



William Rainey Harper College
1982-83 Bulletin
Volume 16
January, 1982

Accreditation

North Central Association of Colleges
and Secondary Schools
International Association of
Counseling Services
American Dental Association
Community/Junior College Member of the
National Association of Schools of Music
American Bar Association
Certificate of Real Estate School,
Department of Registration and Education
School Approval #46
Council on Medical Education of the
American Medical Association in
collaboration with the American
Association of Medical Assistants
National League for Nursing

Harper College reserves the right to change all
or part of this catalog without prior notice.



William Rainey Harper College
Algonquin and Roselle Roads
Palatine, Illinois 60067
312/397-3000



Harper College Off-Campus Course Locations

Alexian Brothers Medical Center
800 West Biesterfield Road
Elk Grove Village

Arlington Heights Memorial Library
500 North Dunton Avenue
Arlington Heights

Barrington High School
616 West Main Street
Barrington

Clearbrook Center
3201 Campbell
Rolling Meadows

Friendship Village of Schaumburg
350 West Schaumburg Road
Schaumburg

Grant Wood Senior Citizens Center
225 East Elk Grove Boulevard
Elk Grove Village

Nathaniel Hawthorne School
200 Glendale Road
Wheeling

Highland Woods Golf Course
2775 North Ela Road
Palatine

Hoffman Bowling Lanes
Higgins and Roselle Roads
Hoffman Estates

Mt. Prospect Senior Citizens Center
50 Emerson
Mt. Prospect

Northwest Community Hospital
800 West Central Road
Arlington Heights

North Suburban Library System
200 West Dundee Road
Wheeling

Palatine Public Library
500 North Benton Street
Palatine

Rand Grove Village Apartments
773 East Rand Grove Road
Palatine

Schaumburg High School
1100 West Schaumburg Road
Schaumburg

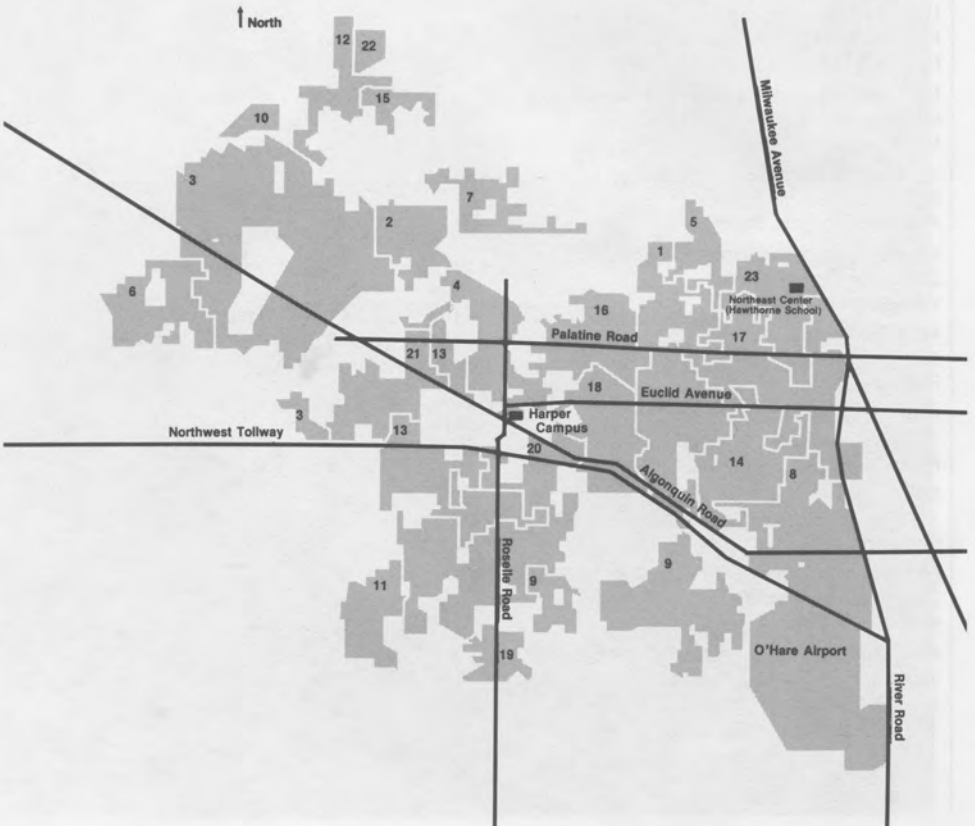
Schaumburg Township Building
25 Illinois Boulevard
Hoffman Estates

St. John United Church of Christ
308 North Evergreen Avenue
Arlington Heights

Communities served by Harper College District No. 512

- 1 Arlington Heights
- 2 Barrington
- 3 Barrington Hills
- 4 Inverness
- 5 Buffalo Grove*
- 6 Carpentersville*
- 7 Deer Park*
- 8 Des Plaines*
- 9 Elk Grove Village
- 10 Fox River Grove*
- 11 Hanover Park*
- 12 Lake Barrington
- 13 Hoffman Estates
- 14 Mount Prospect
- 15 North Barrington
- 16 Palatine
- 17 Prospect Heights
- 18 Rolling Meadows
- 19 Roselle*
- 20 Schaumburg
- 21 South Barrington
- 22 Tower Lake
- 23 Wheeling

*Portions of these communities are included in the district.



Campus Map

- A College Center
- B Public Safety, Power Plant
- C Art and Architecture
- D Mathematics and Science
- E Lecture-Demonstration Area
- F Learning Resources Center
- G Vocational Technology Shops and Laboratories
- H Vocational Technology Shops and Laboratories
- I Business, Social Science, and Vocational Education
- J Business, Social Science, and Vocational Education
- M Recreation, Athletics and Physical Education
- P Music Building, Women's Center
- T Grounds Maintenance Shop
- U Art Studio-Storage
- V Roads and Grounds, Park Management



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First Semester – Fall, 1981

Early Registration as scheduled	April through August 17
Faculty Report	August 18
Open Registration	August 19, 20, 22
Classes Begin	August 24
Last Day for Late Registration	August 29
Last Day for Adding Classes	August 29
Last Day for Refunds*	September 5
Labor Day (Classes Not in Session)	September 7
Midterm	October 16
Veterans' Day (Classes Not in Session)	November 11
Thanksgiving Vacation (Classes Not in Session)	November 26-29
Classes Resume	November 30
Last Day for Withdrawals	December 5
Final Exams	December 14-19
Semester Break Begins	December 20

Second Semester – Spring, 1982

Early Registration as scheduled	November through January 12
Faculty Report	January 13
Open Registration	January 13, 14, 16
Classes Begin	January 18
Last Day for Late Registration	January 23
Last Day for Adding Classes	January 23
Last Day for Refunds*	January 30
Lincoln's Birthday (Classes Not in Session)	February 12
Midterm	March 12
Good Friday (Classes Not in Session)	April 9
Spring Vacation	April 10-18
Classes Resume	April 19
Last Day for Withdrawals	May 8
Final Exams	May 17-22
Graduation	May 23

Summer Session, 1982

Registration	June 3-4
Classes Begin	June 7
Last Day for Late Registration	June 9
Last Day for Adding Classes	June 9
Last Day for Refunds*	June 12
Midterm	July 2
Independence Day (Observed, Classes Not in Session)	July 5
Classes Resume	July 6
Last Day for Withdrawals	July 17
Final Exams	July 29-30

*See refund policy on page 17 of Bulletin

First Semester - Fall, 1982

Early Registration as scheduled	April through August 16
Faculty Report	August 17
Open Registration	August 18, 19, 21
Classes Begin	August 23
Last Day for Late Registration	August 28
Last Day for Adding Classes	August 28
Last Day for Refunds*	September 4
Labor Day (Classes Not in Session)	September 6
Midterm	October 16
Veterans' Day (Classes Not in Session)	November 11
Last Day for Withdrawals	November 13
Thanksgiving Vacation (Classes Not in Session)	November 25-28
Classes Resume	November 29
Final Exams	December 13-18
Semester Break Begins	December 19

Second Semester - Spring, 1983

Early Registration as scheduled	November through January 11
Faculty Report	January 12
Open Registration	January 12, 13, 15
Classes Begin	January 17
Last Day for Late Registration	January 22
Last Day for Adding Classes	January 22
Last Day for Refunds*	January 29
Lincoln's Birthday Observed (Classes Not in Session)	February 11
Midterm	March 11
Good Friday (Classes Not in Session)	April 1
Spring Vacation	April 2-10
Classes Resume	April 11
Last Day for Withdrawals	April 16
Final Exams	May 16-21
Graduation	May 22

Summer Session, 1983

Open Registration	June 2-3
Classes Begin	June 6
Last Day for Late Registration	June 11
Last Day for Adding Classes	June 11
Last Day for Refunds*	June 11
Midterm	July 2
Independence Day (Classes Not in Session)	July 4
Classes Resume	July 5
Last Day for Withdrawals	July 16
Final Exams	July 28-30

*See refund policy on page 17 of Bulletin

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William Rainey Harper

Father of the Community College

The spirit of Harper College is reflected in its name. William Rainey Harper was a scholar, teacher, writer, and administrator who devoted his life to the pursuit of excellence in education. He accomplished so much in his lifetime that he is counted among the intellectual giants of his day.

A man of vision and an innovator, Dr. Harper was hand picked by John D. Rockefeller to become the first president of the University of Chicago before the turn of the century. During his 15-year presidency, that university emerged as one of the leaders in a movement to reform higher education.

Dr. Harper is recognized as the father of the two-year college, which he initiated at the University of Chicago in 1896. At that time the university was divided into two divisions—the academic college for freshmen and sophomores and the university college for juniors and seniors. Full-fledged emergence of this concept came almost 70 years later with the community college as we know it today.

In Illinois alone there are 39 public two-year community college districts serving more than 315,000 citizens through a full range of transfer, career-vocational, and continuing education programs on both a daytime and an evening basis.



The President's Message

Academic excellence—it is a goal, an ongoing activity, and an accomplished fact at Harper College.

Harper College is committed to academic excellence now and as a goal for the future. There will always be new courses and programs to be developed to meet changing educational and career needs. A college must continually evaluate and update the educational and cultural opportunities offered to the community in order to insure excellence.

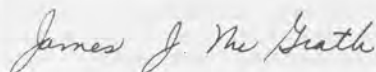
As an ongoing activity, academic excellence at Harper is fostered through the College's emphasis on employing highly qualified faculty members and encouraging them to pursue opportunities for further professional development. In addition, excellence is promoted through a fine system of student support services beginning with admission counseling and course selection. Resources available to the matriculating student include a superior library, tutoring, special classes on study techniques, and audiovisual study materials. Academic standards are updated yearly, and there is continuing evaluation of courses and curricula. Transfer options and available career programs are continually expanded through articulation with senior institutions and other community colleges. Honors options are available in most departments, and students' academic achievements are recognized in honors lists, an honor society, and academically based scholarship programs.

Academic excellence is also an accomplished fact in terms of the fine educators on the faculty, 97 percent of whom hold advanced degrees. At Harper, these faculty members provide the actual classroom instruction, and are available to students seeking additional help outside of class hours. Harper's fine reputation is an accomplished fact, and is based both on the College's historical commitment to excellence and on the continuing effort to maintain and enhance that excellence.

Among all the advantages of attending Harper College, academic excellence is the most valuable. Its value is in the quality of the education the student receives today, and in the relevance and ready acceptance of that education as a foundation for career growth or further education. Surveys of former Harper students who have transferred have shown that their grades at the senior institution are as good or better than those of students who entered the four-year college as freshmen. Career program graduates have an excellent

rate of employment in their chosen fields, and are often recruited before graduation by area business and industrial firms.

Whatever your educational goal may be, we hope you will take full advantage of the Harper College resources designed to help you take a first step toward collegiate excellence.



James J. McGrath



The College

William Rainey Harper College in Palatine, Illinois is a public community college, an integral part of the Illinois system of higher education. The college, established in 1965 by voter referendum, is governed by an elected board of trustees. Harper serves high school districts 211 (Palatine and Schaumburg Townships), 214 (Elk Grove and Wheeling Townships), as well as Barrington Unit School District 220.

The Harper College district (512) covers an area of about 200 square miles. Communities within the college district are Arlington Heights, Barrington, Barrington Hills, Elk Grove Village, Hoffman Estates, Inverness, Lake Barrington, Mount Prospect, North Barrington, Palatine, Prospect Heights, Rolling Meadows,

Schaumburg, South Barrington, Tower Lake, and Wheeling. Also included are portions of Buffalo Grove, Carpentersville, Deer Park, Des Plaines, Fox River Grove, Hanover Park, and Roselle.

Board of Trustees

The board of trustees is comprised of seven elected individuals who represent the voters of the district and one student representative who has an advisory vote elected by the student body for a one-year term.

Meetings of the board of trustees, which are open to the public, are held on the fourth Thursday of each month at 8:00 pm in the Board Room of the administrative wing of the College Center (Building A) on the Harper campus at Algonquin and Roselle Roads in Palatine.

Compliance Actions

Harper College does not discriminate on the basis of race, religion, sex, age, national origin, marital status, or physical or mental handicap. This policy governs the recruitment and admission of students, the recruitment and employment of faculty and staff and the operation of any of the College's programs and activities as specified by federal laws and regulations.

Inquiries regarding Affirmative Action should be directed to the Personnel Specialist. Inquiries regarding College compliance with Section 504 of the 1973 Rehabilitation Act should be directed to the Director of Environmental Health.

Accreditation

All courses and educational programs, including counseling services, are fully accredited by the North Central Association of Colleges and Secondary Schools. In addition, the Student Development Center at Harper is accredited by the International Association of Counseling Services; the Harper Dental Hygiene career program is accredited by the American Dental Association; the Harper Music Department is accredited as a Community/Junior College Member of the National Association of Schools of Music; the Harper Legal Technology program is accredited by the American Bar Association; the Harper Real Estate program holds a Certificate of Real Estate School, Department of Registration and Education School Approval # 46; the Medical Office Assistants program at Harper is accredited by the Council on Medical Education of the American Medical Association in collaboration with the American

Association of Medical Assistants; and the Harper Nursing program is accredited by the National League for Nursing.

History

The story of William Rainey Harper College parallels the history of the community college movement in Illinois, an educational phenomenon in the late 1960's.

Late in 1964, while legislators in Springfield were adding the final revisions to the Illinois Community College Act enabling citizens to form their own college districts, concerned citizens in Chicago's northwest suburban communities petitioned for a referendum to vote on the establishment of a college. Within a matter of days after the legislation passed, voters in the four-township area of Elk Grove, Palatine, Schaumburg, and Wheeling approved a referendum establishing the Harper district— on March 27, 1965.

Groundwork for the referendum to establish a two-year college had been laid early in the 1960's with a survey of student needs and the establishment of a concerned Citizen's Committee. The success of the committee was exhibited in a 3-2 margin at the polls. Voters returned to the polls thirty-four days after approving the referendum to elect seven citizens, from among forty-eight candidates, as the first board of the new college.

Two years later, Barrington High School District 224 (now Unit School District 220) annexed to the Harper district, and the boundaries of Harper's 200 square mile constituency were established to become Illinois Community College District 512.

Since its inception, Harper College has been most fortunate in having trustees possessing the capacity to work together in planning programs, solving problems, and establishing goals unique in the annals of the northwest suburbs. The first board meeting was held in May, 1965. The college had no name, no staff, and no facilities, but it did have seven dedicated individuals determined to establish a community college worthy of the area it serves.

During the first year a president was hired, architects were selected to design and plan a campus, the campus site was chosen, and a decision was made to adopt the name of William Rainey Harper College in honor of the "father" of the two-year college concept.

Voters in the district approved a \$7,375,000 building referendum 4 to 1 to begin Harper's

second year. By September, 1967, the college was staffed and operating with more than 1,700 students attending evening classes in Elk Grove High School, and ground had been broken for a new campus. Harper College was a reality, and the northwest suburbs had the first college in a 125-year history.

Harper serves as a cornerstone in Illinois educational history as the first two-year institution to complete Phase I of its building construction and the first to receive unqualified full accreditation—only six years after its founding—in the shortest possible time in 1971.

Throughout its brief history, Harper has had a record of monumental growth. The 1967 enrollment of 1,725 students jumped to 3,700 in one year, double the projections. When the doors opened on Harper's new campus in fall, 1969, 5,350 students were enrolled. Enrollment topped 20,000 for the first time in fall, 1975.

The college employed numerous off-campus locations, instituted a Weekend College program, and opened an extension campus at Willow Park Center in 1975 to provide additional classroom space for day and evening offerings. In August, 1980, the Northeast Center opened in the Hawthorne School in Wheeling, replacing the Willow Park Center as an extension facility.

A successful referendum held in September, 1975 provided funds for the college to proceed with completion of the present campus, purchase land for a second site, and construct the first phase of buildings on that site when required by enrollment increases.

Buildings G and H were completed and classes begun in the facilities in 1977. Building M, the physical education, athletics and recreation facility, and Buildings I and J opened to classes in the 1979-80 academic year. All plans were subject to approval by the Illinois Community College Board and the Illinois Board of Higher Education.

Community Orientation and Involvement

From the beginning, college supporters have been committed to the concept of an institution oriented to its community. Harper has enjoyed a heartening involvement and interest by members of the community who continue to give countless hours to accomplish key phases of the college's programs.

Advisory committee members selected from the community for their expertise and knowledge give support to Harper on career programs, management training seminars for business and industry, women's programs, senior citizens' program, public relations, the college's long range plan, and fund raising.

Community leaders serve as directors of the Harper College Educational Foundation, which provides scholarships and supports special projects to enhance the educational programs of the College. In 1981, the Friends of Harper organization was formed as a support group for the College by citizens interested in promoting awareness of programs and services offered by Harper.

Harper continues to evaluate itself as it plans for the future. Will anticipated building plans be adequate? Is Harper keeping up with community needs in the career/vocational fields? How well is the college serving its constituency in terms of preparing students to meet their future educational and career requirements? Is Harper College, in fact, providing an outstanding program of higher education?

As Harper plans for the future, answers to these questions will be constantly sought and reevaluated to enable the college to continue to be accountable to the community it serves.

Philosophy

An outstanding program of higher education for the community it serves is the guiding philosophy of William Rainey Harper College.

Created by a community responsive to contemporary insistence on more education for more of its citizens, the college is determined to meet the educational and vocational requirements of each student and thus serve the community at large, for a true community college answers to the demands of the total community.

