinical Seminar	1
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DENA317	Dental Assisting Clinical II	5
PSYH106	Psychology of Human Relations	3
SPCH110	Fundamentals of Speech	3

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.

Graduates of the five-term program receive an Associate in Applied Science degree. They are eligible to take the national, state, and regional licensure examinations in dental hygiene. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in all of the following: high school algebra or equivalent, complete one semester of college level chemistry and biology equivalent to BIOL:130 and CHEM:131. Submit ACT test scores with composite of 20 or better. Complete interview with dental hygiene faculty. Must be a high school graduate or have a G.E.D. All transcripts must be supplied. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

DENH210	Oral Histology & Embryology	2
DENH208	Principles of Dental Hygiene	2
DENH209	Principles of Dental Hygiene Practicum	3
DENH230	Dental Anatomy	4
DENH257	Dental Radiography I	3
CHEM132	General Chemistry II	4

SECOND TERM

DENH228	Dental Hygiene I	2
DENH229	Dental Hygiene I Practicum	4
DENH240	Nutrition and Preventive Dentistry	4
DENH258	Dental Radiography II	1
DENH293	General and Oral Pathology	3
BIOL149	General Microbiology	4

THIRD TERM

DENH280	Periodontology	2
DENH278	Dental Hygiene II	2
DENH279	Dental Hygiene II Practicum	2
DENH282	Dental Pharmacology	2
PSYH101	General Psychology/Applied Psychology	3

FOURTH TERM

DENH288	Dental Hygiene III	2
DENH289	Dental Hygiene III Practicum	7
DENH200	Dental Materials	3
DENH227	Dental Health Ed.	3
SPCH110	Fundamentals of Speech	3

FIFTH TERM

DENH202	Professional Management & Liability	2
DENH290	Community Health Issues	3
DENH298	Dental Hygiene IV	2
DENH299	Dental Hygiene IV Practicum	7
SOCY101	Intro.to Sociology	3

EDUCATIONAL PROGRAMS

DENTISTRY PREPARATION

The Pre-Dentistry curriculum is intended for students who hope to eventually pursue a career in the field of dentistry. Students should check the catalog of the university to which they intend to transfer and then develop an associate degree program with their academic advisor. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

BIOL145	Biology I	4
BIOL146	Biology II	5
CHEM151	General & Inorganic Chemistry I	4
CHEM152	General & Inorganic Chemistry II	4
CHEM161	Organic Chemistry I	5
CHEM162	Organic Chemistry II	5
MATH123	Trigonometry	3
PHYL111	College Physics I	4
PHYL112	College Physics II	4
PSYH102	General Psych: Psychological Methods	4

DEVELOPMENTAL DISABILITIES - DIPLOMA

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

Course work will assist you in developing knowledge and skills in the areas of 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 and you will complete a practicum experience each term within various programs for handicapped persons.

When the two-term program is completed you 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 form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To qualify for a diploma in Developmental Disabilities - Diploma, a student must complete the credit hours prescribed and attain a grade point average of 2.0.

FIRST TERM

DEVD260	The Exceptional Individual	3
DEVD261	Programs for the Mentally Retarded	3
DEVD262	Health Care	3
DEVD460	Practicum I	2
CHLD160	Human Growth	4
DEVD244	Emergency Care	1

SECOND TERM

DEVD263	Professional Relationships	2
DEVD264	Programs for the Physically Handicapped	3
DEVD265	Multicategorical Disorders	3

DEVD266	Speech and Hearing Disorders	2
DEVD461	Practicum II	4

DEVELOPMENTAL DISABILITIES DEGREE-ASSOC.

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.

When you have completed the two-semester Developmental Disabilities program and the requirements below, you will be awarded a Developmental Disabilities Associate in Science degree and 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 all necessary general application forms and attend a Planning for College Success (PCS) Workshop. Start fall term.

Program Entry Requirements

To qualify for the Developmental Disabilities AS degree, a student must complete the standard core requirements for the degree, plus the Developmental Disabilities Degree base and electives, and maintain a 2.0 grade point average.

DEVD462	Developmental Disabilities Assoc. Practicum	4
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EDUCATIONAL PROGRAMS

DIESEL EQUIPMENT MECHANIC

The Diesel Equipment Mechanic program prepares students for a career in the diesel repair field. By the end of the six-term program students will have the necessary knowledge and practical skills to meet the standards demanded by the industry.

Instruction is in the repair, maintenance, and testing of diesel engines, power trains, and accessories of trucks and construction equipment. Related instruction in shop management, interpersonal relationships with fellow workers, and improvements for everyday living is also provided.

Physical facilities include a large laboratory where students gain experience on the latest types of service equipment.

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

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

DISL401	Diesel Engines	15
DISL403	Related Math	3

SECOND TERM

DISL404	Power Trains	8
DISL406	Hydraulics	5
DISL408	Basic Electricity	5

THIRD TERM

DISL420	Air Conditioning	3
DISL428	Operation & Maintenance	6
DISL432	Dynamometer Testing	3

FOURTH TERM

DISL434	Diesel Fuel Systems	15
DISL444	Diesel Electronics	3

FIFTH TERM

DISL441	Advanced Electricity	2
DISL443	Truck & Heavy Equipment Repair	16

SIXTH TERM

DISL451	Shop Management	2
ENGL410	Communication Skills	3
SOCY302	Industrial Relations	3
DISL453	Computer Literacy	3

ELECTRONICS MAINTENANCE

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

At the end of the four terms, students should be able to perform the routine maintenance of electronic systems. The curriculum places emphasis on servicing of consumer products in 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 all applications and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To qualify for the diploma, complete all courses as prescribed and at-

tain a 2.0 grade point average.

FIRST TERM

ELEM450	Related Math	3
ELEM451	DC & AC Fundamentals	4
ELEM452	DC & AC Fundamentals Lab	3
ELEM453	Basic Electrical Practices	4
ELEM454	Basic Electrical Practices Lab	3

SECOND TERM

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

THIRD TERM

ELEM470	Communications	4
ELEM471	Communications Lab	2
ELEM472	Color Systems I	4
ELEM473	Color Systems I Lab	2

FOURTH TERM

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

ENGINEERING PREPARATION

The Pre-Engineering curriculum is designed for students who wish to major in science or engineering and plan to work toward a baccalaureate degree at a college or university. Since there is considerable variance between programs offered by different institutions, the student should consult the catalog of the institution to which the student plans to transfer before choosing electives or making substitutions. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

ENGR155	Engineering Computations	2
ENGR165	Engineering Graphics & Conceptual Design	4
ENGR175	Engineering Statics	3
CHEM151	General & Inorganic Chemistry I	4
CHEM152	General & Inorganic Chemistry II	4
MATH129	Calculus I	5
MATH130	Calculus II	5
MATH132	Differential Equations & Laplace Transforms	4
PHYS121	Classical Physics I	6
PHYS122	Classical Physics II	6

EDUCATIONAL PROGRAMS

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 student selects 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 would help in supervisory positions. Four terms in length. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Beginning typing skills required. Students start any term.

Graduation Requirements

To earn the diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

OFFC205	Business English	3
OFFC207	Introduction to Computers	3
OFFC302	Typing II	2
OFFC310	Professional Development	3
OFFC311	Business Math & Calculators	3
OFFC403	Professionalism I	1
MGMT202	Psychology and Human Relations	3

SECOND TERM

OFFC201	Information/Word Processing	2
OFFC204	Office Procedures	4
OFFC206	Written & Verbal Communications	3
OFFC303	Typing III	2
OFFC306	Information Processing I	2
OFFC404	Professionalism II	1
MGMT101	Personnel Supervision	3

THIRD TERM

MGMT291	Pre-Employment Seminar	1
OFFC405	Professionalism III	1
ECON101	Principles of Macro-Economics	3
OFFC307	Information Processing II	2

FOURTH TERM

OFFC203	Admin. Off. Mgmt.	3
OFFC309	Office Accounting	2
OFFC406	Professionalism IV	1
OFFC408	Internship	5
BUSL101	Business Law I	3

FASHION MERCHANDISING

Fashion Merchandising offers opportunities at all levels of the fashion industry. Progressive individuals who like people contact, challenge, and variety find many rewards in this career.

The five-term course work gives you in-depth knowledge in buying, promoting, and selling products. Emphasis is on retail business management. Training includes developing selling, communication, human relations, and management skills.

Special attention is paid to keeping up to date with the constant changes taking place in fashion through such courses as: clothing selection, principles of fashion merchandising, display, advertising, textiles, fashion show procedures, and a study tour of a major fashion market.

Fashion Merchandising graduates are found in positions as store

managers and assistant managers, buyers and assistants, department managers, manufacturers' sales representatives, sales supervisors, fashion coordinators and consultants, and bridal consultants. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall or spring term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

MGMT202	Psychology & Human Relations	3
MGMT291	Pre-Employment Seminar	1
MGMT322	Office Procedures	1
MKTG102	Principles of Marketing	3
MKTG231	Prin. of Clothing Selection	3
BSAD223	Business/Financial Math	3
BSAD227	Business Communications	3

SECOND TERM

MGMT404	Psychology Seminar	1
MKTG103	Principles of Selling	3
MKTG104	Adv. & Sales Promotion	3
MKTG321	Retail Mgt. I	3
MKTG323	Display & Visual Merchandising	2
MKTG332	Textiles	3
SPCH110	Fundamentals of Speech	3

THIRD TERM

MGMT340	Business Internship I	7
MGMT342	Internship Seminar I	2

FOURTH TERM

MGMT101	Personnel Supervision	3
MGMT357	Business Internship II	5
MGMT358	Business Internship II Seminar	1
MKTG333	Fashion Show Procedures	3
MKTG334	Prin. of Fashion Merchandising	3
ECON101	Principles of Macro-Economics	3

FIFTH TERM

MGMT365	Business Internship III and	5
MGMT367	Business Internship III Seminar or two Electives	1
MKTG345	Fashion Study Tour	2
MKTG322	Retail Mgt. II	3
MKTG324	Buying & Merchandise Control	3
ACCT101	Principles of Accounting I or	4
ACCT301	Accounting Fundamentals	3
DATA101	Introduction to Data Processing or	3
DATA103	BASIC	3

EDUCATIONAL PROGRAMS

FINANCIAL SERVICES

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

Specialized courses in principles of bank operations, installment credit, management fundamentals, real estate finance, money and banking, and field experience provide the basic content areas. A good background in general business courses are included with the options of specializing in a specific area of interest.

The field experience program in the last two terms gives the student 'hands-on' practical experience in a financial institution. The program is five semesters in length.

Banks are noted for promoting from within, and continuing the education of their employees through the American Institute of Banking sponsored classes, college and graduate school, while 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. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

FNSR201	Prin. of Banking	3
ACCT101	Principles of Accounting I	4
BSAD150	Intro. to Business	3
BSAD223	Business/Financial Math	3
BSAD227	Business Communications	3
MGMT322	Office Procedures	1

SECOND TERM

FNSR202	Installment Credit	3
ACCT102	Principles of Accounting II	4
BUSL101	Business Law I	3
MGMT202	Psychology & Human Relations	3
MGMT291	Pre-Employment Seminar	1
MKTG103	Prin. of Selling	3

THIRD TERM

FNSR203	Real Estate Finance	3
BUSL102	Business Law II	3
MKTG102	Prin. of Marketing	3
SPCH110	Fund of Speech	3

FOURTH TERM

FNSR204	Management Fundamentals	3
FNSR392	Field Experience I	5
DATA101	Introduction to Data Processing	3
ECON101	Principles of Macro-Economics	3
ENGL117	Composition I	3

FIFTH TERM

FNSR205	Money and Banking	3
FNSR394	Field Experience II	5
MGMT101	Personnel Supervision	3

FIRE SCIENCE TECHNOLOGY

Fire Science is a four-term program for people wishing to prepare for a career in fire science or engaged in fire science work. The Fire Science curriculum is concerned with providing instruction and experience in the application of basic and technical fire subject matter.

Students complete general education core requirements related to fire science as well as specific fire science courses. The latter is emphasized in course work, all matters connected with fire fighting, including: nature of fires and hazardous materials, firefighting theory, fire safety techniques (private, public, and industrial), investigative methods, fire administration methods, tactical planning, etc. These courses provide entry-level knowledge and skills for state employment opportunities.

Instruction in the Fire Science program is provided by Iowa State University Fire Science Extension instructors. Location: Ankeny

Program Entry Requirements

High school graduation or G.E.D. required. Complete necessary application form and attend a Planning for College Success (PCS) Workshop. Start any term.

Graduation Requirements

To qualify for the Fire Science Technology AS or AA degree, a student must complete the standard core requirements for the degree, plus the Fire Science Technology base and electives, and maintain a 2.0 grade point average.

FIRST TERM

FIRE231	Intro. to Fire Science	2
FIRE232	Fire Behavior	3
BSAD225	Principles of Insurance	3
CHEM131	General Chemistry I	4
ENGL117	Composition I	3

SECOND TERM

FIRE233	Building Construction	3
FIRE234	Fire Protection Systems	3
ENGL118	Composition II	3
PHYL106	Survey of Physical Science	4

THIRD TERM

FIRE235	Hazardous Materials	3
FIRE236	Fluid Flows	3
MGMT102	Introduction to Management	3
SPCH110	Fundamentals of Speech	3

FOURTH TERM

FIRE237	Planning for Fire Protection	3
FIRE238	Fire Investigation	2
PLSC112	State and Local Government	3
PSYH106	Psychology of Human Relations	3

EDUCATIONAL PROGRAMS

HEALTH CARE ADMINISTRATION

The Health Care Administration program offers students opportunities to prepare for entry level administrative positions in the rapidly growing health care field. The program consists of two tracks: the first, the two-year Associate of Science degree which qualifies the graduate to write the exam to become a Licensed Nursing Home Administrator in Iowa; and the second, a one-year certificate program which qualifies one to be a Certified Residential Care Facility Administrator in Iowa with emphasis in MR/DD. Location: Ankeny

Program Entry Requirements

Complete an application form, submit prior college transcripts, and complete a health care orientation class, HCAD:200. Students start any term.

Graduation Requirements

To qualify for the Health Care Administration AS degree, students must complete the standard core requirements for the degree, plus the Health Care Administration base and electives.

THIRD TERM

ADHC200	Orientation	0
ADHC226	Management of Serv. for Mentally Disabled	3
ADHC227	Management of Serv. for Mentally Ill	3
ADHC275	Administration of Long Term Care Facilities	6
SOCY201	Introduction to Social Gerontology	3
BUSL101	Business Law I	3

FOURTH TERM

ADHC228	Field Projects in Services for the Mentally Disabled	1
ADHC229	Field Projects in Services for the Mentally Ill	1
ADHC257	Practicum: Business Administration	3
ADHC276	Services for Long Term Care Patients	6
SOCY202	Practical Application of Social Gerontology	1
ACCT101	Principles of Accounting I	4

FIFTH TERM

ADHC237	Principles of Accounting II for Health Care	3
ADHC251	Practicum: Social Services	3
ADHC252	Practicum: Dietary	3
ADHC253	Practicum: Legal Aspects & Govt. Org.	3
ADHC254	Practicum: Nursing	3

SIXTH TERM

ADHC281	Seminar in Health Care	3
ADHC255	Practicum: Housekeeping, Laundry & Maintenance	3
ADHC256	Practicum: Activities and Community Resources	3
ADHC258	Practicum: Admin. Organization	3
ADHC259	Practicum: Personnel Administration	3

HIGH TECHNOLOGY ELECTRONICS

The High Technology program has four options: Computer Technology, Biomedical, Robotics/Process Control and Telecommunications. Each option features basic electronics skills that are taught the first four terms.

After successfully completing the four-term course of study, you may specialize in one of the four options. Students should select their option prior to beginning the basic four-term sequence. Location: Ankeny

Program Entry Requirements

Besides completing the usual application form and the PCS workshop, you must complete at least one year of high school algebra, or its equivalent. (Two years are recommended.) A minimum level PCS score

is required and an understanding of the fundamentals of electronics is also highly recommended.

Graduation Requirements

To qualify for the AAS degree, students must complete the courses as prescribed, and attain a grade point average of 2.0.

FIRST TERM

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

SECOND TERM

ELHT323	Technical Math II	3
ELHT321	Circuit Analysis II	6
ELHT322	Circuit Analysis II Lab	3
ELHT324	Computer Programming	3

THIRD TERM

ELHT330	Digital Circuits I	3
ELHT331	Circuit Analysis III	3
ELHT332	Circuit Analysis III Lab	3

FOURTH TERM

ELHT340	Digital Circuits II	5
ELHT341	Digital Circuits II Lab	5
ELHT345	Data Communication & Laser	3
ELHT346	Data Communication & Laser Lab	2

HIGH TECH - BIOMEDICAL

This program prepares you for a career as a 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 area hospitals or as a technician for a manufacturer of medical electronic equipment.

FIFTH TERM

HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instruction I Lab	5
HTBM355	Electro-Mechanical Systems I	3
HTBM356	Electro-Mechanical Systems I Lab	3
BIOL124	The Human Body	2
BIOL125	Human Body Lab	1

SIXTH TERM

HTBM362	Health Care Delivery	3
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instruction II Lab	2
HTBM365	Electro-Mechanical Systems II	2
HTBM366	Electro-Mechanical Systems II Lab	2

ELECTIVES

HTBM302	Integrated Science (Assigned)	3
	Business Admin.	3
ELHT342	Calculus for Electronics	3
	Social Science	3

EDUCATIONAL PROGRAMS

HIGH TECH - COMPUTER TECHNOLOGY

This 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.

FIFTH TERM

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

SIXTH TERM

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

ELECTIVES

ELHT343	Physics for Electronics	3
BSAD126	Business Admin.	3
ELHT342	Calculus for Electronics	3
	Social Science	3

HIGH TECH - ROBOTICS AND PROCESS CONTROL

This 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 more sophisticated industrial robots that utilize microprocessors for programming and servo control.

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

FIFTH TERM

HTPC351	Hydraulics and Pneumatics	3
HTPC352	Hydraulics and Pneumatics Lab	3
HTPC354	Motor Control and PLC'S	3
HTPC355	Process Control Instrumentation	3
HTPC356	Motor Control and PLC'S Lab	3
HTPC357	Process Control Instrumentation Lab	2

SIXTH TERM

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

ELECTIVES

	Social Science	3
ELHT342	Calculus for Electronics	3
	Business Admin.	3

HIGH TECH - TELECOMMUNICATIONS

The telecommunications program prepares you for work in installation of communications and maintaining much of the hardware associated with the advanced information society. It also includes training in communication/transmission principles, microwave principles, and telephony. Terms like telemarketing, teleconferencing, data linkages and fiber optics are part of this whole new era of instant information.

FIFTH TERM

HTTC352	Telephony Principles I	5
HTTC353	Communications I	3
HTTC354	Communications I Lab	3
HTTC355	Microwave Principles	3
HTTC356	Microwave Principles Lab	3

SIXTH TERM

HTTC362	Telephony Principles II	3
HTTC363	Communications II	3
HTTC364	Communications II Lab	3
ELHT361	Technical Update	3

ELECTIVES

	Business Admin.	3
ELHT343	Physics for Electronics	3
	Social Sciences	3

HOSPITALITY APPRENTICE

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

At the end of two terms the graduates will have taken courses in food preparation, sanitation/safety, accounting, purchasing/cost 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 form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

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

FIRST TERM

HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation & Equipment	2
HRMT319	Sanitation & Safety Lab	1
HRMT348	Purchasing/Cost Control	3
BSAD223	Business/Financial Math	3
MGMT202	Psychology & Human Relations	3

SECOND TERM

HRMT325	Food Preparation II	3
HRMT328	Food Preparation II Lab	2
HRMT349	Nutrition and Menu Planning	3
ACCT101	Principles of Accounting I	4
	or	
ACCT301	Accounting Fundamentals	4
ENGL117	Composition I	3
	or	
BSAD227	Business Communications	3
MGMT291	Pre-Employment Seminar	1
HRMT349	Nutritional Menu Planning	3

EDUCATIONAL PROGRAMS



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.

By the end of the five-term program, graduates will have taken courses in food preparation, sanitation and equipment, purchasing/cost control, marketing courses, 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 & restaurant management industry. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation & Equipment	2
HRMT319	Sanitation & Safety Lab	1
HRMT348	Purchasing/Cost Control	3
BSAD223	Business/Financial Math	3
MGMT202	Psychology & Human Relations	3

SECOND TERM

HRMT325	Food Preparation II	3
HRMT328	Food Preparation II Lab	2
HRMT349	Nutritional Menu Planning	3
ACCT101	Principles of Accounting I	4
	or	
ACCT301	Accounting Fundamentals	4
BSAD227	Business Communications	3
	or	
ENGL117	Composition I	3
MGMT291	Pre-Employment Seminar	1

THIRD TERM

HRMT341	Work Experience	7
HRMT342	Work Experience Summer	1

FOURTH TERM

HRMT337	Restaurant Mgmt.	3
HRMT357	Restaurant Mgmt. Lab	5
DATA101	Introduction to Data Processing	3
MGMT101	Personnel Supervision	3
MKTG102	Principles of Marketing	3

FIFTH TERM

HRMT344	House Admin.	3
HRMT345	House Admin. Lab	3
MKTG103	Principles of Selling	3
SPCH110	Fundamentals of Speech	3
BSAD229	Small Business Management	3
BUSL101	Business Law I	3

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.

Skills needed in relating to clients, interviewing, determining eligibility for services, referring appropriately, and assisting with counseling are emphasized. A supervised field experience allows students to apply their skills in a work setting.

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

When the program is completed, employment may be 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 Department of Social Services. Location: Ankeny, Urban

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To qualify for the Human Services AS degree, a student must complete the standard core requirements for the degree, plus the Human Services base and electives, and maintain a 2.0 grade point average.

HUMS101	Introduction to Human Services	3
HUMS202	Interviewing & Interpersonal Relationships	3
HUMS109	Survey of Mental Health Treatment	3
HUMS104	Community Organization	3
HUMS205	Intervention Theories and Practice I	3
HUMS206	Intervention Theories and Practice II	3
HUMS207	Field Experience	4
PSYH103	Developmental Psychology	3
PSYH104	Abnormal Psychology	3
SOCY101	Intro to Sociology	3
	or	
SOCY102	Social Issues	

ELECTIVES

Three courses must be selected.

HUMS210	Counseling Techniques	3
HUMS211	Counseling with Women	3
HUMS212	Survey of Chemical Dependency	2
HUMS	Any other Human Services courses	3
ANTH101	Intro to Anthropology	3
EDCR102	Principles of Child Development	3
PHIL112	Ethical Problems	3
PLSC112	State and Local Governments	3
PSYH	Any other Psychology courses	3
SOCY	Any other Sociology courses	3

EDUCATIONAL PROGRAMS

INDUSTRIAL MANAGEMENT AND MARKETING

Industrial Management and Marketing offers you 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. The program includes: 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 with extensive backgrounds in business and industry.

Basic subject areas for the five terms are: selling, advertising, marketing, purchasing, human relations, supervision, management, industrial organization, accounting, and information processing.

Employment and advancement opportunities exist in positions as manufacturer's representatives, purchasing agents, wholesalers, salespeople, owners of your own distribution business, traffic and transportation managers, manufacturing and distribution managers, production supervision, customers' 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 form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

MGMT202	Psychology & Human Relations	3
MGMT322	Office Procedures	1
MKTG102	Prin. of Marketing	3
MKTG335	Industrial Product Analysis	3
BSAD227	Business Communications	3
BSAD223	Business/Financial Math	3
	or	
MATH092	Introductory Algebra	4

SECOND TERM

MGMT291	Pre-Employment Seminar	1
MGMT404	Psychology Seminar	1
MKTG103	Prin of Selling English	3
	or	
	Speech Elective	3
MKTG211	Industrial Marketing	3
MATH092	Intro to Algebra	4
	or	
	Elective	
MKTG212	Purchasing	3

THIRD TERM

MGMT343	Field Experience I	7
MGMT344	Field Experience I Seminar	2

FOURTH TERM

MGMT101	Personnel Supervision	3
MGMT355	Field Experience II	5
MGMT356	Field Experience II Seminar	1
MKTG104	Adv. & Sales Promotion	3
ECON101	Principles of Macro-Economics	3
ACCT101	Principles of Accounting I	4
	or	
ACCT301	Accounting Fundamentals	3

FIFTH TERM

MGMT102	Intro. to Mgmt.	3
	or	
MGMT103	Sales Management	3
MGMT368	Field Experience III	5
	plus	
MGMT369	Field Experience III Seminar	1
	or	
	Two Electives	6
MKTG336	Industrial Mgt. Operations	3
BUSL101	Business Law I	3
DATA101	Introduction to Data Processing	3
	or	
DATA103	BASIC	3

INFORMATION/WORD PROCESSING

The Information/Word Processing program is a three-term program 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. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

A student must complete all required classes in the program with at least a 2.0 grade average to receive a diploma.

FIRST TERM

OFFC205	Business English	3
OFFC207	Intro to Computers	3
OFFC301	Typing I	2
OFFC302	Typing II	2
OFFC311	Business Math & Calculators	3
OFFC403	Professionalism I	1
MGMT202	Psychology and Human Relations	3

SECOND TERM

OFFC303	Typing III	2
OFFC306	Infor. Proc. I	2
OFFC201	Infor./Word Proc. Concepts	2
OFFC204	Office Procedures	4
OFFC206	Written & Verbal Communications	3
OFFC310	Professional Dev.	3
OFFC404	Professionalism II	1

THIRD TERM

OFFC307	Infor. Proc. II	2
OFFC309	Office Accounting	2
OFFC401	Model Office	2
MGMT291	Pre-Employment Seminar	1
OFFC405	Professionalism III	1

EDUCATIONAL PROGRAMS

JOB SHOP MACHINIST

The Job Shop Machinist program is a three-term program for students who desire employment in general machine shop work.

Students gain practical experience on the latest, most up-to-date equipment 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 form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

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

FIRST TERM

TOOL480	Blueprint Reading I	3
TOOL484	Machine Tool Operations I	3
TOOL486	Machine Tool Operations Lab I	5
TOOL489	Heat Treatment of Materials	3
TOOL499	Related Math	3

SECOND TERM

TOOL481	Blueprint Reading II	3
TOOL482	Machine Shop Measurements I	3
TOOL483	Machine Shop Measurements II	3
TOOL485	Machine Tool Operations II	4
TOOL487	Machine Tool Operations Lab II	7

THIRD TERM

TOOL491	Machine Shop Measurements III	2
TOOL494	Machine Tool Operations III	4
TOOL490	Machine Tool Operations Lab III	7
ENGL410	Communications Skills	3

JOURNALISM/ADVERTISING PREPARATION

The Pre-Journalism curriculum is designed for students who intend to enter journalism and related fields. The curriculum is also broad enough to allow students to explore various areas of journalism and communications.

After four terms of study, students have the option of entering the work force or transferring to a senior institution to expand communications skills. Location: Ankeny, Boone

Program Entry Requirements

Complete all application forms and attend a planning for College Success (PCS) Workshop. Start any term.

Graduation Requirements

To qualify for the Journalism/Advertising AA or AS degree, a student must complete the standard core requirements for the degree, plus the Journalism/Advertising base and electives, and maintain a 2.0 grade point average.

JNAD120	Intro to Mass Communication	3
JNAD121	Basic Reporting Principles	3
JNAD122	Advanced Reporting	3
JNAD123	Publications Production	3

JNAD124	Layout and Design	3
JNAD125	Principles of Advertising	3

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 form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To qualify for the Labor Studies AS degree, a student must complete the standard core requirements for the degree, plus the Labor Studies base and electives, and maintain a 2.0 grade point average. See program chairperson for specific requirements.

LABS220	Survey of Labor Studies	3
LABS221	Grievance Handling and Arbitration	3
LABS222	History and Development of Labor Movement	3
LABS223	Protective and Labor Relations Legislation	3
LABS224	Public Sector Labor Legislation & Public Sector Collective Bargaining	3
LABS225	Union Psychology and Industrial Sociology	3
LABS226	Labor Economics & Collective Bargaining	3
LABS227	Union Administration	3
LABS228	Unions, Politics & Comparative Labor Movements	3
LABS229	Labor Studies Problems	3
LABS230	Union Counseling	2
LABS231	Advanced Union Counseling	2



EDUCATIONAL PROGRAMS

LAW PREPARATION

The Pre-Law curriculum enables students to continue their studies at four-year colleges and universities in preparation for law school.

Students choose courses which will give them a solid background in oral and written communication as well as electives in areas such as political science, psychology or business.

Students should be aware that colleges of law require a baccalaureate degree as a condition for admission. Transfer and degree requirements vary for different institutions, so students should study the catalogs of institutions in which they are interested. Counselors are available to assist with transfer and other academic planning. Location: Ankeny, Boone, Urban

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop is not required for Boone. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

CRIM105	Constitutional Law	3
ECON101	Principles of Macro-Economics	3
ECON102	Principles of Micro-Economics	3
SPCH112	Public Speaking	3
SPCH114	Persuasive Speaking	3
PHIL111	Introduction to Logic	3
PHIL112	Ethical Problems	3
PLSC111	American National Government	3
PLSC112	State & Local Government	3
PSYH101	General Psychology: Applied Psychology	3
LEGA240	Introduction to Law	3
DATA101	Introduction to Data Processing	3

LEGAL ASSISTANT

The Legal Assistant program trains students to do legal work under the supervision of an attorney. A legal assistant can relieve an attorney of routine matters and assist him or her 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 areas of law.

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

Instructors in the Legal Assistant program are practicing attorneys. There are two program legal assistants and a program counselor available to assist students with educational and career planning.

Graduates of the Legal Assistant program are employed in private law firms, public agencies, and legal departments of large companies. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop and a Legal Assistant Orientation program. Students start any term, but fall term is recommended.

Graduation Requirements

To qualify for the Legal Assistant AS degree, a student must complete the standard core requirements for the degree, plus the Legal Assistant base and electives, and maintain a 2.0 grade point average.

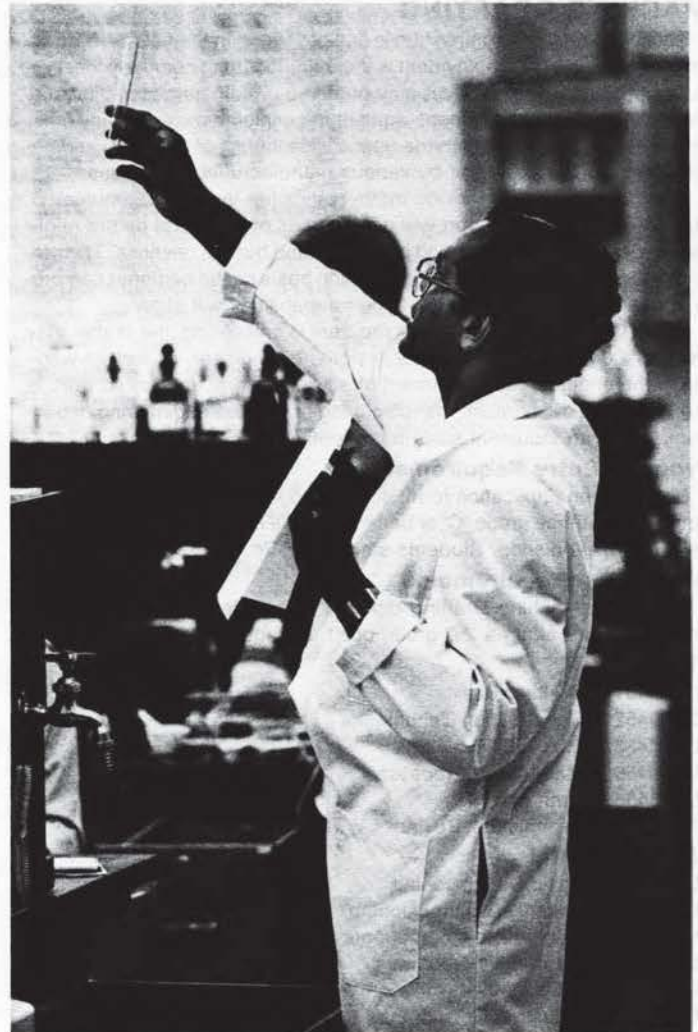
LEGA240	Introduction to Law	3
LEGA241	Legal Research and Writing	3
LEGA242	Torts & Litigation I	3

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

ELECTIVES

Must complete 9 semester credits

LEGA251	Wills, Estate Planning & Taxation	3
LEGA252	Administrative Practice	3
LEGA253	Advanced Legal Research	3
LEGA254	Evidence: Theory & Practice	3
LEGA255	Advanced Legal Writing	3
LEGA256	Debtor/Creditor Law	3
CRIM105	Constitutional Law	3
CRIM104	Criminal Law	3
DATA101	Intro to Data Processing	3
ACCT101	Principles of Accounting I	4
LEGA198	Independent Study	1



EDUCATIONAL PROGRAMS



MACHINE DRAFTING

The Machine Drafting program is one of several in the field of drafting. The primary point of employment is the manufacturing company that produces products. That product may be home or commercial appliances, electrical/electronic equipment, agricultural implements, and 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), statics, and technical report writing. Courses of a general nature might include industrial materials and processes and human relations. The program is set up on an individual instruction basis so the beginner can progress as slowly or as quickly as their capabilities will allow.

When this intensive three-term 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 form, submit proof of high school algebra or equivalent with the grade 'C' or better, attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

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

FIRST TERM

MACD451	Drafting Basics	3
MACD452	Construction Techniques	3
MACD453	Multiview Drawings	3
MACD456	Materials & Processes	3
MACD458	Draft Math I	3
ENGL115	Technical & Business Writing	3

SECOND TERM

MACD461	Basic Dimensioning	3
MACD462	Advanced Dimensioning	3
MACD463	Mechanical Components	3
MACD466	Descriptive Geometry	3
MACD468	Draft Math II	3
SOCY302	Industrial Relations	3

THIRD TERM

MACD471	Detailing	4
MACD472	Technical Illustration	2
MACD476	Statics	4
MACD478	Computer in Manufacturing	2

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 form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school biology or equivalent completed in the last five years, show proof of high school typing or equivalent or demonstrate typing speed at 55 wpm with no more than 5 errors. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

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

FIRST TERM

MEDA460	Professional Development I	2
MEDA461	The Human Body in Health and Disease I	4
MEDA462	Medical Terminology	2
MEDA463	Medical Office Management I	4
MEDA464	Medical Laboratory Procedures I	4
MEDA465	Medical Office Procedures I	3

SECOND TERM

MEDA470	Professional Development II	2
MEDA471	The Human Body in Health & Disease II	4
MEDA473	Medical Office Management II	4
MEDA474	Medical Laboratory Procedures II	3
MEDA475	Medical Office Procedures II	3
MEDA472	Diagnostic Radiography I	2

THIRD TERM

MEDA480	Professional Development III	1
MEDA483	Medical Office Management III	1
MEDA482	Diagnostic Radiography II	2
MEDA481	Practicum	6

EDUCATIONAL PROGRAMS

MEDICAL LABORATORY TECHNICIAN

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. Program is six terms in length.