The demands of the community are clear. In addition to the specific needs for two years of high quality transferable collegiate credit, the college recognizes the more general, but no less important, requirement of educating all of its students for a meaningful role in a free and fluid society which promises increased leisure time.

Basic to responsible participation in society is the student's contribution in voting more intelligently, producing more efficiently through the acquisition of a salable skill, and adapting more readily to a complex society. In view of

the realities of the complexity of a dynamic society and the knowledge explosion, the student must not only learn what is known but also how to acquire knowledge not yet extant.

With a commitment to the dignity and significance of each student, the college endeavors to bring the student to a realization of what place he can make for himself in today's world and to provide the necessary training for his social and personal goals. To this end, the college must provide those cultural experiences which will open to the student the heritage of the educated man.

Mission

The mission of William Rainey Harper College, as part of the system of public community colleges in Illinois, is to provide to college district residents a comprehensive postsecondary education which includes transfer, career, and continuing education programs. In addition to fulfilling this primary mission, Harper College also offers specialized programs and services in cooperation with local school districts, area business and industry, and other community colleges. Programs developed to meet the needs of the community are offered at reasonable cost to students, district taxpayers, and the State of Illinois. Each student is accepted without social discrimination. The ultimate goal is to provide an educational environment that allows the individual the maximum opportunity to develop through successful learning experiences.

General Education

Harper College is committed to a program of general education which acquaints the student with a broad area of knowledge. This knowledge not only provides information in particular subject fields but contributes toward an enlightened and integrated view of life. General education serves to complement specialized training designed to prepare the student for an occupation, whether a trade skill, a technical proficiency, or a professional vocation.

Essential to transfer and career-oriented programs, the aim of general education is to equip the student with important understandings and insights—and the power to communicate them. Thus, efforts to assume the role of a citizen and to earn a livelihood are set in a value perspective that gives a proper order to life's activities.

The general education philosophy of Harper College is intended to permeate the entire

college program, enabling all members of the college community to work together to develop and strengthen constructive attitudes, knowledge, and understandings.

Degree graduation requirements have been developed to combine adequate specialization with general education.

Objectives

Specific objectives of the college are:

1. To offer the first two years of *transfer or pre-professional education*, preparing students within their chosen field of study with a sound background commensurate with the first two years of education at a four-year college or university.
2. To offer two-year programs in *technical-vocational training*, providing students with the knowledge and skills required in a specific field.
3. To offer appropriate *general education* for all citizens, preparing them for more effective participation in a free society as well as for personal and cultural enrichment in an era which promises more and more leisure time.
4. To offer *opportunities for adults* in the community to initiate or to continue a collegiate education.
5. To provide *retraining and upgrading courses and programs* to facilitate adjustments to, or re-employment or advancement in, a work environment that is undergoing rapid technological changes.
6. To complement the educational programs with effective *counseling services*, including guidance and assistance to each individual student.
7. To encourage the use of its facilities and services for education and *cultural purposes* by all citizens of the community.

Degrees

Harper College offers three degrees: The Associate in Arts, the Associate in Science, and the Associate in Applied Science. The A.A. and A.S. degrees are primarily for students desiring to transfer to four-year institutions. The A.A.S. is primarily for those in two-year career programs.

In addition, the college structures certificate programs designed to meet specific needs of the community. These programs are normally one year in length, and upon completion of the

prescribed courses, the student receives a certificate of completion.

The Harper Year

The college follows the semester plan and also offers a summer session. Day and evening classes are conducted throughout the college year. The college also offers a limited number of courses during the weekends of the fall and spring semesters.

College Hours

Business Hours: Offices will be open for business Monday through Friday from 8:15 am to 4:30 pm. The Registrar's Office will be open from 8:15 am until 9:00 pm Monday through Thursday, from 8:15 am until 4:30 pm on Friday, and from 8:15 am until 12:00 noon on Saturday.

Class hours are scheduled Monday through Friday from 7:00 am until 10:00 pm and on Saturday from 7:00 am until 12:00 noon. The campus is closed on Saturday afternoon and Sunday.

Summer hours may differ from those listed above.

Campus Facilities

Completion of the Harper campus, which opened to 5,400 students in September, 1969, brought to the college district a complex of informal contemporary buildings nestled in the rolling terrain of 200 rural acres. On-time delivery of the buildings marks Harper as the first Illinois public community college to complete its entire Phase I project, which was formally dedicated on May 3, 1970.

Campus structures include a comprehensive library and Learning Resources Center; a science and technology laboratory and classroom complex; a lecture-demonstration center; a fine and applied arts complex; a vocational-technical center; a park management and greenhouse facility; a college center for student-related activities; an administrative wing including admissions, business offices, and data processing center; and a central utility facility serving the entire campus.

Since the first phase of the campus was completed, additions to the science complex, fine arts wing, and central utility were completed. The physical education building, plus four other classroom-specialized career program buildings (G, H, I & J) were opened in 1980.

The hub of the campus, the college center, provides a natural meeting place for students and faculty—and includes a lounge, food service facilities, bookstore, various student activity offices, student development center, community meeting rooms and provisions for almost any activity the multi-purpose design might embrace.

The informal layout of the campus was designed to have a “village street” atmosphere. The architectural concept uses scale and placement of buildings, multi-level plazas, picturesque pedestrian streets, “earth-tone” building materials (brick, wood, and concrete), and glass window walls to give a variety of interior and exterior views, producing a stimulating and pleasing environment for learning and working.

The structures are built into the natural contours of the land, with entrances on several levels. Panoramic vistas from several buildings embrace a small scenic lake to the north of the buildings, with foot bridge connecting the campus to the parking lot on a hill across the lake.

The Harper campus is an exciting environment for learning, complete with the latest educational tools. Students, alumni, and community residents find pride in a local campus which provides educational and cultural opportunities as well as a conference center for clubs and civic organizations.

Bookstore

The bookstore, located on the second floor of the College Center, offers a full range of new and used textbooks, current paperbacks, magazines, newspapers, students supplies, educational aids, and sundries. Convenient store hours are posted near the entrance to the bookstore.

Parking

All members of the college community, including students, faculty, and staff, are required to register their motor vehicles with the college, display their Harper parking permit decal, and park in the area designated for them. The speed limit in all parking lots is 15 miles per hour, and Illinois Motor Vehicle Laws will be enforced on the campus.

The Public Safety Office in Building B registers vehicles and issues parking permits.

Persons with disabilities may apply for special permits in Health Services, A362.

Learning Resources Center

The function of the Learning Resources Center is to support the instructional program of the college by providing appropriate services to faculty and students. The staff is qualified and ready to help in the development, acquisition, and use of a variety of audiovisual media and print materials. The LRC collection contains about 100,000 volumes, over 700 magazines, and extensive back issues of the *Chicago Tribune* and *New York Times* on microfilm, as well as tapes, records, slides, films, videotapes, and film strips.

LRC Library Services

Library Services oversees all circulation of the LRC materials in the collection. Reference service, copy machines, and reserve materials are available on the second floor. This service also oversees the acquisition, cataloging, and indexing of all materials added to the LRC collection arranged according to the Library of Congress classification.

LRC AV Media Services

The TV, photographic, duplicating, and graphics areas design and develop institutional graphics, publications, and instructional media productions aimed at making instruction more effective. Located in the middle and south side of the first floor, the television studio is available for staff and student productions. Also adjacent to this area is AV media equipment distribution and repair service.

Flexible Facilities for Instruction

Nine lecture/demonstration facilities provide the teachers and students with flexible resources for instructional use. These lecture/demonstration facilities are designed for large group instruction and are equipped with audio systems, remote media projection, and television linked directly to the Learning Resources Center.

Other self-instructional spaces and the LRC independent study area, each equipped with a variety of media, are used to support individualized instruction.

Admission Information, Tuition, and Fees

Admission

Admission Options

Readmission

General Admission Requirements

Residency

Tuition and Fees

Charge-Back Tuition

Tuition Refund Policy

Withdrawals

Admission*

Eligibility

All high school graduates or the equivalent (GED) are eligible for admission to the college. A non-graduate 16 or 17 years of age who has severed his connection with the high school system, as certified in writing by the chief executive officer of the high school district in which the student has legal residence, or a non-graduate 18 years of age or older, may be admitted if he demonstrates the capacity to benefit from programs and courses offered by the college. High school students may be admitted to selected courses upon the written approval of their high school principal and the college director of admissions. To be placed in some programs in the college, the applicant may have to meet additional requirements as specified by that program and the Illinois Public Community College Act.

* All Admission Policies and Procedures were under review at time of printing and are subject to change. Contact the Admissions Office for further information.

Admission Options

Students may select one of the following options and should follow the procedures identified:

Transfer Program

This option is available to those students interested in selecting courses transferable to institutions offering a baccalaureate degree. Applications for these programs are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this bulletin.

Career Programs

These sequences of courses are designed for individuals who desire to pursue a specific curriculum to prepare them for a particular career. Applications for career programs other than Limited Enrollment Programs are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this bulletin.

Limited Enrollment Programs

The following career programs have been identified as limited enrollment programs: Dental Hygiene, Dietetic Technician, Nursing, and Operating Room Technician. Each of these programs has special admission requirements. Consult the curriculum outlines

section of this bulletin to determine the specific admission requirements of a particular limited enrollment program.

Selection of all of these programs is determined by the following: Residents of the Harper College district who *complete* the application process by *December 1* of the year prior to the fall term in which they desire to enroll, will receive preferential consideration in the selection process. If, on December 1, more completed applications have been received than space available, those students with the highest qualifications will be selected. If space is available after December 1, students (in and out-of-district) meeting program requirements for admission will be considered based on date of completed application. The Fashion Design, Fashion Merchandising, Interior Design, and Legal Technology Programs are also limited enrollment programs and also have special admission requirements. Contact the Admissions Office for additional information

Program for Non-Degree Seeking Students

This option is available to students who desire to enroll in courses and not pursue a degree or certificate. Applications are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this bulletin.

Continuing Education (Non-Credit) Program

Continuing Education courses have been established to provide an educational service to the public and are not a part of college credit or certificate credit programs. Students need not apply for admission and may register at any time by following the procedures for enrolling in a Continuing Education course as listed in the General Admission requirements section of this bulletin.

Transfer-In Students

Students transferring from another accredited institution of higher learning must provide the Admissions Office with official college transcripts covering all previous college work. (See the Transfer of Credit to Harper College section of this bulletin for information on transferring in credit.) Students dismissed from another institution for disciplinary reasons may be required to be reviewed by the director of admissions.

International Students

Students from other countries attending Harper College are termed "international" students, according to the following definition: "A person who is a citizen of a country other

than the United States who has a visa for educational purposes with an intent to return to his homeland upon completion of his educational program."

International students must carry a minimum of twelve (12) semester hours. Because no scholarships or grants are available to international students, it is essential that students from outside the United States have sufficient funds to cover their expenses while in this country. The international student tuition is \$72.60 per semester hour (subject to change without notice).

International Students must fulfill the International Student General Admission Requirements as listed in the General Admission Requirements section of the bulletin.

Readmission

Any student who has previously attended Harper College and who is returning after an absence of one semester or more does not need to complete an application for readmission. If a student has attended any other educational institution since attending Harper, official transcripts must be supplied for all academic work taken. Students dismissed from Harper for disciplinary reasons must be reviewed by Harper's vice president of student affairs.

General Admission Requirements

Full-Time Student Admission (Credit only)

Full-time students (12 semester hours or more) are required to:

1. Complete all sections of the application form.
2. Submit official transcripts of all high school work and all college work attempted. Students who have completed the GED must also submit an official copy of their GED scores.
3. Take the college admissions battery. Either of the following test batteries will meet this requirement: American College Test (ACT), or Scholastic Aptitude Test (SAT). If either of these tests has been taken, please request that an official score report be forwarded to the Admissions Office. Students may register to take the ACT at Harper College. For information, contact the Office of Testing Services.

Students who have completed 12 semester hours of "C" work or better, either at Harper or at another accredited institution, are exempt

from this requirement unless it is an admission requirement for a specific program.

4. Complete the Harper medical record form.
5. Pay a \$15.00 non-refundable application fee.

Part-Time Student Admission (Credit only)

Part-time students (less than 12 semester hours) are required to:

1. Complete all sections of the application form.
2. Complete the Harper medical record form.
3. Pay a \$15.00 non-refundable application fee.

International Student Admission

Before any action can be taken on their applications, international students must complete and/or file the following with the Admissions Office at least six weeks prior to the beginning of the semester or summer session in which they intend to begin their studies:

1. A completed application form with a non-refundable \$15.00 application fee.
2. Official transcripts for at least the last four years of secondary school study and any university-level or post-secondary school work that has been completed or attempted. All these records must list all subjects taken, grades earned or examination results in each subject, minimum and maximum grades possible, and all diplomas and certificates awarded. If these documents are not in English, they must be accompanied by authorized English transcriptions.
3. An official Test of English as a Foreign Language (TOEFL) score report. To be considered for admission, students must receive a minimum converted score of 500.
4. A completed Harper medical record form.
5. An affidavit of support.
6. A release letter from foreign student advisor of the previous school attended (this applies to students already enrolled in a school in the United States).

Residency

Students enrolling at William Rainey Harper College shall be classified as Resident, Non-Resident, Out-of-State, or International for tuition and fee purposes:

Resident

A student whose residence has been determined to be within the William Rainey Harper College District (Illinois Community College District 512). Determination is made by the college registrar.

Non-Resident

A student residing in Illinois but outside Community College District 512.

Out-of-State

A student whose residence is outside the State of Illinois.

International

A student attending Harper College on a student visa.

Tuition and Fees (subject to change without notice)

Tuition

Resident Tuition—

\$22.00 per semester hour

Non-Resident Tuition (see Charge-Back)—

\$43.13 per semester hour

Out-of-State Tuition—

\$69.44 per semester hour

International Student Tuition—

\$72.60 per semester hour

Senior Citizen Tuition (Resident)—

(60 and older) \$ 4.40 per semester hour

All tuition and fees are due and payable during registration unless arrangements are made at the Office of Financial Aid or the Office of the Registrar, A213. Failure to do so will result in being withdrawn from classes.

A one-time application fee of \$15.00 is charged to each new student applying for admission for credit courses. The fee, which is non-refundable, covers the cost of processing the application.

Activity Fee

Students enrolled for 12 or more credit semester hours will pay a \$15.00 activity fee for each semester; students enrolled for less than 12 hours will pay a \$6.00 activity fee. No activity fee is charged for students enrolled *only* in credit-free (Continuing Education) courses or Harper classes taught off-campus (extension courses). However, students enrolled only in credit-free and extension courses may pay the activity fee and obtain an activity card (see: Student Activities).

Special Music Fee

Students enrolled in minor applied music will pay \$64.00 per semester. This entitles the student to one private lesson per week. Major applied music students will pay \$128.00 per semester and will receive two private lessons per week.

Students may lease musical instruments for \$25.00 a semester, \$15.00 of which may be refunded depending upon the condition of the instrument when it is returned.

Graduation Fee

A graduation fee of \$15.00 includes the cost of the diploma (see: Graduation Requirements).

Laboratory and Music Fees

Laboratory and music fees will be indicated at time of registration.

Parking Fees

Parking fees will be assessed as follows:

\$3.00 for fall semester

\$3.00 for spring semester

\$1.50 for summer session

No parking fee is required for one or two day Continuing Education seminars or workshops.

Charge-Back Tuition

Resident Students desiring to pursue a certificate or degree program not available through Harper College may apply for charge-back tuition if they attend another public community college in Illinois which offers that program. (See section on cooperative programs.)

Students approved for charge-backs will pay the resident tuition of the receiving institution; the Harper College District will reimburse the college for the remainder of the non-district tuition cost.

Application for charge-back tuition is made in the Office of the Registrar 30 days prior to the beginning of the term for the college in which the student wishes to enroll.

Non-Resident Students approved for charge-back tuition from their resident district will pay Harper's resident tuition and their district will reimburse Harper for the balance of the non-resident tuition. Non-resident students attending Harper without charge-back will pay the non-resident fees (see: Tuition and Fees).

Tuition Refund Policy

Tuition refund requests shall be made to the Office of the Registrar. Refunds will be made according to the following schedule:

Regular Credit Courses	Percent of Refund
Prior to first day of semester or term (less a \$5.00 service charge)	100%
During first week of class*	80%
During second week of class	50%
No refund after second week of class (Eight week classes prorated including summer session.)	

Any extraordinary circumstances involving tuition refund, including withdrawal during the semester for medical reasons, shall be brought to the attention of the Registrar. The Vice President of Student Affairs shall make the final decision on such tuition refund requests.

*First week of class is defined as the first 7 calendar days of the term for 16 week classes and the first 3 calendar days of the term for 8 week classes. Other classes not following the regular schedule will be prorated based on the length of the course.

Withdrawals

If students wish to withdraw from a class after regular registration, they must withdraw officially by submitting the appropriate forms to the Office of the Registrar. A student who does not withdraw officially from a class is subject to an "F" grade.

Procedures for a medical withdrawal are available in the Health Services Office.

The following guidelines determine grades for an official withdrawal from a 16-week course; the timetable for withdrawing from other courses (8-week, 4-week, etc.) will be determined on a pro rata basis according to these guidelines:

Effective Fall, 1982*

1. Classes dropped prior to the third week will not become a part of the student's permanent record.
2. A "W" grade will be assigned to a class dropped after the beginning of the third week and prior to the thirteenth academic week.
3. A grade of "F" will be assigned to a class dropped after the twelfth week of a full semester course.

*For guidelines on withdrawals prior to fall, 1982, consult the 1981-82 bulletin.

Academic Information

Grading

Academic Honors

Standards for Academic Performance

Probation

Honors Program

Incomplete Grades

Auditing a Course

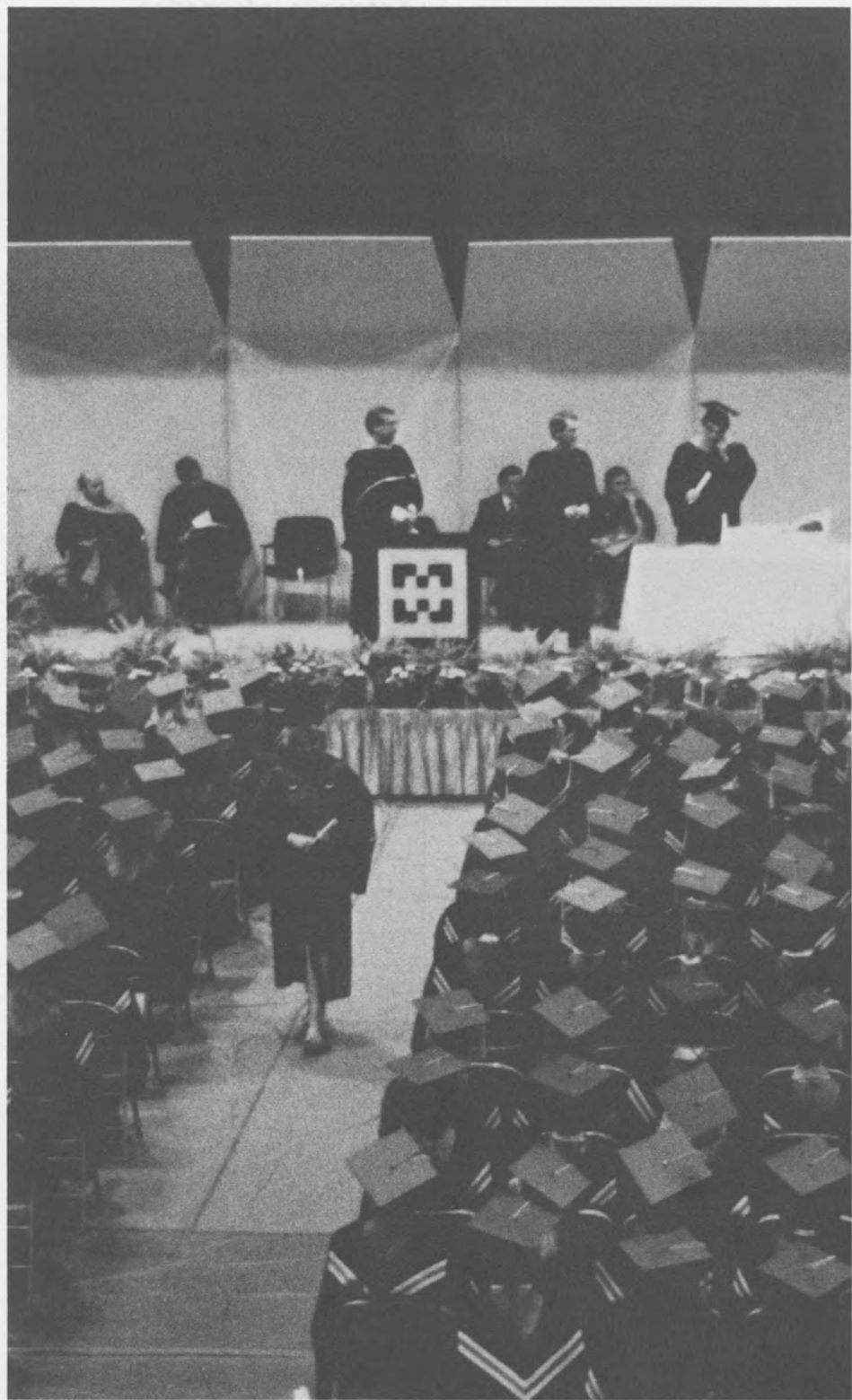
Transcripts

Transfer to a Senior Institution

Transfer of Credit to Harper College

Student Records Policy

Student Grievance Policy



Grading

At the end of each semester, the student will receive a grade for each class in which he was enrolled at the beginning of the fourth week of the semester. The official grade point average is computed on the basis of final grades awarded at the end of each semester or term.

Grade Points

Grade points are numerical values which indicate the scholarship level of the letter grades. Grade points are assigned according to the following scale:

Grade	Significance	Grade Point
A	Superior	4.0
B	Good	3.0
C	Average	2.0
D	Poor	1.0
F	Failure	.0
H	Audit	.0
K	Unfulfilled audit	.0
N	Non-Attendance	.0
P	Pass	.0
W	Withdrawal	.0
X	Incomplete	.0

Academic Honors*

Trustees' Honor List

Each semester, students achieving a grade point average of 3.75 to 4.00 are recognized as Trustees' Honor List students.

Dean's Honor List

Each semester, students achieving a grade point average of 3.50 to 3.74 are placed on the Dean's Honor List.

Honors List

Each semester, students with a grade point average of 3.25 to 3.49 are given recognition on the Honors List.

*Students must have accumulated 12 semester hours at Harper to be eligible for an academic honor.

Standards for Academic Performance

Students enrolled in an academic program must maintain minimum academic performance. In the following table are listed satisfactory and unsatisfactory standards for Harper students:

Attempted Cumulative Hours	Satisfactory	Unsatisfactory
7-18	1.00 or more	.99 and below
19-36	1.50 or more	1.49 and below
37-45	1.75 or more	1.74 and below
46 or more	2.00 or more	1.99 and below

Harper students who have accumulated seven semester hours or more and students who transfer from another institution must make satisfactory performance or be placed on probation.

Probation

Probationary students must raise their cumulative grade point average to the minimum required for the succeeding semester in which they are enrolled or they will be considered for dismissal. A probationary student may be required to carry a reduced number of semester hours, upon the recommendation of his student development faculty member, as an added incentive to increase academic performance.

A student placed on probation will automatically be removed from probation when his cumulative grade point average (GPA) meets the minimum standards for satisfactory performance. A student on probation whose cumulative GPA remains below satisfactory performance can continue on probation if his work in succeeding semesters gives hope that he can achieve a 2.0 average by graduation.

Repeat Policy

Students who have received "Ds" or "Fs" in courses will be allowed to repeat these courses and attempt to earn a higher grade. When such a course has been attempted more than once, only the highest grade received for that course will be used to compute the cumulative GPA. The lower grade will remain on the transcript but will not be used to compute the Harper College cumulative GPA. A student transferring to another college should check that school's repeat policy.

Behavioral Contracting

Behavioral contracting is the development of an agreement between a student development faculty member or teacher and a student, the objective being to raise the student's academic performance to the level of satisfactory status. The rationale for behavioral contracting is to provide additional incentives for academic performance.

Honors Program

Harper College seeks to stimulate, encourage, and recognize work of depth, scope, and originality by its students. These demonstrated student abilities have led nearly every department to supplement regular programs with honors options. Whether in transfer or career areas, students may elect honors options of four types:

1. Independent study
2. Courses specifically designed for honors candidates
3. Honors sections of existing courses
4. Honors enrichment topics or projects to augment regular courses

The College also offers several scholarships based primarily on academic achievement. (see Financial Aid section).

Incomplete Grades

A student may be assigned a grade of "X" for unfinished work in a course provided the work was incomplete because of circumstances deemed to be unavoidable or uncontrollable (to be determined by the instructor). The work to be completed will be assigned by the instructor. The unfinished work must be satisfactorily completed by the mid-term of the following semester of the instructor may assign a final grade of "F" or "N".

Auditing a Course

A student who wishes to audit a course will be required to pay full tuition and fees and must obtain approval from the instructor, department chair, or associate dean prior to enrollment in the course. At that time, a mutual set of expectations will be determined.

Registration for audit status in a course must be done before the end of the first week of class. All students taking a course for credit are given priority in registration over audit students.

Upon completion of the course, the instructor will assign an "H" grade if the agreed upon expectations are met, and a "K" if they are not.

Transcripts

Official transcripts of a student's academic record will be issued and sent, upon written request, to other educational institutions and prospective employers. Each student is entitled to three transcripts without charge. A fee of \$1.00 is charged for each additional copy. The College reserves the right to withhold transcripts of persons who have past due monetary obligations such as tuition, fees, or materials.

Transfer to a Senior Institution

Baccalaureate oriented credits earned at Harper College are transferable to other institutions of higher learning. Students intending to transfer to other institutions should consult with that institution as well as their student development faculty member to assure efficient transfer.

Transfer of Credit to Harper College

A student who has attended any other college(s) must have an official transcript from each college attended sent to the Admissions office immediately upon making application. A student may transfer credit to William Rainey Harper College according to the following conditions:

1. The collegiate institution previously attended must be an accredited and/or approved institution awarding college credit.
2. Credit may be transferred to Harper College for courses earning credit and successfully completed with a grade of "D" or above if the student's cumulative grade point average (GPA) is 2.0 or above ("C" average) at the previously attended institution. If the student's cumulative GPA is less than 2.0 at a previously attended institution, credit may be transferred for courses earning credit and successfully completed with grade of "C" or above. The student's work at each institution is evaluated independently if several institutions were attended.
3. Credit may be transferred, but the grades earned at other institutions are not transferred nor are the grades included in computing the cumulative GPA at Harper College.

4. Religion courses which are of a sectarian nature or courses which are not applicable to programs at Harper College may not receive transfer credit.

Student Records Policy

The Student Records policy at Harper College is governed by the Family Education Rights and Privacy Act of 1974. The law and the guidelines for its use at Harper College are available in the Office of the Registrar.

Student Grievance Policy

A Student Grievance policy and procedure is available for students who feel improper, unfair, arbitrary, or discriminatory judgments or improper use of procedures have been applied to them directly by the college or a college representative. A copy of the procedure can be obtained in the Student Senate office, Student Activities office, or office of the vice president of student affairs.

Student Services

Student Development Services

Orientation

Vocational and Academic Testing Services

Proficiency Credit Program

Financial Aid

Placement and Career Development Services

Veteran Services

Student Activities

Conduct

Athletics

Food Service

Student Senate

Child Learning Center

Health Services

Disabled Student Services

College Services

Student Development Services

Counseling and guidance are important functions of a comprehensive community college. Harper recognizes this fact and has developed an extensive program of student development services. Student development faculty serve as academic advisors to all students, especially in the areas of program selection and career decision-making. Students are also encouraged to see student development faculty members when personal or social problems arise.

The Student Development Centers maintain a collection of information on vocational and college selection and college catalogs for personal use by the students. Up-to-date transfer information on area colleges and universities is available, including specific information on program requirements for transferring to these institutions. In addition the library maintains a subscription service to current copies of all U.S. College catalogs on microfiche.

A cluster counseling approach is used at Harper, with student development faculty housed in three counseling centers on campus. These are located in Buildings A, D, and I. Counselors are available during the College's day and evening hours, and may often be consulted without an appointment.

Human Potential Seminars and Career Planning and Development Seminars are offered as PSY 110 and PSY 111 for one hour credit each. These classes meet as small groups led by student development faculty. Other small group experiences are also offered from time to time.

Orientation

An orientation program for new full-time students is conducted prior to the start of fall and spring semesters by the Harper College Student Development staff. This program explains to new students the services and opportunities at Harper College and helps them select and register for their first semester courses. The orientation program is divided into two parts: assessment and advising/registration. New full-time students are notified by mail of this program.

Vocational and Academic Testing Services

A comprehensive testing program is available to students enrolled in six credit hours without charge. Test results, through proper interpretations, can give valuable information helpful in making decisions about future plans

and goals. In addition to personality, interest, and aptitude tests, national testing programs such as GED, ACT, CLEP, and dental hygiene aptitude are administered at Harper College.

Proficiency Credit Program

Students with wide varieties of educational experience may convert this experience into college credits on the basis of satisfactory performance on proficiency examinations. A student who has been officially accepted as a Harper student may apply for and receive college credit by meeting the course objectives for no more than one-half of the academic program required for graduation at Harper. This would include Advanced Placement (AP) credit, College Level Examination Program (CLEP) credit, Harper College Proficiency Examination credit, and Defense Activity for Non-Traditional Educational Support (DANTES, previously USAFI) credit.

Guidelines, policies, and procedures for this program are available from the Office of Testing Services.

Advanced Placement Program (Offered Only in High School)

Credit and placement will be awarded to students with adequate Advanced Placement (AP) examination grades in areas comparable to the Harper curriculum. The granting of credit and/or advanced placement will be determined following the guidelines listed in the "Proficiency Credit" bulletin available in the Office of Testing Services.

College Level Examination Program

Credit through the College Level Examination Program (CLEP) is available to all students who feel they have acquired the necessary proficiency level to meet the requirements in a variety of subjects not covered by Harper College proficiency tests. A student who has previously completed CLEP tests should request that the scores be sent to the Office of Testing Services. Information regarding CLEP examinations may be obtained by requesting a copy of the CLEP "Registration Guide" and Harper CLEP schedule from the Office of Testing Services. Criteria for granting credit have been determined by each academic division. Granting of CLEP credit by Harper College is contingent upon completion of application procedures.

Harper College Proficiency Examination Program

A student who wishes to receive credit for a course not covered by the College Level Examination Program should secure an "Authorization to Apply for Departmental

Proficiency Credit" from the Division responsible for the course. Additional forms must then be completed by the Office of Testing Services, and a fee of \$8.00 per credit hour paid before the test can be administered.

Applications for these examinations may be denied due to the nature of the course or because a suitable examination is not currently available.

Armed Services Experience Credit
Credit will be granted for educational experience completed while in the Armed Services. Applicants submitting DD Form 214, Armed Forces of the United States Report of Transfer or Discharge, a transcript of in-service training from the appropriate service, or an official report of educational achievement through Defense Activity for Non-Traditional Educational Support (DANTES, previously USAFI) will receive credit and advanced placements as recommended by the Commission on Accreditation of Service Experiences of the American Council on Education. These recommendations will be considered if the courses are equivalent to the courses offered by the college.

Financial Aid

Harper College offers a diversified and comprehensive financial aid program. Harper participates in the following:

Federal Programs

College Work Study (on and off campus)
National Direct Student Loans
Nursing Loans and Scholarships
Armed Forces Tuition Assistance
Supplemental Educational Opportunity Grants
PELL

State-Sponsored Aid Programs

Illinois State Scholarships and Monetary Awards
Illinois Guaranteed Loans
Illinois Military Scholarships
Division of Vocational Rehabilitation Programs
Illinois National Guard Scholarships

Scholarships

Each year the Board of Trustees of Harper College offers to graduates of high schools within the Harper district a series of scholarships called Trustee Scholarships. The Trustee Scholarship will also be awarded to four students selected from the general college in-district population who are not recent graduates from one of the district high schools.

During the 1980-81 academic year, several scholarships for Harper students were established based primarily on academic achievement. The Harper College Educational Foundation "Award for Excellence" is the highest honor a Harper student can achieve. Application for this scholarship is open to students from all college degree programs who meet criteria of grade point average, service, and faculty recommendation.

Students in the Technology, Mathematics and Physical Science Division may apply for scholarship awards from a fund established by the Division. Additional scholarships in this area of study have been provided by UOP, and Amersham Corporation. Academic achievement is a major qualification for these scholarships.

In addition, many private and public agencies are ready and able to assist the worthy college student. Funds are also available through local organizations such as women's clubs, Rotary, and chambers of commerce.

There are many ways to put together needed college funds. Some students receive outright grants or scholarships for a portion of their expenses. Loans up to \$3000 each academic year (interest free and no payments while the student is in college) can be obtained. Last but not least, jobs for students under work-study or other employment programs can be obtained to assist with college financing.

Many students utilize a package aid program combining funds from two or three sources to pay for their college education—in addition to what they can expect to receive from their parents. More than 1,600 Harper College students are receiving some form of assistance in programs administered by the Office of Financial Aid.

Students who plan to attend Harper College and have a need for financial assistance should take the following steps:

1. Submit an application for admission to Harper College
2. Complete the following applications for financial assistance:
 - A. Illinois State Scholarship Commission
 - B. PELL Grant
 - C. Financial Aid Form
 - D. Harper College Financial Aid Application

It is important to complete all these forms, as financial assistance can be received from several sources simultaneously.

Certain financial aid programs have specific standards for academic performance which the student must meet in order to maintain eligibility.

Information on all scholarships, grants, and loans may be obtained from the Office of Financial Aid.

Placement and Career Development Services

A representative of the Illinois State Employment Service has an office on campus. This person provides job placement services to Harper students at no charge.

Career resource materials are maintained in each of the student development centers and staff members are available to assist students who wish to use these resources.

Student development staff provide a variety of career development services including individual counseling and testing and career planning seminars.

Veteran Services

Harper College maintains a full-time Veteran Affairs Office which has responsibility for veteran enrollment, certification, special education programs, and tutorial programs.

Eligible veterans under the Vietnam G.I. Bill receive a monthly educational allowance to attend school. Development courses are designed to satisfy education needs or prepare the veteran for more advanced training. Pre-college courses are not charged toward the veteran's entitlement time although they will be paid by the VA. Full-time veteran students are also eligible for Veterans' Work-Study. Others who may be in doubt as to whether or not they are eligible under the VA Widows' Compensation, Vocational Rehabilitation, and other special programs should contact the college veterans' coordinator.

Illinois Veterans who served on active duty for at least one year in World War 1 or any term after September 16, 1940 are eligible for the Illinois State Veterans Scholarship.

Additional benefits are available to the veteran who is experiencing difficulty in completing his educational objectives. The VA will pay supplementary benefits (up to \$69 per month for a maximum of \$828) for individual tutoring.

Harper has been designated as a Serviceman's Opportunity College by meeting or exceeding the following criteria: Uncomplicated and non-

restrictive admission policies; providing for servicemen to pursue educational programs through courses offered on weekends, evenings, and other non-traditional times; and offering maximum credit for educational experiences obtained in the Armed Forces.

The Veterans' Outreach Division actively seeks out "returning" veterans in the college district and provides veterans with information concerning college programs and curricula. Veterans are also assisted in securing rights, benefits, and services available to them.

Questions concerning veterans' affairs should be directed to the veterans' coordinator.

Student Activities

A comprehensive activities program is available which includes a college/community program series of lectures, concerts, films, art exhibits, and theater productions sponsored by a student-faculty Cultural Arts Committee; social programs of concerts, films, special events, mini-courses and other programs of interest sponsored by the student College Center Program Board; student publications including the college newspaper *Harbinger*, and a literary and visual arts publications, *Point of View*; a closed circuit student radio station, WHCM; speech activities; a student travel program; free legal and medical advice; student government; and a program for student leadership development. These programs are financed by student activity fees.