At the successful completion of the program, students have earned an AAS degree and are eligible to take the national certification examination for job entry. 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 form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school algebra, biology, chemistry or equivalent. Must be a high school graduate or have a G.E.D. Students start fall or spring term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

MLTS400	Intro to Med Lab	6
BIOL130	Allied Health-A&P	5
CHEM131	Chemistry I	4

SECOND TERM

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

THIRD TERM

MLTS421	Clinical Chemistry	8
PSYH101	General Psychology: Applied Psychology	3
SOCY101	Intro. to Sociology	3
MLTS431	Clinical Microbiology	4

FOURTH TERM

MLTS441	Immunohematology	4
MLTS450	Practicum I	2
SPCH110	Fundamental of Speech	3

FIFTH TERM

MLTS451	Cl. Practicum II	11
MLTS460	Clinical Seminar	1
MLTS461	Med. Lab Review	1

SIXTH TERM

MLTS452	Cl. Practicum III	6
MLTS462	Prof. Development	1

These courses offered fall 1983 only for spring 1983 starts

MLTS410	Hematology	4
MLTS420	Clinical Chemistry	4
MLTS430	Clinical Micro-Biology	3

Offered spring term 1984 for fall 1982 starts

MLTS440	Immunohematology	4
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MEDICINE PREPARATION

The Pre-Medical curriculum is designed for students who will eventually pursue a degree in medicine. Many medical schools require students to complete a baccalaureate degree before admission. Emphasis is placed on a high science core but students should develop specific degree programs with their academic advisors. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus.

Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

BIOL145	Biology I	4
BIOL146	Biology II	5
BIOL149	General Microbiology	4
CHEM151	General & Inorganic Chemistry I	4
CHEM152	General & Inorganic Chemistry II	4
CHEM161	Organic Chemistry I	5
CHEM162	Organic Chemistry II	5
MATH123	Trigonometry	3
PHYL111	College Physics I	4
PHYL112	College Physics II	4
PSYH102	General Psychology: Psychological Methods	4

NURSING - PRACTICAL

The Practical Nursing program is a three-year term program 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.

Upon completion of the curriculum and attainment of the objectives of the Practical Nurse program, the student will be eligible to write the State Board Test Pool examination for practical nurse licensure. Location: Ankeny, Boone, Carroll

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school biology or equivalent, obtain a satisfactory score on the math and reading aptitude test taken during the PCS Workshop. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

To earn the Practical Nursing diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

NURS200	Body Structure and Function	3
NURS201	Human Needs I	6
NURS202	Nursing Practicum I	4
PSYH101	General Psychology	3

SECOND TERM

ENGL117	Composition I	3
PSYH103	Developmental Psychology	3
NURS203	Human Needs II	4
NURS204	Nursing Process I PN	2
NURS205	Nursing Practicum II PN	2

THIRD TERM

NURS206	Human Needs III	5
NURS207	Nursing Practicum III	7

EDUCATIONAL PROGRAMS

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 serve as a basis for clinical applications of nursing skills in a functioning health care agency. Students receive close support in the clinical area from college nursing instructors who provide individual and small group instruction.

Upon completion of five terms of the nursing curriculum and attainment of the objectives of the Associate Degree Nursing program, the student will be eligible to write the State Board Test Pool examination for registered nurse licensure. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school algebra, biology, chemistry or equivalent, obtain a satisfactory score in math and reading aptitude test taken during PCS Workshop. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

NURS200	Body Structure & Function	3
NURS201	Human Needs I	6
NURS202	Nursing Practicum I	4
PSYH101	General: Applied Psychology	3

SECOND TERM

ASDN200	Nursing Process I - ADN	2
ASDN201	Nursing Practicum II - ADN	6
NURS203	Human Needs II Core	4
ENGL117	Composition I	3
PSYH103	Developmental Psychology	3

THIRD TERM

BIOL131	Health Sciences Physiology	3
BIOL132	Health Sciences Microbiology	4

FOURTH TERM

ASDN202	Human Needs III	5
ASDN203	Nursing Practicum III	8
SOCY101	Introduction to Sociology	3

FIFTH TERM

ASDN204	Human Needs IV	4
ASDN205	Management & Accountability in Nursing	1
ASDN206	Nursing Practicum IV	9
SPCH110	Fundamentals of Speech	3

NURSING PREPARATION

The Pre-Nursing curriculum will not necessarily meet the requirements of the various colleges offering a bachelor's degree in nursing. Because programs offering a bachelor's degree in nursing vary, students should consult the catalogs of the colleges at which they hope to complete their professional nursing education and work out specific programs with academic advisors. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

BIOL145	Biology I	4
BIOL149	General Microbiology	4
CHEM131	General Chemistry I	4
CHEM132	General Chemistry II	4
ENGL117	Composition I	3
PSYH102	General Psychology: Psychological Methods	4
PSYH103	Developmental Psychology	3
PSYH104	Abnormal Psychology	3
SPCH110	Fundamentals of Speech	3
SOCY101	Introduction to Sociology	3
LITR120	Introduction to Literature	3
LITR125	Contemporary Literature	3
MATH119	Intermediate Algebra	4

PHARMACY PREPARATION

The Pre-Pharmacy curriculum is designed to meet the first and second year requirements for a bachelor's degree in pharmacy. Requirements vary at different universities and the student should study the catalog of the institution to which the student plans to transfer and work out an individual program with the academic advisor. Emphasis is given to courses in chemistry, biology, and zoology. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

BIOL145	Biology I	4
BIOL146	Biology II	5
BIOL149	General Microbiology	4
CHEM151	General & Inorganic Chemistry I	4
CHEM152	General & Inorganic Chemistry II	4
CHEM161	Organic Chemistry I	5
CHEM162	Organic Chemistry II	5
MATH123	Trigonometry	3
MATH124	Precalculus	5
MATH129	Calculus I	5



EDUCATIONAL PROGRAMS

PRINTING

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

Instruction is accomplished in both the classroom and laboratory setting. Classes include layout and design, cold composition, printer's math, cost estimating, plant management, and printing. The listed sequence of courses may be altered.

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 form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn a Printing diploma, you must complete courses as prescribed and attain a 2.0 grade point average.

FIRST TERM

PRTG460	Printing I	10
PRTG462	Printing Math	3
ENGL410	Communication Skills	3

SECOND TERM

PRTG470	Printing II	10
PRTG471	Recordkeeping & Filing	3
SOCY302	Industrial Relations	3

THIRD TERM

PRTG480	Printing III	10
PRTG461	Layout, Design & Pasteup	2

RECREATIONAL LEADERSHIP

The Recreational Leadership program 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 four-term program, employment opportunities are available in YMCA's, YWCM's, boys or girls clubs, retirement communities, resorts, swimming pools, medical facilities, schools, industries, armed forces, and public and private institutions.

Study would include courses in introduction to recreation, recreation leadership, instruction of crafts, program planning and organization, outdoor recreation, introduction to therapeutic recreation, supervised field experience I and II, communication, psychology, sociology, science, and the humanities. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form. Students start any term.

Graduation Requirements

To qualify for an AA or AS degree students must complete core requirements along with the program requirements and maintain a minimum grade point average of 2.0.

RECR141	Recreation Leadership	3
RECR142	Supervised Field Experience I	1
RECR143	Instruction in Crafts	2
RECR144	Program Planning and Organization	3
RECR145	Outdoor Recreation	3
RECR146	Introduction to Therapeutic Recreation	3
PHYE145	First Aid	2
RECR147	Supervised Field Experience II	13
RECR148	Outdoor Recreation Application	2
RECR149	Campus Recreation and Intramurals	2

RECR150	Bioenergies	3
RECR151	Introduction to Recreation	2

RESPIRATORY THERAPY

This program provides training for a career in respiratory therapy. It is a patient-oriented profession with emphasis on interactions with the patients.

The six-term curriculum comprises 1000 hours of supervised clinical experience in hospitals. It prepares students with all the knowledge, skills and attitudes to begin successful employment in this health career. The program is accredited by the Joint Review Committee for Respiratory Therapy Education (JRCRTE) for the American Medical Association. Graduates of the program are eligible for examinations administered by the National Board for Respiratory Care (NBRC).

Employment opportunities are found in hospitals, clinics, and home care. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school algebra, biology, and chemistry or equivalent completed in the last five years, complete an interview with respiratory therapy staff. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

RESP301	Fundamentals of Respiratory Therapy	6
BIOL130	Allied Health Anatomy & Physiology	5
PHYL106	Survey of Physical Science	4

SECOND TERM

RESP305	Principles of Respiratory Therapy	4
RESP310	Cardiopulmonary Renal Pathophysiology	5
CHEM131	General Chemistry I	4
BIOL131	Health Sciences Physiology	3
PHYL203	Physics for Respiratory Therapy	2

THIRD TERM

RESP315	Respiratory Therapy Pharmacology	3
RESP360	Respiratory Therapy Practicum I	4
CHEM132	General Chemistry II	4

FOURTH TERM

RESP320	Advanced Respiratory Therapy	5
RESP325	Neonatal and Pediatrics Respiratory Therapy	3
RESP370	Respiratory Therapy Practicum II	7
BIOL132	Health Sciences Microbiology	4

FIFTH TERM

RESP330	Cardiopulmonary Diagnostics	3
RESP380	Respiratory Therapy Practicum III	9

SIXTH TERM

RESP335	Respiratory Therapy Management & Ethics	3
RESP390	Respiratory Therapy Practicum IV	6

ELECTIVES

RESP350	Health Applications of Computers	3
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EDUCATIONAL PROGRAMS

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 line of your choice such as apparel and accessories, food marketing, automotive, home furnishings, sporting goods, building materials; up-to-date instruction based on advice from advisory committee of Retail Managers; rapid advancement opportunities resulting from promotion from within policy. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

MKTG102	Prin. of Marketing	3
MKTG321	Retail Mgt. I	3
MKTG323	Display & Visual Merchandising	2
MGMT202	Psychology & Human Relations	3
MGMT322	Office Procedures	1
BSAD227	Business Communications	3
BSAD223	Business/Financial Math	3

SECOND TERM

MKTG103	Prin. of Selling	3
MKTG104	Adv. & Sales Promotion	3
MKTG301	Retail Product Analysis	3
MGMT291	Pre-Employment Seminar	1
MGMT404	Psychology Seminar	1
DATA101	Introduction to Data Processing	3
DATA103	BASIC	3

THIRD TERM

MGMT340	Business Internship I	7
MGMT342	Internship Seminar I	2

FOURTH TERM

MGMT101	Personnel Supervision	3
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MGMT357	Business Internship II	5
MGMT358	Internship Seminar II	1
ACCT101	Principles of Accounting I	4
ACCT301	Accounting Fund.	3
BSAD229	Small Business Management	3
ECON101	Principles of Macro-Economics	3

FIFTH TERM

MKTG322	Retail Mgt. II	3
MKTG324	Buying & Merchandise Control	3
MGMT102	Intro. to Management	3
	or	
MGMT103	Sales Management	3
MGMT365	Business Internship III	5
	and	
MGMT367	Business Internship Seminar III	1
	or two Electives	
BUSL101	Business Law I	3

RETAIL MERCHANDISING

Retail merchandising offers rapidly growing employment opportunities. A recent government study reported that one-fourth of the job openings between now and 1985 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 based on advice from Retail Merchandising advisory committee; opportunity to specialize in a product line of your choice such as furniture, automotive, decorator products, clothing, sporting goods. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

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

FIRST TERM

MGMT202	Psychology & Human Relations	3
MGMT291	Pre-Employment Seminar	1
MKTG102	Prin. of Marketing	3
MKTG103	Prin. of Selling	3
MKTG323	Display & Visual Merchandising	3
BSAD227	Business Communications	3
BSAD223	Business/Financial Math	3

SECOND TERM

MGMT322	Office Procedures	1
MGMT342	Internship Seminar I	1
MGMT359	Retail Merchandise Internship I	5
MGMT404	Psychology Seminar	1
MKTG104	Adv. & Sales Promotion	3
MKTG321	Retail Marketing I	3
MKTG301	Retail Product Analysis	3

THIRD TERM

MGMT358	Internship Seminar II	2
MGMT360	Retail Merchandise Internship II	7

EDUCATIONAL PROGRAMS

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 that wants to quickly move into a sales or management, industry-sponsored training program.

Specific benefits of the three-term program include rapid development of sales and management skills, total transferability into any of DMACC's two-year AAS degree marketing and management 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 all application forms and attend a Planning for College Success (PCS) Workshop. Students start fall or spring.

Graduation Requirements

To qualify for the diploma, complete all courses as prescribed and attain a 2.0 grade point average.

FIRST TERM

MGMT101	Personnel Supervision	3
MGMT202	Psychology & Human Relations	3
MKTG102	Principles of Marketing	3
	or	
BSAD150	Intro.to Business	3
BSAD227	Business Communications	3
BSAD223	Business/Financial Math	3
	or	
MATH092	Introductory Algebra	4

SECOND TERM

MGMT102	Intro. to Mgmt.	3
MGMT103	Sales Management	3
	or	
MKTG104	Advertising and Sales Promotion	3
MGMT291	Pre-Employment Seminar	1
ACCT101	Principles of Accounting I	4
	or	
ACCT301	Accounting Fund.	3
DATA101	Introduction to Data Processing	3
	or	
DATA103	BASIC	3

THIRD TERM

MKTG103	Principles of Selling	3
MGMT343	Field Experience I	7
MGMT344	Field Experience I Seminar	2

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 three-term program, the administrative secretary will have a variety of skills including shorthand transcription, English usage, and word processing. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Beginning typing skills required. Students start any term.



Graduation Requirements

A student must complete all required classes in the program with at least a 2.0 grade average to receive a diploma.

FIRST TERM

OFFC205	Business English	3
OFFC207	Intro to Computers	3
OFFC304	Intro. Shorthand	4
MGMT202	Psychology and Human Relations	3
OFFC309	Office Accounting	2
OFFC311	Business Math and Calculators	3
OFFC403	Professionalism I	1

SECOND TERM

OFFC204	Office Procedures	4
OFFC206	Written & Verbal Communications	3
OFFC302	Typing II	2
OFFC305	Adv. Shorthand & Transcription	4
OFFC306	Inf. Proc. I	2
OFFC404	Professionalism II	1

THIRD TERM

OFFC303	Typing III	2
OFFC310	Professional Dev.	3
OFFC401	Model Office	2
MGMT291	Pre-Employment Seminar	1
OFFC405	Professionalism III	1

EDUCATIONAL PROGRAMS

SECRETARY - LEGAL

The student in the five-term 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 form and attend a Planning for College Success (PCS) Workshop. Beginning typing skills required. Students start any term.

Graduation Requirements

To earn the AAS degree, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

OFFC205	Business English	3
OFFC302	Typing II	2
OFFC304	Intro. Shorthand	4
OFFC311	Business Math and Calculators	3
OFFC403	Professionalism I	1
MGMT202	Psychology and Human Relations	3

SECOND TERM

OFFC207	Intro to Computer	3
OFFC230	Legal Procedures	3
OFFC303	Typing III	2
OFFC305	Advanced Shorthand and Transcription	4
OFFC331	Legal Terminology	3
OFFC404	Professionalism II	1
OFFC309	Office Accounting	2

THIRD TERM

OFFC234	Intro to Law & Citations/Research	1
OFFC235	Law I Techniques	2
OFFC237	Criminal Law	1
OFFC306	Infor. Proc. I	2
OFFC405	Professionalism III	1
OFFC201	Information/Word Processing Concepts	2

FOURTH TERM

OFFC206	Written & Verbal Communications	3
OFFC236	Domestic Relations I	1
OFFC238	Civil Litigation	1
OFFC239	Business Organizations	1
OFFC240	Law II Techniques	2
OFFC307	Infor. Proc. II	2
MGMT291	Pre Employment Seminar	1
OFFC406	Professionalism IV	1
BUSL101	Business Law I	3

FIFTH TERM

OFFC231	Legal Management	3
OFFC232	Real Estate	1
OFFC233	Probate	1
OFFC241	Law III Techniques	2
OFFC242	Income Tax	3
OFFC243	Estate Planning	1
OFFC407	Professionalism V	1
OFFC420	Legal Internship	5

SECRETARY - MEDICAL

The Medical Secretary program is a three-term program which prepares 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; is part receptionist, part bookkeeper, part stenographer, and in emergencies, part technician. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Beginning typing skills needed. Students start fall term.

Graduation Requirements

To earn the Medical Secretary diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

OFFC205	Business English	3
OFFC220	Intro to Anatomy & Physiology	3
OFFC221	Medical Terminology	3
OFFC302	Typing II	2
OFFC403	Professionalism I	1
OFFC432	Medical Secretarial Proc. I	3
MGMT202	Psychology and Human Relations	3

SECOND TERM

OFFC206	Written & Verbal Communications	3
OFFC306	Infor. Proc. I	2
OFFC320	Human Body in Health & Disease	3
OFFC309	Office Accounting	2
OFFC404	Professionalism II	1
OFFC430	Medical Trans. I	3
OFFC433	Medical Secretarial Proc. II	3

THIRD TERM

OFFC405	Professionalism III	1
OFFC431	Medical Trans. II	3
OFFC435	Internship for Medical Secretary	6
MGMT291	Pre-Employment Seminar	1



EDUCATIONAL PROGRAMS



SOCIAL WORK PREPARATION

The Pre-Social Work curriculum enables students to transfer to a Bachelor of Social Work (BSW) degree program. The Human Services Program may be more appropriate for building job skills of students who plan to work before completing the BSW degree.

Students should have a strong background in the social and behavioral sciences, especially sociology and psychology. Usually references from a field experience or volunteer work experience are required for admission to a social work program. Location: Ankeny, Boone, Carroll

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

HUMS101	Introduction to Human Services	3
HUMS104	Community Organization	3
HUMS109	Survey of Mental Health Treatment	3
PSYH102	General Psychology	3
PSYH103	Developmental Psychology	3
PSYH104	Abnormal Psychology	3
SOCY101	Introduction to Sociology	3
SOCY102	Social Issues	3
SOCY105	Majority/Minority Problems	3
PHIL112	Ethical Problems	3
PLSC	One Political Science Course	
ECON	One Economics Course	

SURGICAL TECHNOLOGIST

The Surgical Technologist program provides the opportunity for students to develop the knowledge and skills which contribute to the safe and competent care of a surgical patient. The three-term curriculum proceeds from simple to more complex in the classroom and clinical area. Upon graduation from the program, the surgical technologist is qualified to function

under the direct guidance of the Licensed Registered Nurse and/or surgeon.

The surgical technologist is eligible to take the National Surgical Technologist Qualifying Certification Examination given by the Association of Surgical Technologists (AST). Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, submit transcripts to show 'C' or better in high school biology or equivalent completed in the last five years. Must be a high school graduate or have a G.E.D. Students start fall term.

Graduation Requirements

To earn a Surgical Technologist diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

STOR450	Anatomy & Physiology	5
STOR451	Microbiology	1
STOR452	Medical Terminology	1
STOR453	Fundamentals of the O.R. I	10
STOR454	Human Relations in the O.R.	1

SECOND TERM

STOR460	Fundamentals of the O.R. II	6
STOR461	Surgical Procedures & Instruments I	4
STOR462	Operating Room Practicum I	7
STOR463	Surgical Pharmacology	1

THIRD TERM

STOR470	Surgical Technology Seminar	2
STOR471	Surgical Procedures II	3
STOR472	Operating Room Practicum II	6

TEACHER ASSOCIATE

This 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 form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

Students enrolled in the Teacher Associate program complete the core requirements for the AS degree along with the following program requirements.

EDCR101	Intro. to Education	3
EDCR102	Prin. of Child Development	3
EDCR103	Contemporary Issues in Education	3
EDCR206	Internship/Teaching Experiences	4
EDCR105	Educational Psychology	3
	or	
PSYH105	Educational Psychology	3
EDCR125	Children's Literature	3
	or	
LITR125	Children's Literature	3
EDCR105	Art in the Elementary Schools	3
	or	
ARTT106	Art in the Elementary Schools	3
EDCR131	Introduction to Music	3
	or	
MUS1131	Introduction to Music	3
EDCR104	Enriching the Curriculum	3

EDUCATIONAL PROGRAMS

TEACHER EDUCATION PREPARATION

The Pre-Teacher Education program offers a flexible curriculum designed to meet individual needs and interests of a student who has teaching as a goal.

Emphasis is placed on providing a broad background in general education and on providing direct exposure to schools. A student may select courses with an emphasis on (1) elementary school teaching, (2) secondary school teaching, (3) a liberal arts background, (4) preparation as a paraprofessional teacher associate. Credits are transferable to four-year colleges and universities.

The basic course recommendations are suitable for either elementary or secondary education majors. Secondary education majors should design a program which will provide them with a heavy concentration in the subject area in which they intend to teach. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

PSYH101	General Psychology	3
PSYH105	Educational Psychology	3
EDCR101	Introduction to Education	3
EDCR102	Principles of Child Development	3
SOCY101	Introduction to Sociology	3
PHIL110	Introduction to Philosophy	3
MATH118	Math for Elementary Education	4
	or	
MATH115	Finite Mathematics	4
PLSC111	American National Government	3
HIST124	American History - 1492-1877	4
HIST125	American History - 1877 to present	4

Suggested Electives:

EDCR106	Art in Elementary Schools (Also ART:106)	3
EDCR104	Enriching the Curriculum	3
EDCR125	Children's Literature	3
EDCR131	Introduction to Music	3
EDCR206	Internship/Teaching Experiences	6

TELECOMMUNICATIONS

This three-term program prepares the student for employment in the telephone industry as a craftsperson. The common industry job title for the graduate of this program is telephone combination person.

The learning experiences in classroom and laboratory instruction provide a knowledge of telephone electronic circuitry, central office equipment, and total outside plant with a heavy emphasis in math skills.

The student will learn to perform the basic manipulative skills involved in installation, servicing, and troubleshooting for the total outside plant. The student will also have a basic knowledge of central office equipment.

The students have been placed with independent telephone companies, telephony equipment manufacturers, and cable TV companies. Location: Ankeny

Program Entry Requirements

Complete an application form, attend a Planning for College Success (PCS) Workshop, and submit proof of one year of high school algebra or equivalent. Start summer term.

Graduation Requirements

To qualify for the diploma, complete all courses as prescribed and at-

tain a grade point average of 2.0.

FIRST TERM

TELE427	Telephony I	2
TELE428	Telephony Experience I	5
TELE439	Math for Telephony I	2
TELE419	DC Fundamentals for Telephony	3
EMRC	Emergency Care	

SECOND TERM

TELE429	Telephony II	4
TELE430	Telephony Experience II	7
TELE440	Math for Telephony II	3
TELE448	AC & DC Applications	4

THIRD TERM

TELE449	Telephony III	4
TELE450	Telephony Experience III	7
TELE451	Basic Digital Logic Electronics	4
ENGL115	Technical and Business Writing	3



EDUCATIONAL PROGRAMS

TOOL AND DIE

Tool and Die is a six-term program designed to fill the demand for qualified personnel for either manually controlled or computer-numerically controlled equipment.

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 from the idea stage, tool makers who devise the tooling that makes quantity production possible, and program operators who plan, direct, and operate computer numerically controlled equipment.

The first half of the program is the same as Job Shop Machinist, and students have the option of pursuing general machine shop work upon successful completion of this portion of the program. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start fall term.

Graduation Requirements

To earn the AAS degree, students must complete the courses as prescribed and attain a 2.0 grade point average.

FIRST TERM

TOOL480	Blueprint Reading I	3
TOOL484	Machine Tool Operations I	3
TOOL486	Machine Tool Operations Lab I	5
TOOL489	Heat Treatment of Materials	3
TOOL499	Related Math	3

SECOND TERM

TOOL481	Blueprint II	3
TOOL482	Machine Shop Measurements I	3
TOOL483	Machine Shop Measurements II	3
TOOL485	Machine Tool Operations II	4
TOOL487	Machine Tool Operations Lab II	7

THIRD TERM

TOOL491	Machine Tool Operations III	4
TOOL490	Machine Tool Operations Lab III	7

FOURTH TERM

DIEM400	Basic Diemaking	4
DIEM401	Basic Diemaking Lab	7
DIEM402	Advanced Blueprint Reading	3

FIFTH TERM

DIEM403	Progressive Die Design	4
DIEM404	Advanced Diemaking	4
DIEM405	Advanced Diemaking Lab	7
DIEM413	Electric Discharge Machining	3

SIXTH TERM

DIEM410	CNC Machine Operations	8
DIEM407	Plastic Moldmaking	4
May be taken any term		
ENGL410	Communications Skills	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 three-term 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 businesses. Location: Ankeny

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn an Upholstery diploma, complete all courses as prescribed and attain a 2.0 grade point average.

FIRST TERM

UPHL421	Upholstery I	10
UPHL431	Math	3
ENGL410	Communications	3

SECOND TERM

UPHL422	Upholstery II	10
UPHL432	Technical Problems	4
UPHL433	Recordkeeping & Filing	2
SOCY302	Industrial Relations	3

THIRD TERM

UPHL423	Upholstery III	10
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EDUCATIONAL PROGRAMS



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. The program lasts three terms.

Ferrous and non-ferrous metals are joined using the oxyacetylene, shielded metallic arc, gas metallic arc and gas tungsten 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 form and attend a Planning for College Success (PCS) Workshop. Students start any term.

Graduation Requirements

To earn the Welding diploma, complete all course work as prescribed and attain a 2.0 grade point average.

FIRST TERM

WELD470	Welding Fundamentals & Theory	5
WELD471	Related Math	3
WELD472	Shielded Metallic Arc Welding I	7
WELD473	Oxygen-Acetylene Welding & Cutting	2

SECOND TERM

WELD480	Applied Theory & Metallurgy	5
WELD481	Blueprint Reading	3
WELD482	Shielded Metallic Arc Welding II	7
WELD483	Gas Metallic Arc Welding	2

THIRD TERM

WELD492	Shielded Metallic Arc Welding III	2
WELD493	Gas Tungsten Arc Welding	2
WELD494	Shielded Metallic Arc Welding-PIPE	3
ENGL410	Communications	3
SOCY302	Industrial Relations	3

VETERINARY MEDICINE PREPARATION

The Pre-Veterinary medicine curriculum of study is designed for those students who are planning careers in veterinary medicine. Requirements vary at different universities, and the student should study the catalog of the institution to which the student intends to transfer. Location: Ankeny, Boone

Program Entry Requirements

Complete an application form and attend a Planning for College Success (PCS) Workshop. PCS Workshop not required for Boone Campus. Students start any term.

Graduation Requirements

To earn the AA degree, complete all course work as prescribed and attain a 2.0 grade point average.

Suggested Courses:

BIOL145	Biology I	4
BIOL146	Biology II	5
CHEM151	General & Inorganic Chemistry I	4
CHEM152	General & Inorganic Chemistry II	4
CHEM161	Organic Chemistry I	5
CHEM162	Organic Chemistry II	5
MATH123	Trigonometry	3
PHYL111	College Physics I	4
PHYL112	College Physics II	4
PSYH102	General Psychology: Psychological Methods	4



SPECIALIST CERTIFICATES

ACCOUNTING - ADVANCED

The Advanced Certificate in Accounting option 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, public accounting firms and similar establishments.

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT203	Cost Accounting I	4
BSAD150	Introduction to Business	3
DATA101	Introduction to Data Processing	3
BSAD227	Business Communications	3

OFFC205	Business English	3
OFFC311	Business Math/Calculators	3

Accounting Electives (4 credits)

ACCT104	Intermediate Accounting II	4
ACCT204	Cost Accounting II	4
ACCT105	Governmental Accounting	3

Business Electives (3 credits)

BKKA482	Typing for Accountants	2
ECON101	Principles of Macro- Economics	3
BUSL101	Business Law I	3
MKTG102	Principles of Marketing	3

ACCOUNTING - BASIC

The Basic Certificate in Accounting 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.

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
OFFC311	Business Math/ Calculators	3
BSAD150	Introduction to Business	3

Accounting Electives (3-4 hours)

ACCT203	Cost Accounting I	4
ACCT105	Governmental Accounting	3

Business Electives (2-3 hours)

BKKA482	Typing for Accountants	2
DATA101	Introduction to Data Processing	3

ADMINISTRATIVE SUPPORT

With much of the typewritten work in today's office being produced by Word Processing Specialists, there is a need for secretaries who are able to perform a variety of administrative responsibilities.

The purpose of this program is to provide the previously trained secretary with the communication, record keeping and decision-making skills necessary to succeed in an administrative support position.

OFFC322	Typewriting Refresher	1
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OFFC317	Office Procedures I	2
OFFC318	Office Procedures II	2
OFFC206	Written/Verbal Communications	3
OFFC309	Office Accounting	2
OFFC313	Business English Review	2
Plus one of the following		
OFFC323	Refresher Shorthand	2
OFFC314	Machine Transcription	1
OFFC207	Introduction to The Computer	3

AGRI-BUSINESS

This certificate program is based on the technical aspects of feed and grain handling with added emphasis on selling principles.

It is intended for the student needing entry level skills or for upgrading of credentials for the currently employed.

AGRI319	Soils	2
AGRI320	Fertilizers	3
AGRI201	Feeding and Animal Nutrition I	3
AGRI205	Commodities I	3
MKTG103	Principles of Selling	3

Electives (6 credits)

AGRI421	Chemical Technology	3
AGRI215	Commodities II	3
AGRI202	Soil Fertility	3
OFFC207	Introduction to Computers	3
MGMT202	Psychology and Human Relations	3

AIRBRUSH ART

Study design theory and practice application and operational techniques of airbrush. Includes textures, spotlight effects, color techniques, photo retouching, portrait, and architectural rendering.

CART449	Airbrush I	4
CART451	Airbrush II	4

AUTO BODY REPAIR

This program allows for an overview of the Auto Body Repair processes.

The introduction course is for those wishing to explore the Auto Body Repair process, while Auto Estimating is designed for those with prior knowledge in Auto Body Repair.

AUTB304	Auto Body Fundamentals	5
AUTC434	Collision Estimating	3

AUTO MECHANICS

Offers knowledge and skill development on certain systems of the automobile. Course can be selected to fill individual's needs. For those who have limited knowledge, it is suggested that the course Introduction to Auto Mechanics be taken first.

Select 12 credits from the following:

AUTO301	Introduction to Auto Mechanics	3
AUTO401	Electronics I	5
AUTO403	Engines I	5
AUTO304	Carburetion	3
AUTO305	Tune-Up (Advanced)	3
AUTO306	Automatic Transmissions	3
AUTO409	Air Conditioning	5
AUTO308	Brakes	3
AUTO309	Front End Alignment Machines	3
	Elective (Department Approved)	3

SPECIALIST CERTIFICATES

AUTO PARTS

For those who are considering a career in auto parts. Understand the parts distribution system.

Select at least two of the following:

AUTP301	Parts and Product Analysis	3
AUTP302	Catalogs and Nomenclature	3
AUTO301	Introduction to Auto Mechanics	3

BASIC CORONARY CARE

Provides a comprehensive learning experience for nurses in a coronary care setting.

Each course offers the nurse the opportunity to learn the basics of a specific coronary care area and will be updated to reflect the latest trends.

The classes also will provide an overview of coronary topics covered in the CCRN examination.

HLCR301	Introduction to Coronary Care	1
HLCR302	Coronary Anatomy and Physiology	1
HLCR303	Arrhythmia Interpretation	3
HLCR304	Nursing Care and Coronary Complication	1
Plus one of the following		
HLCR305	Surgical Intervention	1
HLCR306	The Rehabilitation Phase	1

BUILDING MAINTENANCE

The Building Maintenance Specialist program 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. Personnel presently working in maintenance can upgrade their skills.

BLDM325	Boiler Room Maintenance	1
ELEM325	General Electricity	3
BLDM327	Plumbing, Electricity, Hardware	2
Plus one of the following		
BLDM326	Steam Plant Operation	2
HLCR314	Emergency Care W/BCLS	1
BLDM328	Inventory And Purchasing	1
BLDM329	Basic Plumbing	2
BLDM330	Building Custodian	1

CHEMICAL DEPENDENCY COUNSELING

The Chemical Dependency Counseling program is offered cooperatively with Iowa Methodist Medical Center, Powell III. In order to be in the program a person must apply and be admitted by the Powell III Counselor Training program.

Prepares students for careers as counselors in treatment facilities for chemically dependent people and their families.

The program consists of one term of on-campus instruction and two terms of intensive, supervised experience during which the students work with clients in each of the treatment programs at Powell III.

Designed to meet the proposed standards for certification of substance abuse counselors in Iowa.

HUMS202	Interviewing & Interpersonal Relationships	3
HUMS109	Survey of Mental Health Treatment	3
HUMS205	Intervention Theories and Practice I	3
HUMS206	Intervention Theories and Practice II	3

HUMS207	Field Experience	4
HUMS212	Survey of Chemical Dependency	2
HUMS213	Practicum in Chem. Dependency Counseling I	6
HUMS214	Practicum in Chem. Dependency Counseling II	6
ENGL117	Composition I	3
Select one course of the following		
SPCH110	Fundamentals of Speech	3
SOCY102	Social Issues	3
PSYH103	Developmental Psychology	3
PSYH104	Abnormal Psychology	3
BIOL124	The Human Body	2

COMPUTER LANGUAGES

This certificate program provides the basic elements of program design, logic, and analysis with emphasis in COBOL language.

It is intended for the student with prior business work experience or formal education wishing to gain entry level skills or for the presently employed person who wants to upgrade credentials.

DATA101	Introduction to Data Processing	3
DATA304	COBOL - Beginning	4
DATA306	COBOL - Intermediate	4
DATA319	Assembler - Beginning	4
ACCT101	Principles of Accounting	4
DATA382	Systems Analysis	4
Select two courses		
DATA303	Job Control Language	3
DATA338	OSJCL	2
DATA308	COBOL - Advanced	4
DATA310	Program Logic Design	3
DATA321	Assembler - Intermediate	4
DATA211	FORTRAN	3
DATA221	PL/I	3
DATA231	RPG/II	3

DATA ENTRY

Data Entry is a short program designed to give quick skills in entering data on a visual display terminal.

Graduates of this program would function as data entry operators, but a course in word processing could be very helpful as similar equipment is used.

Instruction is also given in job hunting, resumes, and interviewing.

OFFC312	Data Entry	3
MGMT202	Psychology and Human Relations	3
MGMT291	Pre-Employment Seminar	3

DIETARY SERVICE SPECIALIST I

Dietary Service Specialist I program provides a person with knowledge and skills to assist in an entry level position in the dietary department.

The dietary employee assumes responsibility for the production and service of appetizing and nutritionally balanced meals.

The Iowa State Department of Health, Division of Health Facilities, has approved the starred (*) courses for meeting the 90-hour requirements. The Dietary Service Specialist I Certificate may be awarded upon completion of:

DIAS381	Food Preparation*	1
DIAS382	Sanitary and Efficient Meal Service*	1
DIAS383	Modified Diets*	1

DIETARY SERVICE SPECIALIST II

Dietary Service Specialist II program builds on DSS I knowledge and

SPECIALIST CERTIFICATES

skills and upon completion provides a person with training to function as a Food Service Supervisor.

The Food Service Supervisor will organize and coordinate all elements of the dietary department.

The Iowa State Department of Health, Division of Health Facilities has approved the starred (*) courses for meeting the 90-hour requirement. Six hours of continuing education will be earned for other courses. The Dietary Specialist II Certificate may be awarded upon completion of DSS I and the following courses:

DIAS384	Food Service Management*	2
DIAS385	Purchasing*	1
DIAS386	Mathematics	1
DIAS387	Self & Others	1
DIAS388	Clinical Studies	1

DIETARY SERVICE SPECIALIST III

Dietary Service Specialist III program provides intensive information and clinical experiences to complete the American Dietetic Association approved training program for the dietetic assistant.

The dietetic assistant will assist the dietitian in providing quality nutritional care services for health maintenance and leadership in food service supervision.