A number of clubs are active, and students are encouraged to begin other organizations within the established guidelines. Among the clubs recognized are: Astronomy Club, Association of Legal Students, Baha'i Club, Catholic Campus Ministry, Chess Club, Circle K, Collegiate Illinois Association of the Deaf, Data Processing Association, Electronics Club, Food Service Association, Future Secretaries Association, Harper's Bizarre (Fashion Design), Geology Club, Intramural Sports Board, Junior American Dental Hygienist's Association, Operating Room Technicians, Phi Theta Kappa (Honorary), Photography Club, Physical Education Majors, Political Science Club, S.E.A.R.C.H. (Solar Energy), Seekers, Sophomore Nurses and Ski Club.

Conduct

Harper College respects the civil rights and liberties of each member of the college community. A student conduct code has been established to insure these rights and responsibilities. All students are held to be

informed of the rules pertaining to these rights and responsibilities which are printed in the *Student Handbook*.

Athletics

Harper College is a member of the North Central Community College Conference (N4-C) which includes Triton, DuPage, Wright, Thornton, Illinois Valley, Rock Valley and Joliet Community College for the total membership of the conference.

In addition, Harper College is a member of the National Junior College Athletic Association (NJCAA) which has a membership of approximately 560 junior community colleges throughout the United States.

Harper College participates in football, cross-country, golf, women's tennis, basketball, women's basketball, wrestling, soccer, track, tennis, baseball, women's volleyball, women's softball, men's and women's swimming.

An extensive intramural program is also available for the Harper students. Activities are promoted both on and off campus. To name a few, activities include flag football, bowling, tennis, water polo, billiards, track, wrestling, weight lifting, softball, and ice skating.

Food Service

The Harper Food Service offers breakfast, lunch, and dinner Monday through Thursday, and breakfast and lunch on Friday in the College's cafeteria in Building A. Operating hours are as follows:

Monday through Thursday 7:30 am-7:30 pm
Friday 7:30 am-3:15 pm

A snack bar is located on the second floor of Building A near the student lounge. Hours are posted at the snack bar.

Food Service also maintains food vending machines located in buildings throughout the campus.

Food Service also does "on campus" catering for breakfasts, luncheons, dinners, and special events. This service is available to faculty, staff, and students. Call 397-3000, extension 571.

Harper operates a "mini-bakery" in the College's cafeteria where a variety of bakery products is available several days per week.

Student Senate

The Student Senate is the student government body through which students are represented to the Board of Trustees, administration and faculty. They are responsible for budgeting the student activity fee to provide for a variety of social, cultural, and recreational activities as well as special programs and services. They also act upon student concerns, appoint students to college committees, review and recommend changes in college policy, recognize student clubs and organizations, and in general promote student welfare.

Child Learning Center

The Child Development Program offers:

Child Care Room with flexible hours (7:45 am-4:30 pm) for a fee for those parents who are on campus attending a class or workshop.

Preschool program for children of students, faculty and from the community at large. The children are registered for set sessions which coincide with Harper's calendar.

Advance registration is required for both programs, and early registration is advised as the Centers often reach capacity. For more information, call 397-3000, extension 262.

Health Services

Academic achievement and a choice of educational goals are largely dependent upon the physical and emotional well-being of the student. The college's acceptance of this fact has meant the recognition of its responsibility to provide a health program equal to the health needs of the students.

The health services program is directed by a registered nurse with experience in counseling. A part-time physician is available on selected days in the health service to see, diagnose, treat, and refer students as necessary during fall and spring semesters. There are also medications available for treating minor illnesses, as well as testing for strep throat, mononucleosis, pregnancy, tuberculosis, and venereal disease. Students are encouraged to use health service facilities when ill or injured as well as for confidential counseling and care regarding personal health problems. A rest area is available to students, faculty, and staff. Community health resources are utilized for referral when necessary.

Disabled Student Services

Supportive services are available to students with disabilities. These services may include: reading/recording of texts, scribing, counseling and registration assistance. In addition, specific support services available to hearing impaired students are interpreting, notetaking and tutoring.

Students interested in securing these services should contact the Coordinator of Disabled Student Services at the earliest possible date.

College Services

Harper College programs and facilities are accessible to handicapped persons.

Complete college services may not be available at all off-campus or extension locations.



Continuing Education and Community Services

Continuing Education

Employer Based Program

University Extension Courses

Special Services

College Community Programs

Open Test Center for CLEP

Open Test Center for GED

Community Counseling Center—A Service for
Non-Harper Clients

Continuing Education

Harper College believes that education must be a lifelong pursuit to keep abreast of the knowledge explosion and the pervasive influence of social and cultural changes. To meet the educational needs of adults, the college has developed a complete schedule of credit and credit-free offerings. In addition, graduate extension courses are offered on the Harper campus by Illinois colleges and universities.

The Continuing Education program seeks to provide adults with a variety of ways to continue their education in a formal or informal manner. Seminars, conferences and workshops are conducted which are designed to meet the special needs of community interest groups. The needs of business and industry are met through management training seminars. Special programs are offered relating to women's interests in today's changing world along with many other seminars in community leadership training and senior citizen activities.

Harper seeks to extend its educational offerings to other community locations. Credit and credit-free extension offerings are offered at industrial plants, high schools, libraries, apartment buildings, shopping centers and local government offices.

Every effort is made to provide course offerings that respond to community needs and afford both enjoyment and practical benefits. Expansion of Harper's role in assisting community agencies and institutions to achieve their goals is an objective of the college.

Institute for Management Development
Harper College offers business and industrial personnel the opportunity to participate in management and supervisory training seminars scheduled during the course of the academic year. The management training program was created through the joint participation of the college and northwest suburban business and industrial representatives who serve as members of the Harper College Business-Industrial Steering Committee.

Every effort is made to provide training programs related to the needs of area business organizations. The seminars are led by nationally-known experts in the fields of specialized management training and Harper faculty.

A list of seminars and workshops held at Harper during the past year includes such subjects as problem solving, improving

employee performance, the art and skill of delegation, motivation, efficient communication, team building, employee relations, managing time, and business writing.

Northwest suburban business concerns can now arrange to have their employees attend the local management seminars and workshops at a fraction of what it would cost to attend these same offerings when they are sponsored by professional associations at locations in other parts of the country. Special rates are available to organizations sending "groups" of employees to the training sessions. As an additional service, management training seminars and workshops can be brought to local businesses as a component of in-plant training.

Senior Citizen Program

Objectives of the Senior Citizen Program are to make Harper's existing services and programs available to older persons, to structure specific programs especially for them, and to provide opportunities for professional growth and exchange for those who are concerned with meeting the needs of aging citizens in our community.

All district residents 60 or older are eligible for reduced tuition rates for all courses and workshops offered by the college. Some programs are placed at locations in the community, including senior citizen centers, churches and nursing homes, so that transportation problems are minimized. The services of the college, including the Student Development Center, Dental Hygiene Clinic and Learning Resources Center are all open to senior citizens. Older persons are welcome and encouraged to attend cultural events sponsored by the Student Activities office.

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 406.

Community Development Education Center

The purpose of the center is to promote a better informed citizenry in the areas of government and leadership. The center's objectives are to provide information and skills to public officials and professional staff, to increase their efficiency, to interest citizens in becoming more informed and active in all phases of the community, and to bring together citizens, officials, and staff to facilitate greater interaction and understanding between these groups. Seminars, workshops, and special conferences are planned to meet these objectives. Offerings to municipal employees and government officials are provided in cooperation with the Northwest Municipal Conference.

Center for Material Management Education

The purpose of the center is to provide training and enriching educational experiences for business professionals in purchasing, inventory control, production control, material handling, physical distribution, receiving and shipping, warehousing, and material requirements planning. Offerings within the center include non-credit, seminars as well as college-credit courses.

Center for Real Estate Education

The purpose of the center is to provide training and enriching educational experiences for those entering or increasing their professionalism in the real estate business. Offerings include courses to meet educational requirements for the salesman's and broker's licenses, exam review workshops prior to every monthly state licensure examination, and other activities developed in cooperation with an advisory committee of practicing real estate professionals.

The Center For Small Business Education

This Center was organized to develop a seminar series for the person interested in beginning his/her own business or who is interested in developing management expertise for a small business. There are seminars and courses for those interested in computer operations for small businesses, financial planning, opening a restaurant or catering business, and entering the export market. New courses and seminars are created as the needs of the small business community are recognized.

The Center For Office and Administrative Services Education

This Center was established for office administrators and secretaries who wish to update their skills in such practical areas as word processing and business correspondence. Other areas of significance are managing secretarial responsibilities and communication skills that are necessary to work well with peer groups and management. As the needs of the business community change, the courses and seminars offered also change to meet current needs.

Health Care Program

The purpose of continuing education at Harper College directed toward health care professionals and allied health care personnel is to improve health care in the community. The program has been designed to meet needs of the consumer, the individual health care worker and the employer of health care personnel for continuing education. It has also been set up to work cooperatively with other health agencies in the community to determine and provide for learning needs of those providing health care.

The Health Care Program functions within the guidelines of each professional association. Course offerings, seminars, workshops and conferences carry professional association continuing education credit when indicated.

The Health Care Program offers basic courses for beginning health workers in the continuing education mode and learning experiences beyond basic educational programs for professionals. These are designed to promote the development of sound health care practices, thus improving health care to the public.

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 406.

Women's Program

At a time when questions of optional life styles are being raised, the Women's Program attempts to help women know themselves better, to understand their relationships within their society, and to participate more effectively in their chosen roles. Workshops, continuing education offerings, credit program offerings and referral services are designed to provide women with information, skill development, and personal guidance in the areas of individual growth and awareness, interaction and communication with others, career development, community awareness and involvement, and women's studies.

A special effort has been made to schedule programs at convenient times for women and to provide day long child care facilities at the college at a minimal cost.

Employer Based Program

Harper will provide credit and non-credit offerings to employees of industry, business, agencies and public institutions. Need assessment and other program development services are available to help these organizations determine training needs and the resources available through the college. Credit courses as well as non-credit seminars and workshops can be delivered through these special contractual arrangements.

University Extension Courses

University undergraduate and graduate level instruction is offered at Harper College through extension courses from various four-year colleges and universities. With proper planning and counseling, it is possible for a person to earn most or all of the requirements for a bachelor's or master's degree in

business administration or a master's degree in education on the Harper campus or in various Harper district locations.

A Bachelor of General Studies (B.G.S.) degree with an area of study in Administrative Studies is offered at Harper College by Northern Illinois University's College of Liberal Arts and Sciences as an academic option which allows a student to construct an individualized program of study which does not require a formal major. The degree program appeals primarily to adult learners whose educational objectives include personal development rather than preparation for graduate study or a specific professional career.

The degree is intended as a capstone to build upon the Harper or other community college associate degree programs which include 60 semester hours (or the equivalent quarter hours) of transferable course work.

Special Services

Courses and Programs

Learning Skills

Students entering college with academic deficiencies may be referred to the learning skills laboratory. After completing a battery of tests and having an interview with a student development faculty member, a program designed around the needs of the student would be recommended. This program could consist of any combination of the courses presently offered through the developmental and skills courses in arithmetic, reading, English language, and college learning skills.

English as a Second Language

Eight levels of English as a Second Language (ESL) courses are offered for limited-English-speaking adults. Six levels of core courses that include listening, speaking, reading, and writing skills prepare students for everyday life in the U.S. Students in the first six levels may also take supplementary courses in basic literacy, reading, writing, and conversation. At the seventh level students may take advanced courses in reading, composition, conversation, grammar, vocabulary, pronunciation, and preparation for the TOEFL Examination. Students at the eighth level prepare to enter college in the U.S. or to function in business, industry, and the professions.

Daytime and evening courses are offered at the Palatine campus and at other locations in the community. Students are tested during registration for placement in classes. Limited tutoring and counseling services are available. For more information, contact the English as a Second Language Program Coordinator.

Basic Skills and GED Test Preparation

The Adult Basic Education (ABE) program provides instruction for persons sixteen years old and over who have not completed a secondary education program in the United States, who have not passed the General Educational Development (GED) high school equivalency tests, and who are not currently enrolled in a secondary school.

Daytime and evening courses are offered in reading development; basic English skills; basic mathematics; GED social studies, science, and constitution review; GED grammar review, GED mathematics, and citizenship training. Students are tested during registration for placement in classes. One-to-one instruction, tutoring, and counseling services are also available.

Persons under nineteen years of age should contact the GED coordinator for other test eligibility requirements.

College Credit Courses

Sign language courses (SGN 101, 102, 201) are offered for college credit at beginning, intermediate, and advanced levels for those interested in communicating with hearing impaired persons.

Human potential seminars (PSY 110) and career planning and development (PSY 111) are offered for college credit for those interested in examining individual human potential and individual career path planning.

Services

Tutoring Services

As a part of the Learning Skills Laboratory a "walk in" tutoring service has been developed for Harper students. During posted time periods, a student can come to the laboratory and receive academic assistance. Tutoring is available for most subjects offered by the college. Further information can be obtained from the Learning Skills Laboratory.

College/Community Programs

A student-faculty Cultural Arts Committee provides the college and community with programs representative of the various arts—dance, drama, exhibits, film and music, and a lecture series for discussion of relevant issues. These programs are sponsored by the Student Activities Office and financed by student activity fees.

Open Test Center for CLEP

The College Level Examination Program (CLEP) tests sponsored by the College Entrance Examination Board are administered monthly except February and December by the Office of Testing Services. This program offers a means of converting knowledge gained in a variety of ways into college credit. Students are urged to contact the college of their choice to determine if they will accept and act upon results of the examinations.

Open Test Center for GED

Harper College is an approved test center for the General Educational Development test. Upon passing the GED test, a high school equivalency certificate will be issued by the Cook County Superintendent of Schools. Tests are offered monthly at Harper.

Community Counseling Center

Harper's Community Counseling Center makes psychological services available to non-student residents of the community, on a fee basis.

Clients are assisted in making intelligent occupational choices through the use of psychological and vocational counseling. This service includes the administration and interpretation of intelligence and personality tests, as well as measurements of interests and preferences. Clients are aided in an exploration of the world of work, job interviewing, and resume writing.

Another function of the center is to provide an evaluative, diagnostic, and psycho-therapeutic service for adults and adolescents with personal, social or emotional problems. The broad gamut of problems our staff works with includes marital discord, divorce adjustment, sexual problems, family relationships, and drug related problems.

The Community Counseling Center is located in Building A, room 347. Further information may be obtained by calling the Community Counseling Center, at 397-3000, extension 273.

Programs of Study and Requirements

General Education Requirements

Graduation Requirements

General Studies Certificate Requirements

Career Programs

Transfer Programs

Cooperative Programs

Associate Degree Curricula

Certificate Programs

Associate Degree Requirements

General Education Requirements:

	Associate in Arts	Associate in Science	Associate in Applied Science
I. Communication Skills ENG 101, ENG 102, ENG 201, ENG 220	6 hours	6 hours	6 hours ¹
II. Social Sciences anthropology, economics, geography, history, political science, psychol- ogy, sociology	6 hours	6 hours	6 hours
III. Science or Mathematics astronomy, biology, chemistry, engineering ² , geology, mathematics, physical science, physics	8 hours	20 hours	6 hours ³
IV. Humanities art, foreign language, humanities, literature, music, philosophy, fine arts, SPE 107, SPE 111, SPE 212	6 hours	6 hours	3 hours
V. Twelve hours to be taken in at least two of the following areas: communication ⁴ , social sciences, science or mathematics, humanities, PED 203, PSY 100	12 hours		
Total General Education Requirements	38 hours	38 hours	21 hours
Other Degree Requirements:			
A.A. Electives	22 hours		
A.S. Electives		22 hours	
A.A.S. Technical Requirements and Electives			39 hours
TOTAL	60 hours	60 hours	60 hours minimum⁵

¹The following courses may be used to satisfy this requirement if a part of the approved career program: ENG 100, ENG 103, ENG 130, JNM 130, JNM 131, JNM 133.

²Courses in engineering may apply to the general education requirements in Group III in the Associate in Science and Associate in Applied Science degrees.

³Students majoring in a career program may count courses in their major toward fulfillment of this requirement.

⁴In addition to the listed courses in Group I, the following can be used to fulfill the Group V requirement: SPE 101, SPE 102, SPE 115, SPE 205, RDG 104, RDG 106, ENG 103 and ENG 130.

⁵See item 7 in Graduation Requirements.

Graduation Requirements

1. Attainment of a minimum of 60 semester hours of credit, at least 30 of which must be earned in attendance at Harper College. Waiver of the latter requirement by the vice president of academic affairs may be made where exceptional circumstances warrant. Up to two hours credit in physical education activity courses may be included as free electives in the minimum 60 required hours for an associate degree. A maximum of four semester hours of Independent Study credit may be included as free electives in the minimum 60 required hours for an associate degree.
2. Attainment of a minimum grade point average of 2.0 for all work taken for the associate in arts and the associate in science degrees. Attainment of a minimum grade point average of 2.0 for any applicable 60 semester hours work for the associate in applied science.
3. Meet the Constitution Requirement of the Illinois State School Code. This can be met by (1) submitting an official Illinois high school transcript stating the requirement has been met, or (2) successfully completing PSC 201, or (3) successfully passing a college administered test of the U.S. Constitution, Illinois Constitution, the proper use and display of the American flag, and the principles of American democratic government.
4. Requirement of 60 hours must be in courses numbered 100 or above for the degrees of associate in arts or associate in science.
5. Enrollment in Harper College during the semester in which graduation requirements are completed. Waiver of enrollment requirement may be made by the vice president of academic affairs where exceptional circumstances warrant.
6. Fulfillment of the degree requirements.
7. In addition to the above requirements, students enrolled in a specific career program will fulfill the requirements outlined in that program. Any changes in program requirements necessitated by licensing and/or accrediting agencies must be observed by students who are already admitted and in process in their programs.
8. A student must apply for graduation and pay the graduation fee of \$15.00. Notification of the student's intent to graduate will be accepted in the Registrar's Office no later than one week after the midterm of the semester in which the student intends to graduate.

Students are encouraged to complete their petition for graduation when registering for the semester in which their graduation requirements will be fulfilled.

General Studies Certificate Requirements

Students enrolled in Continuing Education offerings carrying General Studies credit can apply their course work to a General Studies certificate. Such a certificate is meant to recognize those who diligently pursue a sequence of Continuing Education offerings.

Requirements for the certificate in general studies are as follows:

1. Successful completion of nine General Studies credit hours.
2. A grade of "P" (Pass) indicates successful completion of a course for purpose of granting credit. A grade "W" indicates that the class has not yet been satisfactorily completed.
3. Courses/seminars taken at other institutions are not applicable to a general studies certificate.

A \$10.00 non-refundable fee will be charged to those who wish a certificate upon completion of the Certificate in General Studies program. This fee is payable at the time when the certificate is applied for. Anyone who wishes to have his past continuing education work included for the Certificate in General Studies may do so by applying to the Director of Continuing Education and Program Services. Anyone who registers for a Continuing Education offering automatically enters the Certificate in General Studies program.

Check the current college course schedule for a list of those offerings available for general studies credit.

Statement of Completion

Students enrolled in any Continuing Education offering may be awarded a Statement of Completion for successfully completing the offering. For Continuing Education courses, satisfactory completion is evidenced by a grade of "P" (Pass). The Statement of Completion must be applied for in the office of the division in which the offering is scheduled.

Career Programs

Harper College offers the following career/vocational programs. Both associate degree and certificate programs are offered except where indicated.

Accounting Aide
Accounting Clerk¹
Accounting—Payroll¹
Agricultural Marketing—
Commodity Futures²
Architectural Technology
Auto Body Repair and
Painting^{1,9}
Automotive Technology⁹
Aviation Maintenance
Technology³
Baking¹
Banking, Finance and Credit:
Banking option
Savings & Loan option
Brokers License Certification¹
Building Codes and Enforcement¹
Building Construction Technology:⁹
Construction Layout¹
Construction Management¹
Business Machine Repair Technology²
Certified Professional Secretary¹
Child Development
Civil Technology:⁹
Materials Testing and Inspections¹
Project Inspector¹
Clerical¹
Clerk-Typist¹
Cooking¹
Criminal Justice
Data Processing—Clerical¹
Data Processing—Computer Operator¹
Data Processing Technology
Dental Assisting^{8,9}
*Dental Hygiene^{5,9}
Dental Laboratory Technology⁴
*Dietetic Technician^{5,6}
Digital Electronics and
Microprocessor Technology
Electronics Technology
Executive Secretarial Development
*Fashion Design⁵
Fashion Merchandising⁸
Fire Science Technology
Fluid Power Technology⁹
Food Service Management
General Office Assistant¹
Heating Service¹
Horticulture
Human Services Technology⁹
Industrial and Retail Security¹
Industrial Sales Management and
Development¹

Industrial Skilled Craft Training:⁹
Industrial Building Construction¹
Industrial Electrician¹
Industrial Heating, Ventilating,
Air Conditioning¹
Industrial Mechanical Maintenance¹
Industrial Welder¹
Machine Repair¹
Maintenance Machinist¹
Millwright¹
Moldmaker¹
Pipefitter¹
Tool and Die¹
Tool Grinder¹
Industrial Supervision⁹
*Interior Design^{5,6}
Journalism⁶
Legal Secretary
*Legal Technology⁵
Library Technical Assistant⁷
Machinist¹
Marketing/Management
Material Management
Mechanical Drafting¹
Mechanical Engineering Technology:
Mechanical Engineering option
Production Engineering option
Medical Laboratory Technology^{8,9}
Medical Office Assistant⁸
Medical Record Technology^{2,8}
Medical Transcriptionist¹
Numerical Control Technician¹
*Nursing⁵
*Operating Room Technician^{1,5}
Park and Grounds Operation
Management
Physical Therapist Assistant²
Plant Maintenance²
Production Welding¹
Public Administration
Radiography^{8,9}
Real Estate
Refrigeration and Air Conditioning
Refrigeration Service¹
Residential Comfort Systems¹
Respiratory Care⁴
Retail Merchandising¹
Stenographer¹
Supervisory and Administrative
Management
Vending Machine Repair¹
Water-Wastewater^{1,9}
Word Processing¹
Word Processing Operator¹
X-Ray Technology⁴

*Enrollment in program is limited. See Application Procedures Section of this Bulletin for guidelines

¹Certificate program only.

²This program is offered by Oakton Community College through cooperative agreement. Contact the Admissions Office for details.

³This program is offered by Rock Valley College through cooperative agreement. Contact the

Admissions Office for details.

⁴This program is offered by Triton College through cooperative agreement. Contact the Admissions Office for details.

⁵Refer to page 14 for admission information.

⁶Associate degree program only.

⁷This program is offered by the College of DuPage through cooperative agreement. Contact the Admissions Office for details.

⁸This program is offered by Elgin Community College through cooperative agreement. Contact the Admissions Office for details.

⁹This program is offered by College of Lake County through cooperative agreement. Contact the Admissions Office for details.



Cooperative Programs

Harper College has Joint Educational Agreements with various area colleges. Under these agreements, Harper district residents who are admitted to the programs listed below will usually be allowed to attend at the sponsoring college's in-district tuition rate.

The cooperating college will issue all degrees or certificates for successful completion of the program. Program and admission information may be obtained by calling the Director of Admissions at the college offering the program, as listed below.

College of DuPage _____ 858-2800
Lambert Road and 22nd Street
Glen Ellyn, Illinois 60137

Library Technical Assistant

College of Lake County _____ 223-6601
19351 West Washington Street
Grayslake, Illinois 60030

Auto Body Repair and Painting
Automotive Technology
Building Construction Technology
 Construction Layout
 Construction Management
Civil Technology
 Materials Testing and Inspection Project
Dental Assisting
Fluid Power Technology
Human Services Technology
Industrial Skilled Craft Training
 Industrial Building Construction
 Industrial Electrician
 Industrial Heating, Ventilating,
 Air Conditioning
 Industrial Mechanical Maintenance
 Industrial Welder
 Machine Repair
 Maintenance Machinist
 Millwright
 Moldmaker
 Pipefitter
 Tool and Die
 Tool Grinder
Industrial Supervision
Medical Laboratory Technology
Medical Record Technology
Radiography
Water-Wastewater

Elgin Community College _____ 697-1000
1700 Spartan
Elgin, Illinois 60120

Dental Assisting

Oakton Community College _____ 635-1600
1600 East Golf Road
Des Plaines, Illinois 60016

Agricultural Marketing—Commodity Futures
Business Machine Repair Technology
Medical Record Technology
Physical Therapist Assistant
Plant Maintenance

Rock Valley College _____ (815) 226-2600
3301 North Mulford Road
Rockford, Illinois 61101

Aviation Maintenance Technology

Triton College _____ 456-0300
2000 Fifth Avenue
River Grove, Illinois 60171

Dental Laboratory Technology
Respiratory Care
X-Ray Technology

Harper College programs available to residents of other college districts under cooperative agreement are as follows:

Legal Technology DuPage, Lake County, Rock Valley, and Oakton Community College districts.

Fashion Design Lake County and Oakton
Interior Design Community College districts.

Dental Hygiene Lake County and Triton
Dietetic Technician College districts.

Dental Hygiene Elgin Community College district.

Baking College of Lake County
Banking, Finance and Credit district.

Building Codes and Enforcement

Cooking
Food Service Management
Industrial and Retail Security
Journalism

Legal Secretary
Material Management
Medical Office Assistant
Operating Room Technician
Park and Grounds Operation Management

Transfer Programs

An important role of a community college is to provide programs of study allowing students to complete requirements for the first two years of a baccalaureate degree. Harper defines these programs as transfer programs.

Practically every senior college and university has general education requirements for graduation. These include courses in English, the humanities, social science, and science and mathematics. Students are encouraged to consult with a Harper College student development faculty member and the catalog of the senior college or university where they expect to transfer for the most appropriate courses to take while at Harper.

Students planning to pursue a four-year baccalaureate program but not sure of their area of specialization, are advised to pursue the associate in arts or associate in science degree course requirements. These programs basically meet the two-year requirements of most institutions; they do not, however, offer the opportunity to begin work in an area of specialization.

Major fields of study include: Business Administration, Education, Engineering, Fine Arts, Humanities, Liberal Arts, Mathematics, Medicine, Science, and Social Sciences.

Cooperative Transfer Program

Governors State University is an accredited, public supported state university which accepts only transfer students who have completed at least two years of college study.

Harper College and Governors State University have developed cooperative programs in business and secretarial science areas. The cooperative programs allow a student to transfer from arts and sciences, business or secretarial science at William Rainey Harper College to business or secretarial science at Governors State University to continue study toward the Bachelor of Arts degree in Business Administration or Business Education from Governors State University. Courses in these programs are now being offered in the Harper College area.

Program and admission information may be obtained by calling the Office of Admissions at Harper College or the University:

Admissions Office
Governors State University
Stuenkel Road
Park Forest South, Illinois 60466
Telephone: 312/534-5000



Accounting Aide

Accounting Aide is a two-year career program leading to an associate in applied science degree. The curriculum includes the study of accounting theory and practice, partnership and corporation accounting, and cost accounting. The program is designed to prepare students for employment as junior accountants in business, industry, and government.

First Year _____

First Semester

ACC 101 Principles of Accounting Theory I _____	3
DPR 101 Introduction to Data Processing _____	3
English ¹ _____	3
MGT 111 Introduction to Business Organization _____	3
Mathematics ² _____	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II _____	3
DPR 106 Computer Logic and Programming Technology _____	3
ECO 200 Introduction to Economics _____	3
ENG 130 Business Writing I ¹ _____	3
Humanities elective _____	3
	<u>15</u>

Second Year _____

First Semester

Accounting/DPR elective ³ _____	3
ACC 201 Intermediate Accounting I _____	3
ACC 211 Business Law I _____	3
DPR 108 Computer Programming (COBOL) _____	5
Social Science elective _____	3
	<u>17</u>

¹Students may elect ENG 100, ENG 101, or ENG 102, depending on their test scores and advice of a student development faculty member. ENG 130 may be taken as the second English course.

²Students may elect any mathematics course offered depending on their test scores and advice of a student development faculty member; however, only MTH 095 or higher will satisfy this requirement.

³Elective: ACC 155, DPR 203.

⁴Elective: ACC 212, BFC 215, DPR 140, MGT 218, MGT 270, SEC 131.

Second Semester

ACC 202 Intermediate Accounting II _____	3
ACC 203 Introductory Cost Accounting _____	3
Business elective ⁴ _____	5-6
DPR 215 System Communications _____	3
	<u>14-15</u>

Air Conditioning

See: Refrigeration and Air Conditioning

Architectural Technology

Architectural Technology is a two-year technical career program leading to an associate in applied science degree. Curriculum emphasis is on architecture, including solar energy and conservation, but courses in communication skill, social sciences, and humanities are also included. Graduates from this curriculum may be qualified for positions as architectural aide, engineering aide in building construction, building materials and equipment salesman, specification writer, and ancillary professional services.

First Year _____

First Semester

ATE 101 Introduction of Architectural Tech. I _____	4
ATE 103 Building Materials Technology I _____	4
ATE 105 Computer Math for Architectural Tech. I ¹ _____	3
ENG 101 Composition ² _____	3
Social Science elective _____	3
	<u>17</u>

Second Semester

ATE 102 Introduction to Architectural Tech. II _____	4
ATE 104 Building Materials Technology II _____	4
ATE 106 Computer Math for Architectural Tech. II ¹ _____	3
ENG 102 Composition ² _____	3
Social Science elective _____	3
	<u>17</u>

Second Year _____

First Semester

ATE 201 Comprehensive Building Project I _____	4
ATE 203 Construction Problems I _____	4
ATE 207 Behavior of Architectural Materials I _____	3
Humanities elective ³ _____	3
	<u>14</u>

Second Semester

ATE 202 Comprehensive Building Project II _____	4
ATE 204 Construction Problems II _____	4
ATE 208 Behavior of Architectural Materials II _____	3
Technical elective ⁴ _____	3
	<u>14</u>

¹Students in this program may count this course toward fulfillment of their mathematics requirement.

²ENG 100, ENG 103 or ENG 130 may be used, under certain conditions, to satisfy this requirement.

³Recommended elective: ART 110, MUS 103, MUS 104, PHI 105, or any literature course.

⁴Technical elective: ATE 205, ATE 206, ATE 210, or ATE 211.

Art

The art curriculum is designed to provide the transfer student with a program equivalent to the first two years of most four-year college programs. Students following this curriculum can obtain an associate degree and transfer into most four-year institutions without loss of time or credit.

In order to serve the differing interests and needs of the total student body, art courses with prerequisites may be taken without the prerequisites for humanities elective credit by non art majors with permission of the instructor. Courses without prerequisites are open for enrollment to all students.

First Year _____

First Semester

ART 100 Art Seminar ¹ _____	1
ART 105 Introduction to Arts _____	3
ART 110 Drawing I _____	3
ART 121 Design I _____	3
ENG 101 Composition _____	3
Mathematics or Science elective ² _____	3-4
	<u>16-17</u>

Second Semester

ART 100 Art Seminar ¹ _____	1
ART 111 Drawing II _____	3
ART 122 Design II _____	3
ENG 102 Composition _____	3
FNA 111 History of Art I _____	3
Mathematics or Science elective ² _____	3-4
	<u>16-17</u>

Second Year _____

First Semester

Elective ³ _____	3
FNA 112 History of Art II _____	3
Social Science elective _____	3
Studio electives _____	6-8
	<u>15-17</u>

Second Semester

FNA 113 History of Art III _____	3
Social Science elective _____	3
Studio electives _____	9-11
	<u>15-17</u>

¹ART 100 may be repeated to 2 credit hours.

²Mathematics or Science elective may be taken two times for 4 credit hours each, equalling the 8 credit hours minimum requirement; or may be taken three times for 3 credit hours each, exceeding the minimum requirement by 1 credit hour.

³Elective: communication, mathematics or social science.

Banking, Finance and Credit

A two-year program leading to an associate in applied science degree in Banking, Finance and Credit, emphasizing either the banking or the savings and loan industry. The program is designed for those currently employed in, or seeking employment in banks or savings and loan associations. The curriculum emphasizes developing competencies necessary for middle level management and lending positions within the financial industry.

First Year

First Semester (Both options)

BFC 101 Principles of Financial Institution Operations	3
BFC 115 Personal Banking or	
BFC 118 Administration	3
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
MGT 150 Business Math	3
	<u>15</u>

Second Semester

(Banking option)

ACC 101 Principles of Accounting Theory I	3
BFC 102 Commercial Law	3
Banking elective ¹	3
ECO 115 Consumer Economics	3
SPE 101 Fundamentals of Speech Communication	3
SPE 115 Interviewing	1
	<u>16</u>

Second Semester

(Savings and Loan option)

ACC 101 Principles of Accounting Theory I	3
ECO 115 Consumer Economics	3
RES 120 Principles of Real Estate	2
Savings and Loan elective ²	3
SPE 101 Fundamentals of Speech Communication	3
SPE 115 Interviewing	1
	<u>15</u>

Second Year

First Semester

(Banking option)

ACC 102 Principles of Accounting Theory II or	
BFC 211 Accounting for Financial Institutions	3
Banking elective ¹	3
ECO 200 Introduction to Economics	3
ENG 130 Business Writing I	3
MGT 218 Principles of Finance	3
	<u>15</u>

First Semester

(Savings and Loan option)

ACC 102 Principles of Accounting Theory II or	
BFC 211 Accounting for Financial Institutions	3
BFC 212 Home Mortgage Lending	3
ECO 200 Introduction to Economics	3
ENG 130 Business Writing I	3
MGT 218 Principles of Finance	3
	<u>15</u>

Second Semester

(Banking option)

Banking elective ¹	3
BFC 215 Analyzing Financial Statements	3
BFC 219 Consumer Credit or	
BFC 229 Commercial Lending	3
ECO 210 Money and Banking	3
Humanities elective	3
	<u>15</u>

Second Semester

(Savings and Loan option)

BFC 215 Analyzing Financial Statements	3
ECO 210 Money and Banking	3
Humanities elective	3
BFC 219 Consumer Credit or	
RES 123 Real Estate Law	3
Savings and Loan elective ²	3
	<u>15</u>

¹Banking electives (to be selected with approval of coordinator): ACC 211, ACC 212, ATE 209, BFC 110, BFC 117, BFC 118, BFC 200, BFC 211, BFC 212, BFC 213, BFC 216, BFC 217, BFC 219, BFC 220, BFC 229, DPR 101, ECO 201, ECO 202, MGT 160, MGT 225, MGT 265, MGT 270, PSY 101, PSY 145, RES 122, RES 123, RES 124, RES 232, SEC 131, SEC 236.

²Savings and Loan electives (to be selected with approval of coordinator): ACC 211, ACC 212, BFC 102, BFC 110, BFC 117, BFC 118, BFC 200, BFC 217, BFC 219, DPR 101, ECO 201, ECO 202, MGT 160, MGT 225, MGT 265, MGT 270, PSY 101, PSY 145, RES 122, RES 123, RES 124, RES 232, SEC 131, SEC 236.

Business Administration

Though subject to variance among colleges and universities, the following curriculum reflects consensus among most schools insofar as a recommended program for business transfer students is concerned.

First Year _____

First Semester

ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
Mathematics elective ¹ _____	3
Science elective _____	3-4
SPE 101 Fundamentals of Speech Communication _____	3
	<u>15-16</u>

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
DPR 101 Introduction to Data Processing ¹ _____	3
ENG 102 Composition _____	3
Mathematics elective ² _____	3-4
Science elective _____	3-4
	<u>15-17</u>

Second Year _____

First Semester

ACC 102 Principles of Accounting Theory II _____	3
ACC 211 Business Law I ¹ _____	3
ECO 201 Principles of Economics I _____	3
Humanities elective _____	3
Social Science elective _____	3
	<u>15</u>

Second Semester

ACC 203 Introductory Cost Accounting _____	3
ECO 202 Principles of Economics II _____	3
Humanities elective _____	3
MGT 225 Applied General Statistics _____	3
ACC 212 Business Law II ¹ or Social Science elective ³ _____	3
	<u>15</u>

¹Transfer students should check with the school they will be transferring to regarding the transferability of these courses.

²Elective: MTH 103, MTH 124 or MTH 134.

³ACC 212 specifically recommended for accounting majors. Social Science electives should be selected from PSY 101, PSY 145 or SOC 101.



Child Development

Child Development is a two-year career program leading to an associate in applied science degree. The curriculum is designed to provide students with the requisite skills and theoretical knowledge to work in a variety of child care facilities; preschool and daycare centers, public school classrooms (as aides), special education programs and related settings in the expanding area of child-related professions.