The Dietary Service Specialist III Certificate may be awarded upon completion of DSS I, DSS II and the following courses:

DIAS389	Health Field Orientation	0
DIAS390	Nutrition: Life Cycle	2
DIAS391	Food Production	1
DIAS392	Advanced Food Service Management	1
DIAS393	Advanced Clinical Studies	1
DIAS394	Supervised Work Experience	3

DIETETIC ASSISTANT

The Iowa Dietetic Assistant program is composed of the Dietary Service Specialist I, Dietary Service Specialist II, and Dietary Service Specialist III programs. Membership into the Hospital, Institution and Educational Food Service Society (HIEFSS) may be requested after completion of the Dietetic Assistant Program.

ELECTRONIC FUNDAMENTALS

This short-term program allows one to build a knowledge base in electricity/electronics.

Courses will transfer to the AS degree program (approximately 16 credits) and to other colleges and can become a base for the attainment of higher degrees.

Graduates will receive a certificate in Electronic Fundamentals.

ELEM327	Electricity/Electronics II	3
Choose one of the following		
ELEM326	Electricity/Electronics I	3
ELET357	Digital	3
ELET358	Microprocessors I	3
ELET359	Microprocessors II	3

EMERGENCY MEDICAL TECHNICIAN - AMBULANCE

Provides 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.

Course requirements include 80 percent test scores, 18 years old at

course completions, and proficiency in all skills.

HLCR307	EMT-AMBULANCE	6
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GERONTOLOGICAL NURSING

Understanding gerontology or the process of aging is a major part of health care today. Program will provide an overview of gerontology topics covered in the American Nurses Association certification process.

The Gerontological Nursing Specialist uses the nursing process to assess the needs of the elderly, plan care, implement and evaluate that care.

HLCR308	Process of Aging	2
HLCR309	Assessment of the Geriatric Patient	2
HLCR310	Drugs & the Elderly	1
HLCR311	Developing Management Skills	2
Plus two of the following		
HLCR312	Assertiveness Training	1
HLCR313	Infection Control	1
HLCR314	Emergency Care with BCLS	1

GRAPHIC ARTS

A series of job related courses to provide broad knowledge of the printing industry. Sufficient skill training is included for entry level employment.

GRPH303	Color Photography	2
GRPH305	Graphics Arts Proc. & Materials	3
Plus one of the following		
GRPH312	Small Publications	2
PRTG461	Layout Design/Paste-Up	2
GRPH304	Darkroom Techniques	2

HOMEMAKER HOME HEALTH AIDE

This specialist program prepares people for employment as a Homemaker Home Health Aide in the home health care field.

The required courses include instruction in human relations, home management, food and nutrition, personal care, and methods of assistance for a broad range of individual and family problems.

Homemaker Home Health Aides work with public health nurses, social workers, doctors, and other professionals to provide direct and practical in-home services to individuals and families.

SEVC360	Homemaker Aide	3
SEVC361	Home Health Aide	2

INSURANCE SALES

This certificate program offers the basic elements of insurance with emphasis on human relations and marketing.

It is intended for those wishing to become licensed to sell insurance or for those in the field who want to upgrade credentials.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
BSAD225	Principles of Insurance	3
MKTG103	Principles of Selling	3
Electives (6 credits)		
BSAD223	Business/Financial Math	3
BSAD150	Introduction to Business	3

SPECIALIST CERTIFICATES

BUSL101	Business Law I	3
MKTG101	Principles of Marketing	3
MGMT103	Sales Management	3
MKTG104	Advertising and Sales Promotion	3
MGMT340	Business Internship	7

MID-MANAGEMENT

This certificate focuses on a broad-based understanding of business organization and activities with emphasis on human relations, legal aspects, and basic management practices.

It is intended for one in first-line supervision aspiring to advancement, the recently promoted manager who wishes to upgrade credentials, or the student possessing long-range goals that include upward movement through management.

ACCT101	Principles of Accounting I	4
-or-		
ACCT301	Accounting Fundamentals	3
BSAD150	Introduction to Business	3
BUSL101	Business Law I	3
MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
BSAD223	Business & Financial Mathematics	3
DATA101	Introduction to Data Processing	3
-or-		
DATA103	BASIC	3
Electives (3 credits)		
BSAD153	Office Management	3
MGMT321	Retail Management I	3
MGMT103	Sales Management	3
MKTG211	Industrial Marketing	3
BSAD152	Business Statistics	4
BSAD208	Quantitative Methods	4

MONEY MANAGEMENT

This program is intended for persons within a service or helping profession who are serving individuals in need of money management guidance. The program will help students discover and develop individualized styles of working with people on money related problems.

The courses train individuals to utilize appropriate resources to assist the client in achieving immediate and/or long-range monetary-related goals.

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.

Individuals in human service occupations will find it useful in functioning more effectively as they serve others in the area of financial resources. The program is particularly helpful for those in the credit and banking industry to help them in their role as financial counselor.

SEVC356	Intro to Money Management Counseling	2
SEVC357	Dev. Skills in Money Management Counseling	2
Select one of the following		
SEVC358	Current Money Management Topics	1
SEVC359	Crisis Intervention/Counseling Techniques	1

MOTOR CONTROL

The Motor Control Specialist Certificate program is for 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.

ELEM321	Motor Control I	3
ELEM322	Motor Control II	3
Plus one of the following		
ELEM323	Code Book for Motors	1
ELEM320	Basic Elet. Motor Theory	1
HLCR314	Emergency Care	1

PHLEBOTOMY CERTIFICATE

For those who wish to go to college part time. Learn how to assist the lab technician in the art of drawing blood samples.

PHLE301	Phlebotomy	2
PHLE390	Phlebotomy Practicum	3

PRODUCTION ART

A skill-building program that will teach the content, design and techniques of preparation of material for magazines, advertisements and publications.

CART407	Production Art I	4
CART415	Production Art II	4

PURCHASING

This certificate program covers the principles of purchasing with emphasis on accounting and legal aspects.

It is designed for the person looking for a career change to purchasing or for one already in the field wishing to build on present credentials.

Business internship credit is evaluated and established by a staff committee.

ACCT101	Principles of Accounting I	4
BUSL101	Business Law	3
MKTG212	Purchasing	3
BSAD223	Business/Financial Math	3
Electives (6 hours)		
BSAD150	Introduction to Business	3
DATA101	Introduction to Data Processing	3
DATA103	BASIC	3
BSAD153	Office Management	3
MKTG102	Principles of Marketing	3
MKTG211	Industrial Marketing	3
MGMT340	Business Internship	7

REAL ESTATE SALES

This certificate program offers the basic elements of real estate with emphasis on human relations and legal aspects.

It is intended for those wishing to become licensed to sell real estate or for those in the field who want to upgrade credentials.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
BUSL101	Business Law 1	3

SPECIALIST CERTIFICATES

BSAD226	Principles of Real Estate	3
MKTG103	Principles of Selling	3
Electives (6 hours)		
BSAD223	Business/Financial Math	3
BSAD150	Introduction to Business	3
MGMT103	Sales Management	3
MKTG104	Advertising & Sales Promotion	3
MGMT340	Business Internship	7

SELLING - ADVANCED

This certificate program emphasizes the broad principles of business, marketing, selling, and sales management with added coverage of human relations and communication.

It is intended for those wishing to enter the sales field with adequate educational preparation or for those now selling who want to build on their present credentials.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
MKTG102	Principles of Marketing	3
MKTG103	Principles of Selling	3
MGMT103	Sales Management	3
SPCH110	Fundamentals of Speech	3
MKTG104	Advertising & Sales Promotion	3
BSAD150	Introduction to Business	3
SPCH114	Persuasion	3
Electives (need 5-6 hours)		
BSAD223	Business/Financial Math	3
SOCY101	Introduction to Sociology	3
MKTG211	Industrial Marketing	3
MKTG334	Principles of Fashion Merchandising	3
MKTG323	Display & Visual Merchandising	3
MGMT340	Business Internship	7
MGMT321	Retail Management I	3

SELLING - BASIC

This certificate program provides the basic elements of selling and marketing with special emphasis on human relations and communication.

It is intended for the student wishing to enter this exciting and rewarding field and for the currently employed sales person who wants to build on present credentials.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
MKTG102	Principles of Marketing	3
MKTG103	Principles of Selling	3
MGMT103	Sales Management	3
Electives (need 5-6 hours)		
SOCY101	Introduction to Sociology	3
SPCH110	Fundamentals of Speech	3
BSAD150	Introduction to Business	3
MKTG321	Retail Management I	3
MKTG211	Industrial Marketing	3
MKTG104	Advertising & Sales Promotion	3
MKTG334	Principles of Fashion Merchandising	3
MKTG323	Display & Visual Merchandising	3

MGMT340	Business Internship	7
SPCH114	Persuasion	3

SMALL BUSINESS MANAGEMENT

This certificate program offers broad coverage of the basic elements of small business management with emphasis on human relations and marketing.

It is intended for those aspiring to owning and/or managing a small business or for someone already in such a position.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
-or-		
MGMT202	Psychology and Human Relations	3
ACCT101	Principles of Accounting	4
-or-		
ACCT301	Accounting Fundamentals	3
BSAD229	Small Business Management	3
MKTG112	Principles of Marketing	3
Electives (need 5-6 hours)		
BSAD223	Business/Financial Math	3
DATA101	Introduction to Data Processing	3
DATA103	BASIC	3
MGMT101	Personnel Supervision	3
BUSL101	Business Law I	3
MGMT321	Retail Management I	3
MKTG211	Industrial Marketing	3
MKTG104	Advertising & Sales Promotion	3
MKTG334	Principles of Fashion Merchandising	3
MKTG103	Principles of Selling	3
MKTG212	Purchasing	3
MKTG212	Display and Visual Merchandising	1
MGMT340	Business Internship	7

SUPERVISION - BASIC

This certificate program offers broad coverage of the basic elements of management with added emphasis on human relations.

It is intended for those aspiring to be a beginning management/supervision position or for those recently appointed to such a position.

Business internship credit is evaluated and established by a staff committee.

BSAD303	Adventures in Attitudes	2
MGMT202	Psychology & Human Relations	3
MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
Electives (6 hours)		
BSAD150	Introduction to Business	3
BSAD153	Office Management	3
BSAD229	Small Business Management	3
MKTG321	Retail Management I	3
MGMT103	Sales Management	3
MKTG211	Industrial Marketing	3
MKTG334	Principles of Fashion	3
MKTG103	Principles of Selling	3
MKTG212	Purchasing	3
MGMT340	Business Internship	7

TELEPHONE

This program offers job entry and advancement skills for both men and women and develops a basic understanding of electricity and electronics.

SPECIALIST CERTIFICATES

TELE311	Basic Electricity/Electronics I (DC)	3
TELE312	Basic Electricity/Electronics II (AC)	2
Choose additional 2-credits from the following		
TELE315	Carrier Systems	3
TELE313	Introduction to Telephone	1
ELET357	Digital	3
TELE316	Electronic Circuits	2
TELE318	SemiConductor Devices	3
TELE381	Seminar Topic I	2
TELE382	Seminar Topic II	2
TELE383	Seminar Topic III	2

TRAVEL PERSONNEL

Trained and qualified personnel are needed to work in private agencies as travel agents and in corporate settings as reservationists, travel counselors and travel planners.

This program is designed to supplement agency and company training programs and provide you with a basic understanding of the terminology, communication skills and specialized procedures for handling personal and business travel needs of the community.

OFFC410	Travel Personnel Beginning	1
OFFC411	Travel Personnel Intermediate	1
OFFC412	Travel Personnel Advanced	1
OFFC413	Geography	1
OFFC317	Office Procedures I	2
OFFC322	Typing Refresher	1
Electives (select one)		
OFFC207	Introduction to Computers	3
OFFC309	Office Accounting	2
OFFC206	Written/Verbal Communications	3

VOLUNTEER MANAGEMENT

The Volunteer Management Specialist Certificate program is the only program of its kind in Iowa. It is intended for people who are involved, or intend to be involved, in the management of volunteer programs.

The program will develop understanding of the problems and challenges particularly inherent in managing a human service program. The courses are designed to provide a comprehensive learning experience in the development, coordination, and supervision of volunteer programs.

Each required course is instructed by a practicing volunteer professional. A program option offers the opportunity for independent study or 'hands-on' experience in a volunteer agency.

A broad range of volunteer opportunities exists in schools, child care programs, youth organizations, churches, consumer and legal agencies, the political and government sector, programs for the elderly, hospitals, nursing homes, and other service and welfare organizations.

SEVC351	Volunteers in Action	1
SEVC352	Volunteer Coordination	1
SEVC353	Effective Management of Volunteer Programs	1
Select one of the following		
SEVC354	Volunteer Services Practicum	1
SEVC355	Volunteer Independent Study	1
PSYH106	Psychology of Human Relations & Adjustments	3

WARD CLERK

The Ward Clerk Specialist program provides an opportunity for individuals to learn and practice skills required of a ward clerk in employment.

The ward clerk keeps a busy unit in a health care facility running smoothly. Effective telephone communications with other departments,

physicians, and nurses are essential.

HLCR316	Ward Clerk	4
HLCR317	Medical Terminology	2
Plus one of the following		
HLCR314	Emergency Care with BCLS	1
HLCR312	Assertiveness Training	1

WASTE WATER TREATMENT OPERATOR

The Waste Water Operator program provides a series of courses for those working in waste water treatment plants, sometimes referred to as sewage treatment or water pollution control.

WWAR302	Intro to Wastewater Treatment	2
WWAR303	Lagoons	2
WATE312	Basic Math for Operators	1
WATE313	Math Formulas for Operators	1
HLCR314	Emergency Care	1
WATE322	Lab Equipment	1
WATE323	Lab Techniques	1
WATE331	Pumps and Piping	2
WWAR374	Seminar Topics I	1
WWAR375	Seminar Topics II	1
WWAR376	Seminar Topics III	1
	Approved Elective	2

WATER OPERATOR

The Water Treatment program provides a series of courses for those working in water works (drinking water) systems.

WATE302	Intro to Water Treatment	2
WATE312	Basic Math for Operators	1
WATE313	Math Formulas for Operators	1
WATE317	Basic Water Chemistry	1
WATE318	Chemistry & Water Processes	1
HLCR314	Emergency Care	1
WATE322	Lab Equipment	1
WATE323	Lab Techniques	1
WATE331	Pumps and Piping	2
WATE363	Seminar Topics I	1
WATE364	Seminar Topics II	1
WATE365	Seminar Topics III	1
	Approved Elective	2

WORD PROCESSING

Businesses today have a high demand for correspondence specialists who are skilled in grammar, punctuation and spelling and who can produce a high volume of error-free copy on text-editing typewriters.

The purpose of this program is to provide office workers with a basic understanding of word processing concepts and prepare them with the necessary training, knowledge and skills to meet the special needs of business and industry in the job market today.

OFFC313	Business English Review	2
OFFC314	Machine Transcription	1
OFFC315	Word Processing Fundamentals	1
OFFC316	Word Processing Applications	1
OFFC201	Information/Word Processing Concepts	2
Select one of the following		
OFFC207	Introduction to Computers	3
OFFC206	Written/Verbal Communications	3
OFFC317	Office Procedures I	2

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.

ACCT101 4-3-2
PRINCIPLES OF ACCOUNTING I

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 statements.

ACCT102 4-3-2
PRINCIPLES OF ACCOUNTING II

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
INTERMEDIATE ACCOUNTING I

Emphasis on the 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; statement of changes in financial position; receivables; liabilities and operational assets. Prerequisite: ACCT102.

ACCT104 4-3-2
INTERMEDIATE ACCOUNTING II

Continuation of Intermediate Accounting I - with emphasis in the following areas; plant, property and equipment; intangible assets; corporation - formation and operations, expansion; investments; bonds; pensions; leases; accounting changes; earnings per share and current/constant dollars. Prerequisite: ACCT103

ACCT105 3-3-0
GOVERNMENTAL ACCOUNTING

An introduction to the accounting and reporting principles, standards, and procedure applicable to federal, state, and local government. Also includes nonprofit institutions such as hospitals and universities.

ACCT203 4-3-2
COST ACCOUNTING I

An introduction to accounting concepts of product costing system. Topics include: classification of costs, process cost, job order cost, joint and by-product costs and standard cost. Prerequisite: ACCT101.

ACCT204 4-3-2
COST ACCOUNTING II

A detailed study of the concepts and techniques of cost analysis. Topics include production budgeting, capital budgeting, break-even analysis, direct costing, and other areas of concern to management. Prerequisite: ACCT203.

ACCT205 3-2-2
AUDITING PROCEDURES

A broad overview of how audits are performed and why they are performed. Includes topics in planning the audit, evaluation of internal control, sampling, preparation of work papers and the latest pronouncements by the Auditing Standards Board, the SEC and the FASB. Prerequisite: ACCT104, BSAD208 or 152.

ACCT206 3-3-0
INCOME TAX

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
ACCOUNTING FUNDAMENTALS

An introductory course in accounting fundamentals and procedures. Includes capturing and analyzing business data, topics in financial statement preparation,

manufacturing costs and budgeting.

ACCT350 3-1-4
COMPUTERS & ACCOUNTING APPLICATIONS

An introduction to computer applications of accounting procedures. Includes topics in analysis and design of input and output systems; forms, operations of micro computers. Prerequisite: DATA101 and ACCT101.

ACCT403 3-0-15
ACCOUNTING INTERNSHIP

An opportunity to gain practical experience through on-the-job training in an approved business or governmental office. Prerequisite: Completion of the first two semesters of Accounting Specialist Program and/or departmental permission.

ADHC226 3-3-0
MGMNT OF SERV - MENTALLY DISABLED

Physical, psychosocial and cultural dynamics of mental retardation and developmental disabilities. Public policy as it affects the disadvantaged and the Administrator's role in effecting optimum normalization.

ADHC27 3-3-0
MGMNT OF SERV - MENTALLY ILL

Functional and organic bases of illness, treatment modalities, cultural community role in rehabilitative milieu and Administrative responsibility in dynamics of change.

ADHC228 1-1-0
FIELD PROJ. - SERV FOR MENTALLY DISABLED

After completing the management course, the student will utilize the information gained to develop an ideal community based long term care program to serve the needs of this client population.

ADHC229 1-1-0
FIELD PROJ. SERVE FOR MENTALLY ILL

After completing the management course, the student will utilize the information gained to develop an ideal community based long term care program to serve the needs of this client population.

ADHC237 3-3-0
PRINC OF ACCOUNTING II FOR HEALTH CARE

Accounting II for Health Care is directed toward giving students a review of basic accounting in the nursing home, becoming aware of the overall fiscal control mechanisms in the nursing home, developing skills in monitoring on a regular basis the cost and labor hours, third-party payment billings and audits. Emphasis will be placed on evaluating a nursing home from financial and other related reports. Prerequisite: ACCT101.

ADHC251 3-1-0-6
PRACTICUM: SOCIAL SERVICES & REHABILITATION

This unit will direct the student's attention to the Social Services and Rehabilitation program. Under the supervision of the Administrator - Preceptor the student will observe, assist, and participate in experiences relevant to an understanding of these areas. Prerequisite: Approval of program chairperson.

ADHC252 3-1-0-6
PRACTICUM: DIETARY

This unit directs attention to the dietary department of a nursing home, the understanding of the ordering and inventory process, food preparation and serving and staffing patterns. The student will work in the kitchen as well as with the administrator and the dietary consultant. Prerequisite: Approval of program chairperson.

ADHC253 3-1-0-6
PRACTICUM: LEGAL ASPECTS & GOVERNMENT ORGANIZATIONS

This unit will acquaint the student with some of the con-

cerns related to governmental organizations regulating nursing homes. The student is expected to become aware of these rights and regulations.

ADHC254 3-1-0-6
PRACTICUM: NURSING

Students will spend 80 hours in the nursing unit and will expand his/her knowledge of long-term facility nursing and how it relates to long-term care administration.

ADHC255 3-1-0-6
PRACTICUM: HOUSEKEEPING, LAUNDRY MAINT

The student spends 80 hours observing, participating, and assisting in related activities in the housekeeping, laundry and maintenance areas. Under the guidance of the preceptor and facility staff the student will participate in the administration of these departments.

ADHC256 3-1-0-6
PRACTICUM: ACTIVITIES & COMM. RESOURCES

The unit directs attention to the facility's activity and volunteer program. Under guidance of the preceptor there are directed opportunities to participate in these programs.

ADHC257 3-1-0-6
PRACTICUM: BUSINESS ADMINISTRATION

Under supervision the student will become familiar with the organization of the facility's business and will participate in such things as Accounts Payable/Receivable, Budgeting, Bank Reconciliations, Cost Reports and Third Party Billing. The student should have mastered basic accounting principles prior to enrollment in this unit.

ADHC258 3-1-0-6
PRACTICUM: ADMINISTRATION ORGANIZATION

This unit will be devoted to concepts and practices utilized in Administrative Organization. During this period of study the student will observe, assist and participate in the various areas of concern with the help of the Administrator-Preceptor and other relevant persons.

ADHC259 3-1-0-6
PRACTICUM: PERSONNEL ADMINISTRATION

During this unit the student will be studying the processes involved in the facility's Personnel Administration Program. During this experience the student will observe, assist and participate in activities related to Personnel Administration with the assistance of the college, the Administrator-Preceptor and other relevant facility personnel.

ADHC275 6-6-0
ADMIN. LONG TERM CARE FAC.

Relates fundamental management principles to special challenges and concerns of long-term care, basic principles of the management process, human resources management, and organizational behavior.

ADHC276 6-6-0
SERVICE FOR LONG TERM CARE PATIENTS

Relates physical and psychosocial needs of residents to services provided in the institutional setting and the community. Units include nursing services, quality assurance mechanisms, environmental control, mental illness in the elderly and resident characteristics.

ADHC281 3-3-0
SEMINAR IN HEALTH CARE

The concluding seminar on the role of the long term care facility in the health care delivery system. Emphasis will be placed on principles and practices involved in administration and resident services. Special attention is given to reviewing rules and regulations of federal, state and local governmental agencies including Title XIX and XVIII. It is expected that this will be the final course.

AGET479 10-5-10
ADVANCED ENGINES

An in-depth study of the concepts covered in Basic

DESCRIPTION OF COURSES

Engines. Engine application and overhaul procedures according to manufacturers' recommendations are studied. Prerequisite: AGPE478

AGET481 5-5-0
DIESEL FUEL ENGINES

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

AGET482 3-3-0
SHOP MANAGEMENT

General economic principles that control business operation with special emphasis how 'proper' shop management can affect the growth of the agriculture equipment dealer.

AGET483 10-5-10
LIGHT INDUSTRIAL EQUIPMENT

An introduction to light industrial equipment associated with the agriculture equipment industry, but not used primarily in farm production. Emphasis will be given to the hydraulic systems usually used in small end loaders, loader backhoes, and fork lifts. Prerequisite: AGPE473, 474, 468

AGET485 7-5-5
POWER UNIT TESTING

The application of principles learned in the Basic Electricity, Hydraulics, Engines and Power Trains courses in the analysis of malfunctions of components and with their relationship with other components in agriculture equipment. Prerequisites: AGPE469, 473, 474, 478, 471, 472, AGET479, 480

AGPE466 7-5-5
PLANTING & TILLAGE SYSTEMS

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.

AGPE468 3-3-0
RELATED MATH

A math course that covers addition, subtraction, multiplication, division, fractions, decimals, ratios, and simple algebra. Instruction on reading of precision instruments is also given.

AGPE469 3-3-0
BASIC ELECTRICITY

An introduction to basic electricity principles that apply to d.c. electrical systems used on agricultural equipment. Electrical circuits covered include starting, charging and accessory systems.

AGPE470 2-2-0
TECHNICAL PUBLICATIONS

A course in reading and understanding service manuals, parts catalogs, and technical bulletins.

AGPE471 10-5-10
POWER TRAINS

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.

AGPE473 7-5-5
HYDRAULICS

Designed to develop knowledge of the principles of fluid power. The principles, components, circuits, technical language, testing and diagnosis of hydraulic systems are studied. Prerequisite: AGPE468

AGPE475 7-2-10
HARVESTING SYSTEMS

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.

AGPE477 2-2-0
AIR CONDITIONING

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
BASIC ENGINES

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.

AGRI201 3-3-0
FEEDING AND ANIMAL NUTRITION I

The identification and study of feed ingredients, nutrients and additives. Determining feed requirements of various classes of livestock. Ration balancing and feed formulations are computed.

AGRI202 3-3-0
SOIL FERTILITY

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.

AGRI203 3-3-0
FEEDING ANIMAL NUTRITION II

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

AGRI204 3-3-0
ANIMAL SCIENCE I

Production methods of feeding and breeding classes of livestock. Emphasis on swine and beef operations.

AGRI205 3-3-0
COMMODITIES I

Focuses on the futures market and how it can be used as a marketing tool. Emphasis is on terminology and hedging.

AGRI206 3-3-0
CROP MANAGEMENT

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.

AGRI214 3-3-0
ANIMAL SCIENCE II

Production methods of feeding and breeding classes of livestock. Emphasis on swine and beef operations. Prerequisite: AGRI204

AGRI215 3-3-0
COMMODITIES II

An in-depth study of the futures market. Major areas of study will include: hedging, speculation, price forecasting, spreading, technical analysis and fundamental analysis. Prerequisite: AGRI205

AGRI219 5-4-2
SOILS AND FERTILIZERS

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.

AGRI301 3-3-0
PERSONNEL AND INDUSTRIAL RELATIONS

A study of the problems involved in industrial relations. The duties and responsibilities of management, wage and salary administration, job descriptions and resumes are discussed.

AGRI319 2-2-0
SOILS

An introductory course in soils found in physical, chemical, and biological properties.

AGRI320 3-2-2
FERTILIZERS

An introductory course in fertilizers, their composition, manufacturer, and use.

AGRI411 2-2-0
AGRICULTURAL ECONOMICS

A study of the best economic principles and the application of these principles to the distribution of agricultural supplies.

AGRI421 3-3-0
CHEMICAL TECHNOLOGY

Common features of pests, methods of control, how pesticides work, pesticide labels, application equipment, calibration, laws and regulations governing pesticide use.

AGRI430 4-0-12
EMPLOYMENT EXPERIENCE I

Employment experience in an agri-business related to the career objectives.

AGRI435 2-2-0
PHYSICAL FACILITIES

Discusses the layout of buildings, driveways and facilities on site. Includes the flow of materials and the safe operation and maintenance of machinery and equipment.

AGRI436 2-2-0
GRAIN MANAGEMENT

This course is 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.

AGRI453 3-0-0-10
EMPLOYMENT EXPERIENCE II

Work experience in an agri-business area. Prerequisite: AGRI430

AGRI454 1-1-0
AGRICULTURE SEMINAR

An overview of the individual's goals as they relate to employment experiences and the instructional program. Prerequisite: AGRI453

AGRI463 5-0-0-16
EMPLOYMENT EXPERIENCE III

Work experience in an agricultural business. Prerequisite: AGRI453

AGRI473 7-0-0-10
EMPLOYMENT EXPERIENCE IV

Work experience in an agricultural business. Prerequisite: AGRI463

ANTH120 3-3-0
INTRODUCTION TO ANTHROPOLOGY

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 variation, cultural development and change, socio-cultural systems, and cross-cultural comparisons of peoples throughout the world.

ANTH122 3-3-0
PEOPLES & CULTURES OF MEXICO

DESCRIPTION OF COURSES

This course traces the development of the various cultures of Mexico, from earliest origins to the present. It surveys the cultural mosaic of modern Mexico: peoples, institutions, languages, literature and the arts. It also deals with the role of the North American traveler in Mexico and some practical problems in intercultural relations.

ANTH123 3-3-0
ETHNOGRAPHY OF THE FUTURE

This course explores the rapidly growing field of future studies, its historical development, contributions of futurists to government, business, and ideology, and futurist perspectives on current world problems. Students will apply an anthropological systems approach to complex issues affecting today's lifestyles and ideologies. Prerequisite: ANTH120 OR SOCY101

ARCH410 2-2-0
ARCHITECTURAL DRAFTING I LECTURE

An introduction to drafting and related equipment, along with a preliminary look at the following; site, energy, the building code, and sketching.

ARCH420 3-3-0
ARCHITECTURAL DRAFTING II LECTURE

Complete sets of residential working drawings involving plans, elevations, sections, details, and schedules, will be developed.

ARCH460 3-0-6
ARCHITECTURAL DRAFTING I LAB

Practical application of the basic skills of drafting involving the mechanics and the necessary thought process.

ARCH461 5-0-10
ARCH. DRAFTING II LAB

Practical application of techniques necessary to develop a set of residential drawings.

ARCH462 3-3-0
ARCHITECTURAL DRAFTING III LECTURE

Small commercial building drawings will be developed including the mechanical systems and costs.

ARCH463 5-0-10
ARCHITECTURAL DRAFTING III LAB

Involvement in the practical drawing of commercial buildings including the normal systems but with an emphasis on energy conservation.

ARCH464 2-2-0
CONSTRUCTION TECH I

An introduction to building materials through the construction specification institutes' accounting and management system.

ARCH465 2-2-0
BUILDING EQUIPMENT II

Heating and cooling systems with support conditioning elements will be analyzed.

ARCH470 2-2-0
CONSTRUCTION TECH II

An ongoing look into the construction specification institutes system of categorizing building materials.

ARCH471 3-3-0
CONSTRUCTION TECH. III

Complete the construction specification institutes uniform system and investigate the preliminary aspects of structural design.

ARCH472 2-2-0
CONSTRUCTION ESTIMATING

An orderly process of accounting for the items involved in the construction project.

ARCH473 2-2-0
BUILDING EQUIPMENT I

The mechanical systems of the building will be analyzed from the ground up beginning with plumbing and electrical.

ARCH474 3-3-0
DRAFTING MATH - ALGEBRA

A review of basic math, and an investigation of the principles of algebra.

ARCH475 2-2-0
TECHNICAL REPORTS AND SPECS

A look into the forms and contracts used in architecture as well as the technical section called specifications.

ARCH476 3-3-0
DRAFTING MATH - TRIGONOMETRY

A search into the relationship between algebra and geometry and how they are combined into a useful tool. Prerequisites: ARCH474

ARTS101 3-3-0
ART APPRECIATION

A general survey course which explores many artists: their lives, cultures and media. Field trips required.

ARTS102 3-0-6
FUNDAMENTALS OF DRAWING

Emphasis on new perceptions of reality using nature, still life and landscapes, developing skills in composition with a variety of media and techniques.

ARTS103 3-0-6
LIFE DRAWING

Drawing and painting from the live model with emphasis on structure movement, and expression.

ARTS104 3-0-6
FUNDAMENTALS OF PAINTING

Acrylic or oil painting with emphasis on still life, landscape and individual composition.

ARTS105 3-3-0
ART IN THE ELEMENTARY SCHOOL

Designed for students in Education and Recreation to assist them with design, construction, and planning with multi-art forms and materials in instructional situations.

ARTS106 2-1-2
FREEHAND SKETCHING - TV

A television course expressly for beginners progressing through a series of skill levels. Emphasis is on controlling shapes and directions of three-dimensional objects leading to the use of drawing for visual communication.

ARTS107 2-1-2
APPLIED SKETCHING - TV

Reviews the fundamentals of freehand drawing and builds on those principles to introduce advanced techniques and concepts; builds confidence for the television student. Skills developed for drawing greeting cards, posters, charts and cartoons.

ASDN200 2-2-0
NURSING PROCESS I - ADN

Nursing roles of professional care giver, communicator, and teacher-reinforcer are examined. Components of the nursing process with emphasis on assessment, problem identification and nursing diagnosis formulation are reviewed with application to surgical clients and clients with activity, nutrition/elimination and oxygen/circulation alterations. Prerequisites: PSYH101, NURS200, 201, 202

ASDN201 6-0-12
NURSING PRACTICUM II - ADN

Provides practicum experience for application of Human Needs II and Nursing Process I 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: PSYH101, NURS200, 201, 202.

ASDN202 5-5-0
HUMAN NEEDS III

Utilization of nursing process, clinical manifestations, and pathophysiological considerations as applied to alterations of sleep/comfort, sexuality/self-concept, activity, and nutrition/elimination are emphasized. Maternal and newborn care are introduced. Prerequisites: PSYH103, BIOL131, 132, NURS203, ASDN200, 201, ENGL117

ASDN203 8-0-16
NURSING PRACTICUM III

Provides practicum experience for application of Human Needs III theory with emphasis on utilization of nursing process for clients with altered sleep/comfort, sexuality/self-concept, activity and nutrition/elimination needs. Students provide care for maternal, newborn, and pediatric clients. Prerequisite: PSYH103, BIOL131, 132, NURS203, ASDN200, 201, ENGL117.

ASDN204 4-4-0
HUMAN NEEDS IV

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: SOCY101, ASDN202, 203.

ASDN205 1-1-0
MGMNT & ACCOUNTABILITY IN NURSING

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: SOCY101, ASDN202, 203.

ASDN206 9-0-18
NURSING PRACTICUM IV

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 sexuality/self-concept and multiple needs. Prerequisites: SOCY101, ASDN202, 203.

AUTB304 5-4-2
AUTO BODY FUNDAMENTALS

A basic overview of the processes used to repair the damaged surfaces. For those who wish to broaden their knowledge in the auto body repair or explore the auto body repair field or are considering entering the full-time day program. Safety glasses required, \$15 lab fee, book required. A recommended tool list will be presented during the first class session.

AUTC412 4-4-0
INTRODUCTION TO AUTOBODY

Provides a thorough study of the autobody industry. The competencies expected to be achieved are outlined and studied.

AUTC414 3-3-0
FUNDAMENTALS OF REPAIR

Automobile design, the properties of materials used in construction, collision and corrective forces are analyzed to provide techniques for complete repair. Prerequisite: AUTC412

AUTC416 3-2-2
AUTOBODY WELDING

Oxy-Acetylene welding, brazing and MIG (metallic inert gas) welding processes are studied and practiced. Prerequisite: AUTC414

AUTC418 4-1-6
BASIC REPAIR OPERATIONS

DESCRIPTION OF COURSES

Skills and knowledge fundamental to complete autobody collision repair are studied and practiced. Prerequisite: AUTC416

AUTC420 **RELATED MATH** **3-3-0**

Practical mathematics as it applies to the automobile. Emphasis is placed in fractions, decimals, percentages, and mathematics as it applies to shop procedures and small business operation.

AUTC422 **PAINT REFINISHING THEORY** **3-3-0**

Proper surface preparation, pre-finish operations, equipment use and care, refinish materials, and color matching are studied. Prerequisite: AUTC418

AUTC424 **PAINT REFINISHING PRODUCTION** **3-0-6**

Following paint refinishing theory the proper application of those subjects learned are practiced using project vehicles. Prerequisite: AUTC422

AUTC426 **SERV OPERATIONS - REPAIRS** **5-0-10**

The repair of damaged components, fabrication of components, and component replacement are studied and practiced using current technologies. Prerequisite: AUTC424

AUTC432 **MAJOR PRODUCTION OPERATIONS** **4-0-8**

Minor to major collision repair as practiced in industry is given special attention. Prerequisite: AUTC426

AUTC434 **COLLISION ESTIMATING** **3-3-0**

Vehicle damage appraisal and estimating is a skill developed so a written estimate can be prepared which serves as a legal document, repair guide, and business evaluation.

AUTC434 **COLLISION ESTIMATING** **3-3-0**

Vehicle damage appraisal and estimating is a skill developed so a written estimate can be prepared which serves as a legal document, repair guide, and business evaluation.