First Year _____

First Semester

CCA 101 Introduction to Child Development Careers _____	3
CCA 102 Child Development I _____	3
ENG 101 Composition _____	3
Humanities elective _____	3
PSY 101 Introduction to Psychology _____	3
	<u>15</u>

Second Semester

CCA 103 Child Development II _____	3
EDU 211 Educational Psychology _____	3
Elective ¹ _____	3
ENG 102 Composition _____	3
SOC 101 Introduction to Sociology _____	3
	<u>15</u>

Second Year

First Semester

CCA 209 Language Arts for the Young Child _____	3
CCA 214 Principles of Preschool Education ² or CCA 218 Principles of Special Education _____	6
CCA 225 Mental Health in Child Development _____	3
Elective ¹ _____	3
HSC 220 Health, Nutrition and Safety _____	3
	<u>18</u>

Second Semester

CCA 210 Creative Activities for Young Children _____	3
CCA 219 Psychology of Exceptional Children or CCA 221 Workshop in Early Childhood Education _____	3
CCA 220 Children Development Practicum Internship _____	6
CCA 252 Child-Family-Community _____	3
Elective ¹ _____	1
	<u>16</u>

¹Electives may include courses useful in child development such as art, music, speech, physical education, etc.

²Students interested in preschool teaching will take CCA 214 and CCA 221. Students interested in work with exceptional children will take CCA 218 and CCA 219.

Criminal Justice

Criminal Justice is a two-year career program leading to an associate in applied science degree. It is designed to serve the needs of men and women in criminal justice organizations at the local, state and federal levels, and to prepare others to enter this service. Opportunities include positions in crime prevention, probation, correction, court records, communications, and general police and security work. Options are available for those wishing to continue in any of these special areas or for those who plan to earn a baccalaureate degree at a four-year college or university.

Certificate options are available in Criminal Justice and in Industrial and Retail Security.

Students earning an associate in applied science degree in criminal justice are required to complete a total of 60 semester hours of work. Courses must satisfy both the college and the program's minimum requirements.

Required Core Courses:

CRJ 101 Introduction to Criminal Justice ¹	3
CRJ 104 Introduction to Corrections	3
CRJ 201 Criminal Law I ¹	3
CRJ 202 Criminal Law II	3
CRJ 205 Juvenile Delinquency	3
CRJ 209 Police Public-Community Relations	3
CRJ 210 Introduction to Criminology ¹	3

Required General Education Courses:

Electives ²	12
English ³	3
English elective	3
Humanities elective	3
PSC 201 Contemporary American Politics or PSC 202 Suburban, Urban and State Politics	3
PSY 101 Introduction to Psychology	3
PSY 217 Adolescent Psychology	3
SOC 101 Introduction to Sociology	3
SOC 205 Social Problems	3
SPE 101 Fundamentals of Speech Communication	3

Specialized Study Areas

Depending on the student's career needs, he may choose courses from the following specialized study areas.

Basic Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 116 Introduction to Forensics	3
CRJ 211 Criminal Investigation	3
CRJ 216 Investigative Process	3
CRJ 222 Police Operations	3

Advanced Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 212 Traffic Administration	3
CRJ 213 Crime Prevention	3
CRJ 216 Investigative Process	3
CRJ 220 Police Administration	3
CRJ 224 Police Supervision	3
CRJ 226 Case Management	3

Corrections

CRJ 105 Criminal Courts of the U.S.	3
CRJ 210 Introduction to Criminology	3
CRJ 215 Alternatives to Confinement	3

Industrial Security

CRJ 213 Crime Prevention	3
CRJ 250 Industrial Security Administration	3
CRJ 252 Industrial Fire Protection, Disaster Control	3
CRJ 253 Safety Management	3

¹Students may take CRJ 203, CRJ 213, or CRJ 215, with approval of coordinator.

²In determining electives, the student should consult with the coordinator.

³Students may take ENG 100 or ENG 101, depending upon English assessment.

Data Processing Technology

The Data Processing career program is a technical curriculum to train students for various positions in the field of data processing. The student will take courses in mathematics, business, data processing, and general education. Graduates of the program may find employment as computer programmers, systems analysts, and computer operators.

First Year _____

First Semester	
DPR 101 Introduction to Data Processing _____	3
DPR 106 Computer Logic and Programming Technology _____	3
ENG 101 Composition _____	3
MTH 102 Intermediate Algebra _____	4
Social Science elective _____	3
	<hr/> 16

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
DPR 108 Computer Programming—COBOL _____	5
DPR 203 Systems Analysis and Design I _____	3
ENG 103 Report Writing _____	3
MGT 111 Introduction to Business Organization _____	3
	<hr/> 17

Second Year _____

First Semester	
ACC 102 Principles of Accounting Theory II _____	3
DPR 110 Computer Programming—Basic Assembler Language _____	5
DPR 204 Advanced Systems Analysis and Design _____	3
Humanities elective _____	3
	<hr/> 14

Second Semester

DPR 202 Programming Systems _____	3
DPR 208 Computer Programming—Advanced COBOL or DPR 210 Computer Programming—Advanced Assembler _____	4
DPR 230 Internship and/or Case Study _____	3
Data Processing elective ¹ _____	3-4
ECO 220 Introduction to Economics _____	3
	<hr/> 16-17

¹Elective: ACC 203, DPR 140, DPR 142, DPR 150, DPR 208, DPR 210, DPR 240, or DPR 250.

Dental Hygiene*

Dental Hygiene is a two-year career program, leading to an associate in applied science degree in dental hygiene. The program is designed to train the hygienist and educate the person.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- High school graduation or equivalent (GED).
- A high school grade average of "C" or better, or if 12 semester hours of college credit have been completed, a college grade average of "C" or better.
- Completion of at least one year of high school work in biology, chemistry, and math with grades of "C" or better, or one semester of college course work in biology, chemistry, and math with grades of "C" or better. Once college work has been completed in any of these subject areas, *only* college work will be used to determine if the particular subject admission requirement has been fulfilled.
- Satisfactory scores on the National Dental Hygiene Aptitude Test.

Graduates are qualified after passing state board examinations and achieving licensure, for private practice in dental offices, hospitals, health agencies, government, and the armed services.

First Year _____

First Semester	
BIO 160 Human Anatomy _____	4
CHM 100 Chemistry for the Health Sciences _____	4
DHY 100 Pre-Clinic and Orientation _____	4
DHY 161 Dental Anatomy _____	3
DHY 111 Dental Radiology _____	3
	<hr/> 18

Second Semester

BIO 130 Microbiology _____	4
BIO 161 Human Physiology _____	4
DHY 101 Clinical Dental Hygiene I _____	5
DHY 160 Introductory Nutrition _____	1
DHY 190 Oral Pathology _____	3
DHY 199 Introductory Periodontology _____	1
	<hr/> 18

Summer Session _____

DHY 102 Field Experience in Dental Assisting ¹ _____	1
Humanities elective _____	3
	<hr/> 4

Second Year	
First Semester	
DHY 200 Advanced Periodontology _____	1
DHY 220 Community Dentistry I _____	3
DHY 240 Dental Pharmacology and Anaesthesia _____	1
DHY 250 Clinical Dental Hygiene II _____	4
DHY 260 Advanced Nutrition _____	2
DHY 280 Dental Materials and Dental Assisting _____	3
ENG 101 Composition _____	3
	<u>17</u>
Second Semester	
DHY 201 Seminar _____	2
DHY 221 Community Dentistry II _____	3
DHY 251 Clinical Dental Hygiene III _____	4
PSY 101 Introduction to Psychology _____	3
SOC 101 Introduction to Sociology _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>18</u>



* Dental Hygiene is a limited enrollment program. See Limited Enrollment Programs Section of this Bulletin for details.

** Subject to change. Contact the Admissions Office for additional information.

¹Placement into this course is contingent upon previous experience and consent of instructor.

Dietetic Technician*

Dietetic Technician is a two-year career program leading to an associate in applied science degree. This program with its major emphasis on nutritional care prepares a student for employment in a hospital, nursing home or in community feeding programs under the direct or general supervision of registered dietitians.

The Dietetic Technician program is approved by the American Dietetic Association, and graduates of the program are eligible to join the association.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College
- High school graduation or equivalent (GED)
- Completion of at least one year of high school course work in science and math with grades of "C" or better, or one semester of college course work in science and math with grades of "C" or better.
- A satisfactory personal interview with the coordinator or the Dietetic Technician Program

First Year _____

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy	4
DIT 100 Introduction to the Dietetic Technician Program	3
DIT 101 Basic Nutrition	3
English elective ¹	3
FSM 114 Food Standards and Sanitation	3
	16

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology (4)	3-4
DIT 102 Advanced Nutrition	3
DIT 110 Principles of Food Preparation	3
DIT 150 Dietetic Clinical Laboratory I	3
PSY 101 Introduction to Psychology	3
	15-16

Second Year _____

First Semester

DIT 200 Dietetic Clinical Laboratory II	4
DIT 201 Nutritional Services in Institutions	3
EDU 211 Educational Psychology	3
FSM 212 Food Service Supervision	4
SOC 101 Introduction to Sociology	3
	17

Second Semester

DIT 202 Nutrition Care Seminar	2
DIT 203 Dietetic Seminar	1
DIT 250 Dietetic Clinical Laboratory III	4
English elective ¹	3
Humanities elective ²	3
SPE 101 Fundamentals of Speech Communication	3
	16

* Dietetic Technician is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

** Subject to change. Contact the Admissions Office for additional information.

¹Students may elect ENG 100, ENG 101, ENG 102, or ENG 103 depending on their English assessment and the advice of a student development faculty member.

²PHI 180 recommended.

Digital Electronics and Microprocessor Technology

Digital Electronics and Microprocessors is a two-year technical program leading to an associate in applied science degree. It is designed to prepare students for the field of digital electronics in industries associated with computers and microprocessor equipment. The curriculum offers courses in electronics, digital electronics, computer hardware, software, and peripheral systems, mathematics and general education.

Graduates may be employed in a variety of electronics related industries with job classifications as technician, programmer, or field service technician.

First Year

First Semester	
ELT 110 Introductory Electronics	2
ELT 210 Computer Programming	3
MTH 106 Mathematics I	5
ENG 101 Composition	3
Humanities Elective ¹	3
	<hr/> 16

Second Semester	
ELT 111 Electronics I, Resistive	3
ELT 203 Electronics II, Digital	5
MTH 107 Mathematics II	5
ENG 102 Composition or	
ENG 103 Report Writing	3
	<hr/> 16

Second Year

First Semester	
ELT 206 Electronic Computers	5
ELT 216 Microprocessor Software Applications	5
Social Science Elective ²	3
MTH 208 FORTRAN Computer Programming	3
	<hr/> 16

Second Semester	
ELT 217 Microprocessor Peripheral Systems	5
ELT 218 Principles of Microprocessor System Design	5
Social Science Elective ²	3
ELT or DPR Elective ³	3
	<hr/> 16

¹Any 3 credit hour course in the humanities area will meet this requirement.

²Social Science electives: ANT 201, ECO 201, GEG 101, HST 111, HST 112, HST 141, PSC 201, PSY 101, PSY 145, SOC 101.

³To be approved by Electronics Program Coordinator.

Electronics Technology

Electronics Technology is a two-year technical program leading to an associate in applied science degree. It is designed to prepare students for the field of electronics and associated industries. The curriculum offers courses in electronics, circuit analysis, mathematics, physics, and general education, with laboratory emphasis placed on equipment familiarization and use.

Graduates may find employment as electronic engineering technicians, industrial technicians, electronic/electrical draftsmen, customer engineers, technical writers, and research laboratory technicians.

First Year

First Semester	
ELT 101 Circuits I	5
ELT 105 Electro-Mechanical Drafting	3
ELT 110 Introductory Electronics	2
ENG 101 Composition	3
MTH 106 Mathematics I	5
	<hr/> 18

Second Semester	
ELT 102 Circuits II	4
ELT 111 Electronics I, Resistive	3
ELT 210 Computer Programming	3
Humanities elective ¹	3
MTH 107 Mathematics II	5
	<hr/> 18

Summer Session

Social Science electives ²	6
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Second Year

First Semester	
ELT 103 Circuits III, Networks	5
ELT 203 Electronics II, Digital	5
MTH 206 Mathematics III	3
PHY 101 Technical Physics I	4
	<hr/> 17

Second Semester	
Electronics elective ³	4-5
ELT 204 Electronics III, Advanced Electronics	5
ENG 103 Report Writing	3
PHY 102 Technical Physics II	4
	<hr/> 16-17

¹Any 3 credit hour course in the humanities area will meet this requirement.

²Social Science electives: ANT 201, ECO 201, GEG 101, HST 111, HST 112, HST 141, PSC 201, PSY 101, PSY 145, SOC 101.

³Electronics elective: ELT 205, ELT 206, ELT 207, ELT 215, ELT 216, ELT 217, ELT 218.

Engineering

The following represents a suggested two year pre-engineering curriculum. A student completing this suggested curriculum would be eligible, on the basis of subject matter, for junior standing in any engineering school in Illinois. The student should recognize the fact that the field of engineering is quite diversified and that there are many areas of specialization within this field. Because of different requirements in specialized areas, the student should compare the requirements of this suggested curriculum with those of the area of specialization at the transfer institution of his choice.

Listed at the end of this sample curriculum are required lower division engineering courses for various areas of specialization at the University of Illinois at Urbana-Champaign.

Typical curriculum for Mechanical, General and Aeronautical Engineering:

First Year _____	
First Semester	
CHM 121 General Chemistry I ¹ _____	4
EGR 100 Introduction to Engineering and Technology _____	1
EGR 120 Engineering Graphics I _____	3
ENG 101 Composition _____	3
MTH 105 Analytic Geometry _____	4
Social Science elective _____	3
	<u>18</u>
Second Semester	
CHM 122 General Chemistry II ¹ _____	4
EGR 121 Engineering Graphics II _____	3
EGR 150 Analytical Mechanics (Statics) _____	3
ENG 102 Composition _____	3
MTH 201 Calculus I _____	5
	<u>18</u>
Second Year _____	
First Semester	
Humanities elective _____	3
MTH 202 Calculus II _____	5
PHY 201 General Physics I _____	4
Social Science elective _____	3
	<u>15</u>
Second Semester	
EGR 211 Analytical Mechanics (Dynamics) _____	3
Humanities elective _____	3
MTH 212 Differential Equations _____	3
PHY 202 General Physics II _____	4
Technical elective ² _____	3
	<u>16</u>

The following courses are recommended for specific engineering programs as substitutes or additions in the sample curriculum.

Agricultural Engineering
EGR 120, ECON 201, EGR 150, EGR 211
Ceramic Engineering
EGR 120, EGR 150, EGR 211
Chemical Engineering
CHM 131, CHM 132, CHM 204, CHM 205, plus language is required—2 years high school or 1 year of college study
Civil Engineering
EGR 120, EGR 150, EGR 211
Computer Science
MTH 165, MTH 203, MTH 208
Electrical Engineering
EGR 120, EGR 150, MTH 208
Engineering Physics
EGR 120 plus a language: German, Russian, or French recommended
Industrial Engineering
EGR 120, EGR 150, EGR 211
Metallurgical Engineering
EGR 120, EGR 150, EGR 211, EGR 212
Nuclear Engineering
EGR 120, EGR 150, EGR 211

¹CHM 131 and CHM 132 may be substituted where required for specialized curricula offered at four-year institutions.

² Technical elective: EGR 212, EGR 215, MTH 165, MTH 203, MTH 208, MTH 215, and PHY 203. PHY 203 is required in many engineering curricula.

Executive Secretarial Development

Executive Secretarial Development is a two-year career program leading to an associate in applied science degree. The curriculum is designed to give the student experience in office practices, secretarial duties, and functions of office administration.

Graduates may be employed in any of a variety of organizations, including manufacturing firms, government agencies, schools and colleges, insurance companies, banks, and hospitals.

First Year _____

First Semester	
ENG 101 Composition _____	3
Mathematics elective ¹ _____	3
MGT 111 Introduction to Business Organization _____	3
SEC 098 Review Shorthand ^{2,3} (2) or	
SEC 125 Elementary Shorthand ^{2,3} (4) _____	2-4
SEC 099 Typewriting Review ¹ (1) or	
SEC 121 Elementary Typing ¹ (2) _____	1-2
	12-15

Second Semester	
ENG 130 Business Writing I _____	3
PSY 101 Introduction to Psychology _____	3
SEC 122 Intermediate Typing ¹ _____	2
SEC 126 Intermediate Shorthand ^{1,2} _____	3
SEC 131 Business Machines _____	2
SEC 236 Secretarial Procedures ⁴ _____	3
	16

Second Year _____

First Semester	
ACC 099 Business Recordkeeping or	
ACC 101 Principles of Accounting Theory I _____	3
SEC 221 Advanced Typing ¹ _____	2
SEC 225 Dictation and Transcription ^{2,3} _____	3
SEC 230 Executive Machine Transcription _____	2
SEC 237 Secretarial Seminar and Internship I ⁵ _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	16

Second Semester	
ACC 211 Business Law I _____	3
DPR 101 Introduction to Data Processing _____	3
ECO 200 Introduction to Economics _____	3
Humanities elective _____	3
SEC 130 Automatic Word Processing Equipment I or	
SEC 135 Automatic Word Processing Equipment II _____	1
SEC 238 Secretarial Seminar and Internship II ⁵ _____	3
	16

¹While students may take any mathematics course offered depending upon their test scores and the advice of a student development faculty member, MGT 150 is recommended.

²Placement into SEC 098, SEC 099, SEC 121 SEC 122, SEC 125, SEC 126, SEC 140, SEC 221, and SEC 225 contingent upon previous training and consent of instructor.

³Students will take ENG 101 concurrently with their first shorthand course.

⁴SEC 236 must be taken the semester prior to entering SEC 237.

⁵Enrollment restricted to students in the second year of the program with the consent of the instructor.

Fashion Design*

Fashion Design is a two-year career program leading to an associate in applied science degree. The program is designed to train students in apparel design, flat pattern design, draping, fashion illustrating, and in professional design room practices of tailoring. Facilities will simulate the professional atmosphere of the fashion industry.

Graduates may find employment as couture fashion designers, mass production fashion designers, flat pattern makers, fashion illustrators and fashion coordinators.

Close cooperation between the college and the fashion industry helps to ensure the type of training the fashion industry demands. Trips to manufacturers are included.

First Year _____

First Semester

English¹ _____ 3

FAS 101 Flat Pattern Design
and Draping I _____ 3

FAS 103 Apparel Design and
Construction I _____ 3

FAS 105 Fashion Design
Illustration I _____ 1

FAS 107 Textiles I _____ 2

FAS 110 Costume History _____ 2

Social Science elective _____ 3

17

Second Semester

English¹ _____ 3

FAS 102 Flat Pattern Design
and Draping II _____ 4

FAS 104 Apparel Design and
Construction II _____ 4

FAS 106 Fashion Design
Illustration II _____ 1

FAS 108 Textiles II _____ 2

FAS 109 Fashion Arts and
Design _____ 2

16

*Fashion Design is a limited enrollment program. Contact the Admissions Office for details.

Second Year _____

First Semester

FAS 201 Advanced Flat Pattern
Design and Draping I _____ 4

FAS 203 Advanced Diversified
Apparel Design I _____ 4

FAS 205 Tailoring Techniques I _____ 2

FAS 209 Advanced Fashion
Illustration I _____ 1

MKT 106 Merchandising of Furnishings
and Softline Goods _____ 3

Social Science elective _____ 3

17

Second Semester

FAS 202 Advanced Flat Pattern
Design and Draping II _____ 4

FAS 204 Advanced Diversified
Apparel Design II _____ 4

FAS 206 Tailoring Techniques II _____ 2

FAS 210 Advanced Fashion
Illustration II _____ 1

FAS 212 Visual Fashion
Merchandising _____ 2

Humanities elective² _____ 3

16

¹Students may elect ENG 100, ENG 101, or ENG 102, depending on their test scores and advice of a student development faculty member.

²ART 105 is recommended.

Fashion Merchandising*

Fashion Merchandising is a stimulating and challenging profession. With the skills and knowledge acquired in Harper's two-year associate in applied science degree program, the graduate can look forward to an exciting and rewarding future.

An educational background in fashion merchandising opens the door to various careers, such as fashion coordinating, fashion promoting, fashion advertising, fashion displaying, fashion copywriting, fashion photographing, fashion buying, and store managing.

The fashion merchandising curriculum provides all the phases of fashion merchandising, not only in business aspects, but also in aesthetic and creative sides of fashion, such as window display, fashion basics and textile. Students will study fashion history and trends as well as their influence on our lives. In addition, they will survey the development of style leading up to contemporary design. Students will also take courses in English composition, data processing, sociology, and introductory psychology.

First Year _____

First Semester

ENG 101 Composition _____	3
FAS 107 Textiles I _____	2
FAS 110 Costume History _____	2
FAS 111 Introduction to Business Organization _____	3
MGT 150 Business Math _____	3
MKT 106 Merchandising of Furnishings and Softline Goods _____	3
	<u>16</u>

Second Semester

ENG 102 Composition _____	3
FAS 111 20th Century Costume and Trends _____	3
FAS 112 Fashion Basics _____	3
PSY 101 Introduction to Psychology _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>15</u>

Second Year _____

First Semester

ART 105 Introduction to Arts _____	3
FAS 229 Promotion of Fashion _____	3
MKT 140 Salesmanship _____	3
MKT 245 Principles of Marketing _____	3
MKT 250 Retailing _____	3
SOC 101 Introduction to Sociology _____	3
	<u>18</u>

Second Semester

DPR 101 Introduction to Data Processing _____	3
FAS 230 Contemporary Living _____	3
FAS 240 Fashion Projects _____	3
MKT 247 Consumer Buying Behavior _____	3
MKT 251 Retail Merchandise Management _____	3
	<u>15</u>

*Fashion Merchandising is a limited enrollment program. Contact the Admissions Office for details.

Fire Science Technology

Fire Science Technology is a two-year career program leading to an associate in applied science degree. This curriculum offers a broad education in the principles and practical applications of fire protection. It provides specialized training for in-service fire personnel and students who wish to enter the profession. Attractive career opportunities are available with industrial firms, governmental agencies, insurance companies, rating bureaus, municipal fire departments, fire training organizations, and fire equipment manufacturers.

First Year _____

First Semester

ENG 101 Composition _____	3
FIS 112 Fire Alarm and Extinguishing Systems _____	3
FIS 132 Hazardous Materials I _____	3
Mathematics elective ¹ _____	3
PSY 101 Introduction to Psychology _____	3
	<u>15</u>

Second Semester

ENG 103 Report Writing _____	3
FIS 101 Municipal Fire Administration I _____	3
FIS 122 Fire Inspection Principles _____	3
FIS 133 Hazardous Materials II _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>15</u>

Second Year _____	
First Semester	
CHM 100 Chemistry for the Health Sciences ² _____	4
FIS 201 Municipal Fire Administration II _____	3
FIS 222 Fire Inspection Applications _____	3
FIS 242 Fire Hydraulics _____	3
Social Science elective ³ _____	3
	<u>16</u>
Second Semester	
FIS 245 Fire Causes and Investigation _____	3
FIS 252 Automatic Sprinkler Systems _____	3
FIS 262 Water Supply Analysis _____	3
Humanities elective ³ _____	3
Physical Science elective ³ _____	3
	<u>15</u>

¹Students may elect any mathematics course, MTH 100 or higher, depending upon their test scores and advice of a student development faculty member.

²CHM 121 may be substituted if prerequisite is fulfilled.

³Electives must be selected upon the advice of a student development faculty member or the coordinator.

Food Service Management

Food Service Management is a two-year career program leading to an associate in applied science degree. Emphasis is placed on the techniques and technology of the food service industry from a management point of view. Graduates will be qualified to assume positions as production supervisors, management trainees, and small unit managers. One-year certificate programs are offered in Baking and Cooking.

First Year _____

First Semester

English¹ _____ 3

FSM 111 Introduction to Food Service _____ 2

FSM 112 Quantity Food Production or _____

FSM 113 Quantity Food Service _____ 4

FSM 114 Food Standards and Sanitation _____ 3

MGT 150 Business Math _____ 3

15

Second Semester

ACC 099 Business Recordkeeping or _____

ACC 101 Principles of Accounting Theory I _____ 3

English¹ _____ 3

MGT 111 Introduction to Business Organization _____

Food Service Management elective² _____ 3-4

FSM 112 Quantity Food Production or _____

FSM 113 Quantity Food Service _____ 4

FSM 115 Menu Planning _____ 2

15-16

Second Year _____

First Semester

ENG 130 Business Writing I _____ 3

FSM 211 Purchasing and Storage _____ 3

FSM 212 Food Service Supervision _____ 4

PSY 101 Introduction to Psychology _____ 3

Social Science elective _____ 3

16

Second Semester

FSM 213 Seminar and Internship _____ 4

FSM 214 Cost Control _____ 3

FSM 215 Restaurant Layout and Equipment or _____

Food Service Management elective² _____ 3-4

Humanities elective _____ 3

SPE 101 Fundamentals of Speech Communication _____ 3

16-17

¹Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and the advice of a student development faculty member.

²Electives: FSM 130 or FSM 210.

Health Education

The successful completion of the health education transfer program will enable the student to obtain an associate degree and to transfer with junior status to most four-year colleges and universities. To insure satisfactory transfer, the student is advised to investigate the institution to which the student plans to transfer for specific general education requirements.

First Year _____

First Semester

BIO 100 Principles of Biology _____	4
ENG 101 Composition _____	3
PED 203 Health _____	2
Physical Education activity _____	1
Social Science elective _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>16</u>

Second Semester

BIO 140 General Zoology _____	4
ENG 102 Composition _____	3
Mathematics elective _____	3
PED 201 First Aid _____	2
PED 205 Drugs in Our Culture _____	2
Physical Education activity _____	1
	<u>15</u>

Second Year _____

First Semester

BIO 160 Human Anatomy _____	4
Elective _____	3
PED 207 Human Sexuality _____	2
PED 270 Community Health _____	2
PHI 180 Medical Ethics _____	3
Social Science elective _____	3
	<u>17</u>

Second Semester

BIO 103 Man and Environment _____	3
BIO 161 Human Physiology _____	4
DIT 101 Basic Nutrition _____	3
EDU 211 Educational Psychology _____	3
Humanities elective _____	3
	<u>16</u>

Horticulture

Horticulture is a two-year program leading to an associate in applied science degree. Several horticulture programs options are available with approval of the program coordinator, including arboriculture, floral design, landscaping, nursery management, golf course operations and turfgrass management. Students can prepare for employment with nursery and garden centers, lawn and tree care companies, landscapers, greenhouse and plant propagating operations, landscape maintenance firms and horticulture equipment dealers.

First Year _____

First Semester

Electives ¹ _____	8
PKM 100 Introduction to Park Management _____	1
PKM 140 Grounds Equipment and Shop Operation _____	4
PED 201 First Aid _____	2
	<u>15</u>

Second Semester

Electives ² _____	6-8
PKM 102 Plant Disease and Pests _____	4
PKM 111 Basic Horticultural Skills _____	4
	<u>14-16</u>

Summer Session³

PKM 150 Park Management Internship _____	5
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Second Year _____**First Semester**Electives⁴ _____ 9-11English⁵ _____ 3

Social Science elective _____ 3

15-17

Second SemesterPKM elective⁶ _____ 3-4English⁵ _____ 3

Humanities elective _____ 3

PKM 230 Contracts, Specifications
and Estimating _____ 3

PKM 250 Park Management Seminar _____ 1

Social Science elective _____ 3

16-17

¹Electives: BIO 120, PKM 101, and PKM 110. These electives must be taken in the first or second semester of the first year.

²Electives: BIO 120, MGT 111, MGT 154, PKM 101, PKM 110, PKM 121. A math elective could be taken as an additional course selection and may consist of math lab skills, MTH 094 or MTH 110, based on math assessment and advice of a student development faculty member or program coordinator.

³Strongly recommended elective but not required.

⁴Electives: MGT 111, MGT 154, PKM 104, PKM 210, PKM 212, PKM 214, PKM 244.

⁵Students may take ENG 100, ENG 101, ENG 102, ENG 103, or ENG 130, depending upon English assessment and the advice of a student development faculty member or program coordinator.

⁶Elective: PKM 220, PKM 240, PKM 242, PKM 247.

Interior Design*

Interior Design is a two-year career program leading to an associate in applied science degree. The curriculum is designed to prepare students for residential designer/sales positions in the retail home furnishings field.

First Year¹ _____**First Semester**

ART 121 Design I _____ 3

English² _____ 3IND 101 Basic Interior
Design I _____ 5

IND 103 Furniture History _____ 3

14

Second Semester

ENG 130 Business Writing I _____ 3

FNA 112 History of Art II _____ 3

IND 102 Basic Interior
Design II _____ 5PSY 101 Introduction to
Psychology _____ 3SPE 101 Fundamentals of Speech
Communication _____ 3

17

Second Year _____**First Semester**

FNA 113 History of Art III _____ 3

IND 201 Advanced Interior
Design I _____ 6

JNM 133 Feature Writing (3) or

JNM 134 Media Adjunct (4) _____ 3-4

SOC 101 Introduction to
Sociology _____ 3

15-16

Second Semester

Elective _____ 3

IND 202 Advanced Interior
Design II _____ 6MKT 106 Merchandising of
Furnishings and

Softline Goods _____ 3

MKT 140 Salesmanship _____ 3

15

*Interior Design is a limited enrollment program. Contact the Admissions Office for details.

¹Periodic field trips to Chicago required in all semesters.

²Students will take ENG 100, ENG 101, or ENG 102, depending on their test scores and the advice of a student development faculty member.

Journalism¹

Journalism is a two-year career program leading to an associate in applied science degree. The curriculum provides intensive study and practical training in contemporary journalism, including historic, sociologic and realistic situations. Graduates of the program are prepared for positions in newspapers; radio and television newsrooms; wire services; public relations and advertising agencies; and business, industrial, and consumer magazines.

First Year _____

First Semester	
ENG 101 Composition _____	3
HST 111 The American Experience to 1877 _____	3
JNM 130 Fundamentals of Journalism _____	3
Science elective _____	3-4
SPE 101 Fundamentals of Speech Communication _____	3
	15-16

Second Semester

HST 112 The American Experience Since 1877 _____	3
Humanities elective _____	3
JNM 131 News Reporting and Writing _____	3
JNM 133 Feature Writing _____	3
JNM 134 Media Adjuncts _____	4
	16

Second Year _____

First Semester	
JNM 234 Mass Communication _____	3
JNM 235 Copy Reading and News Editing _____	4
JNM 236 Radio and Television News _____	4
PSC 201 Contemporary American Politics _____	3
	14

Second Semester

ECO 200 Introduction to Economics or	
ECO 201 Principles of Economics I _____	3
Electives ² _____	5-6
JNM 237 Externship Study _____	5
PSC 202 Suburban, Urban and State Politics or Social Science elective _____	3
	16-17

Legal Secretary

Legal Secretary is a two-year career program leading to the degree of associate in applied science for those interested in pursuing secretarial careers in law firms, government, law departments of business firms, and banks. The curriculum is designed to give the student experience in legal dictation and transcription, legal office procedures, background in legal terminology, and supervised on-the-job training in a legal office or department.

First Year _____

First Semester	
ENG 101 Composition _____	3
SEC 102 Survey of Law Office Practice _____	2
SEC 122 Intermediate Typing ¹ _____	2
SEC 126 Intermediate Shorthand (Manual or Machine) ¹ _____	3
SEC 236 Secretarial Procedures ² _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	16

Second Semester

ENG 130 Business Writing I _____	3
RES 120 Principles of Real Estate ³ _____	2
SEC 221 Advanced Typing ¹ _____	2
SEC 225 Dictation and Transcription (Manual or Machine) ¹ _____	3
SEC 230 Executive Machine Transcription _____	2
SEC 234 Legal Office Procedures _____	3
	15

¹Students must type 40 wpm or take SEC 121.

²Courses in communications, humanities, mathematics, science, or social science are recommended.

Second Year	
First Semester	
ACC 099 Business Recordkeeping or	
ACC 101 Principles of Accounting Theory I	3
ACC 211 Business Law I	3
PSC 201 Contemporary American Politics	3
SEC 130 Automatic Word Processing I or	
SEC 135 Automatic Word Processing II	1
SEC 235 Legal Dictation and Transcription	3
SEC 237 Secretarial Seminar and Internship I	3
	<u>16</u>
Second Semester	
ACC 212 Business Law II	3
Electives*	2-3
ECO 200 Introduction to Economics	3
Humanities elective	3
SEC 238 Secretarial Seminar and Internship II	3
	<u>14-15</u>



¹Placement in SEC 122, SEC 126, SEC 221 and SEC 225 is contingent upon previous training and consent of instructor.

²A special section of this course is offered for legal secretarial students during the fall semester. Students must enroll in this special section before taking SEC 237.

³RES 120 is offered each eight weeks. You may decide to take this course during the second half of a semester.

⁴These electives require the approval of the coordinator.

Legal Technology*

Legal Technology is a two-year career program leading to an associate in applied science degree. The program is designed to prepare men and women as technically qualified assistants to a lawyer. Under the supervision of a lawyer, the legal technician may perform such functions as investigation, detail work with regard to probate matters, preparation of tax forms and returns, searching public and court records, office management, library service, bookkeeping, serving and filing legal documents, and preparing legal forms.

First Year

First Semester

ACC 101 Principles of Accounting Theory I	3
ENG 101 Composition	3
LTE 101 Introduction to Legal Technology	3
LTE 103 Litigation	3
SOC 101 Introduction to Sociology	3
	<u>15</u>

Second Semester

ENG 103 Report Writing	3
LTE 102 Fundamentals of Legal Research	3
LTE 105 Family Law	3
LTE 123 Real Property Law	3
PSY 101 Introduction to Psychology	3
	<u>15</u>

Second Year

First Semester

ACC 211 Business Law I	3
Elective ¹	3
LTE 202 Estate Planning	3
LTE 203 Income Taxation I	3
PSC 201 Contemporary American Politics	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II or Accounting Theory II	3
LTE 204 Income Taxation II	3
ACC 212 Business Law II or LTE 210 Corporate and Securities Law	3
Humanities elective ²	3
LTE 200 Probate	3
LTE 206 Conference Course in Legal Technology ³	3
	<u>15</u>

*Legal Technology is a limited enrollment program. Contact the Admissions Office for details.

¹LTE 212 is recommended.

²PHI 110 is recommended.

³Required for persons with no legal experience. Persons with legal experience may substitute another Legal Technology course.

Liberal Arts

The Liberal Arts transfer curriculum lays the foundation for a broad general education. It should be followed by those who wish to become lawyers, historians, philosophers, sociologists, English teachers, social workers, anthropologists and political scientists, and for those who have not chosen their field of specialization but who wish to satisfy the general education requirements of the university to which they will transfer.

Though the general education requirements of universities vary in some details, in general the student can be sure he will meet them if he takes at Harper two semesters of transfer-level English composition, two semesters of laboratory science, four semesters of foreign language, two semesters of mathematics, and a number of courses in the social sciences and humanities. The student can often count each year of successful high school foreign language as one semester of college foreign language, and he may meet the mathematics requirement of some universities by passing their mathematics proficiency test.

First Year _____

First Semester

ENG 101 Composition _____	3
Foreign Language elective _____	4
Laboratory science ¹ _____	4
Mathematics or elective _____	3
Social Science elective _____	3
	<hr/>
	17

Second Semester

ENG 102 Composition _____	3
Foreign Language elective _____	4
Laboratory science ¹ _____	4
Mathematics or elective _____	3
Social Science elective _____	3
	<hr/>
	17

Second Year _____

First Semester

Electives ² _____	3-4
English ³ _____	3
Foreign Language ⁴ _____	3-4
Humanities elective ⁵ _____	3
Social Science elective _____	3
	<hr/>
	15-17

Second Semester

Electives ² _____	3-4
English ³ _____	3
Foreign Language ⁴ _____	3-4
Humanities elective ⁵ _____	3
Social Science elective _____	3
	<hr/>
	15-17

¹Physical or biological science or physics, chemistry, botany, or other lab science.

²Another lab science may be added. Electives may be drawn also from anthropology, art, economics, geology, geography, history, music, political science, philosophy, psychology, sociology, and speech.

³Advanced English, literature or speech.

⁴Consult a student development faculty member for specific language requirements of the university to which you plan to transfer.

⁵HUM 101 and HUM 102 are recommended. Other humanities areas include art, music, literature, philosophy, fine arts, SPE 107, SPE 111, or SPE 212.