AUTC436 **SPECIALIZATION PRACTICE** **3-1-4**

Technology updating and special functions of the industry are given additional attention to enhance the student's potential. Prerequisite: AUTC432

AUTO301 **INTRO TO AUTO MECHANICS** **3-3-0**

Part of the automobile; maintenance, cooling, and lubrication systems, brakes, oil leaks, vibrations, and rattles.

AUTO304 **CARBURETION** **3-3-0**

Gasoline, fuel pumps, gauges, carburetion theory and the rebuilding and adjustment of single barrel, tow barrel, and four barrel carburetors. Prerequisite: AUTM301

AUTO305 **TUNE-UP (ADVANCED)** **3-2-1**

Electronic equipment in diagnosis, testing, and adjustment procedures. Prerequisite: AUTM304

AUTO306 **AUTOMATIC TRANSMISSION** **3-2-1**

Operation and construction of automatic transmission, hydraulic systems and planetary gear systems.

AUTO308 **BRAKES** **2-2-1**

Components, and parts and basic functions service of brake cylinders, calipers, hydraulic brake lines, brake shoes, pads and other brake components.

AUTO309 **FRONT END ALIGNMENT** **3-2-1**

Alignment factors, suspension and steering control systems. Parts replacement. Prerequisite: AUTM301

AUTO401 **ELECTRONICS I** **5-4-1**

A course to provide instruction in electricity; basic circuitry, correct meter usage and cranking system fundamentals.

AUTO402 **ELECTRONICS II** **5-4-4**

Instruction in evaluating and servicing charging systems, ignition systems, carbureted fuel systems and related components. Prerequisite: AUTO401

AUTO403 **ENGINES I** **5-4-1**

A course to provide a thorough knowledge of the automotive engine as it relates to mechanical and performance problems. Prerequisite: AUTO402

AUTO404 **RELATED SCIENCE** **3-3-0**

Designed to acquaint the student with the scientific principles that must be understood to properly diagnose and service the automobile.

AUTO405 **ENGINES II** **5-4-4**

Instruction in evaluating, repairing and replacing engine components to meet manufacturers' specifications. Prerequisite: AUTO403

AUTO406 **ADVANCED TUNE-UP** **5-4-4**

Provides instruction in diagnosis, testing, and correct tune-up procedures using manufacturers' specifications and modern test equipment. Prerequisite: AUTO405

AUTO407 **ADVANCED ENGINES** **5-4-4**

Provides instruction in diagnosis of engine failure and the correct repair and rebuilding of automotive engines. Prerequisite: AUTO405

AUTO408 **RELATED MATH** **3-3-0**

Practical mathematics as it applies to the automobile. Emphasis is placed on fractions, decimals, and percentages as it applies to shop procedures and small business operation.

AUTO409 **AIR CONDITIONING** **5-3-4**

Provides instruction in the theory of operation of air conditioning as well as diagnosing and servicing automotive air conditioning systems.

AUTO410 **ELECTRONIC ENGINE CONTROLS** **2-1-3**

Provides instruction in the theory of operation of electronic engine controls and the diagnosis, testing and repair of systems using computers and microprocessors. Prerequisite: AUTO407

AUTO411 **INTRODUCTION TO DIESEL** **2-1-3**

An introductory course in the operation and servicing of the automotive diesel and components. Prerequisite: AUTO207

AUTO412 **AUTOMOTIVE BRAKES AND SUSPENSION** **8-7-3**

Instruction in the theory of operation and service procedures of automotive brakes and suspension systems.

AUTO413 **BASIC POWER TRAIN** **8-7-3**

Principles of operation and construction of automotive power trains. Includes instruction in the theory of hydraulic and planetary systems in automatic transmissions.

AUTO414 **SMALL BUSINESS MANAGEMENT** **2-2-0**

A general study of small business structure, emphasis will be placed on operational costs, insurance, taxation, payroll costs, and legal aspects of small business.

AUTO415 **ADVANCED BRAKES AND SUSPENSION** **7-5-4**

This course provides instruction in the overhaul and adjustment of brakes and suspension systems. Prerequisite: AUTO412

AUTO416 **ADVANCED POWER TRAIN** **8-5-3**

This course provides instruction in diagnosing, servicing and repairing automotive power trains. Prerequisite: AUTO413

AUTO417 **SERVICE MANAGEMENT** **2-1-1**

Provides instruction in customer relations, service sales, shop management and business practices in the automotive shop.

AUTO418 **ADV DIAGNOSIS OF BRAKES & SUSPENSION SYSTEMS** **5-3-4**

An advanced course to develop diagnostic skills in automotive brakes and suspension systems. Prerequisite: AUTO415

AUTO419 **HAND TOOLS** **2-1-3**

A course to develop skills needed in the use of automotive tools and measuring instruments.

AUTO420 **BASIC WELDING** **2-1-3**

A course to develop skills in gas welding as required in an automotive repair shop.

AUTP301 **PARTS AND PRODUCT ANALYSIS** **3-3-0**

Components on the automobile, identification and recognition of parts and their function.

AUTP302 **CATALOGS AND NOMENCLATURE** **3-3-0**

Automotive terminology, understanding of such catalogs as Weatherly, GM, Ford, Chrysler, AMC, Honda, Toyota, etc. Micro Fiche Reopen computer systems.

BIOL121 **ENVIRONMENTAL BIOLOGY** **3-3-0**

This course combines the basic principles of ecology with the problems caused by man's mismanagement of natural resources. Environmental problems examined and include pollution, land use, solid waste, overpopulation, pesticides and energy. Designed for the non-science major.

BIOL122 **ENVIRONMENTAL BIOLOGY LAB** **1-0-2**

This lab supplements the discussion course, BIOL 121. Labs include measurement of soil nutrients and air and water pollutants. Selected field trips are conducted. Prerequisite or corequisite: BIOL121

BIOL124 **THE HUMAN BODY** **2-2-0**

Structure and function of the cell and basic structure and function of the system of the human body. Designed for the non-science, non-health major.

BIOL125 **BASIC POWER TRAIN** **1-0-2**

DESCRIPTION OF COURSES

HUMAN BODY LAB

This lab supplements BIOL124. Labs explore the basic structure and function of the systems of the body. Prerequisite or corequisite: BIOL124

BIOL126 FIELD BIOLOGY

Field and laboratory studies of native plants and animals of Iowa. Emphasis is placed on ecological relationships. Selected field trips are conducted to forest, prairie, marsh and riparian habitats in the local area.

BIOL128 BIOLOGY OF ANIMALS

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.

BIOL130 HEALTH SCI.-ANATOMY & PHYSIOLOGY

A classic integration of human anatomy and physiology at the cellular level and organ/system level. Designed

for the health science major. Prerequisite: High school biology and chemistry. BIOL 145 recommended.

BIOL131 HEALTH SCIENCES-PHYSIOLOGY

Detailed human physiology of the nervous, circulatory, respiratory, digestive, urinary and endocrine systems. Designed for the health science major. Prerequisite: BIOL130 or NURS200.

BIOL132 HEALTH SCIENCES-MICROBIOLOGY

An instructional and laboratory microbiology course emphasizing basic concepts and applications of medical microbiology. Topics include morphology and physiology of microorganisms, pathology, epidemiology, and immunology. Designed for the health science major. Prerequisite: High school biology and/or chemistry recommended.

BIOL135 CONTEMPORARY HEALTH ISSUES (TV)

A telecourse which explores human emotional and sexual adjustment, life-birth to death, nutrition, substance use and abuse, disease, and health and society.

BIOL145 BIOLOGY I

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.

BIOL146 BIOLOGY II

The second of a two-term sequence in introductory biology designed for the science major. This course involves a progressive survey of the animal kingdom. Prerequisite: BIOL145.

BIOL147 INTRODUCTION TO BOTANY

Morphology and taxonomy of representative species of algae, fungi, bryophytes, and the vascular plants with emphasis on the local flora. Prerequisite: BIOL145 or permission of instructor.

BIOL148 FUNDAMENTALS OF ECOLOGY

A study of the interrelationship of organisms to their physical and biotic environment, including community structure, geographical distribution, climatic factors, and population dynamics. Prerequisite: BIOL145 or permission of instructor.

BIOL149 GENERAL MICROBIOLOGY

An instructional and laboratory general microbiology course designed for the science major. Emphasis is placed on morphology, physiology, microbial genetics, virology and basic immunology. Prerequisite: BIOL130 or 145

BKKA401 ACCOUNTING APP. I & COST ACCOUNTING

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 recordkeeping. Projects provide training for preparing monthly statements, sales slips, accounts payable. Prerequisite: ACCT101.

BKKA402 ACCOUNTING APPLICATIONS II

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 inter-personal relationships. Prerequisite: BKKA401, 410, ACCT101

BKKA410 TAXES/PAYROLL

Introduction to income taxes for the individual. Emphasis on understanding and preparation of generally used income tax forms. Introduction to the accounting and recordkeeping procedures associated with payroll. Includes topics on wage and hour laws, the social security act and payroll taxes; also emphasizes government tax reporting. Prerequisite: ACCT101

BKKA460 PRINCIPLES OF ACCOUNTING I (Lab)

Supervised study of accounting applications and procedures. Includes special emphasis on special skills and competencies that will be useful on the job. Prerequisite: Current enrollment in ACCT101.

BKKA461 ACCOUNTING APPLICATIONS I (Lab)

Provides the student with the opportunity to practice and develop the skills and competencies that will be needed on the job. Prerequisite: Current enrollment in BKKA401, ACCT101.



DESCRIPTION OF COURSES

BKKA482 TYPING FOR ACCOUNTANTS Specialized typing skills needed by the bookkeeper/accountant. Includes topics in typing financial statements, business forms and statistical reports. Prerequisite: Knowledge of typewriter keyboard and typing skills at about 30 wpm.	2-0-4	BLDM314 PLUMBING, ELECTRICITY, HARDWARE 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.	2-2-1	Includes topics in the mathematics of buying and selling, payroll, bank discount, compound interest, consumer math, financial statement analysis and other related business applications.
BKKA490 BOOKKEEPING INTERNSHIP Practical experience through on-the-job training in an approved business, government or similar establishment. Prerequisite: BKKA sequence and/or departmental permission.	3-0-10	BLDM325 BOILER ROOM MAINTENANCE Basic course to cover boiler accessories, fittings, controls, water treatment and fundamentals.	1-3-0	BSAD225 PRINCIPLES OF INSURANCE An introduction to managing risk and making the best use of insurance. The course covers the fundamental principles 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.
BLDG451 RESIDENTIAL MAT. & CONST.THEORY 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	BLDM326 STEAM PLANT OPERATIONS Pressurized boilers. Prepare for the examination and city of Des Moines engineer's license.	2-3-0	BSAD226 PRINCIPLES OF REAL ESTATE Fundamental principles, economics, law, working concepts, and terminology. Alternatives will be directed toward real estate law, and to those preparing for the apprentice salesperson examination.
BLDG452 RESIDENTIAL CONSTRUCTION TECH. A practical 'hands-on' introductory experience that covers the construction processes of house building including rough and finish carpentry.	7-0-15	BLDM328 INVENTORY & PURCHASING Knowledge and skills necessary to understand inventory systems, maintain records and correctly order and maintain supplies.	1-3-0	BSAD227 BUSINESS COMMUNICATIONS 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.
BLDG453 CARE & USE OF HAND & POWER TOOLS Proper care, use, and selection of hand power tools with an emphasis on maintenance and safety.	1-0-2	BLDM329 BASIC PLUMBING A lecture-discussion-problem solving course to explain how plumbing systems work. Identify component parts and read blueprints and symbols.	2-2-1	BSAD227 BUSINESS COMMUNICATIONS 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.
BLDG454 MATH FOR CARPENTERS A course in basic math designed to strengthen skills that will be needed to solve 'on the job' calculations confronted by the carpenter.	3-3-0	BLDM330 BUILDING CUSTODIAN Work procedures, floor coverings, detergents, safety prepared for examination by Iowa Association of Custodians and Assistants.	1-3-0	BSAD229 SMALL BUSINESS MANAGEMENT This course examines the preparation and methods needed to start 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.
BLDG455 BLUEPRINT READING AND ESTIMATING 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	BSAD126 SURVEY OF ECONOMIC PRINCIPLES Survey of micro-economic and macro-economic concepts with emphasis on contemporary problems of dimensions, ranging from household consumption and saving decisions to the overall public economic decisions and policies. This course presents economic principles in simplified practical form to students who may not need to be exposed to further economic courses in their educational programs.	3-3-0	BSAD243 QUANTITATIVE METHODS An introduction to management research methods which are used in business. Topics include probability, break-even analysis, inventory control, statistics and transportation models. Prerequisite: MATH119 or departmental permission
BLDG461 MASONRY TECHNOLOGY AND PRACTICES 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.	3-2-6	BSAD150 INTRODUCTION TO BUSINESS This course offers an overview of the ever-changing world of business. It provides information in the areas of ownership, management, marketing and finance as well as the role of government.	3-3-0	BSAD303 ADVENTURES IN ATTITUDES Human relations through group projects: understanding yourself, insights into effective communication, managing your mind, attitudes and leadership, goal-setting, and motivation.
BLDG462 RESIDENTIAL DRAFTING AND DESIGN 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	2-3-0	BSAD151 PERSONAL FINANCE Management of personal income with emphasis on family financial planning - including budgeting, income taxes, types of insurance and investing.	3-3-0	BUSL101 BUSINESS LAW I 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.
BLDG463 RESIDENTIAL PRACTICES Advanced lab experience that emphasize 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; adapt previously learned skills to complete more complex building tasks. Prerequisite: BLDG452	4-0-12	BSAD152 BUSINESS STATISTICS Tabular and graphical presentation, measures of central tendency and variability; standard elementary procedures involving the binomial, normal, student's t's, CHI - square and F distributions; correlation, regression, analysis of variance, and several nonparametric procedures. Prerequisite: 2 yr. high school algebra or MATH119 or consent of department.	4-4-0	BUSL102 BUSINESS LAW II Provides for overview of commercial paper, creditors' rights and secured transactions, the law of agency and employment, partnerships, special ventures, and corporate law concepts and introductory real estate law. Prerequisite: BUSL101
BLDG471 RESIDENTIAL CONST. PROC. & APP. Apply theory and technical materials previously studied to the various procedures of constructing a residence. Prerequisite: sequence	15-0-30	BSAD153 OFFICE MANAGEMENT This course 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	CART400 COMMERCIAL ART EXPLORATION (C.A.R.E) A one-day exploration session for commercial art applicants. Gives valuable insight into career and program content. Interviews with program instructors, students, advisory committee members and professionals in the career. A portfolio evaluation is included.
BLDG472 BUSINESS PRACTICES-BUILDING TRADES An introduction to the information needed to create and operate a small business including finance, insurance, legal concepts, property and taxation.	2-3-0	BSAD223 BUSINESS/FINANCIAL MATH Mathematical computations are reviewed and strengthened with emphasis on facility and accuracy.	3-3-0	CART401 COMMERCIAL ART ORIENTATION A prerequisite for all commercial art courses. It is essential that proper commercial art terminology, tool

DESCRIPTION OF COURSES

and techniques be fully understood. Prerequisite: CART400

CART403 4-2-4
COMMUNICATION DESIGN 1

This course will create awareness of design use. Lectures and projects will give the student experience in two-dimensional design. Prerequisite: CART400

CART405 4-2-4
DRAWING 1

Drawing perspective, still life, and the introduction to human figure construction will develop skills of drawing for self-expression. Prerequisite: CART400

CART407 4-2-4
PRODUCTION ART 1

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 commercial art for printing are studied.

CART409 4-2-4
ADVERTISING

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.

CART411 4-2-4
COMMUNICATION DESIGN 2

Using the background gained from Communication Design 1, special attention will be given to the relationship of design to advertising. Prerequisite: CART403

CART413 4-2-4
DRAWING 2

Emphasized are advanced problems involving free-hand perspective, figures, places, objects, and situation sketches relevant to the designer. Prerequisite: CART405

CART415 4-2-4
PRODUCTION ART 2

This will add to the student's qualifications from taking Production Art 1 by emphasizing 'camera-ready' artwork for printing. Prerequisite: CART407

CART417 2-1-2
TYPOGRAPHY

A study of the history of typography as it relates to advertising design. Includes emphasis on copyfitting and use of typography in design. Prerequisite: CART401.

CART419 2-0-4
LETTERING AND SIGN ART

Use of various types of lettering skills for the production of posters, signs, certificates and other hand-lettered materials. Prerequisite: CART401

CART421 2-1-2
INTERNSHIP PREPARATION

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 in goal setting, interpersonal and group skills. Prerequisite: CART411

CART423 10-2-0-24
COMMERCIAL ART INTERNSHIP

On-the-job training for commercial art students. Included is weekly seminar for the exchange of information, review and evaluation. Prerequisite: CART421.

CART425 4-2-4
COMMUNICATION DESIGN 3

An advanced course using skills and understanding developed in Communication Design courses 1 & 2. Special emphasis is given to design for publications and the further development of portfolio samples. Prerequisite: CART411

CART427 3-1-4
ILLUSTRATION 1

Many forms of illustration exist. Special techniques are studied and practiced to accomplish the skills needed for illustration. Prerequisite: CART413

CART429 4-2-4
PRODUCTION ART 3

Advanced problems in the preparation of materials to be printed. Included are live studio projects, lectures, field trips and experiences in the production of printed samples. Prerequisite: CART415

CART431 3-2-2
PHOTOGRAPHY I

Photography in communication design is essential. Basic knowledge and skills will be developed in photographing, developing and printing.

CART433 2-1-2
TRADEMARK SYSTEMS

An investigation of corporate image design as required for the business world. Problems involve design for live projects in addition to the development of a personal image system. Prerequisite: CART417

CART435 2-1-2
PORTFOLIO PREPARATION 1

A student seeking employment must have a well prepared portfolio. Such a portfolio will be developed by the student and reviewed by the commercial art advisory committee in this course. Prerequisite: CART423

CART437 3-0-6
COMMUNICATION DESIGN 4

Further study in design will be accomplished by improving individual portfolio samples as suggested by the commercial art advisory committee. Prerequisite: CART425

CART439 3-0-6
PRODUCTION ART 4

To complete the study of production art. Emphasis will be on paper selection, color theory, technical illustration, and the development of studio projects. Prerequisite: CART429

CART441 3-1-4
ILLUSTRATION 2

Advanced problems in illustration as related to communication design. Concentration in use of techniques and media is used to create special effects. Prerequisite: CART427

CART443 2-1-2
PORTFOLIO PREPARATION 2

'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 this annual event. Prerequisite: CART435

CART445 3-2-2
PHOTOGRAPHY II

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
BUSINESS MANAGEMENT

A small business workshop for all students enrolled in this course. Includes job quotation, recordkeeping, personal organization, time management, job scheduling, setting up a freelance studio, taxes, and mailing information.

CART449 4-2-4
AIRBRUSH I

The fundamental principles of airbrush techniques and

application to advertising design and use of airbrush as an illustrative tool.

CART451 4-2-4
AIRBRUSH II

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.

CHEM120 3-2-2
SURVEY OF CHEMISTRY

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
GENERAL CHEMISTRY I

A study of the concepts of general chemistry including a mathematical review, atomic structure, bonding, reactions, stoichiometry, gas laws, solutions, acids and bases, equilibrium and nuclear chemistry. Mathematical problem-solving is emphasized. For non-science majors and students in health related programs. Prerequisite: One year of high school algebra or MATH092.

CHEM132 4-3-2
GENERAL CHEMISTRY II

A study of biochemistry including the necessary introductory topics from organic chemistry. 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: One semester of general chemistry or completion of CHEM131.

CHEM151 4-3-2
GENERAL AND INORGANIC CHEMISTRY I

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: One year of high school chemistry, or CHEM131 or the equivalent; two years of high school algebra or MATH119 or the equivalent.

CHEM152 4-3-2
GENERAL & INORGANIC CHEM II

A continuation of General and Inorganic Chemistry I. Prerequisite: CHEM151 or the equivalent.

CHEM161 5-3-4
ORGANIC CHEMISTRY I

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. This sequence is designed to satisfy the one year of organic chemistry required by most medical schools. Prerequisite: CHEM152 or 132 or one year of college level general chemistry.

CHEM162 5-3-4
ORGANIC CHEMISTRY II

A continuation of Organic Chemistry I. Prerequisite: CHEM161 or the equivalent.

CHLD160 4-4-0
HUMAN GROWTH

A study of theories and principles of human growth and development applies to children from conception through adulthood.

CHLD244 1-1-0
EMERGENCY CARE

DESCRIPTION OF COURSES

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.

CHLD260 3-3-0
OBSER. & GUIDANCE OF CHILDREN
CHLD261 1-0-2
OBSERVATION AND GUIDANCE LAB

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. CHLD260, 261 must be taken concurrently.

CHLD262 4-4-0
CURRICULUM AND ACTIVITIES I

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. Must be taken with or after CHLD160 and 260.

CHLD263 2-2-0
PROFESSIONAL RELATIONSHIPS

Emphasizes developing patterns of effective communication with others. Also includes discussion and evaluation of practicum experiences as well as skill development in the areas of employment applications, resume preparation and interviewing techniques. Must be taken concurrently with CHLD462.

CHLD264 3-3-0
CHILD NUTRITION AND HEALTH

A basic study of nutrition and the nourishment of young children and the provision of a healthy and safe environment for children.

CHLD265 4-4-0
CURRICULUM AND ACTIVITIES II

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. Prerequisite: CHLD262, 260, 160

CHLD266 3-3-0
ADMIN. OF PROGRAMS FOR CHILDREN

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.

CHLD460 3-0-6
STUDENT PARTICIPATION I

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.

CHLD461 3-0-6
STUDENT PARTICIPATION II

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. Prerequisite: CHLD460, 160, 260, 262.

CHLD462 3-0-0-8
PRACTICUM

Placement in a community-based program for children. Emphasis is on development of the competencies necessary for employment in a similar setting. Prerequisite: CHLD160, 260, 262, 460.

CHLD463 4-0-0-12

CHILD DEV. ASSOC PRACTICUM

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. Prerequisite: CHLD462

COHM453 2-0-4
LANDSCAPE DESIGN & PLANT MAT II

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. Prerequisite: COMH420, 472.

COMH410 3-2-2
GREENHOUSE PRODUCTION I

An introduction to greenhouse structures, heating and environmental control systems and watering. Winter and spring commercial pot plants and cut flowers and bedding plant crops will be explored vocationally in the college greenhouses.

COMH418 2-2-0
HORTICULTURE CHEMICAL 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.

COMH420 2-1-1
LANDSCAPE DESIGN I

Fundamentals of landscape design for homes are presented. Serves 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: COMH472

COMH425 3-2-2
TURF I

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.

COMH435 2-1-1
BOTANY

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, reproduction and development.

COMH439 2-1-1
LANDSCAPE CONST & EQUIP. MAINT.

To give study and experience choosing materials, planning and construction of landscape facilities, and give practical experiences in the proper care and use of hand tools, power equipment and horticulture mechanics.

COMH452 2-1-1
ARBORICULTURE & PLANT PROPAG. II

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 done. Prerequisite: COMH771

COMH455 2-1-1
TURF II

Turf management practices on golf and recreation areas with practical experience in maintaining turf on outdoor campus facilities. Prerequisite: COMH425.

COMH456 2-1-1
FOLIAGE PLANT PROD. & DISPLAY

The commercial production of foliage plants: culture, propagation and nomenclature will be discussed. Interior use, design and display of foliage plants will be studied.

COMH457 2-2-0
FRUIT AND VEGETABLE PROD

A study of tree fruits, small fruits and vegetable culture, including varietal selection, planting, pruning, fertilizing, disease and insect control programs.

COMH458 1-1-0
COST OF PROD., EST., & CONTRACTING

Students will study cost of production and scheduling greenhouse crops, record keeping. Estimating and contracting will be explored as it relates to landscaping and interiorscaping.

COMH460 4-0-0-13
SUPERVISED EMPLOYMENT EXPER I

Experience in a business setting related to the student's career objective.

COMH461 3-0-0-9
SUPERVISED EMPLOYMENT EXP. II

Student will continue on his first employment experience. Prerequisite: COMH460

COMH467 3-3-0
GARDEN CENTER MANAGEMENT

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.

COMH468 2-1-1
COMM'L HORTICULTURE MARKETING

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.

COMH471 3-2-2
NURSERY PRODUCTION I

Nursery Production I 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.

COMH472 3-2-2
PLANT MATERIALS & LANDSCAPE DRAFTING

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.

COMH478 3-2-1
PLANT PROPAGATION I

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.

COMH480 7-0-0-21
SUP EMPLOYMENT EXP III

Work experience in an area in which the individual has chosen to specialize. Prerequisite: COMH460, 461.

COMH482 3-2-1
GREENHOUSE PRODUCTION II

Greenhouse maintenance, nutrition, watering, cooling systems and pest control shall be further developed in college greenhouse facilities. Summer and fall crops will be grown by students. Prerequisite: COMH410

COMH491 4-0-0-13
SUP EMPLOYMENT EXP IV

A final opportunity for the students to gain employment

DESCRIPTION OF COURSES

experience in their specialization. In many instances they will continue as full time employees upon completion of the program. Prerequisite COMH460, 461, 480.

COMH495 1-0-2
MERCH. & DISPLAY-FLOWERS & PLANTS

Construction and mechanics of merchandising and displaying flowers and plants at retail.

COMS111 3-3-0
COMPUTERS & PROGRAMMING I

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. Prerequisite: MATH115, 124, or 2 years high school algebra

COMS112 3-3-0
COMPUTERS & PROGRAMMING II

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

COMS115 5-5-0
STATISTICAL APPS OF COMPUTERS

Statistical applications as related to computer programming using the FORTRAN language. Algorithmic development emphasized. Prerequisite: MATH121, COMS172

COMS125 3-3-0
BUS. PROGRAMMING - COBOL I

Introduces the programming language COBOL through writing, testing and debugging COBOL programs. Emphasis is given to business applications. Prerequisite: COMS111 or 176

COMS126 4-4-0
BUS PROGRAMMING - COBOL II

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
COMPUTATIONAL STRUCTURES

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. Prerequisite: COMS112, MATH129

COMS172 2-2-0
INTRODUCTION TO FORTRAN

For students desiring an introductory background in the programming language of FORTRAN. Included are FORTRAN structures, I/O statements, arrays, subscripting, control statements, data storage, and retrieval. Prerequisite: MATH129 or COMS111

COMS175 3-3-0
APP. BUS. PROGRAMMING I

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. Prerequisite: MATH123, 115, or 119

COMS176 4-4-0
APPLIED BUSINESS PROGRAMMING II

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: COMS175

CONA451 3-2-2
FUND. OF REFRIGERATION

This course consists of the principles of refrigeration, domestic systems and equipment. Installation, opera-

tion and trouble shooting with lab work on actual equipment.

CONA452 3-2-2
ELECTRICITY

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.

CONA453 3-3-0
RELATED MATH

The study of basic math operations consisting of addition, subtraction, multiplication and division of whole numbers, decimals, fractions, ratios and proportions.

CONA454 3-2-2
FUNDAMENTALS OF HEATING

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
ADV REFRIGERATION & HEATING

Lectures on the compression cycle, different refrigeration and electrical circuits and lubrication problems found in supermarket equipment. Lab work on actual equipment. Prerequisite: CONA451, 454

CONA462 8-3-10
YEAR ROUND AIR COND. I

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. Prerequisite: CONA451, 454

CONA463 2-2-0
BLUE PRINT READING

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
RELATED PHYSICS

Course consists of the study of gas laws, temperature and pressure relationships; heat and energy and power as applied to the heating and refrigeration industry. Prerequisite: CONA453

CONA471 5-3-5
AIR DISTRIBUTION

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
YEAR ROUND AIR COND. II

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

CRIM101 3-3-0
INTRO TO CRIMINAL JUSTICE

An in-depth examination of the three aspects of the Criminal Justice System and their roles as they are played in society.

CRIM102 3-3-0
ORGANIZATION AND ADMIN.

Study of the theory and practice of public administration. Examines alternate organizational theories and practices, personnel administration, problems of communications within organizations, and styles of leadership. The course will emphasize the interrelationships of professional and political influences on decision making.

CRIM103 3-3-0
COMMUNITY RELATIONS

Examination of the role of criminal justice personnel in a democratic society; emphasis on ethical uses of discretion; analysis of social barriers, stress, social distance and the popular perceptions of criminal justice actors.

CRIM104 3-3-0
CRIMINAL LAW

An examination of the elements of offenses and the procedural safeguards in the criminal process.

CRIM105 3-3-0
CONSTITUTIONAL LAW

A study of the issues raised by the application of Constitutional principles to social and political questions including the powers of the national government vs. state government, the evolution of civil liberty guarantees and the incorporation problem.

CRIM106 3-3-0
JUVENILE LAW AND DELINQUENCY

An overall investigation of the social, legal aspects, and sociological theories of juvenile delinquency; administration of juvenile procedures, legislation, juvenile court and prevention programs.

CRIM107 3-3-0
THEORIES OF INTERVIEWING

Analysis of processes of gathering information from others, the interviewee, the setting, types of questions, nonverbal communication, deception, and theories of communication.

CRIM110 3-3-0
PENOLOGY

Analysis of the organization and goals of correctional programs. Principles and programs of institutional corrections, and the social structure within institutions. Examination of non-institutional alternatives include probation and parole.

CRIM211 3-3-0
CORRECTIONAL TREATMENT

Institutional options for preventing recidivism through sentencing to programs 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
CORRECTIONAL LAW

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
CRIMINAL INVESTIGATION

Rudiments of criminal investigation, techniques, principles, problems, sources of information, and evidentiary processes. Theories of investigation with emphasis on specific offenses.

CRIM215 3-2-2
IDENT. & PREP. OF EVIDENCE

Emphasis on casting techniques, obliterated numbers, tool impressions, glass fractures, crime scene sketches as well as collection and preservation of same.

CRIM216 3-2-2
FINGERPRINTING & IDENTIFICATION TECH.

Classification and identification of fingerprints as well as collection and presentation of latents.

CRIM217 3-2-2
IDEN. OF WEAPONS & FIREARMS

The study of internal and external ballistics, edged weapons, blunt instruments, and the physical evidence produced.

DESCRIPTION OF COURSES

CRIM218 IDENT. OF PHYSIOL. FLUIDS, HAIR & FIBER	3-3-1		
Blood analysis from flow origin and question stained determination; collection and preservation of physiological fluids, hairs and fibers. Use of spectrographic and gas chromatography examination required for this course.			
CRIM226 RETAIL SECURITY INVESTIGATION	3-3-0		
How theft occurs in its many forms 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.			
CULA355 BUFFET DECORATING I	2-2-0		
This is an art course with food. It includes techniques used in preparing hot and cold hors d'oeuvres, decorative food displays and ice carvings. Emphasis is placed on aspics, gallantine, chau-froids, mousses, pates, and buffet centerpieces.			
CULA356 BUFFET DECORATING I LAB	4-0-8		
Application of techniques used in preparation of hot and cold hors d'oeuvres, decorative food displays and ice carvings. Emphasis is placed on aspics, gallantines and buffet presentations.			
CULA363 BUFFET DECORATING II	1-1-0		
Demonstration and discussion of techniques used in tallow, chocolate, spice and pastillage centerpieces. Prerequisite: CULA355, 356.			
CULA364 BUFFET DECORATING II LAB	2-0-4		
Preparation of tallow, pastillage, chocolate carvings and spice. Prerequisite: CULA356, 355.			
CULA437 INTERNATIONAL CUISINE LAB	3-0-6		
Application of gourmet cooking through actual quantity preparation of eight-course international dinners. Dinners are prepared and served once a month throughout the academic year. Prerequisite: HRMT325, 328.			
CULA438 ADVANCE CULINARY CUISINE LAB	8-0-16		
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. Prerequisite: HRMT328, 337.			
CULA443 INTERNATIONAL CUISINE	2-2-0		
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. Prerequisite: HRMT:325, 328			
CULA445 ADVANCE CULINARY CUISINE	3-3-0		
Discussion of the more intricate and difficult cooking principles and techniques of classical cuisine and planning for advanced culinary cuisine lab. Prerequisite: HRMT337, 328			
DATA101 INTRO TO DATA PROCESSING	3-3-0		
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.			
DATA103 BASIC	3-3-0		
An elementary course in the use of the BASIC programming language. Students will learn the various commands and design, code and test several programs. Prerequisite: DATA101 or permission of instructor.			
DATA210 SURVEY OF PROGRAMMING LANG.	3-3-0		
The basic principles of two computer languages are presented -- BASIC and FORTRAN. Designed for students who have proficiency in one or more computer languages and wish to gain a rudimentary knowledge of additional languages. Prerequisite: DATA101			
DATA211 FORTRAN	3-3-0		
An introductory course in the use of the FORTRAN programming language. Students will design, code and test several business programs using the various features of the language. Prerequisite: DATA101,			
DATA221 PL/I	3-3-0		
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 RPG II	3-3-0		
A study of the basic steps of programming. The student learns to design, code and debug various problems written in report program generator language. Prerequisite: DATA101			
DATA303 JOB CONTROL LANGUAGE	3-3-0		
Provides an individual with a working knowledge of disk operating system/virtual storage extended (DOS/VSE) Job Control Language. Prerequisite: DATA101			
DATA304 COBOL - BEGINNING	4-3-2		
Introduces the student to structured COBOL design and coding of card input programs, control break processing and the use and structure of one and two level arrays. Prerequisite: DATA101			
DATA306 COBOL - INTERMEDIATE	4-3-2		
ANS COBOL Programming involving sequential disk, table processing and VSAM file processing. Prerequisite: DATA304			
DATA308 COBOL-ADVANCED	4-3-2		
ANS COBOL involving advanced editing programs, table processing VSAM file process, program linkage, and report writer. Prerequisite: DATA306.			
DATA310 PROGRAM LOGIC DESIGN	3-5-0		
The study of the logical design of programs using the structured method. Various design tools and applications will be covered.			
DATA319 ASSEMBLER - BEGINNING	4-3-2		
An introductory course in the syntax rules of Assembler language programming. Business problems are analyzed and programmed. Prerequisite: DATA101			
DATA321 ASSEMBLER-INTERMEDIATE	4-3-2		
An advanced course in the concepts and techniques of using assembler language to solve complex business problems. Prerequisite: DATA319.			
DATA327	4-3-2		
ASSEMBLER-ADVANCED			
An advanced course in the more complex concepts of assembler type instructions, including machine language and macro processing with inter-program linkage. Prerequisite: DATA321			
DATA334 APPLICATIONS PROGRAMMING	8-6-4		
Individual projects are assigned which require the student to apply the programming knowledges gained in prerequisite courses to the design and implementation of assigned business applications. Prerequisite: DATA303, 306, 321			
DATA341 DATA BASE LANGUAGE (DL/I)	3-3-0		
An introductory course in the concepts, facilities and techniques used in data base language. Students design, organize and create data independent business applications. Prerequisite: DATA321, 303, 306.			
DATA352 TELECOMMUNICATIONS CICS/PROG.	4-3-2		
Provides theory and working knowledge of telecommunication programming. Students will code programs using CICS. Prerequisite: DATA306, 321.			
DATA382 SYSTEMS ANALYSIS	3-3-0		
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. Prerequisite: DATA101, (DATA304 or DATA319.)			
DATA402 CONSOLE OPERATIONS	3-3-0		
Console and on-line equipment operation fundamentals. Job control language for both the virtual machine and DOS is stressed. Prerequisite: DATA101			
DATA403 CONSOLE OPERATIONS LAB	2-0-4		
Laboratory applications of DATA412. Prerequisite: DATA101			
DENA301 PRE-CLINICAL DENTAL ASSISTING	4-2-4		
Basic concepts of chairside dental assisting are covered with emphasis on the role in team delivery systems. Instruments, equipment and basic procedures are covered. Prerequisite: admission as a dental assisting student.			
DENA302 DENTAL SCIENCE I	4-4-2		
Introduction to the various sciences necessary for the dental assistant. Microbiology, embryology, histology, and oral pathology are covered. Prerequisite: admission as a dental assisting student.			
DENA303 BUSINESS OFFICE PROCEDURES	4-2-4		
Covers the business aspect of the dental office, patient relations, appointment book management, financial records, telephone communications, credit collections, prepaid dentistry, payroll and tax records, filing, supplies and inventory systems.			
DENA305 DENTAL RADIOGRAPHY II	2-1-2		
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. Prerequisite: DENH257, 230			
DENA306 DENTAL ASSISTING SEMINAR	1-2-0		
Discussion and problem-solving from clinical practice. Provides an awareness of types of office situation and			

DESCRIPTION OF COURSES

discussion of clinical aspects of dental assisting and dentistry. Oral reports and weekly evaluations are required. Prerequisite: Second semester standing in Dental Assisting Program.

DENA307 2-0-0-14
DENTAL ASSISTING CLINICAL I

Application of knowledge and skills as students rotate through private dental offices, clinics, and through hospital dental clinics. General and specialty practices are included in the rotations. Prerequisite: satisfactory standing in all Dental Assisting courses second semester.

DENA311 4-3-3
CLINICAL DEN. ASSIST. & DENTAL SPEC.

A continuation of Pre-Clinical Dental Assisting, pain control, operative dentistry procedures, and dental specialties are covered. The laboratory experience will develop student competencies in clinical assisting. Prerequisite: DENA302, 301, DENH200, 230.

DENA312 2-2-0
DENTAL SCIENCE II

A continuation of Dental Science I. Emphasis on human anatomy and physiology and effects of drugs and emergency procedures related to the body systems and dental procedures. CPR credentials will be obtained. Prerequisite: DENA302 and second semester standing in dental assisting program.

DENA316 1-1-0
ETHICS AND CLINICAL SEMINAR

Continuation of DENA306. 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. Prerequisite: Second semester standing in Dental Assisting Program.

DENA317 10-0-0-24
DENTAL ASSISTING CLINICAL II

Continuation of DENA307.

DENH200 3-2-2
DENTAL MATERIALS

A study of materials utilized in the practice of dentistry. Properties of dental materials and ADA requirements are presented.

Through laboratory experience the student learns techniques in preparation and storage of dental materials. Prerequisite: Permission of Chairperson.

DENH202 2-2-0
PROF. MANAGEMENT AND LIABILITY

Students develop an understanding of dental business procedures, the practice of dental hygiene as it relates to the dental practice act and job seeking skills.

DENH208 2-2-0
PRINCIPLES OF DENTAL HYGIENE

DENH209 3-0-0-6
PRIN. OF DENTAL HYGIENE PRACTICUM

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.

DENH210 2-2-0
ORAL HISTOLOGY AND EMBRYOLOGY

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.

DENH227 3-2-0-2
DENTAL HEALTH EDUCATION

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. Corequisite: SPCH110

DENH228 2-2-0
DENTAL HYGIENE I

DENH229 4-0-0-8
DENTAL HYGIENE I PRACTICUM

Continuation of instrumentation techniques, polishing techniques, topical application of fluoride and supplementary procedures. Application of principles of patient education in chairside instruction. Prerequisite: DENH208, 209

DENH230 4-4-0
DENTAL ANATOMY

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: Permission of Program Chairperson.

DENH240 4-4-0
NUTRITION AND PREVENTIVE DENTISTRY

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.

DENH257 3-2-2
DENTAL RADIOGRAPHY I

Lecture includes: radiation physics, biology, and health safety; radiographic film, methods, processing techniques, and mounting. Through laboratory experiences the student develops competence in exposing, processing, mounting, and evaluating radiographs. Prerequisite: Permission of Program Chairperson.

DENH258 1-0-2
DENTAL RADIOGRAPHY II

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
DENTAL HYGIENE II

DENH279 2-0-0-5
DENTAL HYGIENE II PRACTICUM

A continuation of clinical practices. Further instruction and application in techniques for a complete oral prophylaxis. Auxiliary procedures presented include ultrasonic instrumentation, amalgam polishing, charting and application of nutritional counseling techniques. Prerequisite: DENH228, 229

DENH280 2-2-0
PERIODONTOLOGY

The clinical characteristics, histopathology, etiology, and treatment of periodontal disease is presented. Special emphasis is placed on the role of the dental hygienist in patient education for the prevention and management of gingival problems. Prerequisite: DENH210

DENH282 2-2-0
DENTAL PHARMACOLOGY

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. Prerequisite: CHEM132, BIOL130

DENH288 2-2-0
DENTAL HYGIENE III

DENH289 7-0-14
DENTAL HYGIENE III PRACTICUM

A continuation of Dental Hygiene II. Applied radiographic interpretation and further instruction in

root planing and curettage including utilization of the dental hygiene treatment plan for initial periodontal therapy. Auxiliary procedures include pit and fissure sealants. Prerequisite: DENH278, 279.

DENH290 3-2-0-2
COMMUNITY HEALTH ISSUES

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

DENH293 3-3-0
GENERAL AND ORAL PATHOLOGY

Basic concepts of disease process and the oral manifestations of inflammation, degenerative changes, neoplasms and developmental anomalies of the oral cavity. Prerequisite: DENH210, BIOL130

DENH298 2-2-0
DENTAL HYGIENE IV

DENH299 7-0-0-14
DENTAL HYGIENE IV PRACTICUM

A continuation of Dental Hygiene III. Students present and discuss dental hygiene treatment plans. Auxiliary procedures include additional occlusal evaluation techniques and dental business office procedures. Prerequisite: DENH288, 289

DEVD244 1-1-0
EMERGENCY CARE

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.

DEVD260 3-3-0
THE EXCEPTIONAL INDIVIDUAL

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
PROG. FOR MENTALLY RETARDED

Course emphasizes definition, characteristics, educational/vocational programs and adaptations for the mentally retarded. Must be taken with or after DEVD260 and CHLD160.

DEVD262 3-3-0
HEALTH CARE

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. Must be taken with or after DEVD260 and CHLD160.

DEVD263 2-2-0
PROFESSIONAL RELATIONSHIPS

Course emphasizes developing patterns of effective communication with others. Also includes discussion and evaluation of practicum experiences as well as skill development in the areas of employment applications, resume preparation and interviewing techniques. Must be taken concurrently with DEVD461.

DEVD264 3-3-0
PROG. FOR PHYSICALLY HANDICAPPED

Course emphasizes characteristics, identification, educational mainstreaming, vocational programs and adaptations for the physically handicapped. Special emphasis placed on adaptive equipment. Prerequisites: DEVD260, CHLD160

DESCRIPTION OF COURSES

DEVD265 3-3-0
MULTICATEGORICAL DISORDERS

Course covers characteristics, identification, educational mainstreaming, vocational programs and adaptations of the socially, emotionally, educationally and visually handicapped. Prerequisites: DEVD260, CHLD160

DEVD266 2-2-0
SPEECH AND HEARING DISORDERS

Course is designed to familiarize the student with the communication process. Auditory disabilities are included as well as elementary signing techniques. Prerequisites: DEVD260, CHLD160

DEVD460 2-0-0-6
PRACTICUM I

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. Must be taken with or after DEVD260 and CHLD160.

DEVD461 4-0-0-12
PRACTICUM II

Additional placement in a residential or community-based program for the developmentally disabled. Emphasis is on further development of competencies necessary for employment. Prerequisite: DEVD460

DEVD462 4-0-0-12
DEV. DISABILITIES ASSOC. PRACTICUM

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. Prerequisite: DEVD461

DIAS381 1-6-18
DSS I - FOOD PREPARATION

Basic principles and development of techniques as they apply to preparation of each food group; criterion for evaluating product quality. Laboratory experience.

DIAS382 1-9-9
DSS I - SANITARY & EFFICIENT MEAL SER.

Methods of efficiently serving safe, pleasing food; an awareness of sanitation will be created for all areas of food service.

DIAS383 1-12-0
DSS I - MODIFIED DIETS

As 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.

DIAS384 2-24-0
DSS II - FOOD SERVICE MANAGEMENT

The management functions required to organize and maintain an efficient quality dietary department are developed.

DIAS385 1-12-0
DSS II - PURCHASING

Methods for making rational buying decisions and developing simple records for figuring food costs.

DIAS386 1-12-0
DSS II - MATHEMATICS

A general course in mathematics for dietary employees.

DIAS387 1-12-0
DSS II - SELF & OTHERS

Methods to help a person understand self/others and develop positive communication skills.

DIAS388 1-0-30
DSS II - CLINICAL STUDIES

Twenty-four learning activities chosen from eight given

areas to research. 30 hours minimum time required.

DIAS390 2-24-0
DSS III - NUTRITION: LIFE CYCLE

An indepth study (social, physiological and psychological need) of residents from infancy to geriatric. Explore the therapeutic role of food.

DIAS391 1-12-0
DSS III - FOOD PRODUCTION

Total production needs; equipment layout, work methods, food storage, food preparation, service, and sanitation in a laboratory setting.

DIAS392 1-12-0
DSS III - ADV. FOOD SER. MGMT.

Details management techniques for all functions of Dietary Department with emphasis on budget developing and long-range planning.

DIAS393 1-0-30
DSS III - ADVANCED CLINICAL STUDIES

Twenty-four learning activities chosen from eight given areas to research and develop. 30 hours minimum time required.

DIAS394 3-0-90
DSS III - SUPERVISED WORK EXPERIENCE

Ninety hours of on-the-job experience under direct supervision and evaluation of preceptor.

DIAS589 0-6-0
DSS III - HEALTH FIELD ORIENTATION

Workshop for student and preceptor for explanation of the Health Field and the course requirements.

DIEM400 4-3-2
BASIC DIEMAKING

Introduction to diemaking principles covering die sets,



DESCRIPTION OF COURSES

die components, cutting and forming applications, and material utilization. Prerequisite: TOOL483

DIEM401 7-0-15
BASIC DIEMAKING LAB

Introducing the student to basic diemaking procedures as he constructs a blank die, piercing die, and a forming die. Prerequisite: TOOL490

DIEM402 3-2-3
ADVANCED BLUEPRINT READING

An interpretation of progressive die blueprints, jig & fixture blueprints including assembly drawings, plan & section views, and detailing. Prerequisite: TOOL481

DIEM403 4-3-2
PROGRESSIVE DIE DESIGN

Hands-on drafting experience in the design, drawing, and detailing of a progressive die. Prerequisite: TOOL481

DIEM404 4-3-2
ADVANCED DIEMAKING

Complex die making procedures, including cam actuated dies and exposure to cost estimating and quoting. Prerequisite: DIEM400

DIEM405 7-0-15
ADVANCED DIEMAKING LAB

Constructing more complex stamp and die, including a progressive die that has been completely designed and detailed by the student. Prerequisite: DIEM401

DIEM407 4-2-5
PLASTIC MOLDDAKING

The student is presented with the basic fundamental of plastic mold construction and molding processes. Prerequisite: DIEM413

DIEM410 8-2-13
CNC MACHINE OPERATIONS

Theory of CNC programming, language and movements. The student will generate programs, load into computer, edit and operate CNC machines. Prerequisite: DIEM404, 405 or 2 years mill and lathe experience.

DIEM410 4-4-1
CNC MACHINE OPERATIONS

Theory of CNC programming, language and movements. The student will generate programs, load into computer, edit and then operate CNC machines. Prerequisite: 24 hours mill and lathe experience or 2 semesters in TOOL.

DIEM413 3-2-3
ELECTRICAL DISCHARGE MACHINING

Operation of conventional EDM Machine, construction of EDM electrodes. Prerequisite: DIEM411

DISL401 15-10-10
DIESEL ENGINES

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.

DISL403 3-3-0
RELATED MATH

A basic course in whole numbers, fractions, decimals, percentages, ratios, and simple formulas and their application.

DISL404 8-4-6-3
POWER TRAINS

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
HYDRAULICS

The study of mobile hydraulic systems. Introduces hydraulic principles, components, fluids systems and circuits.

DISL408 5-3-3-3
BASIC ELECTRICITY

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 3-1-2-3
AIR CONDITIONING

A course on basic air conditioning theory and design. Emphasis will be placed on various system controls and on service operations.

DISL428 6-2-4-6
OPERATIONS AND MAINTENANCE

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.

DISL432 3-1-2-3
DYNAMOMETER TESTING

The course familiarizes the student with the engine and chassis dynamometers. Proper use of the dynamometers and the correct engine testing sequence will be presented.

DISL434 15-12-6
DIESEL FUEL SYSTEMS

A course designed to provide basic fuel system theory of commonly used fuel systems as well as general repair and calibration practices. Prerequisite: DISL401

DISL441 2-0-3-0
ADVANCED ELECTRICITY

The electrical circuitry on trucks and heavy equipment is covered. Included are troubleshooting, diagnosing, and repair procedures components. Prerequisite: DISL408

DISL443 16-5-22
TRUCK & HEAVY EQUIP. REPAIR

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. Prerequisite: DISL401, 404, 405, 406, 407, 408

DISL444 3-2-2
DIESEL ELECTRONICS

Fundamentals of electronics as applied to solid state controls on diesel equipment. Troubleshooting and testing of modules are included. Prerequisite: DISL408

DISL451 2-2-0
SHOP MANAGEMENT

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.

DISL453 3-3-0
COMPUTER LITERACY

A study of the principles of computer technology with particular emphasis on the nature and applications of computers and microprocessors in diesel engines and mechanic support systems.

DRAM110 3-3-0
INTRODUCTION TO THE THEATRE

A survey of the theatre, its literature, purposes, and techniques, with emphasis on the production aspects of acting, directing, and playwrighting. Attendance at dramatic production required.

DRAM111 3-3-0

TECHNIQUES OF ACTING

Training of the body, voice and mind as acting instruments. Course will include acting exercises, scene analyses, and performance.

DRAM113 3-3-0
CREATIVE DRAMA - SCHOOLS & REC.

Course will include work in improvisational acting. Students will learn approaches for participating in as well as leading creative drama activities. (This course could be cross listed with Education and Rec. Leadership.)

DRAM114 2-0-4
THEATRE PRODUCTION

DRAM115 3-0-6
THEATRE PRODUCTION

DRAM116 4-0-8
THEATRE PRODUCTION

Course will provide practical experience in acting, directing, house management, and 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.

DRAM117 3-3-0
DRAMA: PLAY PERF. & PERCEPTION-TV

Investigation of the many facets of drama. Text supplements television broadcasts of fourteen plays that range from classical to contemporary.

ECON101 3-3-0
PRINCIPLES OF MACRO-ECONOMICS

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 system and elements of international finance.

ECON102 3-3-0
PRINCIPLES OF MICRO-ECONOMICS

This course deals with principles of micro-economics. Topics covered include the following: survey of demand and supply conditions cost structure, market structure, anti-trust laws and crucial court decisions and competition as they affect the individual firm. Prerequisite: ECON101

ECON103 3-3-0
CONTEMPORARY ECONOMIC PROBLEMS

A course concentrating on the economic problems facing the country. Current problems include inflation, unemployment, productivity, taxes, energy development and regulation. Some international economic events and their ramifications on domestic monetary policy will be covered. Prerequisite: ECON101, 102

EDCR101 3-3-0
INTRODUCTION TO EDUCATION

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.

EDCR102 3-3-0
PRINCIPLES OF CHILD DEVELOPMENT

Provides a study of growth and development during the formative years with emphasis on family and educational influences. Observations will center on home and school settings with implications for education.

EDCR103 3-3-0
CONTEMPORARY ISSUES IN EDUCATION

Provides a forum to clarify points of view, attitudes, and beliefs concerning crucial issues in education. Emphasis will be placed on understanding different view point.

DESCRIPTION OF COURSES

EDCR104 ENRICHING THE CURRICULUM	3-3-0	Provides an introduction to elementary education. Students develop an understanding of techniques and activities aimed at enriching the child's experiences. Prerequisite: EDCR101	
EDCR105 EDUCATIONAL PSYCHOLOGY	3-3-0	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.	
EDCR106 ART IN THE ELEMENTARY SCHOOLS	3-3-0	A specialized course designed to acquaint students with classroom instruction. Designed specifically for students enrolled in education to assist them with design, construction, and planning for utilization of multi-art form and materials in instructional situations.	
EDCR125 CHILDREN'S LITERATURE	3-3-0	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.	
EDCR131 INTRODUCTION TO MUSIC	3-3-0	Study of scales, rhythms, and harmonies; application of this knowledge through composition for and performance on classroom instruments such as piano and guitar.	
EDCR206 INTERNSHIP/TEACHING EXPERIENCES	4-0-0-12	Provides opportunity to assist in the schools either as a teacher aide or to assess one's potential and interest in teaching as a career. Prerequisite: EDUC101 and Permission of the Program Chairperson.	
ELEM320 BASIC ELECTRIC MOTOR THEORY	1-3-0	To familiarize student with electrical motors and the operations. Discussion covers types, industry standards, and application of single and 3 phase motors.	
ELEM321 MOTOR CONTROL I	3-3-0	Troubleshoot motor controls, use meters for testing, and gain an understanding of schematics. You should have basic knowledge of electricity to take this course.	
ELEM322 MOTOR CONTROL II	3-3-0	Work with control circuits and equipment, testing and troubleshooting practices, blueprints and panel design solid state. Prerequisite: ELEM321 or working knowledge.	
ELEM325 GENERAL ELECTRICITY	3-2-1	For beginners, theory, controlling electricity, voltage, amps, resistance, wattage, series and parallel circuits, DC and AC, batteries, electric lighting, generators, and motors.	
ELEM326 ELECTRICITY/ELECTRONICS I	3-3-0	Electronic Fundamentals, capacitive circuits, inductive circuits, complex AC circuits. Use meters and circuit boards. Should have an understanding of basic algebra.	
ELEM327 ELECTRICITY/ELECTRONICS II	3-3-0	Power and AC circuits, resonance and filters, poly phase circuits, transformers, semiconductors, rectifica-	
		tion and power supplies, transistors, amplifiers, digital logic, audio systems. This course plus ELEM326 is equivalent to ELEM451.	
ELEM450 RELATED MATH	3-3-0	Mathematics related to Basic Electronics. It includes: basic algebra, right triangle trigonometry and scientific notation.	
ELEM451 DC AND AC FUNDAMENTALS	4-4-0	An introductory course in DC and AC Fundamentals subject matter includes Ohm's Law, series and parallel circuits and measuring instrument.	
ELEM452 DC AND AC FUNDAMENTALS - LAB	3-0-6	This laboratory will enable the student to analyze basic L-C-R circuitry. Basic test equipment usage will also be presented.	
ELEM453 BASIC ELECTRICAL PRACTICE	4-4-0	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 BASIC ELECTRICAL PRACTICES - LAB	3-0-6	This laboratory develops the manipulative skills of the student. It includes soldering, mounting component and printed circuit board fabrication.	
ELEM460 APPLIED ELECTRONICS	3-3-0	An introduction to basic solid state devices. This course includes amplifiers, oscillators, etc. both in discrete and integrated circuit packages. Prerequisite: ELEM450, 451, 452	
ELEM461 APPLIED ELECTRONICS - LAB	3-0-6	This laboratory consists of experiments on transistor and integrated circuits device. The use of related test equipment is included. Prerequisite: ELEM450, 451, 452	
ELEM462 DIGITAL ELECTRONICS	3-3-0	An introduction to basic digital circuits. It includes basic gates, counters, registers and multiplexer configurations. Prerequisite: ELEM450, 451, 452	
ELEM463 DIGITAL ELECTRONICS - LAB	3-0-6	This laboratory consists of experiments on basic TTL Digital circuits. It includes: gates, counters, registers and multiplexer configurations. Prerequisite: ELEM450, 451, 452	
ELEM464 INDUSTRIAL ELECTRONICS	3-3-0	An introduction to basic industrial electronic devices. It includes silicon controlled rectifiers, unijunction transistors and various types of trigger devices. Prerequisite: ELEM450, 451, 452	
ELEM465 INDUSTRIAL ELECTRONICS - LAB	3-0-6	This laboratory consists of experiments on basic industrial devices. It includes experiments on SCR's, UJT's and various types of trigger devices. Prerequisite: ELEM450, 451, 452	
ELEM470 COMMUNICATIONS	4-4-0	Familiarization with broadcast and stereo receivers. Circuit analysis and service techniques used in servicing consumer products. Prerequisite: ELEM460, 461	
ELEM471 COMMUNICATIONS - LAB	2-0-4	This laboratory consists of experiments in the stage by stage construction and analysis of a communications receiver. Prerequisite: ELEM460, 461	
ELEM472 COLOR SYSTEMS I	4-4-0	Instruction in the theory and operation of television receivers. It includes basic color theory, circuit analysis and servicing techniques. Prerequisite: ELEM460, 461	
ELEM473 COLOR SYSTEMS I - LAB	2-0-4	This laboratory consists of experiments on T.V. receivers. It includes using scopes, analyzers, and generators to develop proper servicing technique. Prerequisite: ELEM460, 461	
ELEM480 CONSUMER PRODUCTS	6-6-0	Instruction in the theory and operation of consumer products such as: VCR, video disc players, micro-wave ovens, and other consumer electronic products. Prerequisite: ELEM472, 473	
ELEM481 CONSUMER PRODUCTS - LAB	3-0-6	A practical laboratory course in servicing and troubleshooting all types of electronics equipment. Prerequisite: ELEM472, 473	
ELEM482 COLOR SYSTEMS II	6-6-0	A continuation of Color Systems I. This course also includes Video Cassette Recorders. Both the ser- vomechanic and electronic circuitry are presented. Prerequisite: ELEM472, 473	
ELEM483 COLOR SYSTEMS II - LAB	3-0-6	A continuation of Color Systems I lab. Prerequisite: ELEM472, 473	
ELEM484 TROUBLESHOOTING II	6-0-11	A continuation of Troubleshooting I. A practical laboratory course in troubleshooting and servicing of consumer products.	
ELET323 CODE BOOK FOR MOTORS	1-3-0	National Electric Code that pertain to Motor Control and installation.	
ELET357 DIGITAL	3-3-0	Logic circuits, gates, Boolean algebra, flip-flops, and registers. Prerequisite ELEM327. This course plus TELE315 is equivalent to HTTC352.	
ELET358 MICROPROCESSORS I	3-3-0	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 MICROPROCESSORS II	3-3-0	An overview of interface chips - UART, parallel chips such as 8255, A/D and D/A converters. Prerequisite ELEM358 or experience.	
ELHT311 CIRCUIT ANALYSIS I	6-6-0	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 in-	

DESCRIPTION OF COURSES

struments, motors and generators.

ELHT312 3-0-6

CIRCUIT ANALYSIS I - LAB

Basic experiments in circuit analysis. It includes: series circuits, parallel circuits and basic instrumentation familiarization. It also includes experiments in Thevenin's theorem, Norton's theory and Xirchoff's Law.

ELHT313 3-3-0

TECHNICAL MATH I

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

FABRICATION TECHNIQUES

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

CIRCUIT ANALYSIS II

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. Prerequisite: ELET311, 313

ELHT322 3-0-6

CIRCUIT ANALYSIS II - LAB

Continuation of Circuit Analysis I. It includes experiments in alternating current. The lab instrumentation includes bridges and Q Meters. It also includes a group of experiments in solid state circuit analysis.

ELHT323 3-3-0

TECHNICAL MATH II

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: ELET313

ELHT324 3-3-0

COMPUTER PROGRAMMING

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. Prerequisite: ELHT313

ELHT330 3-0-6

DIGITAL CIRCUITS

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. ELHT323

ELHT331 3-3-0

CIRCUIT ANALYSIS (LINEAR)

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. Prerequisite: ELHT323

ELHT332 3-0-6

CIRCUIT ANALYSIS III - LAB

An analysis of solid state circuitry. It includes both transistor and integrated circuit experiments. Linear amplifiers as well as active filters are evaluated.

ELHT340 5-5-0

DIGITAL CIRCUITS II

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. Prerequisite: ELHT330

ELHT341 5-0-10

DIGITAL CIRCUITS II - LAB

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.

ELHT342 3-3-0

CALCULUS FOR ELECTRONICS

An introduction to differential and integral calculus. Subject matter includes the differentiation and integration of algebraic, trigonometric, and exponential functions with electronic application. The laboratory includes an evaluation of differentiator and integrator circuits.

ELHT343 3-3-0

PHYSICS FOR ELECTRONICS

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

DATA COMMUNICATION AND LASER

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. Prerequisite: ELHT330, 331

ELHT346 2-0-5

DATA COMMUNICATION & LASER - LAB

An analysis of modulation methods used in data communications. Also included are experiments in multiplexing such as frequency division multiplexing and time division multiplexing.

ELHT361 3-3-0

TECHNICAL UPDATE

A course used to acquaint the student with the dynamic world of technology. Outside speakers and specialists will be utilized to present opportunities challenges, and answers to new and experimental technologies.

EMCR301 1-3-0

EMERGENCY CARE W/BCLS

Iowa Heart certification in Basic Life Support Level II. Learn techniques of treatment of bleeding, shock, fractures, head and back injuries, environmental and medical emergencies.

ENGL080 3-3-0

STUDY SKILLS

Emphasis on improving time management, developing listening skills, and taking class notes and tests. Guidance in development of study habits, using the library and textbooks.

ENGL081 3-3-0

DEVELOPMENTAL READING

For students who want to improve reading skills for college work. Reading material ranges from fiction to scientific texts. Emphasis on vocabulary and comprehension.

ENGL082 3-3-0

BASIC WRITING I

A basic writing course designed to prepare students for English 083 and help them become more confident and competent writers. Students will write on subjects within their experiences and develop specifics about them. Attention to paragraph development, punctuation, spelling, and usage.

ENGL083 3-3-0

BASIC WRITING II

A basic writing course for students who have already taken English 082 or can meet the objectives for ENGL082. Emphasis on shaping and polishing writing to meet the demands of readers. Attention to organization, spelling, punctuation, and usage.

ENGL084 3-1-4

ENGLISH AS A SECOND LANGUAGE I

ENGL085

ENGLISH AS A SECOND LANGUAGE II

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. Prerequisite: Minimum scores on the TOEFL or Michigan Test.

ENGL115 3-3-0

TECHNICAL AND BUSINESS WRITING

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 3-1-2

SPEED READING

An advanced reading course designed to improve reading speed and comprehension. Emphasis on adapting to varying content and levels of difficulty. Prerequisite: ENGL091, 081 or equivalent.

ENGL117 3-3-0

COMPOSITION I

Designed to help students write effective prose. Course progresses from narration to personal essay. Emphasis on developing concrete detail within well-organized paragraphs to support central idea.

ENGL118 3-3-0

COMPOSITION II

Expository and persuasive writing developed through investigative and logical thinking. Course explores structure, style, and documentation. Prerequisite: ENGL117.

ENGL120 1-1-0

LIBRARY INSTRUCTION

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

CREATIVE WRITING

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

COMMUNICATION SKILLS

Designed to improve the basic communications skills for personal, academic, and professional purposes. Includes units on listening, speaking, writing, non-verbal communication, and group communication.

ENGR155 2-2-0

ENGINEERING COMPUTATIONS

This course presents the organization, solution and presentation of engineering problems. Topics covered include S.I. units, selected engineering topics and the study of BASIC. Prerequisite: MATH123.

ENGR165 4-2-4

ENGINEERING GRAPHICS & CONCEPTUAL DESIGN

An integration of conceptual design and engineering graphics. This course includes orthographic projection applied to three dimensional geometry and engineer-

DESCRIPTION OF COURSES

ing drawings. Instrument and free hand techniques are included. The design process is studied with application to an open-end project that includes a formal engineering report.

ENGR175 3-3-0 **ENGINEERING STATICS**

This course includes the vector and scalar analysis of coplanar and noncoplanar force systems, equilibrium concepts, friction, centroids, moments and products of inertia, Mohr's circle, radius of gyration, internal forces, shear and bending moment diagrams. Prerequisite: PYHL121. Corequisite: MATH130.

ENGR180 5-2-6 **FUNDAMENTALS OF SURVEYING**

Surveying 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 applications. An introduction to photogrammetry is included. Prerequisite: MATH129

FIRE231 2-2-0 **INTRODUCTION TO FIRE SCIENCE**

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 **FIRE BEHAVIOR**

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. Recommended prerequisite CHEM131.

FIRE233 3-3-0 **BUILDING CONSTRUCTION**

A study of building materials, components and design features with regard to their reaction under fire conditions. The course also includes interpretation of the Life Safety Code and its application to proposed and existing structures. (Recommended Prerequisite FIRE232).

FIRE234 3-3-0 **FIRE PROTECTION SYSTEMS**

An examination of devices and systems installed and utilized to support the fire service in the detection and suppression of fire. Recommended prerequisite FIRE 232.

FIRE235 3-3-0 **HAZARDOUS MATERIALS**

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. Recommended prerequisites CHEM 131 and FIRE 232.

FIRE236 3-3-0 **FLUID FLOWS**

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. Prerequisite high school algebra or MATH 092. Recommended prerequisite PHYL 106.

FIRE237 3-3-0 **PLANNING FOR FIRE PROTECTION**

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 **FIRE INVESTIGATION**

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. (Recommended prerequisites FIRE 232, 233.)

FNSR201 3-3-0 **PRINCIPLES OF BANKING**

This course surveys the banking functions. It provides a comprehensive introduction to the diversified services offered by the banking industry today.

FNSR202 3-3-0 **INSTALLMENT CREDIT**

This course emphasizes pragmatic 'how tos' that detail the many types of credit arrangements in which a finance charge is paid for the privilege of repaying debts in delayed payments.

FNSR203 3-3-0 **REAL ESTATE FINANCE**

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 **MANAGEMENT FUNDAMENTALS**

Fundamental Management concepts and techniques are stressed in this course dealing with the basic functions of planning, organization, staffing, leading and controlling. A variety of management theories and approaches is covered.

FNSR205 3-3-0 **MONEY & BANKING**

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 **MARKETING FOR BANKERS**

A course in basic marketing principles with application to the banking industry.

FNSR209 3-3-0 **BANK INVESTMENTS**

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 **THE TRUST BUSINESS**

Provides an overview of the trust department with emphasis on how the trust department fits into banking, the services it provides, and how they are delivered. The changing role of the trust department is highlighted.

FNSR211 3-3-0 **BANK MANAGEMENT**

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 **ANALYZING FINANCIAL STATEMENTS**

This course deals with interpretation and evaluation of

financial reports of business. Focus is on the use of financial statement in bank decisions. Emphasis is on theory of solving problems using a case study approach. Prerequisites: ACCT:101 and ACCT:102 or instructor permission

FNSR213 3-3-0 **INTERNATIONAL BANKING**

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 how money is changed from one currency to another.

FNSR214 3-3-0 **BANK CARDS**

An overview of bank card industry. Basic operational aspects of bank card system 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 **INSIDE COMMERCIAL BANKING**

The purpose of this course is to identify topics and issues which bankers must be prepared to address and 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, wholesale banking, electronic funds transfer system, multinational banking, specialized service areas, regulatory constraints, and the new world of banking.

FNSR216 3-3-0 **LOAN OFFICER DEVELOPMENT**

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, communicate and work with credit analysts, keep accurate, ongoing records, and solve actual on-the-job problems.

FNSR217 3-3-0 **DEPOSIT OPERATIONS**

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 **LAW AND BANKING**

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 **SYSTEMS ANALYSIS**

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. Prerequisite: DATA101 or instructor permission.

FNSR220 1-1-0 **CUSTOMER SERV. FOR BANK PERSONNEL**

This course provides customer contact personnel with the opportunity to develop further their communication skills so that they can better serve their customer's financial and personal needs, help their bank compete profitably, and experience greater job satisfaction. Contents include: elements of professionalism; identifying customer needs; responding to customer needs; sug-

DESCRIPTION OF COURSES

gesting services; and handling different situations.

FNSR221 1-1-0
THE BANKER AND EFT

This course is not intended as a 'how to' guide, but it is more of a 'how to be comfortable with' course designed to provide students 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. Contents include: regulation and legislation; types of systems; EFT systems support; marketing EFT services; and where do we go from here?

FNSR222 1-1-0
NEW DEPOSIT INSTRUMENT I

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
LOAN DOCUMENTATION

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
KNOWING THE COMPETITION

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
ASSET/LIABILITY MANAGEMENT

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
FUNDAMENTALS OF DATA PROCESSING

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
FUND. OF ANALYZING FINANCIAL STMTS.

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
SECURITIES: STOCKS AND BONDS

Presents a bank-oriented approach to the subject of stocks and bonds. Covers the basics of stocks and bonds.

FNSR229 1-1-0
WRITING FOR RESULTS

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
SELLING BANK SERVICES

Teaches sales techniques for customer contact personnel. Emphasis is on identifying customer needs for a bank transaction or from conversation with the customer.

FNSR231 1-1-0
CONSUMER BANKRUPTCY

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
INTRODUCTION TO CREDIT UNIONS

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
CREDIT UNION OPERATIONS

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
CREDIT UNION FINANCIAL MANAGEMENT

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
ADVENTURES IN ATTITUDES

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.

FNSR392 5-0-0-15
FIELD EXPERIENCE I

Work experience in a financial institution based on an approved training plan. Prerequisite: MGMT291

FNSR394 5-0-0-15
FIELD EXPERIENCE II

Work experience in a financial institution based on an approved training plan. Prerequisite: FNSR392

FORL120 4-3-2
ELEMENTARY SPANISH I

Development of the basic skills of understanding, speaking, reading, and writing. Grammar analysis: classroom and laboratory conversational practice emphasizing cultural aspects of the Spanish-speaking world.

FORL121 4-3-2
ELEMENTARY SPANISH II

Continued practice of the four basic skills and grammar analysis. Introduction of short prose selections with conversational emphasis. Prerequisite: FORL120

FORL122 4-4-0
INTER. CONVERSATION & COMPOSITION

Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of Hispanic cultural materials to develop skills in listening comprehension, speaking, reading, and writing. Prerequisite: FORL121

GEOG141 3-3-0
INTRODUCTION TO GEOGRAPHY

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.

GEOG145 3-3-0
PEO./CUL. OF DEV. & THIRD WORLD

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) and the Developed World (Anglo-America, Europe, Russia, Japan, and Australia).

GRPH303 2-2-0
COLOR PHOTOGRAPHY

Reviews the basics of color photography. Follow through with techniques for developing and applying color photos, production printing.

GRPH304 2-1-2
DARK ROOM TECHNIQUES

Theory and practice of film developing techniques and printing. Use of enlargers, filters and dark room equipment will be emphasized.

GRPH305 3-3-0
GRAPHICS ARTS PROC. & MATERIALS

Covers the types of equipment, methods, and processes utilized in the printing industry. Materials include: inks, plates, types of papers, card stock, plastics, and other printed materials.

GRPH312 2-2-0
SMALL PUBLICATIONS

Theory of design for company and planning publications house-organs, periodicals and brochures. For editors, art directors, public relations.

HIST121 4-4-0
WESTERN CIV.: BEG. TO 1715

The student surveys the great ancient civilizations through Greece and Rome, the rise of Christianity, 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
WESTERN CIV.: 1715 TO PRESENT

The student surveys the origins and development of the Enlightenment, the French Revolution, the new order of Vienna, the 'isms', revolutionary disturbances, the industrial revolution, national unification movements, growing hostilities and competition, World War I, economic and political instability, World War II, and subsequent Cold War confrontations and developments.

HIST124 4-4-0
AMERICAN HISTORY: 1492 to 1877

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 presettlement, colonial, Revolutionary, antebellum Civil War and Reconstruction eras.

HIST125 4-4-0
AMERICAN HISTORY: 1877 TO PRESENT

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 the post-WWII era.

HIST126 3-3-0
IOWA HISTORY

A broad survey of Iowa history from Indian cultures and pioneer farming through modern agriculture, gradual social changes and long-term political trends.

HIST127 3-3-0
AFTRO-AMERICAN HISTORY I

The introduction to Black Americans' history begins

DESCRIPTION OF COURSES

with the African heritage and the institution of slavery prior to its establishment in North America. The creation of an Afro-American culture involving colonial history, Black men during the Revolution, the abolitionist crusade and the South's reaction to it, the economics of slavery and the Civil War complete the quarter.

HIST128 **AFRO-AMERICAN HISTORY II** **3-3-0**

Begins with the Reconstruction era, Black politics in the 'New South', a growing alliance of northern industry and southern Bourbonism and the rise of Jim Crow sentiment. The student studies early northward migrations and urban culture, growth of civil rights organizations, Dubois and George W. Carver. The course also examines the roles of Black men in World War I, Garveyism in the 1920's, Black Americans and the New Deal, World War II and the post war transition and the civil rights movements of the 1950's and 1960's.

HIST129 **HISTORY OF WOMEN** **3-3-0**

This course will be a study of the contributions of women in history and the changing status of women from early times to the present. It will contribute to a better understanding of the present trends toward the equality of women.

HIST131 **RUSSIAN HISTORY: BEGINNING TO 1917** **3-3-0**

The student surveys the major developments in Russian History from the beginning to 1917. Among the more significant are: Kievan Russia, the Mongol Conquest, the rise of Moscow Romanov rule, Europeanization, Napoleonic struggles, rebellion and intellectual stirrings, aborted reforms, revolutionary movements, the final decades of reaction, industrialization, war, and revolution.

HIST132 **RUSSIAN HISTORY: 1917 TO THE PRESENT** **1-1-0**

The student surveys the developments of revolution, the communist take-over, the Marxist-Leninist state, Stalin and Stalinism, Soviet diplomacy, the Russian theatre of WWII, subsequent political-cultural developments and confrontation with the West.

HLCR301 **INTRODUCTION TO CORONARY CARE** **1-15-0**

Course designed to introduce the nurse to the coronary care setting. Topics include a review of coronary heart disease, the CCU environment, qualifications of a CCU nurse, nursing of the CCU patient, and patient assessment.

HLCR302 **CORONARY ANATOMY AND PHYSIOLOGY** **1-1-0**

Provides an in-depth review of the A & P of the circulatory system. Specifically for the RN working in a critical care area, ICU, CCU, or ED. Comprehensive update of fluids and electrolytes.

HLCR303 **ARRHYTHMIA INTERPRETATION** **3-3-0**

Designed to provide a base for understanding electrophysiology and the most common arrhythmias and antiarrhythmic drugs.

HLCR304 **NURSING CARE & CORONARY COMP.** **1-10-0**

Emphasis on nursing care and complications to include cardiogenic shock, CHF, invasive, and noninvasive procedures monitoring and patient assessment.

HLCR305 **SURGICAL INTERVENTION** **1-10-0**

Discuss aspects of coronary artery disease and valvular disease as related to cardiac surgery. Includes pathophysiology, clinical manifestation, diagnostic pro-

cedures, surgical techniques, nursing and medical management.

HLCR306 **THE REHABILITATION PHASE** **1-10-0**

Designed to familiarize the nurse with the development and structure of a Cardiac Rehabilitation Program. Emphasis on patient teaching and new trends and research in cardiac rehabilitation.

HLCR307 **EMT-AMBULANCE** **6-126-0**

Prepares rescue personnel for the role and responsibilities of an EMT-A. Includes specific patient assessment and emergency treatment procedures. Emergency ambulance runs with an approved unit to be arranged by each student. Additional Saturday and evening hours required. Students should be 18 years of age prior to course completion. Certification exam after successful course completion. Certification fees collected at course completion. Prerequisite: BCLS Certification

HLCR308 **PROCESS OF AGING** **2-2-0**

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.

HLCR309 **ASSESSMENT OF GERIATRIC PATIENT** **2-2-0**

Review the health status of a given patient and incorporate techniques of examination that more accurately assist the physician as he/she determines the health needs of the patient.

HLCR310 **DRUGS AND THE ELDERLY** **1-1-0**

For those working with the geriatric client or patient. Identify drug reaction and interactions as related to the aging process. Review his/her role in patient assessment as related to drug administration.

HLCR311 **DEVELOPING MANAGEMENT SKILLS** **2-2-0**

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.

HLCR312 **ASSERTIVENESS TRAINING** **1-1-0**

Develop a positive attitude and the verbal skills to enhance your ability to communicate your ideas and feelings.

HLCR313 **INFECTION CONTROL** **1-1-0**

Overview of legal aspects, microbiology, policies, surveillance, isolation, and employee health regarding infection control.

HLCR314 **EMERGENCY CARE WITH BCLS** **1-1-0**

Learn to perform care for medical emergencies: fractures, burns, poisonings, heart attack, etc. Includes cardiopulmonary resuscitation, Basic Rescuer certification.

HLCR316 **WARD CLERK** **4-60-12**

Introduction to records and routines that keep a hospital nursing unit running smoothly. Emphasis on communication skills, medical terminology and background information about health and disease. Observation in the clinical area provided.

HLCR317 **MEDICAL TERMINOLOGY** **2-2-0**

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 discussed with a brief survey of anatomy.

HRMT315 **SANITATION AND EQUIPMENT** **2-2-0**

Principles and methods of sanitation safety and equipment. Equipment selection and facilities planning. Also includes preventive maintenance.

HRMT316 **FOOD PREPARATION I** **3-3-0**

Development of basic food preparation procedures as apply in cookery of starch products, fruits, vegetables, cheese, milk, eggs, meat, fish and poultry products plus criterion for evaluating product quality.

HRMT319 **SANITATION AND EQUIPMENT LAB** **1-0-2**

Application of sanitation and safety methods in the food production kitchen. Prerequisite: HRMT315

HRMT320 **FOOD PREPARATION I LAB** **3-0-6**

Application of basic food preparation procedures as apply in cookery of starch products, fruits, vegetables, cheese, milk, eggs, meat, fish and poultry products.

HRMT325 **FOOD PREPARATION II** **3-3-0**

Principles and procedures of small and quantity food production as apply to quick breads, yeast products, cakes, pastries and desserts, salads, soups and vegetables development. Emphasis is on organization and time management criterion for evaluating product quality. Prerequisite: HRMT316, 320

HRMT328 **FOOD PREPARATION II LAB** **2-0-4**

Principles and procedures of small and quantity food production as apply to quick breads, yeast products, cakes, pastries and desserts, salads, soups and vegetables development. Emphasis is on organization and time management criterion for evaluating product quality. Prerequisite: HRMT316, 320

HRMT337 **RESTAURANT MANAGEMENT** **3-3-0**

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. Prerequisite: HRMT 325, 328

HRMT341 **WORK EXPERIENCE** **7-0-0-21**

An approved program of experience in one of the many hospitality areas: restaurant, hospital, club, school food service, hotel or motel.

HRMT342 **WORK EXPERIENCE SEMINAR** **1-1-0**

Discussion of work experiences and problems encountered on the job. Examination of management functions as they apply to the business.

HRMT344 **HOUSE ADMINISTRATION** **3-3-0**

An introduction to the operation of hotels and motels including management functions as they apply to various aspects of the business.

HRMT345 **HOUSE ADMINISTRATION LAB** **3-0-0-9**

Applications of House Administration principles.

HRMT348 **PURCHASING/COST CONTROL** **3-3-0**

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.

DESCRIPTION OF COURSES

HRMT349 NUTRITION AND MENU PLANNING	3-3-0	systems are governed and controlled by many types of inputs and produce a wide variety of outputs. The equipment closed loop response to fluid and/or electronic inputs is investigated.	HTPC354 MOTOR CONTROL AND PLC'S	3-3-0	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, contactors and controllers used in switching and controlling power actuators.
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.					
HRMT357 RESTAURANT MANAGEMENT LAB	5-0-10	HTBM366 ELECTRO-MECHANICAL SYSTEM II (LAB)	2-0-4	HTCT351 MAJOR COMPUTER SYSTEMS I	3-3-0
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. Prerequisite: HRMT328, 325.		Continuation of Electro-Mechanical Systems II. Open vs. closed loop response is evaluated. Experiments in damping, types of feedback, and stability are included.		A comprehensive study of the PDP-11 Computer System. Topics include the internal bus structure, control and status registers and the basic timing functions. In addition the PDP-11 instruction set is introduced.	
HTBM302 INTEGRATED SCIENCE	3-3-0	HTCT352 MAJOR COMPUTER SYSTEMS I (LAB)	5-0-10	HTCT352 MAJOR COMPUTER SYSTEMS I (LAB)	5-0-10
A comprehensive course comprised of elected principles of physics, chemistry and microbiology with emphasis on their principles as they apply to structure and function of the human body and their application in health care as well as electronics technology.		An evaluation of mainframe hardware. This lab includes scope and logic analyzer instrumentation. This course also includes diagnostic techniques as well as machine language and assembly language familiarization.		An evaluation of mainframe hardware. This lab includes scope and logic analyzer instrumentation. This course also includes diagnostic techniques as well as machine language and assembly language familiarization.	
HTBM353 BIOMEDICAL INSTRUMENTATION I	3-3-0	HTCT353 MICROPROCESSORS	5-5-0	HTCT354 MICROPROCESSOR (LAB)	2-0-5
This course is intended to train the biomedical student in the operation, repair and calibration of patient monitoring equipment such as EEG, EKG, external pacemakers and defibrillators. It also includes clinical laboratory equipment such as hemodialysis apparatus and infusion pumps.		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.		An evaluation of microprocessor interface techniques. The experiments include serial interface using varts, parallel interface using PIA's, and A/D and D/A conversion techniques.	
HTBM354 BIOMED INSTRUMENTATION I (LAB)	5-0-10	HTCT361 MAJOR COMPUTER SYSTEMS II	3-3-0	HTCT362 MAJOR COMPUTER SYSTEMS II (LAB)	3-0-5
Experiments in basic instrumentation. It includes experiments in maintenance and repair of both clinical lab equipment and patient monitoring equipment.		A continuation of Systems I. A detailed analysis of specific module and peripheral signals is presented. In addition, both read-only-memory (ROM) and disk diagnostics are emphasized.		A continuation of Systems I. Computer peripheral equipments is emphasized. This includes: teletype terminals, disk drives and interface modules, as well as related diagnostic techniques.	
HTBM355 ELECTRO-MECHANICAL SYSTEMS I	3-3-0	HTCT364 MICROCOMPUTER SYSTEMS	3-3-0	HTCT365 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
The basic theories and concepts of various types of transducers used in biomedical instrumentation are presented. Active and passive units are explained. In addition, the basic principles of fluid power instrumentation is considered.		A comprehensive study of small computer systems. It includes trouble-shooting techniques such as signature analysis, logic analyzers and waveform recognition. Use of computer diagnostics is also emphasized.		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.	
HTBM356 ELECTRO-MECHANICAL SYSTEMS I (LAB)	3-0-6	HTPC351 HYDRAULICS AND PNEUMATICS	3-3-0	HTCT366 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
Basic transducer principles are evaluated. This includes experiments utilizing pressure, temperature ph and flow velocity transducers.		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.		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.	
HTBM362 HEALTH CARE DELIVERY	3-3-0	HTPC352 HYDRAULICS AND PNEUMATICS (LAB)	3-0-6	HTCT367 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
The students acquire the knowledge of the practice and trends within the Health Care Delivery system. The student taking the 3-credit hour 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 or health related functions.		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.		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.	
HTBM363 BIOMEDICAL INSTRUMENTATION II	2-2-0	HTPC353 HYDRAULICS AND PNEUMATICS (LAB)	3-0-6	HTCT368 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
A continuation of Biomed. I. It includes biotelemetry equipment used in the detection of pressure, ph and temperature, ultrasonic equipment such as sonograph, echo-trace, and the use of the computer in biomedical instrumentation is also presented.		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.		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.	
HTBM364 BIOMED INSTRUMENTATION II (LAB)	2-0-4	HTPC354 MOTOR CONTROL AND PLC'S	3-3-0	HTCT369 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
A continuation of Biomed Instrumentation I. It includes experiments in the maintenance and repair of biotelemetry equipment. It also includes experiments in the use of the microprocessor in biomed instrumentation.		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, contactors and controllers used in switching and controlling power actuators.		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.	
HTBM365 ELECTRO-MECHANICAL SYSTEMS II	2-2-0	HTPC355 PROCESS CONTROL INSTRUMENTATION	3-3-0	HTCT370 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
A continuation of Systems I. Electro-mechanical		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 is stressed.		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.	
		HTPC356 MOTOR CONTROL & PLC LAB	3-0-6	HTCT371 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		This lab includes basic control circuits using devices such as : contactors, timers, starters, limits switches, pressure switches etc. Also included experiments utilizing programmable logic controllers to implement control circuits.		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.	
		HTPC357 PROCESS CONTROL INSTR. LAB	2-0-5	HTCT372 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		This lab includes experiments on transducers used in process control as well as experiments on proportional, integral and derivative control.		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.	
		HTPC360 INDUSTRIAL ELECTRONICS	2-2-0	HTCT373 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		The devices and circuits used in thyristor control of machines is presented. It includes Phase Control of DC motors, triac control of AC motors as well as various speed control circuits. Introduction to computer-assisted design systems for automated drafting and three dimensional computer modeling.		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.	
		HTPC361 ROBOTICS	3-3-0	HTCT374 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		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 served-controlled are considered. Principles of cell development are also presented.		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.	
		HTPC362 ROBOTICS LAB	2-0-4	HTCT375 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		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 system will include: microprocessor architecture, load (actuator) requirements, and control theory considerations.		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.	
		HTPC363 MECHANISMS	3-3-0	HTCT376 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		An introductory study of drives and linkages. Included are laboratory tests of motion - producing mechanisms and various gear trains. Transducers are analyzed for the conditions where they function best and the limitations which must be imposed by their use.		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.	
		HTPC364 MECHANISMS (LAB)	2-0-4	HTCT377 MICROCOMPUTER SYSTEMS (LAB)	3-0-5
		The basic principles of drives and linkages are evaluated. This includes: straight-line mechanisms, toggle mechanisms, and intermittent motion mechanisms. It also includes cams with followers and complex motion cams.		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.	
		HTTC352 TELEPHONY PRINCIPLES I	5-5-0		

DESCRIPTION OF COURSES

A foundation course in telephony. It includes fundamentals of switching, transmission media and characteristics, basic carrier transmission methods and the fundamentals of digital carrier system. A coordinated laboratory is included.

HTTC353 COMMUNICATIONS I 3-3-0

Application of circuit analysis theory for the specialized circuits used in communications systems is presented. Such circuits include impedance matching, coupled circuits, and filter circuits for RF and IF amplifiers, mixers and oscillator circuits.

HTTC354 COMMUNICATIONS I (LAB) 3-0-6

Basic circuits of A.M. and F.M. communication systems are evaluated. This includes: amplifiers, mixers, detectors, and power amplifiers. The experiments include operation and theory of related test equipment such as: signal generators, output meters and device analyzers.

HTTC355 MICROWAVE PRINCIPLES 3-3-0

This is a specialized course directed at characteristics of radiation at microwave frequencies, antenna theory, and transmission lines. It also includes an evaluation of microwave components and the operation and maintenance of a radar system.

HTTC356 MICROWAVE PRINCIPLES (LAB) 3-0-6

This course includes basic transmission experiments such as: SWR evaluation, STUB matching and radiation patterns. It also includes basic radar circuitry such as klystrons and magnetrons.

HTTC362 TELEPHONY PRINCIPLES II 3-3-0

A systems course in telecommunications. It includes PABX business switching systems, ESS systems, PCM carrier systems, and data services equipment such as modem, couplers, and terminals. Principles and practices in fibre optics for the communication industry will also be covered.

HTTC363 COMMUNICATIONS II 3-3-0

Wave propagation of transmitted signals is investigated, followed by the theory of transmission lines. State-of-the-art integrated circuits, such as those used in single-sideband telemetry, FSK and pulse width modulation are studied. A coordinated laboratory is included.

HTTC364 COMMUNICATIONS II (LAB) 3-0-6

A continuation of Communications I. It includes single sideband circuitry such as balanced modulators, product detectors and balanced mixers. Evaluation of antenna configurations is also included.

HUMN130 IN OUR OWN IMAGE - TV 3-3-0

Focuses on some basic notions about human perceptions and about the fine arts - how they are created, how they communicate, and how they can be evaluated. This telecourse features on-location film and in-depth interviews with important figures in visual and performing arts.

HUMN131 HUMANITIES THROUGH THE ARTS - TV 3-3-0

A television course survey of the human condition as seen through film, literature, painting, sculpture, architecture, drama and music. History, techniques, meaning and evolution of individual works are emphasized.

HUMN132 THE ART OF BEING HUMAN - TV 3-3-0

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 esthetics, myth, morality, love and death. Each theme is explored through art, music, literature, philosophy, drama and religion.

HUMS101 INTRODUCTION TO HUMAN SERVICES 3-3-0

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 COMMUNITY ORGANIZATION 3-3-0

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. Recommended: 6 hours Social Sciences.

HUMS109 SURVEY OF MENTAL HEALTH TREATMENT 3-3-0

Introduction to major theoretical approaches for the study of personality including psychoanalytic, dispositional, phenomenological, and behavioral strategies. Counseling theories studied include psychoanalysis, gestalt, transactional analysis, family therapy, reality therapy, behavior therapy and crisis intervention. (Same as PSYH109).

HUMS133 AMERICA IN THE MOVIES 3-2-2

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.

HUMS202 INTERVIEWING & INTERPERSONAL REL. 3-3-0

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 INTERVENTION THEORIES AND PRACTICE I 3-3-0

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. Recommended: HUMS101, 202

HUMS206 INTERVENTION THEORIES AND PRACTICE II 3-3-0

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. Prerequisite: HUMS202, 205. Must be taken concurrently with HUMS207 or volunteer human services work.

HUMS207 FIELD EXPERIENCE 4-0-0-13

Supervised experience in a human services agency enables students to apply their skills and knowledge by working directly with clients. Prerequisites: HUMS202, HUMS205 and permission of program chair. Must be taken concurrently with HUMS206.

HUMS210 COUNSELING TECHNIQUES 3-3-0

Several counseling models are considered. The theories, methods and applications of client-centered and directive counseling are emphasized. Prerequisite:

HUMS202

HUMS211 COUNSELING WITH WOMEN 3-3-0

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.

HUMS212 SURVEY OF CHEMICAL DEPENDENCY 2-2-0

Use of and addiction to alcohol and other drugs are considered from historical, legal and social science perspectives. A variety of treatment philosophies and programs are examined.

HUMS213 PRAC. IN CHEM. DEP. COUNSELING I 6-0-0-20

HUMS214 PRAC. IN CHEM. DEP. COUNSELING II 6-0-0-20

Supervised experience rotating through four or more of these treatment programs for chemically dependent people: inpatient, outpatient, follow-up care, adolescent, halfway house, and family therapy. In each unit students begin by observing and later work independently with clients to assess needs, develop treatment plans, write progress notes and conduct individual and group counseling sessions. Prerequisite: Admission to the Iowa Methodist Medical Center Powell III Counselor training program and permission of program chair.

JNAD120 INTRODUCTION MASS COMMUNICATION 3-3-0

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 BASIC REPORTING PRINCIPLES 3-2-2

Designed to provide students with experiences in gathering, organizing and writing selected types of news stories.

JNAD122 ADVANCED REPORTING 3-3-0

Study of various story types, including consumer, feature, review/editorial, investigative. Further development of news elements, interviewing techniques, and legal and ethical considerations in journalism. Prerequisite: JNAD121

JNAD123 PUBLICATIONS PRODUCTION 3-1-4

Special work in journalism. Students will produce DMACC newspaper, the Champus Chronicle, and will gain experience in writing, copy-editing, layout and design. May be repeated for three additional semesters.

JNAD124 LAYOUT AND DESIGN 3-3-0

Design and production of publications; understanding and critical awareness of contemporary practices in print media for advertising and journalism. Design-oriented assignments.

JNAD125 PRINCIPLES OF ADVERTISING 3-3-0

Advertising introduction with marketing as a tool and socio-economic force for promotional communication.

LABS220 SURVEY OF LABOR STUDIES 3-3-0

A survey course designed to explain the field of Labor Studies. Topic covered in the course include: labor history, labor law, contract negotiations and administration, and the future of the labor movement.

LABS221 GRIEVANCE HANDLING & ARBITRATION 3-3-0

DESCRIPTION OF COURSES

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.

LABS222 **3-3-0**
HISTORY & DEV. OF LABOR MOVEMENT

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.

LABS223 **3-3-0**
PROTECTIVE & LABOR RELATIONS LEG.

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.

LABS224 **3-3-0**
PUBLIC SEC. LABOR LEG. & COLL. BARG.

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.

LABS225 **3-3-0**
UNION PSYCHOLOGY & INDUSTRIAL SOC.

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 move-

ment. It also is an examination of the way industry, unions, and the economy relate to other social institutions in America's society.

LABS226 **3-3-0**
LABOR ECON. & COLLECTIVE BARG.

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.

LABS227 **3-3-0**
UNION ADMINISTRATION

American unions in theory and practice on local, state and national levels. A study of structure and roles on different levels of the organizations.

LABS228 **3-3-0**
UNIONS, POL. & COMP. LABOR MVMTS.

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.

LABS229 **3-3-0**
LABOR STUDIES PROBLEMS

An individual study of special problems in labor studies; an opportunity for a student to apply knowledge and experience to actual specific labor problems. Prerequisite: 18 hours in LABS and consent of instructor.

LABS230 **2-2-0**
UNION COUNSELING

The purpose of the community services counseling course is to acquaint students with the services available in the community and to teach them the fundamentals of referral work and counseling.

LABS231 **2-2-0**
ADVANCED UNION COUNSELING

The purpose of the advance 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.

LEGA198 **1-0-1**
INDEPENDENT STUDY

In depth, independent study in an area of law of interest to the student. The student and instructor will work together to develop a plan of study for the student to follow. Prerequisites: LEGA240, 241, plus permission of the instructor.

LEGA240 **3-3-0**
INTRODUCTION TO LAW

A general introduction to the American legal system including 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 day to day duties and responsibilities of a legal assistant.

LEGA241 **3-3-0**
LEGAL RESEARCH & WRITING

Tools and techniques of legal research and the nature of legal authority. Principles of drafting memorandums and other types of legal research documents.

LEGA242 **3-3-0**
TORTS & LITIGATION I

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 and gathering and organization of materials for trial. Pre or Co-requisites: LEGA240, 241

LEGA243 **3-3-0**
TORTS & LITIGATION II



DESCRIPTION OF COURSES

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 techniques of discovery, drafting of trial briefs, and basic rules of evidence will be covered. Prerequisite: LEGA242

LEGA244 DOMESTIC RELATIONS 3-3-0

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. Pre or Co-requisites: LEGA240, 241

LEGA245 INCOME TAX LAW 3-3-0

Study of the fundamental theory of income taxation coupled with instruction in its practical application. Personal and business taxation are covered on both the Federal and State level. Pre or Co-requisites: LEGA240, 241

LEGA246 BUSINESS & CORPORATE LAW I 3-3-0

A study of the fundamentals of the law of contracts, the Uniform Commercial Code and the rights of creditors in transactions. Pre or Co-requisites: LEGA240, 241

LEGA247 BUSINESS & CORPORATE LAW II 3-3-0

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

LEGA248 REAL ESTATE LAW 3-3-0

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. Pre or Co-requisites: LEGA240, 241

LEGA249 PROBATE PROCEDURE 3-3-0

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. Pre or Co-requisites: LEGA240, 241.

LEGA250 LEGAL INTERNSHIP & ETHICS 4-0-0-13

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 200 contact hours. Prerequisites: 6 LEGA classes including LEGA240, 241.

LEGA251 WILLS, ESTATE PLANNING & TAXATION 3-3-0

Basic principles of estate planning in order to minimize estate and gift tax consequences. Preparation of Federal estate and gift tax returns and Iowa Inheritance tax returns. Drafting of wills designed to carry out estate plans. Prerequisite: LEGA249

LEGA252 ADMINISTRATIVE PRACTICE 3-3-0

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. Research-

ing government regulations will be discussed. Pre or Co-requisites: LEGA240, 241.

LEGA253 ADVANCED LEGAL RESEARCH 3-3-0

Advanced application of principles of legal research. Analysis of complex legal issues and preparation of pleadings, memorandums and briefs based on that analysis. Prerequisite: LEGA241.

LEGA254 EVIDENCE: THEORY & PRACTICE 3-3-0

Court rules for admissibility of evidence. Theories and techniques of interviewing, sources for investigation. Methods of preparing evidence for courtroom use. Pre or Co-requisites: LEGA240, 241

LEGA255 ADVANCED LEGAL WRITING 3-3-0

Techniques of non-research legal writing. Emphasis on clarity, conciseness, sound, correctness from the sentence and paragraph levels to the overall product of letters, summaries and reports. Prerequisites: LEGA240, 241.

LEGA256 DEBTOR/CREDITOR LAW 3-3-0

Procedures in non-bankruptcy debt collection. Fundamentals of bankruptcy law and bankruptcy procedure. Examination of alternatives to formal bankruptcy proceedings. Prerequisites: LEGA240, 241.

LITR120 INTRODUCTION TO LITERATURE 3-3-0

The course covers a study of literary types; fiction, poetry, and drama. Appreciation through understanding is primary, with continuous emphasis on close, critical reading.

LITR121 MAJOR BRITISH WRITERS 3-3-0

In-depth study of works of selected major writers from Post-Renaissance through Contemporary. Common critical approaches for reading, understanding, and evaluating each work are taught.

LITR122 MAJOR AMERICAN WRITERS I 3-3-0

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 MAJOR AMERICAN WRITERS II 3-3-0

Examines American literature from the early 20th century through contemporary America; emphasizes major literary works and their social and cultural contexts.

LITR124 CHILDREN'S LITERATURE 3-3-0

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 CONTEMPORARY LITERATURE 3-3-0

A study of the most significant contemporary writers and literary movements since 1940. The course considers the way today's fiction mirrors today's society.

LITR126 LITERARY GENRES 3-3-0

Course will focus each term on a type of literature: poetry, drama, detective fiction, science fiction. Exploration of relationship between content and form. May be repeated in varying areas for up to 9 hours of credit.

LITR127 LITERARY VIEWPOINTS 3-3-0

Course will examine a body of literature linked by a specialized concern or approach: i.e. Southern fiction, black literature, humor in literature. May be repeated in varying subject areas for up to 9 hours of credit.

LITR128 FILM ANALYSIS 3-2-2

An introduction to the conventions, scope, purposes, and techniques of film. Includes viewing and writing about a variety of films.

MACD451 MACHINE DRAFTING - BASICS 3-1-4

Drafting fundamentals are developed along with equipment and material usage. Line conventions lettering style and basic geometric constructions are stressed.

MACD452 MACHINE DRAFTING CONST. TECH. 3-1-4

More advanced geometric constructions are developed. Basic shape description is presented by pictorial and multiview sketches. Prerequisite: MACD451

MACD453 MACH. DRAFTING - MULTIVIEW DRAWINGS 3-1-4

Advanced shape descriptions is presented including sectioning principles. How to select necessary views in order to effectively describe a part, whether it is simple or complex. Prerequisite: MACD452

MACD456 MATERIALS AND PROCESSES 3-3-0

Survey of materials and the 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 DRAFTING MATH I 3-3-0

Review of arithmetic fundamentals including fractions, decimals and units of measurement. Basics of algebra is emphasized from an application standpoint. Linear and quadratic equations, graphic and problem-solving techniques are covered.

MACD461 BASIC DIMENSIONING 3-1-4

Dimensioning procedures (size description) are presented within the framework of American National Standards Institute principles. Prerequisite: MACD453

MACD462 ADVANCED DIMENSIONING 3-1-4

Continuation of basic dimensioning procedures in order to clearly show the intent of the drawing. Included are casting/machining dimensions and sheet metal blanking and forming. Prerequisite: MACD461

MACD463 MECHANICAL COMPONENTS 3-1-4

Advanced size description is covered in more depth including true position dimensioning. Describing mechanical components includes fasteners, gears, cams and springs. Prerequisite: MACD462

MACD466 DESCRIPTIVE GEOMETRY 3-1-4

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 DRAFTING MATH 2 3-3-0

Introduction to trigonometry, including the solution of right and oblique triangles. Areas and volumes are covered with the emphasis on problems encountered by the drafter, using Machinery's Handbook. Prerequisite: MACD458

DESCRIPTION OF COURSES

MACD471 4-1-6
DETAILING

Preparation of individual detailing projects similar to what a person may encounter the first year on the job. This project will include several types of assembly drawings. Prerequisite: MACD463

MACD472 2-1-2
TECHNICAL ILLUSTRATION

Basic technical illustration is covered. Primary emphasis is on preparation of 'exploded' assemblies. Secondary emphasis is on shading techniques including air-brush fundamentals. Prerequisite: MACD471

MACD476 4-4-0
STATICS

The design of all machine components and their interconnections depend on a knowledge of the forces acting on those components. Statics considers those forces that are in equilibrium and are stationary. Prerequisite: MACD468

MACD478 2-2-0
COMPUTER IN MANUFACTURING

The use of a computer in most engineering departments has many applications for the drafter on the job. Computer Aided Drafting (Design) CAD in the form of micro-computers will be utilized. Along with appropriate software, as it becomes available, will broaden the capability of the drafter.

MATH091 2-2-0
ARITHMETIC

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
INTRODUCTORY ALGEBRA

A beginning algebra course in which most elementary topics of algebra are studied. This course will include the real number system, solving equations, polynomials, graphing, inequalities, fractional equations and radical expressions. This is an adaptor course designed for those students who have not had high school algebra or for those students who need review.

MATH093 3-3-0
HIGH SCHOOL GEOMETRY

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 facility with topics from high school geometry. Prerequisite: One year high school algebra or MATH092.

MATH115 4-4-0
FINITE MATHEMATICS

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. Prerequisite: One year high school algebra or MATH092.

MATH117 3-2-2
PROGRAMMING IN BASIC

Computer systems; variable names and assignments; arithmetic operations and hierarchy; writing a program; loading and running a program; debugging; REM, INPUT, GO TO, and IF-THEN statements; BASIC and user defined functions; print and tab statements; FOR-NEXT Loops; READ and DATA statements; arrays, subroutines; sorting and searching; string variables;

random numbers. Prerequisite: One year of high school algebra or MATH092.

MATH118 4-4-0
MATH FOR ELEMENTARY EDUCATORS

Provides elementary teachers and others with a modern approach to mathematics. Emphasis on understanding basic concepts of mathematics and being able to use these concepts in problem solving. Sets, relations, number systems, nature of proof, algorithms, elements of algebra, elements of geometry, basic computational skills and fundamentals of logic. Prerequisite: One year high school algebra or MATH092.

MATH119 4-4-0
INTERMEDIATE ALGEBRA

A review of elementary algebra along with new topics including exponents and radicals, functions and graphs, quadratic equations, inequalities and systems of equations. Prerequisite: One year high school algebra or MATH092.

MATH121 4-4-0
ELEMENTARY STATISTICS

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. Prerequisite: Two year high school algebra or MATH119.

MATH123 3-3-0
TRIGONOMETRY

Circular functions and their inverses, trigonometric identities, trigonometric equations, solving triangles and graphing. Prerequisite: Two years of high school algebra or MATH119.

MATH124 5-5-0
PRE CALCULUS

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. Prerequisite: MATH 123 or equivalent

MATH129 5-5-0
CALCULUS I

Absolute values, inequalities, functions, limits, continuity, differentiation, definite integral, exponential and logarithmic functions. Prerequisite: MATH124

MATH130 5-5-0
CALCULUS II

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
DIF. EQUATIONS & LAPLACE TRANSFORMS

Ordinary differential equations, systems of ordinary differential equations, Laplace transforms, numerical methods and applications. Prerequisite: MATH130 or Corequisite: MATH130 with consent of department.

MEDA460 2-2-0
PROFESSIONAL DEVELOPMENT I

Emphasizes professional opportunities and responsibilities of the medical assistant. Medical specialties are studied. Study of OSHA first aid procedures prepare the student to cope with emergency situations in the office as well as in the community.

MEDA461 4-4-0
THE HUMAN BODY IN HEALTH & DISEASE I

Basic biological concepts, structure of the body and its functions are studied. Interrelationship of the systems

in the healthy individual are stressed. Symptoms of disease, functional and organic reactions of the body relation to systems, diagnostic aids used by the physician, and possible methods of treatment are presented. Prerequisite: High school biology or equivalent.

MEDA462 2-0-2
MEDICAL TERMINOLOGY

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 usage of medical terms are included.

MEDA463 4-3-2
MEDICAL OFFICE MANAGEMENT I

Emphasizes front office responsibilities of the medical assistant. Includes filing methods, preparation of patient forms, and basic recordkeeping with an emphasis on accounting procedures for the medical office. Introduction to health insurance and other diverse professional activities are also included.

MEDA464 4-3-2
MEDICAL LABORATORY PROCEDURES I

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, introduction to hematology.

MEDA465 3-2-2
MEDICAL OFFICE PROCEDURES I

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.

MEDA470 2-2-0
PROFESSIONAL DEVELOPMENT II

Medical ethics is studied. Lecture and group discussion to aid in communications with patients and recognizing special needs of the patient during illness; understanding how the law affects the practice of medicine. Prerequisite: MEDA460

MEDA471 4-4-0
THE HUMAN BODY IN HEALTH & DISEASE II

The study of the body systems is completed. Prerequisite: MEDA461

MEDA472 2-2-0
DIAGNOSTIC RADIOLOGY I

This course includes radiological principles, film evaluation, processing and techniques, positioning of patients, and radiation protection of patients and workers. This course meets the requirements for a 'limited diagnostic radiographer' as established by the Radiologic Division of the Iowa Department of Health.

MEDA473 4-3-2
MEDICAL OFFICE MANAGEMENT II

Study of health and accident insurance, service plans, worker's compensation, medicare and medicaid. Includes proper use of telephone, appointment scheduling, pegboard and daily log recordkeeping. Through the use of practice sets the student keeps the patient's medical and financial records and types manuscripts. Practice set includes transcription from the dictaphone. Prerequisite: MEDA463

MEDA474 3-2-2
MEDICAL LABORATORY PROCEDURES II

Blood collection by venipuncture and finger puncture. Complete blood counts, slide agglutination tests, theory of electrocardiography and production of satisfactory

DESCRIPTION OF COURSES

electrocardiograms. Practical experience in cell counts and blood chemistries on the Unimeter, accustat, and dextrometer. Prerequisite: MEDA464

MEDA475 **3-2-2**
MEDICAL OFFICE PROCEDURES II

The student learns how to assist with examinations, tests and treatments; 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**
PROFESSIONAL DEVELOPMENT III

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 service available to the patient. Guest speakers, field trips and observation time in selected facilities are included.

MEDA481 **6-0-0-18**
PRACTICUM

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 his assistant. Prerequisite: Satisfactory completion of all courses in first 2 terms.

MEDA482 **2-2-0**
DIAGNOSTIC RADIOLOGY II

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**
MEDICAL OFFICE MANAGEMENT III

Provides an opportunity for the student to become adept in using dictation transcription equipment. Actual case histories, consultations, physical examinations, surgical and autopsy reports on prepared belts are used to provide material that is of immediate practical use. Prerequisite: MEDA473

MGMT101 **3-3-0**
PERSONNEL SUPERVISION

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**
INTRODUCTION TO MANAGEMENT

An 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 solution to common problems.

MGMT103 **3-3-0**
SALES MANAGEMENT

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.

MGMT202 **3-3-0**
PSYCHOLOGY AND HUMAN RELATIONS

Emphasis is on the development of an awareness of the techniques of effective interpersonal relations in business, social, peer and family groups. Also covers the personal benefits derived from developing positive

self esteem.

MGMT291 **1-0-2**
PRE-EMPLOYMENT SEMINAR

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.

MGMT321 **3-3-0**
RETAIL MANAGEMENT I

Study of the development 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.

MGMT322 **1-0-2**
OFFICE PROCEDURES

Prepares the student with an employable proficiency in the techniques and operation of the typewriter, calculator, and ten-key adding machine.

MGMT340 **7-0-0-20**
BUSINESS INTERNSHIP I

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. Development and supervision of training plan will be made by a teacher-coordinator.

MGMT342 **2-1-2**
INTERNSHIP SEMINAR I

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. Current enrollment in MGMT340 is required.

MGMT343 **7-0-0-30**
FIELD EXPERIENCE I

Consists of one semester 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: MGMT291

MGMT344 **2-1-2**
FIELD EXPERIENCE I SEMINAR

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. Current enrollment in MGMT343 is required.

MGMT355 **5-0-0-15**
FIELD EXPERIENCE II

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. Prerequisite: MGMT343

MGMT356 **1-1-0**
FIELD EXPERIENCE II SEMINAR

Field experience problems will be discussed, new occupational information will be presented and topics relating to industrial marketing will be discussed. Current enrollment in MGMT355 is required.

MGMT357 **5-0-0-15**
BUSINESS INTERNSHIP II

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.

MGMT358 **1-1-0**

BUSINESS INTERNSHIP II SEMINAR

Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business. Current enrollment in MGMT357 is required.

MGMT359 **5-0-0-15**
RETAIL MERCHANDISING INTERNSHIP I

Consists of one semester of part-time successful introductory on-the-job training in a cooperating retail training station. Emphasis is placed on stockroom procedures and retail salesmanship techniques. Development and supervision of training plan will be made by a teacher-coordinator.

MGMT360 **7-0-0-20**
RETAIL MERCHANDISING INTERNSHIP II

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.

MGMT365 **5-0-0-15**
BUSINESS INTERNSHIP III

Consists of 1 semester 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.

MGMT367 **1-1-0**
BUSINESS INTERNSHIP SEMINAR III

Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business internship experiences. Current enrollment in MGMT365 is required.

MGMT368 **5-0-0-15**
FIELD EXPERIENCE III

Consists of field training of the level scheduled in the individual field training plan. The training is scheduled for a half day. The training plan will be supervised by a teacher-coordinator. Prerequisite: MGMT355

MGMT369 **1-1-0**
FIELD EXPERIENCE III SEMINAR

Field experience problems will be discussed. New occupational information will be presented and topics relating to industrial marketing will be discussed. Current enrollment in MGMT368 is required.

MGMT404 **1-0-2**
PSYCHOLOGY SEMINAR

Gives the student a practical working knowledge of human relations in business and industry. Special emphasis is placed upon the understanding of the causes of behavior and its effect upon the employee in industry.

MKTG102 **3-3-0**
PRINCIPLES OF MARKETING

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**
PRINCIPLES OF SELLING

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**
ADVERTISING & SALES PROMOTION

The area of promotional communication is studied to achieve an understanding of the market place, the various advertising media and the development of an

DESCRIPTION OF COURSES

effective promotional message.			
MKTG211 INDUSTRIAL MARKETING	3-3-0		
Presents functional methods of industrial marketing. Examines all forms of wholesaler and manufacturer type marketing activities.			
MKTG212 PURCHASING	3-3-0		
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 PRINCIPLES OF CLOTHING SELECTION	3-3-0		
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 RETAIL PRODUCT ANALYSIS	3-3-0		
Examines and identifies the basic technology concerning hardline merchandise as they relate to the retail store and retail business. Emphasis is placed on the student becoming knowledgeable about the various products studied.			
MKTG321 RETAIL MANAGEMENT I	3-3-0		
Study of the development 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 RETAIL MANAGEMENT II	3-3-0		
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 DISPLAY AND VISUAL MERCHANDISING	2-1-2		
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 BUYING & MERCHANDISE CONTROL	3-3-0		
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 maintain a merchandise control system in maximizing profits.			
MKTG332 TEXTILES	3-3-0		
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 FASHION SHOW PROCEDURES	3-3-0		
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		
		PRINCIPLES OF FASHION MERCHANDISING	
		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 INDUSTRIAL PRODUCT ANALYSIS	3-3-0
		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, sales personnel; how it can be compared and analyzed.	
		MKTG345 FASHION STUDY TOUR	2-1-2
		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. Prerequisite: MKTG231 or permission of the instructor.	
		MLTS400 INTRO. TO THE MEDICAL LABORATORY	6-4-4
		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.	
		MLTS410 HEMATOLOGY	6-4-4
		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	
		MLTS421 CLINICAL CHEMISTRY	8-5-5
		The study and analysis of electrolytes, proteins, lipids, enzymes, hormones, and drugs, relates the test results to the patients' condition. Prerequisite: MLTS400	
		MLTS431 CLINICAL MICROBIOLOGY	4-3-3
		A study of clinically important microorganisms. Techniques used to isolate and identify pathogenic bacteria, parasites and fungus. Immune responses are studied. Prerequisite: BIOL132	
		MLTS441 IMMUNOHEMATOLOGY	4-3-6
		Principles of immunohematology with the practices of blood banking are presented. ABO and Rh typing and transfusion testing procedures are performed. Blood group antigens and antibodies are studied. Prerequisite: MLTS411	
		MLTS450 CLINICAL PRACTICUM I	2(10 HOURS)
		Students report to a local hospital to join the phlebotomy team to practice patient approach and to draw blood specimens. Prerequisite: MLTS400.	
		MLTS451 CLINICAL PRACTICUM II	15(32 HOURS)
		The student rotates through the various departments (hematology, chemistry, microbiology, blood bank, and urinalysis) of the hospital laboratory applying the knowledge and skills learned in the classroom. Prerequisite: Completion of first three terms of MLTS curriculum.	
		MLTS452 CLINICAL PRACTICUM III	11(32 hours)
		A continuation of MLTS451.	
		MLTS460 CLINICAL SEMINAR	1-1-0
		The students share their experience in the clinical area and present topics of interest. Case studies are presented for knowledge and review. Prerequisite: MLTS451 assignment.	
		MLTS461 MEDICAL LABORATORY REVIEW	1-1-0
		Medical laboratory subjects are reviewed, a mock registry examination is given. Prerequisite: MLTS452	
		MLTS462 PROFESSIONAL DEVELOPMENT	1-2-0
		The student studies human relations, job seeking skills, continuing education opportunities, legal responsibilities, and professional organizations. Prerequisite: MLTS451	
		MUSI130 MUSIC APPRECIATION	3-3-0
		A survey of the development of music through study of representative compositions of many periods and styles; vocabulary presented to discuss the musical works.	
		MUSI131 INTRODUCTION TO MUSIC	3-3-0
		Study of scales, rhythms, and harmonies; application of this knowledge through composition for and performance on classroom instruments such as piano, guitar and autoharpe.	
		MUSI132 INTRODUCTION TO GUITAR	3-3-0
		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.	
		MUSI134 CHOIR	1-0-2
		The Community College Choir is open to all students. Varied literature is chosen for each group. A performance serves as the final exam. May be repeated for a maximum of 4 credits.	
		MUSI134 SWING CHOIR	1-0-2
		Swing choir members are selected from choir. Repertoire is chosen from popular songs of various periods. Emphasis on performance with choreographed movement.	
		MUSI136 VOICE	1-0-2
		Individual instruction in voice. Fourteen half-hour lessons in tone production, breath control, diction, literature, and stage presence. Fee required plus tuition. May be repeated for a maximum of 4 credits.	
		MUSI137 PIANO	1-0-2
		Individual instruction in piano. Includes a one-half hour lesson per week and one hour practice daily. A minimum of 14 lessons per term must be verified. (May be repeated. Maximum of 4 credits)	
		NURS200 BODY STRUCTURE AND FUNCTION	3-3-0
		Offers the student basic concepts in human anatomical structure with relation to body functions and helps the student gain an understanding of the patterns which enable the body to perform as an integrated whole.	
		NURS201 HUMAN NEEDS I	6-6-0
		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	

DESCRIPTION OF COURSES

and data collection are stressed.

NURS202 4-0-8
NURSING PRACTICUM I

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.

NURS203 4-4-0
HUMAN NEEDS II

This course assists the student to acquire knowledge necessary for the delivery of restorative nursing care for individuals experiencing surgery, isolation, and alterations in activity, nutrition/elimination and oxygen/circulation. Prerequisites: PSYH101, NURS200, 201, 202.

NURS204 2-2-0
NURSING PROCESS I - PN

Focuses on implementation phase and role in applying nursing process to alterations of activity, nutrition/elimination, oxygenation/circulation and the surgical client. Prerequisites: PSYH101, NURS200, 201, 202.

NURS205 6-0-0-12
NURSING PRACTICUM II - PN

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. Prerequisite: PSYH101, NURS200, 201, 202.

NURS206 5-7-0
HUMAN NEEDS III

Students will integrate data collection/observations, nursing interventions, and evaluation to deliver care to multiple need clients, normal pregnancy and newborn care as well as ethical-legal aspects of P.N. practice are presented. Prerequisites: PSYH103, NURS203, 204, 205.

NURS207 7-0-0-21
NURSING PRACTICUM III

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. Prerequisite: PSYH103, NURS203, 204, 205.

OFFC201 2-2-0
INFORMATION/WORD PROCESSING CONC.

A study of information/word processing concepts. Topics include history, benefits, terminology, equipment selection, etc.

OFFC202 3-3-0
RECORDS MANAGEMENT

A study of the processes involved in the management of records - from creation to disposal. Involves the application of methods for alphabetical, subject, geographic and numeric filing, a study of equipment and facilities needed.

OFFC203 3-3-0
ADMINISTRATIVE OFFICE MANAGEMENT

This course involves the office environment where the 'flow of paperwork' is paramount to the success of any business operation.

OFFC204 4-4-0
OFFICE PROCEDURES

Presents information related to the various tasks, procedures, concepts and duties that are required in an office.

OFFC205 3-3-0

BUSINESS ENGLISH

The fundamentals of grammar, spelling, punctuation, word usage, capitalization, abbreviations and number usage.

OFFC206 3-3-0
WRITTEN/VERBAL COMMUNICATIONS

The principles and procedures of effective business letter writing and oral communicating in the office. Prerequisite: OFFC205

OFFC207 3-3-0
INTRODUCTION TO COMPUTERS

Presents the basic data processing cycle - input, process and output. It includes the history of computers, terminology and concepts, and how computers are used in business.

OFFC208 2-2-0
CLERICAL PROCEDURES

A course for the general office worker, covering such areas as receptionist skills, telephone techniques, and processing business correspondence.

OFFC220 3-3-0
INTRO. TO ANATOMY & PHYSIOLOGY

Emphasis on basic biological concepts and structure of the human body and its functions. Prerequisite: OFFC301

OFFC221 3-3-0
MEDICAL TERMINOLOGY

Builds a medical vocabulary through an understanding of anatomic roots for words denoting body structures, prefixes, suffixes, and Greek and Latin verbal adjectival derivatives.

OFFC230 3-3-0
LEGAL PROCEDURES

Covers personality, duties and responsibilities of a legal secretary; trends influencing women working; and procedures for mail, communications, receptionist work, travel, banking, insurance and meeting. Prerequisite: OFFC301

OFFC231 3-3-0
LEGAL MANAGEMENT

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.

OFFC232 1-1-0
REAL ESTATE

An introduction to real estate law with an emphasis on real estate purchase, selling, lease and rental.

OFFC233 1-1-0
PROBATE

An introduction to probate law with an emphasis on probate procedures required to settle an estate.

OFFC234 1-1-0
INTRO. TO LAW & CITATIONS/RESEARCH

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.

OFFC235 2-0-4
LAW I TECHNIQUES

Dictation, transcription and typing of legal materials relative to situations in criminal litigation. Citations are typed from reference materials recommended by the legal profession. Prerequisite: OFFC302, 305

OFFC236 1-1-0
DOMESTIC RELATIONS

An introduction to family law with an emphasis on

domestic relations, actions and adoptions.

OFFC237 1-1-0
CRIMINAL LAW

An introduction to criminal situations with emphasis on preparation for trials and appeals.

OFFC238 1-1-0
CIVIL LITIGATION

An introduction to civil law with an emphasis on civil litigation and court procedures.

OFFC239 1-1-0
BUSINESS ORGANIZATIONS

An introduction to business organizations with an emphasis on the formation, structure, operation and controls of various types of business.

OFFC240 2-0-4
LAW II TECHNIQUES

Dictation, transcription and typing of legal materials relative to situations in civil law, family law and business organizations. Prerequisite: OFFC302, 305

OFFC241 2-0-4
LAW III TECHNIQUES

Dictation, transcription and typing of legal materials relative to estate planning, probate proceedings and real estate transactions. Prerequisite: OFFC302, 305

OFFC242 3-3-0
INCOME TAXES

Accounting procedures relative to the preparation of various tax returns for individuals and business. Instruction is based on IRS fundamentals of tax preparation.

OFFC243 1-1-0
ESTATE PLANNING

An introduction to estate planning with an emphasis on wills and codicils and tax laws influencing estate planning.

OFFC301 2-0-4
TYPING I

Basic machine operation and correct techniques of typewriting. Type at speeds of 30-40 wpm with 3 errors. Cover the fundamentals of typing business correspondence, centering, tabulation, and manuscripts.

OFFC302 2-0-4
TYPING II

A comprehensive course in typewriting for the business office involving business forms and reports, business correspondence, and the efficient production of typed material. Type at speeds of 35-45 wpm with 2 errors. Prerequisite: OFFC301 or skill level.

OFFC303 2-0-4
TYPING III

Typing for the business office, stressing the efficient production of mailable copy. Emphasizes office typing with a minimum of instruction. Type at speeds of 50-60 wpm with 2 errors. Prerequisite OFFC302 or skill level.

OFFC304 4-3-2
INTRODUCTORY SHORTHAND

Covers the principles of shorthand theory. Emphasis is on the correct writing of the shorthand outline with instant recall.

OFFC305 4-3-2
ADV. SHORTHAND & TRANSCRIPTION

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: OFFC304

OFFC306 2-0-4
INFORMATION PROCESSING I

The use of automatic typewriters, transcribers and other word processing media. Prerequisite: OFFC301

DESCRIPTION OF COURSES

OFFC307 INFORMATION PROCESSING II	2-0-4	dicatation and transcribing notes. For persons who have had some shorthand training.
A continuation of Information Processing I with an emphasis on developing speed and accuracy in the preparation of business communications. Automatic typewriters will be used. Prerequisite: OFFC306		
OFFC309 OFFICE ACCOUNTING	2-1-2	
Basic theory of accounting emphasizing the accounting cycle. Includes payroll, specialized journals and banking procedures.		
OFFC310 PROFESSIONAL DEVELOPMENT	3-3-0	
This course is to alert the student to the qualities and techniques of decision-making and advancement.		
OFFC311 BUSINESS MATH AND CALCULATORS	3-1-4	
The solving of business math problems using electronic calculators. Includes instruction on how to efficiently operate the electronic calculator.		
OFFC312 DATA ENTRY	3-0-7	
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.		
OFFC313 BUSINESS ENGLISH REVIEW	2-2-0	
A review of the basic principles of correct English usage in oral and written communications.		
OFFC314 MACHINE TRANSCRIPTION	1-0-2	
Transcribing from messages recorded on machine transcribers. Includes transcription techniques, punctuation review, spelling and proofreading. Recommended beginning typing speed 30 to 35 W.P.M.		
OFFC315 WORD PROCESSING FUNDAMENTALS	1-0-2	
An understanding and application of automatic typewriters in performing text editing functions. Recommended typing speed 30 to 35 W.P.M.		
OFFC316 WORD PROCESSING APPLICATION	1-0-2	
Advanced word processing applications using automatic typewriters. Simulated office experience builds skills in the revision and formatting of business documents. Prerequisite OFFC314 and OFFC315.		
OFFC317 OFFICE PROCEDURES I	2-1-2	
Presents information related to various tasks, procedures, concepts and duties that are required in the office.		
OFFC318 OFFICE PROCEDURES II	2-1-2	
OFFC320 HUMAN BODY IN HEALTH AND DISEASE	3-3-0	
Designed to provide specialized knowledge of the human body relating to disease processes and possible methods of treatment. Drug terminology is added to give student basic knowledge of symbols and abbreviations. Prerequisite: OFFC220, 221.		
OFFC322 TYPEWRITING REFRESHER	1-0-2	
Designed to help students improve their typing skills in speed and accuracy and to increase their office production.		
OFFC323 REFRESHER SHORTHAND	2-1-2	
A review of Gregg shorthand theory. Practice taking		
OFFC331 LEGAL TERMINOLOGY	3-3-0	
Provides training in spelling, defining, pronunciation, and application of terms common in the legal field. Prerequisite: OFFC301		
OFFC401 MODEL OFFICE	2-0-0-6	
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.		
OFFC403,404,405,406 PROFESSIONALISM I TO IV	1-1-0	
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.		
OFFC408 INTERNSHIP	5-0-0-15	
Practical experience through on-the-job training in an approved office setting.		
OFFC410 TRAVEL PERSONNEL BEGINNING	1-1-0	
An introduction to terminology used in the travel industry. Includes the use of reference materials, the preparation to itineraries, and reservations procedures.		
OFFC411 TRAVEL PERSONNEL INTERMEDIATE	1-1-0	
A more comprehensive study of the skills and knowledges needed by travel personnel to perform and succeed on the job. Prerequisite: OFFC410 or equivalent work experience.		
OFFC412 TRAVEL PERSONNEL ADVANCED	1-1-0	
The basic skills and knowledges needed to develop international itineraries and to make arrangements for group and charter travel. Prerequisite OFFC410 & OFFC411 or equivalent work experience.		
OFFC413 GEOGRAPHY	1-1-0	
Provides agents, sales representatives and those employed in travel related fields with a broader perspective on geography.		
OFFC420 LEGAL INTERNSHIP	5-0-0-15	
Part-time placement in a legal environment working with an employer and also under the supervision of legal teaching coordinators. Prerequisite: OFFC303		
OFFC430 MEDICAL TRANSCRIPTION I	3-3-0	
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. Prerequisite: OFFC220, 221		
OFFC431 MEDICAL TRANSCRIPTION II	3-3-0	
A continuation of Medical Transcription I. Prerequisite: OFFC430		
OFFC432 MEDICAL SECRETARIAL PROCEDURES I	3-3-0	
A study of medical science and ethics. Various management duties and responsibilities, such as filing, insurance processing, mail, schedules and telephone procedures. Emergency care and CPR training are also included. Prerequisite: OFFC301.		
OFFC433	3-3-0	
MEDICAL SECRETARIAL PROCEDURES II		
Continuation of Medical Office Procedures. A study of medico-legal issues. Prerequisite: OFFC431.		
OFFC435 INTERNSHIP FOR MEDICAL SECRETARY	6-0-0-18	
Working in a medical facility to learn the many office procedures and policies as they exist in a work situation. Prerequisite: OFFC433.		
PHIL110 INTRODUCTION TO PHILOSOPHY	3-3-0	
General introduction to philosophy. Exploration of problems in metaphysics, theory of knowledge, and ethics; emphasis upon our western philosophical tradition.		
PHIL111 INTRODUCTORY LOGIC	3-3-0	
The study of proper ways of thinking to achieve validity in knowing; exposure to fallacies, inductive inference, and deductive methods of reasoning with applications to practical problems. Recommended prerequisite: 100 level math course.		
PHIL112 ETHICAL PROBLEMS	3-3-0	
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 COMPARATIVE RELIGIONS	3-3-0	
Study of the origins of religions, institutional forms, and comparison of commonalities and contrasts. Examination of living religions such as Hinduism, Buddhism, Judaism, Christianity and Islam.		
PHLE301 PHLEBOTOMY	2-21-12	
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.		
PHLE390 PHLEBOTOMY PRACTICUM	3-16-0-80	
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.		
PHOT105 PRINCIPLES OF PHOTOGRAPHY	3-2-2	
Use of photography as a communication medium. Principles of picture-taking; printing and dry mounting of finished prints.		
PHOT106 ADVANCED PHOTOGRAPHY	3-2-2	
This course is designed 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		
PHYE130 PHYSICAL FITNESS	1-0-2	
Various exercises and activities to improve physical fitness		
PHYE131 TENNIS AND BADMINTON	1-0-2	
Beginning skills only		
PHYE132 FLAG FOOTBALL AND BASKETBALL	1-0-2	
Beginning skills only		
PHYE133	1-0-2	

DESCRIPTION OF COURSES

BOWLING

Beginning skills only

PHYE134 1-0-2

GOLF AND VOLLEYBALL

Beginning skills only

PHYE135 1-0-2

CHEERLEADING

Men and women desiring to be basketball cheerleaders for Varsity Basketball season.

PHYE136 1-0-2

WEIGHT TRAINING

Introduction to basics of weight training. Emphasizes increasing physical capacity; that is, increased muscular strength and power.

PHYE137 1-0-2

RECREATIONAL SWIMMING

No instruction. Recreational swimming at Boone County 'Y'.

PHYE138 1-0-2

VARSITY MEN'S BASKETBALL

For students on Varsity Men's Basketball team only

PHYE139 1-0-2

VARSITY WOMEN'S BASKETBALL

For students on Varsity Women's Basketball team only

PHYE140 3-3-0

SPORTS OFFICIATING

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.

PHYE141 1-0-2

VOLLEYBALL AND SOFTBALL

Beginning skills only

PHYE142 1-0-2

VARSITY BASEBALL

For students on Varsity Baseball team only

PHYE143 1-0-2

VARSITY WOMEN'S SOFTBALL

For students on Varsity Women's Softball team only.

PHYE144 3-3-0

INTRO. TO PHYSICAL EDUCATION

Traces history of physical education. Investigate careers and professional leadership in physical education. Emphasizes physical education as a teaching career for both men and women, covering in detail leadership roles and preparation for these roles. Examines the four areas of most vital concern to the physical educator: recreation and leisure, sports, curriculum, and research and evaluation.

PHYE145 2-2-1

FIRST AID

First aid training with an emphasis in standard first aid and personal safety and cardiopulmonary resuscitation. Red Cross certification will be awarded to those who qualify.

PHYE146 3-3-0

PERSONAL & COMMUNITY HEALTH

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 usage, and environmental problems.

PHYL102 3-2-2

SURVEY OF EARTH SCIENCE

The study of selected concepts and procedures in astronomy, geology, meteorology and oceanography.

PHYL103 3-3-0

ENERGY TODAY

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

SURVEY OF PHYSICAL SCIENCE

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

COLLEGE PHYSICS I

This course is the first semester of a two semester sequence in non-calculus physics. Topics include forces, linear and rotational motion, energy, momentum, relativity, fluids, gases and heat. Prerequisite: MATH123 or Trigonometry.

PHYL112 4-3-2

COLLEGE PHYSICS II

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 permission of the instructor.

PHYL121 6-5-2

CLASSICAL PHYSICS I

This course is calculus oriented and intended for engineering and science majors. Topics covered include statics, dynamics, kinematics, fluid behavior, wave motion, vibrating systems and sound. Corequisite: MATH129.

PHYL122 6-5-2

CLASSICAL PHYSICS II

This course is a continuation of Classical Physics I. Topics covered include static electricity, magnetism, time-dependent electric and magnetic fields, optics, relativity, Bohr Theory and quantum mechanics. Prerequisite: PHYL121 or instructor's permission. Corequisite: MATH130.

PHYL203 2-1-2

PHYSICS FOR RESPIRATORY THERAPY

Basic physics with applications to respiratory therapy. Topics covered include fluid behavior, fluidics, electricity, magnetism, instrumentation, sound and radioactivity. Prerequisite: PHYL106 and concurrent registration in a respiratory therapy program.

PLSC111 3-3-0

AMERICAN NATIONAL GOVERNMENT

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 subsystems.

PLSC112 3-3-0

STATE AND LOCAL GOVERNMENT

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

WORLD POLITICS

The international system is examined from several perspectives including those of the United States, the Soviet Union, and China. Emphasis is placed upon ideology, the use of power and international law and organization.

PLSC122 3-3-0

COMPARATIVE POLITICAL SYSTEMS

Examination of the government and politics of such countries as Great Britain, France, Germany, and the Soviet Union. Each nation is viewed in terms of its political culture, party system, executive, legislative, and legal organization.

PLSC126 3-3-0

INTRO. TO PUBLIC ADMINISTRATION

Study of the theory and practice of public administration examining alternate organizational theories and practices, personnel administration, problems of communications within organizations, and styles of leadership. The course will emphasize the interrelationships of professional and political influences on decision making.

PLSC128 3-3-0

SOVIET AND CHINESE GOVERNMENT

Description and analysis of the Soviet and Chinese political systems with emphasis upon Communist ideology, institutions, and the groups involved in the determination and implementation of public policy.

PRTG460 10-2-16

PRINTING I

Introduce the student to the major printing processes and history of printing.

PRTG461 2-2-0

LAYOUT AND DESIGN/PASTE UP

Balance, symmetry, and proportions, and harmony are studied as they apply to both Layout and Paste-up. The use of the tools and supplies needed are also included.

PRTG462 3-3-0

PRINTING MATH

The student will demonstrate skill and knowledge of the four functions of mathematics as it applies to whole numbers, fractions, decimals, percentages, paper weight, size and cost.

PRTG470 10-2-16

PRINTING II

Introduces the student to type composition, offset photography stripping, platemaking and halftone photography. Prerequisite: PRTG460

PRTG471 3-3-0

RECORDKEEPING AND FILING

The student will be working with actual filing and record keeping system in the form of practical kit.

PRTG480 10-2-16

PRINTING III

Introduces the student the use and theory of offset ink, knowledge of paper printing safety and bindery work. Prerequisite: PRTG470

PSYH101 3-3-0

GEN. PSYCHOLOGY: APP. PSYCHOLOGY

A survey of psychology with emphasis on applications of theoretical and experimental findings from areas such as: learning, memory development, motivation, personality and therapy.

PSYH102 3-3-0

GEN. PSYH.: PSYCHOLOGICAL METHODS

A survey of psychology with emphasis on the use of experimental/scientific methods to investigate behavior from areas such as: physiological, perception, learning, memory, motivation, and social.

PSYH103 3-3-0

DEVELOPMENTAL PSYCHOLOGY

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. Recommended: PSYH: 101 or 102

PSYH104 3-3-0

DESCRIPTION OF COURSES

ABNORMAL PSYCHOLOGY

An introduction to the study of abnormal behavior with emphasis on abnormal behavior including anxiety, depression, and schizophrenia. Includes dynamics of mental disorder and psychological factors involved in the treatment of disorder. Recommended: PSYH101, 102

PSYH105 3-3-0 EDUCATIONAL PSYCHOLOGY

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.

PSYH106 3-3-0 PSYH. OF HUMAN REL. & ADJUSTMENT

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.

PSYH107 3-3-0 PRINCIPLES OF BEHAVIOR MODIFICATION

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. Recommended PSYH101 or 102

PSYH108 3-3-0 HUMAN SEXUALITY AND SEX ROLES

This course is an attempt to provide students with more 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.

PSYH109 3-3-0 PERSONALITY THEORIES & APPLICATIONS

Introduction to major theoretical approaches for the study of personality, including psychoanalytic, dispositional, phenomenological, and behavioral strategies. Applications include personality assessment and psychological therapies. Prerequisite: 3 credits in psychology or consent of the instructor.

PSYH110 3-3-0 UNDERSTANDING HUMAN BEHAVIOR (TV)

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.

PSYH112 3-3-0 THE GROWING YEARS (TV)

How and why children develop the way they do 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.

RECR141 3-3-0 RECREATION LEADERSHIP

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 deals with the obtaining of a practical knowledge of group situations and the principles necessary for effective leadership. Emphasis is placed on the development of leadership skills through student activity presentations.

RECR142 1-0-0-4 SUPERVISED FIELD EXPERIENCE I

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: Consent of Program Chairperson.

RECR143 2-2-0 INSTRUCTION IN CRAFTS

The creation of functional and decorative objects. Materials used are wood, metal, plastics, leather, and fabrics. Emphasis is placed on the teaching of contemporary crafts and the ordering of supplies and equipment.

RECR144 3-3-0 PROGRAM PLANNING AND ORGANIZATION

The underlying principles for effective recreation programming. An overview of the variety of program areas associated with recreation, with attention given to recreation interests and the needs of participants. The major course objective is to teach the student to plan, organize, and provide leadership in program participation as well as to instruct regarding the necessary facilities and equipment.

RECR145 3-3-0 OUTDOOR RECREATION

This course presents an overview of the scope and extent of outdoor recreation. The history and development of outdoor recreation, conservation, and organized camping are presented. Lectures and practical sessions aimed at general training in all phases of outdoor recreation and camp leadership.

RECR146 3-3-0 INTRO. TO THERAPEUTIC RECREATION

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.

RECR147 13-0-0-40 SUPERVISED FIELD EXPERIENCE II

A work experience program designed to provide experience in working with and directing specific recreation programs in a community recreation setting, commercial recreation setting, or therapeutic recreation setting. The student is expected to work in a chosen agency under the direct supervision of a recreation professional for a total of 440 clock hours. Prerequisite: Consent of the program chairperson.

RECR148 2-0-4 OUTDOOR RECREATION APPLICATION

This course is designed to provide the students an opportunity to apply their skills in angling, cooking, canoeing, camping, and backpacking in a natural outdoor setting. Emphasis is placed on planning, programming, and conducting outdoor recreation activities. Prerequisite: RECR145

RECR149 2-2-0 CAMPUS RECREATION AND INTRAMURALS

This course is designed to familiarize the student with recreation programming as it relates to the college setting. Emphasis will be placed on developing campus recreation programs, organizing tournaments, media techniques and conducting sport leagues.

RECR150 3-3-0 BIOENERGIES

This is an exercise class aimed at improving understanding and achievement in the four aspects of physical fitness: strength, endurance, flexibility, and

stress control. A variety of exercise methods is employed, emphasizing individual accomplishment in a non-competitive group setting.

RECR151 2-2-0 INTRODUCTION TO RECREATION

This course is designed to 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.

REHA101 3-3-0 INTRO. TO REHABILITATION SCIENCE

Examines medical and Psycho/Social aspects of disability and rehabilitation. Presents a systems approach to the design and delivery of therapeutic services. Provides opportunities to utilize casework methods and principles in the solution of realistic problems in rehabilitation.

REHA120 3-3-0 REHAB. & ED. OF HANDICAPPED CHILD

Presents a comprehensive overview of philosophies, techniques and services which can be applied to the rehabilitation and education of disabled pre-school and school age children. Examines the inter-relationship between medical, psychological, and educational practices which affect the disabled child and their care givers.

REHA140 3-3-0 HEALTH CAR. & THERAPEUTIC COMM.

Introduces the concept of therapeutic community and clarifies its role in the provision of comprehensive Health Care programs. Provides opportunities for supervised on-site exploration of career options in Health Care facilities. Introduces students to prevailing concepts of disease processes and various approaches to treatment models.

REHA160 3-3-0 COUNSELING EXCEPTIONAL CHILDREN USING GROUP & INDIVIDUAL THERAPY

Analysis of major child guidance theories with application to the unique problems of the exceptional child. Reviews counseling theory and research on physical and psychological aspects of disability. Integrates theory and practice models to present a multidisciplinary approach to the treatment process.

RESP301 6-5-2 FUND. OF RESPIRATORY THERAPY

This course will introduce the profession of respiratory therapy. Lectures on history and organization of the field. Gas therapy, positive pressure breathing and humidity and aerosol therapy, incentive breathing and postural drainage therapies will be taught. Overview of medicine and specialties are presented.

RESP305 4-3-2 PRINCIPLES OF RESPIRATORY THERAPY

Development of clinical assessment skills will be emphasized. Artificial airway insertion and care. Understanding of objective indications and evaluation of therapies is stressed. Principles of home care and rehabilitation are taught. Prerequisite: RESP301.

RESP310 5-5-0 C.P. RENAL PATHOPHYSIOLOGY

An indepth 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. Prerequisite: RESP301, BIOL130, 131 or concurrent registration in BIOL131.

DESCRIPTION OF COURSES

RESP315 3-3-0 RESPIRATORY THERAPY PHARMACOLOGY

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. Prerequisite: CHEM131 and concurrent registration in CHEM132.

RESP320 5-4-2 ADVANCED RESPIRATORY THERAPY

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 learned. Principles of mechanical ventilation along with techniques of PEEP, CPAP, SIMV and initiation and maintenance of ventilation taught. Prerequisite: RESP305, 310, PHYL203.

RESP325 3-3-0 NEONATAL & PEDIATRIC RESP.THERAPY

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. Prerequisite: RESP305, 310, BIOL131.

RESP330 3-3-0 CARDIOPULMONARY DIAGNOSTICS

Principles and techniques of testing of cardiovascular and pulmonary function will be taught with an emphasis on the evaluation of interpretation of the results of the tests. Integration of test results with clinical picture with emphasis on therapeutics will be taught. Principles of polysomnography will be taught. Prerequisite: RESP305, 310, PHYL203.

RESP335 3-3-0 RESPIRATORY THERAPY MGMT. & ETHICS

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: Consent of Instructor.

RESP350 3-3-0 HEALTH APPLICATIONS OF COMPUTERS

This course is designed to teach the health career student computer literacy as well as skills of programming in BASIC language on microcomputers. Students will write and execute programs with applications to health careers. Overview of the current state of the uses in the health care area will be presented. Prerequisite: MATH119 or two years high school algebra.

RESP360 4-0-0-12 RESPIRATORY THERAPY PRACTICUM

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. Prerequisite: RESP305, 310, BIOL131.

RESP370 7-0-0-18 RESPIRATORY THERAPY PRACTICUM II

The second hospital experience for students in supervised clinical care. Techniques from RESP360 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: RESP360.

RESP380 9-0-0-26 RESPIRATORY THERAPY PRACTICUM III

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. Prerequisite: RESP370

RESP390 6-0-0-27 RESPIRATORY THERAPY PRACTICUM IV

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: RESP380.

SEVC351 1-24-0 VOLUNTEERS IN ACTION

Information and skills needed for development and organization of effective volunteer program; structure of volunteer coordinators role, guidelines for operation, recruitment, orientation, placement, supervision, and evaluation.

SEVC352 1-24-0 VOLUNTEER COORDINATION

Development and implementation of methods for maintaining an effective volunteer program, communication, social action, public relations, training, and careers through volunteering.

SEVC353 1-24-0 EFFECTIVE MGMT.OF VOLUNTEER PROG.

Designed for development of specific practical skills for administrators of volunteer programs; developing workshops, fund raising techniques, grantsmanship, fiscal responsibility, effective boards and meetings, and conflict resolution. Emphasis on 'tools' for effective management.

SEVC354 1-45-0 VOLUNTEER SERVICES PRACTICUM

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.

SEVC355 1-45-0 VOLUNTEER INDEPENDENT STUDY

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.

SEVC356 2-36-0 INTRO. TO MONEY MGMT. COUNSELING

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 2-36-0 DEV. SKILLS IN MONEY MGMT. COUNS.

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 1-24-0 CURRENT MONEY MANAGEMENT TOPICS

Exploration of economic scene and implications for money management; financial and socioeconomic factors including income transfer program, insurance, and credit.

SEVC359 1-24-0 CRISIS INTERVENTION/COUNS. 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 3-60-0 HOMEMAKER AIDE

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.

SEVC361 3-60-0 HOME HEALTH AIDE

Course includes 30 hours of classroom discussion and 30 hours of clinical experience. Specific topics include personal care of persons in bed, medications, rehabilitation, treatment and emergency care.

SOCY101 3-3-0 INTRODUCTION TO SOCIOLOGY

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 SOCIAL ISSUES

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 COURTSHIP, MARRIAGE AND FAMILY

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 SOCIAL PSYCHOLOGY OF SMALL GROUPS

Study of self development and interpersonal relations in small groups. Emphasis upon interaction channels, group structure and student involvement in group processes. Theoretical emphasis-symbolic interaction, dramaturgical analysis, systems theory, sociometry, cognitive consistency and equity theory. Practical emphasis upon membership and leadership skill and parliamentary procedure. Prerequisite: SOCY101 or PSYH101 or 102 or 106

SOCY105 3-3-0 MAJORITY - MINORITY RELATIONS

Study of the relationship between cultural, sexual and racial categories. Focus on stereotypes, prejudices, discrimination and exploitation. Social-Psychological, Sociological and Economic theories employed. Major emphasis upon United States. Prerequisite: SOCY101 or consent of instructor.

SOCY106 3-3-0 JUVENILE LAW AND DELINQUENCY

An overall investigation of the social, legal aspects, and sociological theories of juvenile delinquency; administration of juvenile procedures, legislation, juvenile court and prevention programs. Prerequisite: SOCY101 or consent of instructor.

SOCY107 3-3-0 CRIMINOLOGY

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. Prerequisite: SOCY101 or consent of instructor.

SOCY108 3-3-0 SOCIOLOGY OF THE BLACK FAMILY

Study of the black family from the viewpoint of com-

DESCRIPTION OF COURSES

parative sociology, historical perspective, and evaluation of recent changes in family structure and functions.

SOCY201 3-3-0
INTRODUCTION TO SOCIAL GERONTOLOGY

The biological, psychological and societal aspects of aging will be covered and discussed as they relate to those in the delivery of services to the aging. Each student will be allowed an opportunity to explore his own attitudes toward the aging in a youth-oriented society.

SOCY202 1-1-0
PRACTICAL APP.OF SOC. GERONTOLOGY

The students under the supervision of the instructors will explore the various federal, state and local agencies which attempt to serve the needs of the aging. Each student will prepare a grant application for funding of a project to serve a specific need within a community. This will include budgeting, personnel, needs survey, and general guidelines used in grantsmanship. Prerequisite: SOCY201

SOCY302 3-3-0
INDUSTRIAL RELATIONS

This course explores the relationships that exist in a work environment. Special emphasis is placed on relationships with supervisors, co-worker and trade associations.

SPCH110 3-3-0
FUNDMENTALS OF SPEECH

A course designed to familiarize the student, through theory and practice, with 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.

SPCH112 3-3-0
PUBLIC SPEAKING

Analysis and forms of public address, with criticism of published speeches, and emphasis on critical thinking. In-depth study of audience adaptation, speaker style, listener needs, interests and attitudes. Application of theory learned through practice in preparing and delivering impromptu, occasional and ceremonial speeches. Prerequisite: SPCH110

SPCH114 3-3-0
PERSUASIVE SPEAKING

In-depth study of theory, psychology, and practice of persuasive speech techniques. Audience adaptation, impromptu speaking, and logical thinking will be emphasized in addition to mastery of persuasive delivery techniques. Prerequisite: SPCH: 110

SPCH117 3-3-0
INTERPER. SPCH. & SMALL GP. COMM.

The focus is upon interpersonal and group communication, with 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 enhance leadership and participation abilities.

STOR450 5-5-0
ANATOMY AND PHYSIOLOGY

Basic biological concepts, detailed structure of the body and its function are studied. Interrelationship of the systems in the healthy individual is stressed.

STOR451 1-0-2
MICROBIOLOGY

A general survey of commonly found micro organisms in the hospital setting. Special emphasis is placed on application of microbiological principles related to the operating room.

STOR452 1-0-2
MEDICAL TERMINOLOGY

Basic prefixes, suffixes and root words are emphasized as a method of analyzing medical words. Multiple exercises help the student acquire and retain the new knowledge.

STOR453 10-7-7
FUNDAMENTALS OF OPERATING ROOM I

This course includes orientation to the operating room suite and subsequent equipment. Introduction to basic concepts of asepsis, and the handling of equipment and supplies. Laboratory practice allows for development and perfection of operating room skills.

STOR454 1-0-2
HUMAN RELATIONS IN OPERATING ROOM

Interpersonal relationships between the surgical technologist, patient, operating room staff, surgeon, family and other hospital workers are studied. A review of verbal and nonverbal communication and stress management are covered.

STOR460 6-5-2
FUNDAMENTALS OF OPERATING ROOM II

Involves the practices which decrease or eliminate micro organisms from the surgical environment of the patient. Responsibilities of the Surgical Technician in the operating room are studied. Laboratory practice enhances the lecture knowledge.

STOR461 4-4-0
SURGICAL PROCEDURES & INSTRUMENTS I

The role of the surgical technologist relating to surgical procedures is discussed. Special equipment, instruments and supplies required for the various procedures are investigated, as well as a review of regional anatomy.

STOR462 7-0-0-21
OPERATING ROOM PRACTICUM I

During this clinical phase, students perfect previously learned skills by assisting the circulating registered nurse. As the semester progresses, scrub experience with development of basic patterns and routines in setup and handing of instruments is initiated.

STOR463 1-1-0
SURGICAL PHARMACOLOGY

Basic knowledge of the types of anesthetics, appropriate methods of administration, and patient care. Potential hazards pertaining to anesthetic agents in the operating room are covered. Includes medications and appropriate handling on the operative field.

STOR470 2-2-0
SURGICAL TECHNOLOGY SEMINAR

Involves discussions of the adjustment from the student to employee role. Motivation, productivity and attitudes of individuals in the operating room are stressed. Assistance is provided in preparing for the national AST qualifying certification examination.

STOR471 3-3-0
SURGICAL PROCEDURES II

A continuation of STOR461. Additional surgical procedures and the technician's role are included. Regional anatomy along with special equipment, instruments and supplies required for the various procedures are investigated.

STOR472 6-0-0-32
OPERATING ROOM PRACTICUM II

A continuation of second semester program. Opportunity is provided for perfecting scrub techniques and application of these techniques in more complex learning situations. Improvement of accuracy and speed is expected.

TELE311 3-3-0
BASIC ELECTRICITY/ELECTRONICS I (DC)

For beginners who wish to develop knowledge about DC (Direct Current) Electricity. You will be able to solve basic electronic problems involving voltage, resistance & power; explain relationships between electricity and magnetism; construct simple DC Circuits; draw a Schematic, use a multimeter; explain the operation of resistors meters, switches, fuses, relays, capacitors, inductors and batteries. Safety glasses required. May also be taken as a home study course.

TELE312 2-3-0
BASIC ELECTRICITY/ELECTRONICS II(AC)

For those who have an understanding of VOLTS, OHMS, AMPS, & series Parallel Circuits. You will be able to explain the difference between Alternating Current (AC) and Direct Current (DC); describe operation of AC Generator, analyze simple AC Currents, explain Transformer Action, explain operation of Series and Parallel Resonant Circuits. May also be taken as a home study course.

TELE313 1-3-0
INTRODUCTION TO TELEPHONE

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
CARRIER SYSTEMS

Transmission principles, carrier systems, high frequency 'N' type carrier, digital transmission. Carrier Terminals: Transmission facilities. This course plus ELET357 is equivalent to HTTC352.

TELE316 3-3-0
ELECTRONIC CIRCUITS

Basic and operational amplifiers, power supplies, oscillators, pulse circuits, modulation must have prior knowledge in electricity/electronics. Prerequisites: TELE312

TELE318 3-3-0
SEMICONDUCTOR DEVICES

N-type, P-type, DN 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
SEMINAR TOPICS I

TELE382 1-1-0
SEMINAR TOPICS II

TELE383 1-1-0
SEMINAR TOPICS III

For those who attend short term sessions which are directly related to the telephone industry. Registration times and evaluating criteria must be agreed upon before attending the seminar. Typically, the participant grading will be on a pass/fail basis.

TELE419 3-2-2
D.C.FUNDAMENTALS FOR TELEPHONY

An introductory course in electricity covering electron theory, basic circuit parameters, Ohm's Law, series and parallel resistance networks, magnetic circuits and electrical measurements.

TELE427 2-2-0
TELEPHONY

A course covering the constructing of aerial and underground plant. Splicing procedures, color coding, conductor identification and splicing. Soldering and other skills such as pole climbing.

TELE428 5-0-0-15
TELEPHONY EXPERIENCE I

This experience develops good practices and pro-

DESCRIPTION OF COURSES

cedures including safe work habits acquired in basic telephony.

TELE429 TELEPHONY II 4-4-0

Covers telephone sets, meters, buried cables, station installation specifications, P.I.C. cable counts, ready access terminals, terminal blocks and trouble clearing. Prerequisite: TELE427

TELE430 TELEPHONY EXPERIENCE II 7-0-0-20

This experience develops the shop practices and procedures (including work habits and safety) making application of station installation. Prerequisite: TELE428

TELE439 MATH FOR TELEPHONY I 2-2-0

Mathematics related to Ohm's Law, power and other basic electronic principles used in telephony/electronics. Prerequisite: One year high school algebra.

TELE440 MATH FOR TELEPHONY II 3-3-0

A continuation of Mathematics I with emphasis on principles of trigonometry necessary for understanding of resonance, filters and other AC applications. Prerequisite: TELE439

TELE448 AC/DC APPLICATIONS 4-3-2

An introductory course in to alternating current covering sign wave parameters, reactance, impedance, vector algebra, impedance networks, resonance, and transformer action. Prerequisite: TELE419

TELE449 TELEPHONY III 4-4-0

A course covering key system installation, subscriber carrier installation/testing, coin station installation and central office switching system. Prerequisite: TELE429

TELE450 TELEPHONY EXPERIENCE III 7-0-0-20

This experience develops the shop practices and procedures (including work habits and safety) making application of Telephony III. Prerequisite: TELE428

TELE451 BASIC DIGITAL-LOGIC ELECTRONICS 4-3-2

Operation of digital logic circuits, gates, boolean algebra, flip-flop and registers; also logic circuitry and digital design. Prerequisite: TELE448

TOOL480 BLUEPRINT READING I 3-1-4

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 BLUEPRINT READING II 3-2-3

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 MACHINE SHOP MEASUREMENTS I 3-2-3

A study of measurements as used in industry. Units of instruction include tools, gauges, comparators, gauge blocks, and inspection practices.

TOOL483 MACHINE SHOP MEASUREMENTS II 3-2-3

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 MACHINE TOOL OPERATIONS I 3-2-3

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 MACHINE TOOL OPERATIONS II 4-3-2

Theoretical procedures of the tool & cutter grinder and the vertical & horizontal milling machines. Prerequisite: TOOL484

TOOL486 MACHINE TOOL OPERATIONS LAB I 5-0-10

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 MACHINE TOOL OPERATIONS LAB II 7-0-15

Practical experience with the following machine shop equipment: Tool & Cutter Grinder; Vertical and Horizontal Milling Machines. Prerequisite: TOOL486

TOOL489 HEAT TREATMENT OF MATERIALS 3-1-4

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 MACHINE TOOL OPERATIONS LAB III 7-0-15

Advanced practical experience with grinders, electrical discharge, and CNC mill. Prerequisite: TOOL487

TOOL491 MACHINE TOOL OPERATIONS III 4-4-1

Advanced explanation of procedures in grinding, electrical discharge, CNC milling, and exposure to heat treatment of steels. Prerequisite: TOOL485

TOOL499 RELATED MATH 3-3-0

Basic principles of algebra and geometry. The use of hand books and tables is emphasized in the solution of these problems.

UPHL421 UPHOLSTERY I 12-3-15

Instruction on the correct operation of the sewing machine, laying out, cutting, and fitting, fabric, and skills in sewing machine operation. Exercises and basic projects will be used to develop skills.

UPHL422 UPHOLSTERY II 10-5-15

The student will apply the skills developed and knowledge learned by upholstering small furniture objects. Safety, design, and correct procedures will be emphasized. Prerequisite: UPHL421

UPHL423 UPHOLSTERY III 10-3-15

Advanced upholstery work develops student skills with fabric, tools, and procedures on large pieces of furniture. Unique and difficult upholstery projects will be completed. Prerequisite: UPHL423

UPHL431 MATH 3-3-0

Skills and knowledge will be demonstrated in the operation of the four functions of mathematics as it applies to whole numbers, fractions, decimals and percentages.

UPHL432 TECHNICAL PROBLEMS 4-3-2

Instruction will be provided in project estimating, materials and equipment purchasing, small business operation, and solving typical upholstery problems. Prerequisite: UPH421, 431

UPHL433 RECORDKEEPING & FILING 2-1-2

Skills and knowledge will be demonstrated in basic practices of recordkeeping and filing as applied to a small business.

WATE302 INTRODUCTION TO WATER TREATMENT 2-3-0

A familiarization of the water systems. 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 BASIC MATH FOR OPERATORS 1-3-0

For those who say 'math doesn't come easy'. This very practical course allows the operator to learn math and to solve problems that are real to Water/Wastewater.

WATE313 MATH FORMULAS FOR OPERATORS 1-3-0

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 BASIC WATER CHEMISTRY 1-3-0

A course that talks your language and is not over your head. You will learn about Chemistry in a practical way.

WATE318 CHEMISTRY & WATER PROCESSES 1-3-0

Learn the why's of the everyday things one performs in a water treatment plant. Prerequisite WATE317

WATE322 LAB EQUIPMENT 1-3-0

An introductory course for operators. Acquaint yourself with different types of equipment. Learn methods of reading test results, labeling chemicals, collecting samples, making solutions, dilutions; using incubators and balances.

WATE323 LAB TECHNIQUES 1-3-0

Learn how to use and maintain water/wastewater laboratory equipment. Get involved in making lab analyses. Prerequisite WATE322

WATE331 PUMPS AND PIPING 2-3-0

Identification of various types of pumps and components used in water and wastewater systems. Understand how a pump works and how to perform routine maintenance, also study valving and piping systems.

WATE363 SEMINAR TOPIC I 1-17-0

WATE364 SEMINAR TOPIC II 1-17-0

WATE365 SEMINAR TOPIC III 1-17-0

For those who attend short-term sessions which are directly related to water treatment and offered as an educational experience through industries or other public or private institutions. Registration times and evaluation criteria must be agreed upon prior to seminar attendance. Typically the participant will register at DMACC before attending a seminar. After the seminar, the participant will submit a summarization report. Participants must have taken or are currently enrolled in at least one other regular DMACC credit class in order to receive seminar credit.

WELD470 5-5-0

DESCRIPTION OF COURSES

WELDING FUNDAMENTALS AND THEORY

An introductory course stressing the theory and application of oxygen-acetylene and shielded metallic arc welding. Welding equipment and tool handling safety also included.

WELD471 **RELATED INDUSTRIAL MATH** 3-3-0

Instruction is given in addition, subtraction, multiplication and division of whole numbers, fractions, and decimals. Related geometry, metrics and linear measurement are included.

WELD472 **SHIELDED METALLIC ARC WELDING I** 7-0-15

Skills will be developed in welding flatplate, butt and fillet joints in the flat and horizontal positions.

WELD473 **OXYGEN-ACETYLENE WELDING & CUTTING** 2-0-5

Skills will be developed in oxy-acetylene welding, cutting and repair. Safety is emphasized.

WELD480 **APPLIED THEORY AND METALLURGY** 5-5-0

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 **BLUEPRINT READING** 4-3-2

The basic skills needed to read shop drawings (in-

cluding welding symbols) will be learned. Prerequisite: WELD470

WELD482 **SHIELDED METALLIC ARC WELDING II** 7-0-15

Skills will be developed in welding fillet and groove joints in the vertical and overhead positions. Reworking weldments will also be practiced. Prerequisite: WELD472

WELD483 **GAS METALLIC ARC WELDING** 2-0-5

Practical application in the use of the gas metallic arc welding process (including submerged arc and flux cored arc).

WELD492 **SHIELDED METALLIC ARC WELDING III** 2-0-5

An advanced course in arc welding which includes AWS pre-qualified structural joint testing. Prerequisite: WELD472, 482

WELD493 **GAS TUNGSTEN ARC WELDING** 2-0-5

A course to develop skills in the gas tungsten arc welding process using mild steel, stainless steel, and aluminum.

WELD494 **SHIELDED METALLIC ARC WELDING - PIPE** 3-0-7

Welding practice and testing on schedule 40 and 80 pipe in the 2G, 5G, and 6G positions. Prerequisite: WELD472, 482

WWAR302 **INTRO. TO WASTEWATER TREATMENT** 2-3-0

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 **LAGOONS** 2-3-0

Design characteristics, treatment, stabilization pond, problems and solutions, chemical additions, maintenance procedures, safety.

WWAR374 **SEMINAR TOPIC I** 1-17-0

WWAR375 **SEMINAR TOPIC II** 1-17-0

WWAR376 **SEMINAR TOPIC III** 1-17-0

For those who attend short-term sessions which are directly related to wastewater treatment and offered as an educational experience through industries and offered as an educational experience through industries or other public or private institutions. Registration times and evaluation criteria must be agreed upon prior to seminar attendance. Typically, the participant will register at DMACC before attending a seminar. After the seminar, the participant will submit a summarization report. Participants must have taken or be currently enrolled in at least one other regular DMACC credit class in order to receive seminar credit.



FACULTY/PROFESSIONAL STAFF

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ARBUCKLE, JOHN (1969), Electronics. A.A.S., B.S., M.S., Iowa State University.

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BENNETT, JAMES S. (1980), Data Processing. B.S., Northwest Missouri State University; A.A., Des Moines Area Community College; Iowa State University.

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BRANDMEYER, VIVIAN (1974), Office Occupations. B.A., University of Northern Iowa.

BROWN, GEORGIA K. (1970), Learning Center. B.A., Simpson; Drake University.

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BROWN, JOYCE (1970), Counselor. B.A., M.S.E., Drake University.

BROWN, KENNETH O. (1980), Director, Plant Operations Maintenance. B.A., Washington University.

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BRUGIONI, DONNA (1973), Dexterity Evaluation Specialist.

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BURGER, CHRISTINE M. (1980), Child Development, Developmental Disabilities. B.S., M.Ed., Pennsylvania State University; Iowa State University.

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CHALUP, CLAIRE (1973), Banking. B.S., Iowa State University; University of Wisconsin.

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CLAUSON, LARRY (1974), Counselor. B.A., University of Northern Iowa; M.S., Drake University; University of Iowa; Iowa State University.

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JOHNSON, KENNETH (1973), Hospitality Careers. Iowa State University; Drake University; Wayne University; Western Illinois University; Armed Forces Schools.

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JORGENSEN, FRANK (1975), Automotive. B.A., Northwest Missouri State University.

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KEES, EUGENE (1968), Automotive. Industry Service Schools; Iowa State University; University of Northern Iowa; California State Polytechnic University; N.I.A.S.E.

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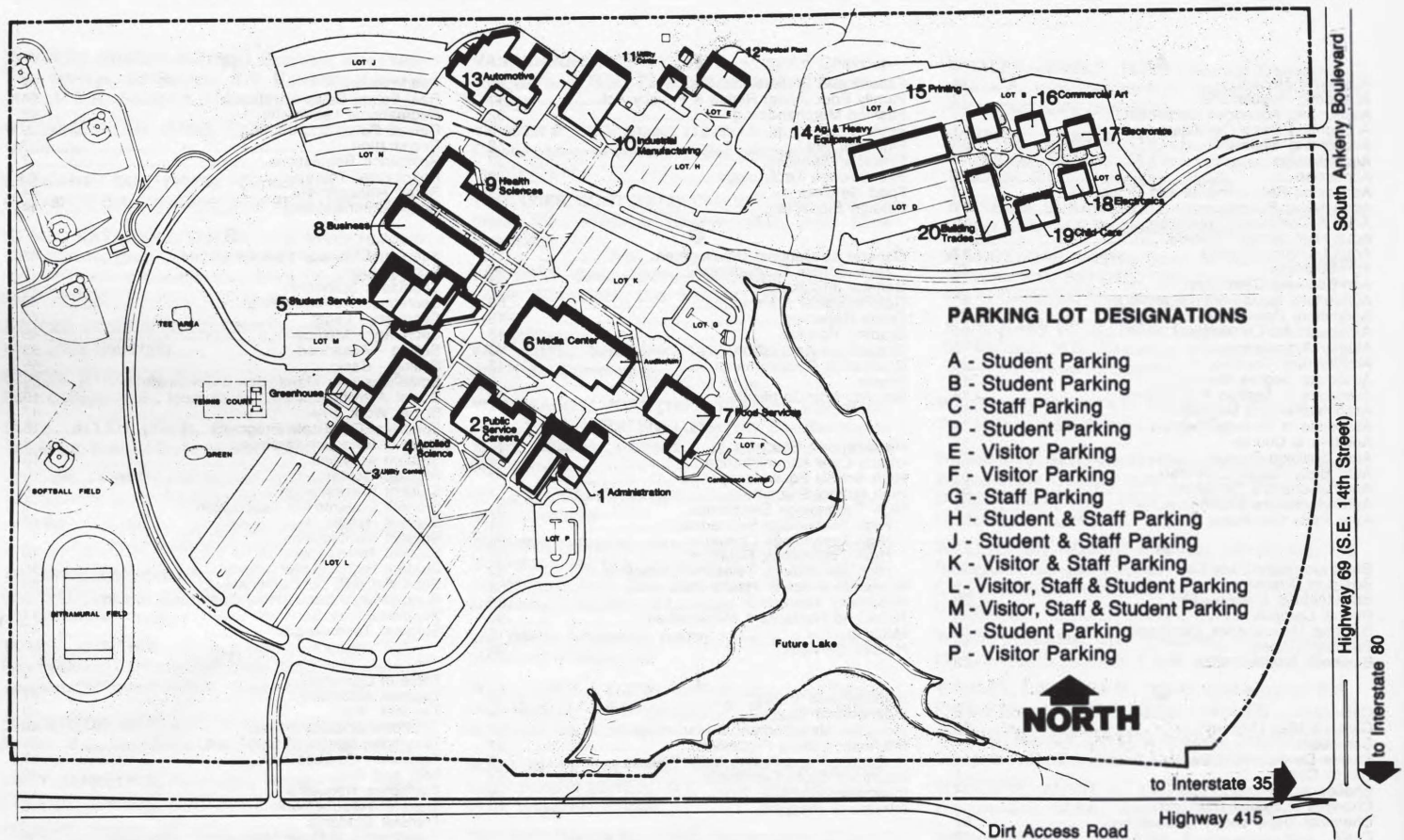
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- PITZ, JANE (1973)**, Development Center. B.A., University of Northern Iowa; M.S., Iowa State University; Drake University.
- POGGE, MARK (1979)**, Director, Learning Resources; B.A., University of Iowa.
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- POWERS, DOLORES B. (1976)**, Learning Center, English. B.S., M.A., Iowa State University.
- PRAGER, HENRY J. (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 Kickiewicz 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.
- QUICK, FRANCES (1971)**, Nursing. R.N., St. Anthony's Hospital; St. Ambrose College; University of Iowa.
- RAGNER, DAVID E. (1982)**, Chairperson, Conditioned Air Program.
- RAYMOND, ROGER A. (1979)**, Manager, Data Services. B.A., M.A., University of South Dakota.
- READY, ALLAN (1980)**, Ag Equipment Technology. Diploma, Southwest Wisconsin Technical College.
- REDDING, CARL (1977)**, Accounting. B.S., Drake University.
- REES, MERRILL (1969)**, Director, Library. B.A., Drake University; M.Ed., University of Iowa.
- RICHARDSON, RALPH R. (1980)**, Auto Mechanics. Industry Service Schools.
- RIESENBERG, MARY A. (1980)**, Nursing. R.N., Mercy Hospital School of Nursing; B.S.N., Grand View College.
- RINGE, JUDI M. (1982)**, Project STRIVE. B.A., M.A., Central Washington University.
- ROBERTS, A. JANE (1974)**, Program Chairperson, Teacher Associate/Pre-Teacher. B.Ed., State University of New York; M.A., Ph.D., University of Iowa.
- ROBINSON, JON (1970)**, Related Education. B.A., Drake University; Iowa State University.
- ROLF, CARL H. (1975)**, Dean, Industrial & Technical. B.S., M.S., Emporia State University; Ph.D., Iowa State University.
- ROLINGER, JACK (1967)**, Director, Community Services. B.A., M.A., University of Northern Iowa; University of Iowa; Drake University; University of Oregon.
- ROSS, KENNETH J. (1979)**, Agricultural Equipment Technology. B.S.I.T., Pittsburg State University.
- ROUSH, CHARLES (1967)**, Retail Management. B.S., Upper Iowa College; Drake University; Iowa State University; University of Northern Iowa.
- ROWE, GORDON (1974)**, Coordinator, Industrial & Technical. B.A., University of Northern Iowa; University of California, California State College.
- ROWE, MARGARET (1967)**, Program 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.
- RUMMANS, MARLOWE (1983)**, Diesel Fuel Injection. GM Schools, Higgins Industries.
- 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.
- SAMUELS, BETTE J. (1976)**, Coordinator, Public and Human Services. B.A., University of Iowa; M.S., Iowa State University.
- SARTAIN, HAROLD (1971)**, Speech, English. B.S., M.A., University of Minnesota.
- SAVILLE, LARRY D. (1970)**, Related, Business Administration. B.A., M.Ed., Northwest Missouri State University; M.A., Missouri University.
- SCHIEFFER, WILLIAM (1975)**, Lab Assistant, Building Trades.
- SCHREURS, CHRISTIAN (1973)**, Coordinator, Academic Records. B.A., Wayne State College; Iowa State University.
- SCHROEDER, EUNICE (1971)**, Nursing. R.N., Queen of Angels College of Nursing; Drake University.
- SCHULTE, DEBRA A. (1978)**, Program Chairperson, Nursing. B.S.N., R.N., University of Iowa; M.S.N., University of Nebraska Medical Center.
- SCHULTZE, GERTRUDE M. (1980)**, Campus Nurse. R.N., Mercy Hospital School of Nursing; B.S., College of St. Francis.
- SCOVILLE, LEWIS (1969)**, Diesel Mechanics. Nebraska Vocational Technical School; University of Omaha, Iowa State University.
- SCROGGS, RICHARD (1971)**, Printing.
- SELIGER, RICHARD (1974)**, Program Chairperson, Tool & Die. Iowa State University.
- SHARP, DIANNE K. (1981)**, Surgical Technology. R.N., Iowa Methodist School of Nursing.
- SHEAFF, JAMES (1974)**, Criminal Justice. B.A., Creighton University; M.A., Boston University; University of Nebraska.
- SHEPARD, DELBERT (1973)**, Manager, Human Resources. A.A., Marshalltown Community College; B.A., University of Northern Iowa; M.S., Ph.D., Iowa State University.
- SHLAES, BEN (1968)**, Program 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.
- SHOOK, LINDA L. (1982)**, Legal Secretarial. A.A., Marshalltown Community College; B.S., Northeast Missouri State.
- SHIVER, 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.
- 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.
- SIOSON, SONYA (1983)**, Biology. B.S., University of Philippines; M.A., Western Reserve University; Ph.D., Iowa State University.
- SMALL, SHARON (1983)**, English. B.A., M.A., Iowa State University.
- SMART, CHARLES (1973)**, Program Chairperson, Upholstery. Iowa State University; Des Moines Area Community College.
- SMITH, CURT (1977)**, Lab Assistant, Auto Parts. Ford Marketing Institute; Iowa State University.
- SMITH, JEANETTE (1971)**, Nursing. R.N., Mercy Hospital; University of Iowa; Drake University.
- 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.

FACULTY/PROFESSIONAL STAFF

- SNYDERS, EUGENE R. (1976)**, Executive Vice President, Management Services. B.S., University of Illinois; M.S., M.B.A., Southern Illinois University;
- STEINBERG, IRV (1968)**, Controller. B.S., Auburn University.
- STEWART, SUE (1975)**, Coordinator, Campus Recreation. B.A., Simpson; Iowa State University.
- STOCK, KATHRYN (1970)**, Nursing. Mercy Hospital School of Nursing; Drake University; Marycrest College; Midwestern College; Iowa State University; Parsons College; University of Dubuque.
- STOLZE, DOREEN (1972)**, Child Development. B.S., Iowa State University.
- STROM, BYRON M. (1975)**, Chemistry. B.S., Sioux Falls College; M.S., Iowa State University.
- SUBY, ALLEN (1968)**, Coordinator, Industrial & Technical. B.S., M.S., Iowa State University.
- TAYLOR, ROBERT (1973)**, Diesel Mechanics, Iowa State University; Des Moines Area Community College.
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- TOMES, CYNTHIA (1975)**, Learning Center. A.A., Southwestern Community College; B.S., University of Northwest Missouri; M.B.A., Drake University.
- TORGERSON, MARLA (1979)**, Educational Placement Advisor. B.S., Iowa State University; Drake University.
- TROY, JANE (1975)**, Respiratory Therapy. B.S., Texas Christian University; M.Ed., Iowa State University.
- 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.
- TYSON, ERNESTINE (1977)**, Student Life Specialist. A.A., Des Moines Area Community College; B.A., Simpson; M.S., Drake.
- VANDEBURG, BETTY (1971)**, Program Chairperson, Nursing. R.N., Finley Hospital; B.A., Stephens College.
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- VAN PELT, GAIL (1975)**, Coordinator, Student Activities. Certificate, Des Moines Area Community College.
- VAN TUYL, SHARON (1973)**, Educational Advisor/Tutor Coordinator.
- VON GRABOW, JOAN (1972)**, Program Chairperson, Nursing. B.S.N., Ball State University; San Bernardino Valley College; University of Iowa; Iowa State University.
- 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.
- WALDRON, BARBARA (1977)**, Nursing. R.N., B.S.N., University of Nebraska.
- WALL, LUCY J. (1978)**, Medical Laboratory Technician. Medical Technologist (ASCP); B.S., University of Wisconsin-Eau Claire.
- WALTON, ELDON (1968)**, Associate Dean, Instructional Support Services. B.S., Iowa State University; M.A., University of Iowa.
- WATSON, DOUGLAS (1978)**, Electronics. B.S., M.S., Iowa State University.
- WEDEMEYER, VIRGINIA (1970)**, Dental Assistant. C.D.A., Wartburg College; University of Colorado; Iowa State University; University of Northern Iowa; University of Iowa.
- WELLS, VENITA (1976)**, Coordinator, Medical Secretary. Des Moines Area Community College; B.S., Drake University; Colorado State; Iowa State University; University of Northern Iowa.
- WESTERGARD, JOANNE E. (1977)**, Coordinator, Health Occupations. B.A., University of Michigan; Iowa State University; University of Minnesota; Drake University; University of Iowa; University of Northern Iowa; M.P.H., University of Minnesota.
- 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)**, Instructor, Development Center. B.A., M.S.E., Drake University.
- WILCOX, GARY (1970)**, Dean, Instructional Support Services. A.B., San Diego State College; M.A., University of California; Iowa State University.
- WILK, MARY BETH (1975)**, English. B.A., University of Nebraska; M.A., University of New Mexico; Ph.D., University of Massachusetts.
- WISER, KIM (1982)**, Lab Assistant, Paralegal. A.A., Des Moines Area Community College.
- 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., Clarion State College; 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)**, Regional Director, District Campus. B.S., Ed., Drake University.
- WYCKOFF, ALVIN L. (1975)**, Commercial Horticulture. B.S., M.Ed., University of Missouri.
- YACH, RICHARD A. (1976)**, Economics. B.A., St. Norbert College; M.S., Iowa State University.
- YOUNG, LEONE (1974)**, Dental Hygiene. A.S., University of South Dakota; B.G.S., Drake University.
- YOUNG, ROBERT (1973)**, Accounting Specialist. B.S.B.A., Drake University.
- YOUNG, THOMAS (1974)**, Veterans Agriculture. B.S., Iowa State University; Mankato State College.
- ZUCK, DON (1969)**, Manager, Business Services. B.S., Iowa State University.

ANKENY CAMPUS MAP



PARKING LOT DESIGNATIONS

- A - Student Parking
- B - Student Parking
- C - Staff Parking
- D - Student Parking
- E - Visitor Parking
- F - Visitor Parking
- G - Staff Parking
- H - Student & Staff Parking
- J - Student & Staff Parking
- K - Visitor & Staff Parking
- L - Visitor, Staff & Student Parking
- M - Visitor, Staff & Student Parking
- N - Student Parking
- P - Visitor Parking

<p>Building 1 Information Registration Student Records Financial Aids Business Office Human Resources Data Systems College Relations Development Services District Administration</p>	<p>Campus Recreation Counseling Student Health Services Career Development Bookstore Gym Game Room Art Music Student Lounge Snack Bar/Grill</p>	<p>Building 9 Dental Programs Medical Assistant Medical Laboratory Programs Surgical Technician Nursing Programs Respiratory Therapy</p>	<p>Building 15 Printing Program</p>
<p>Building 2 Criminal Justice Program Public Service Programs English Social Science</p>	<p>Building 6 Library Instructional Support Services Development Center Auditorium Marketing Word Processing Duplicating</p>	<p>Building 10 Conditioned Air Job Shop Machinist Tool and Die Telecommunications Welding</p>	<p>Building 16 Commercial Art</p>
<p>Building 3 Utility Center</p>	<p>Building 7 Food Service Programs Cafeteria Conference Center</p>	<p>Building 11 Utility Center</p>	<p>Building 17 High Tech. Electronics</p>
<p>Building 4 Math Science Commercial Horticulture Agri-Business Health Care Administration</p>	<p>Building 8 Bookkeeping/Accounting Data Processing Data Entry Office Occupations Programs</p>	<p>Building 12 Physical Plant Services</p>	<p>Building 18 Electronics Program</p>
<p>Building 5 Student Activities Alumni Office</p>	<p>Building 13 Auto Mechanics Auto Body Upholstery</p>	<p>Building 14 Agriculture Equipment Technology Agriculture Power & Equipment Heavy Equipment Technology</p>	<p>Building 19 Child Care Programs</p>
			<p>Building 20 Building Trades Architectural Drafting Machine Drafting</p>