Marketing/Management

A two-year career program for persons interested in preparing for positions in the dynamic field of marketing. Career objectives of persons completing this program would be in the areas of sales, advertising and sales promotion, marketing management, wholesaling, retailing, or other specialized areas of marketing.

First Year

First Semester

ENG 101 Composition	3
MGT 111 Introduction to <i>Business Organization</i>	3
MGT 150 Business Math	3
MKT 140 Salesmanship or Marketing elective ¹	3
PSY 101 Introduction to Psychology	3
	<u>15</u>

Second Semester

DPR 101 Introduction to Data Processing	3
ENG 130 Business Writing I	3
MGT 270 Principles of Management	3
MKT 245 Principles of Marketing or Marketing elective ¹	3
PSY 145 Psychology in Business and Industry	3
	<u>15</u>

Second Year

First Semester

ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I	3
ECO 200 Introduction to Economics	3
MKT 217 Advertising	3
Marketing elective ¹	3
SPE 101 Fundamentals of Speech Communication	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II or Marketing elective ¹	3
ACC 211 Business Law	3
Business elective	3
Humanities elective	3
Marketing elective	3
	<u>15</u>

¹Electives: MKT 106, MKT 140, MKT 141, MKT 217, MKT 240, MKT 245, MKT 246, MKT 247, MKT 250, MKT 255, MKT 260, MKT 265, MAT 125.

Material Management

Material Management is a two-year career program leading to an associate in applied science degree. The program is designed to provide in-service education for those persons working directly in or in fields allied to material management and physical distribution. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.

First Year

First Semester

ACC 101 Principles of <i>Accounting Theory I</i>	3
DPR 101 Introduction to Data Processing	3
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
MAT 101 Fundamentals of Material Management	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II	3
English elective	3
MGT 270 Principles of Management	3
Material Management elective ¹	3
PSY 145 Psychology in Business and Industry	3
	<u>15</u>

Second Year**First Semester**

ACC 211 Business Law I	3
ECO 200 Introduction to Economics	3
MKT 245 Principles of Marketing	3
Material Management electives ¹	6
	<u>15</u>

Second Semester

Humanities elective	3
MAT 228 Finance for Material Managers	3
Material Management electives ¹	9
	<u>15</u>

¹Electives are to be selected from the following list of courses, with approval of the coordinator or a student development faculty member:

Electives: Group I (select four courses)

MAT 120 Production Control Concepts	3
MAT 121 Principles of Physical Distribution	3
MAT 122 Inventory Control for Material Managers	3
MAT 123 Traffic and Transportation	3
MAT 124 Material Handling and Packaging	3
MAT 125 Purchasing	3

Electives: Group II (select two courses)

MAT 220 Advanced Production Control	3
MAT 221 Distribution Center Operations	3
MAT 223 Transportation Law	3
MAT 224 Advanced Material Handling and Warehousing	3
MAT 225 Practice of Regulatory Agencies	3
MAT 226 Material Requirements Planning (MRP)	3
MAT 259 Advanced Purchasing	3
MAT 280 Material Management Policy	3
MGT 160 Principles of Supervision	3
MGT 225 Applied General Statistics	3
MGT 274 Industrial Management	3
DPR 203 Systems Analysis and Design I	3
MET 108 Manufacturing Processes and Materials	3



Mechanical Engineering Technology

Mechanical Engineering Technology is a two-year technical program leading to an associate in applied science degree. The program is designed to train students in the fields of mechanical design and production technology.

The mechanical engineering option includes courses in design, drafting, mathematics, mechanics, materials, and general education. The production engineering option consists of courses in quality control, production control, process planning, automation, numerical control, general education, and other related areas of study.

Graduates of these programs could accept positions such as mechanical designers, mechanical draftsmen, machine designers, mechanical engineering technicians, quality control technicians, production or inventory control controllers, expeditors, tool design technicians, junior process or methods engineers, or technical salesmen.

Graduates of these programs may continue their education either by taking additional courses or, if they so desire, by pursuing a bachelor of science in technology degree with a major in fields such as industrial or manufacturing technology.

First Year

First Semester (Both options)

EGR 100 Introduction to Engineering and Technology	1
ENG 100 Composition or	
ENG 101 Composition	3
MTH 106 Mathematics I	5
MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
NMC 101 Introduction to Numerical Control	2
	<hr/> 17

Second Semester (Mechanical Engineering option)

ENG 103 Report Writing	3
MTH 107 Mathematics II	5
MET 103 Descriptive Geometry	3
MET 104 Statics	3
MET 108 Manufacturing Processes and Materials	3
	<hr/> 17

Second Semester (Production Engineering option)

ENG 103 Report Writing	3
MTH 107 Mathematics II	5
MET 103 Descriptive Geometry	3
MET 108 Manufacturing Processes and Materials	3
NMC 105 Part Programming I	3
	<hr/> 17

Second Year

First Semester (Mechanical Engineering option)	
MET 201 Mechanisms	4
MET 202 Advanced Technical Drafting	3
MET 204 Strength of Materials	3
MET 206 Metallurgy and Heat Treatment	2
Social Science elective	3
	<hr/> 15

First Semester (Production Engineering option)	
MET 111 Quality Control	3
MET 206 Metallurgy and Heat Treatment	2
MET 211 Process Planning and Tool Design	4
NMC 215 Part Programming II	3
Social Science elective	3
	<hr/> 15

Second Semester (Mechanical Engineering option)

Humanities elective	3
MET 207 Machine Design	4
MET 209 Applied Digital Control	3
Social Science elective	3
Technical elective ¹	3
	<hr/> 16

Second Semester (Production Engineering option)

Humanities elective	3
MAT 120 Production Control Concepts	3
MET 209 Applied Digital Control	3
Social Science elective	3
	<hr/> 12

¹Technical elective: ELT 215, MET 110, MET 111, MET 205, PHY 101.

Medical Office Assistant

Medical Office Assistant is a two-year career program leading to an associate in applied science degree for persons interested in becoming medical assistants or medical secretaries in a doctor's office, clinic, or hospital. The curriculum is designed to give the student training in order to perform a variety of administrative and clinical tasks to facilitate the work of the doctor.

First Year

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy ¹	4
ENG 101 Composition	3
HSC 112 Medical Terminology	2
SEC 101 MOA/MT Orientation Seminar	2
SEC 122 Intermediate Typing ²	2
SEC 240 Medical Transcription and Typing I ³ or	
SEC 126 Intermediate Shorthand ¹	3
	<u>16</u>

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology ¹ (4)	3-4
ENG 130 Business Writing I	3
SEC 221 Advanced Typing	2
SEC 240 Medical Transcription and Typing I ³ or	
SEC 242 Medical Transcription and Typing II	3
PED 201 First Aid	2
PSY 101 Introduction to Psychology	3
	<u>16-17</u>

Second Year

First Semester

ACC 099 Business Recordkeeping	3
DPR 101 Introduction to Data Processing	3
HSC 211 Clinical Procedures I	4
Humanities elective	3
SEC 241 Medical Office Procedures	4
	<u>17</u>

Second Semester

HSC 212 Clinical Procedures II	3
HSC 213 Medical Law and Ethics	2
MGT 267 Office and Administrative Management	3
SEC 239 MOA Seminar and Externship	4
Social Science elective ⁴	3
	<u>15</u>

¹Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

²Students may be placed into more advanced courses depending upon previous training and consent of instructor.

³Students may take either SEC 240 and SEC 242, or may take SEC 126 and SEC 240.

⁴ECO 115 or ECO 200 are recommended.

Music

The curriculum at most schools of music is a classical-traditional program requiring a minimum of four full years of academic work leading to the bachelor of music, bachelor of arts, or bachelor of science in music. A music student should be able to perform proficiently on at least one instrument (voice is categorized as an instrument), and should have a basic working knowledge and proficiency at the keyboard. All music programs require credit hours in both applied and ensemble music.

The music curriculum at Harper is designed to provide the student with a program equivalent to the first two years of most four-year college programs, with emphasis in music education, musicology, composition, applied music, and theory and literature. A student who successfully completes the courses suggested in this curriculum guide will have met all requirements for an associate in arts degree.

The piano pedagogy option is designed to provide the knowledge and skills necessary to teach beginning and intermediate piano students. It will provide opportunities for observation of individual and group instruction as well as supervised student teaching.

First Year¹ _____

First Semester

(Music)

Applied Music elective ² _____	2-4
ENG 101 Composition _____	3
Group Performance ³ _____	1
MUS 111 Theory of Music I _____	3
MUS 115 Aural Skills I _____	1
MUS 120 Introduction to Music Literature _____	3
MUS 165 Class Piano I _____	2
	15-17

Second Semester

(Music)

Applied Music elective ² _____	2-4
ENG 102 Composition _____	3
Group Performance ³ _____	1
Instrumental or Vocal Techniques _____	2
MUS 112 Theory of Music II _____	3
MUS 116 Aural Skills II _____	1
Science or Mathematics elective _____	3-5
	15-19

Second Year _____

First Semester

(Music)

Applied Music elective ² _____	2-4
Elective _____	2
Group Performance ³ _____	1
MUS 211 Theory of Music III _____	3
MUS 215 Aural Skills III _____	1
Science or Mathematics elective _____	3-5
Social Science elective _____	3
	15-19

Second Semester

(Music)

Applied Music elective ² _____	2-4
Elective _____	2
Group Performance ³ _____	1
Instrumental or Vocal Techniques _____	2
MUS 212 Theory of Music IV _____	3
MUS 216 Aural Skills IV _____	1
MUS 223 Instrumental Literature or MUS 224 Keyboard and Vocal Literature _____	3
Social Science elective _____	3
	17-19

First Year _____

First Semester

(Piano Pedagogy)

Applied Music elective ² _____	2
ENG 101 Composition _____	3
Group Performance ³ _____	1
MUS 100 Introduction to Music Careers _____	1
MUS 111 Theory of Music I _____	3
MUS 115 Aural Skills I _____	1
MUS 120 Introduction to Music Literature _____	3
MUS 265 Class Piano III _____	2
	16

Second Semester

(Piano Pedagogy)

Applied Music elective ² _____	1
ENG 102 Composition _____	3
Group Performance ³ _____	1
MUS 112 Theory of Music II _____	3
MUS 166 Aural Skills II _____	1
MUS 266 Class Piano IV _____	2
Science or Mathematics elective _____	3-4
	15-16

Second Year	
First Semester	
(Piano Pedagogy)	
Applied Music elective ²	2
Group Performance ³	1
MUS 211 Theory of Music III	3
MUS 215 Aural Skills III	1
MUS 271 Piano Pedagogy I	3
Science or Mathematics elective	3-4
Social Science	3
	<hr/>
	16-17

Second Semester	
(Piano Pedagogy)	
Applied Music elective ²	2
Group Performance ³	1
MUS 212 Theory of Music IV	3
MUS 216 Aural Skills IV	1
MUS 223 Instrumental Literature or	
MUS 224 Keyboard and Vocal	
Literature	3
MUS 272 Piano Pedagogy II	3
Social Science elective	3
	<hr/>
	16

¹All majors in music must demonstrate minimum proficiency on the piano and are advised to take MUS 100 as part of their elective credit.

²To be elected from courses numbered MUS 180 and MUS 280.

³To be elected from MUS 130, MUS 136, MUS 140, MUS 145, and MUS 150.



Nursing (Practical and Associate Degree)*

The Nursing Program is designed to include sufficient and appropriate content to enable students to receive a certificate in practical nursing at the completion of the first year level and sufficient and appropriate content to enable students to receive an associate degree in nursing at the completion of the two-year sequence.

**Admission requirements include:

- Fulfillment of the General Admission Requirement of Harper College.
- High school graduation or equivalent (GED).
- A high school grade average of "C" or better, or if 12 semester hours of college credit have been completed, a college grade average of "C" or better.
- Registered Nursing candidates must have completed at least 1 year of high school chemistry, (no more than 5 years prior to beginning the program), biology, and math with grades of "C" or better, or 1 semester of college chemistry (no more than 5 years prior to beginning the program), biology, and math with grades of "C" or better.
- Licensed Practical Nursing candidates must have completed at least 1 year of high school biology and math with grades of "C" or better or 1 semester of college biology and math with grades of "C" or better. Once college work has been completed in any of these subject areas, *only* college work will be used to determine if the particular subject admission requirement has been fulfilled.
- Satisfactory scores on the Entrance Examination for Schools of Nursing.

Licensed Practical Nurses are eligible for admission directly into the second level after successful completion with a grade of "C" or better in first level support courses (BIO 160 and BIO 161; PSY 101 and PSY 216). All first level admission requirements must be fulfilled and an interview held with the director of the nursing program in order for a student to enter into the second level.

Graduates, after passing the LPN or RN licensure examinations, are qualified for positions in a variety of hospital and specialized care settings.

First Year _____

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy ¹	4
NUR 101 Nursing Fundamentals	9
NUR 103 Nursing Survey I	1
PSY 101 Introduction to Psychology	3
	<hr/> 17

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology ¹ (4)	3-4
NUR 102 Nursing Care of Hospitalized Patients	9
PSY 216 Child Psychology	3
	<hr/> 15-16

Summer Semester _____

NUR 104 Nursing Field Experience ²	4
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Second Year _____

First Semester

BIO 130 Microbiology	4
ENG 101 Composition	3
NUR 201 Advanced Nursing I	8
NUR 203 Nursing Survey II	1
	<hr/> 16

Second Semester

ENG 102 Composition	3
Humanities elective	3
NUR 202 Advanced Nursing II	8
SOC 101 Introduction to Sociology	3
	<hr/> 17

*Nursing is a limited enrollment program. See Limited Enrollment Programs Section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

¹Practical Nursing students may take BIO 135 or BIO 160 and BIO 136 or BIO 161. All Associate Degree Nursing students must take BIO 160 and BIO 161.

²Required for students electing to earn a certificate in Practical Nursing. It is not required for the student who proceeds to the second level of study.

Park and Grounds Operation Management

Park and Grounds Operation Management is a two-year program leading to an associate in applied science degree. This program prepares the student to function as a park operations supervisor or grounds maintenance supervisor in public parks, high density housing complexes, cemetery-memorial parks, golf courses, industrial-office parks, and educational parks.

First Year _____

First Semester

BIO 120 General Botany _____	4
PKM 100 Introduction to Park Management _____	1
PKM 101 Ornamental Plants or PKM 110 Soil Science _____	4
PKM 140 Grounds Equipment and Shop Operation _____	4
PED 201 First Aid _____	2
	<u>15</u>

Second Semester

PKM 101 Ornamental Plants or PKM 110 Soil Science _____	4
PKM 102 Plant Diseases and Pests _____	4
PKM 111 Basic Horticultural Skills _____	4
Elective ¹ _____	3-4
	<u>15-16</u>

Summer Semester² _____

PKM 150 Park Management Internship _____	5
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Second Year _____

First Semester

English ³ _____	3
PKM 210 Drainage and Irrigation _____	3
PKM 212 Turfgrass Science _____	4
PKM 214 Principles of Park Design and Construction _____	4
Social Science elective _____	3
	<u>17</u>

Second Semester

English ³ _____	3
Humanities elective _____	3
PKM 220 Arboriculture _____	4
PKM 230 Contracts, Specifications, Estimating _____	3
PKM 250 Park Management Seminar _____	1
Social Science elective _____	3
	<u>17</u>

¹Elective: MGT 111, MGT 150, MGT 154, or any PKM course, with approval of a student development faculty member and/or program coordinator.

²Strongly recommended elective but not required.

³Students will take ENG 100, ENG 101, ENG 102, or ENG 130, depending upon their English assessment and the advice of the coordinator.

Physical Education¹

The successful completion of the physical education transfer program will enable the student to obtain an associate in science degree and to transfer with junior status to most four-year colleges and universities. To ensure satisfactory transfer, the student is advised to investigate the institution to which he or she plans to transfer for specific general education requirements.

First Year _____

First Semester

BIO 110 Principles of Biology _____	4
ENG 101 Composition _____	3
PED 200 Introduction to Physical Education _____	2
PED 203 Health _____	2
PED 222 Football Techniques or PED 224 Basketball Techniques _____	2
SPE 101 Fundamentals of Speech Communication _____	3
	<u>16</u>

Second Semester

Elective ² _____	3
ENG 102 Composition _____	3
Mathematics or Science elective ³ _____	4
PED 201 First Aid _____	2
PED 204 Selected Physical Education Activities _____	2
PED 220 Track and Field Techniques _____	2
Physical Education elective _____	1
	<u>17</u>

Second Year _____

First Semester

BIO 160 Human Anatomy _____	4
Humanities elective _____	3
PED 210 Sports Officiating _____	2
Physical Education elective _____	1
PSY 101 Introduction to Psychology _____	3
Social Science elective _____	3
	<u>16</u>

Second Semester

BIO 161 Human Physiology _____	4
Humanities elective _____	3
PED 226 Baseball Techniques _____	2
PED 228 Aquatics _____	2
Science elective _____	4
	<u>15</u>

¹The following physical education courses can, in addition to the "100" level courses, serve to satisfy the 3 credit hour physical education teacher certification requirements for the State of Illinois: PED 201, PED 203, PED 204.

²Elective: HST 111, HST 112, or PSC 201.

³Completion of mathematics elective is contingent on requirements of four-year college or university to which student is transferring.

Public Administration

Public Administration is a two-year program leading to an associate in applied science degree. The program is designed to provide mid-level government employees, in state, local, or federal agencies, with knowledge, skills and values useful in the management of people and programs.

The program seeks to serve mid-career people whose duties and responsibilities have been changed by promotion to managerial or staff positions. Pre-service students planning to continue their education at a four-year college or university toward a professional degree in public affairs or administration will be uniquely prepared to enter government service by taking this program.

First Year _____

First Semester

DPR 101 Introduction to Data Processing _____	3
ENG 101 Composition _____	3
PSY 101 Introduction to Psychology _____	3
PAD 101 Introduction to Municipal and Governmental Management _____	3
SOC 101 Introduction to Sociology _____	3
	<u>15</u>

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
ENG 103 Report Writing _____	3
Humanities elective _____	3
PSC 202 Suburban, Urban and State Politics _____	3
PAD 201 Governmental Management _____	3
	<u>15</u>

Second Year _____

First Semester

Elective ¹ _____	3
PAD 202 Organization Behavior _____	3
PAD 210 Public Finance and Budget Process _____	3
SOC 215 Introductory Social Psychology _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>15</u>

Second Semester

Electives ¹ _____	6
PAD 203 Management Process _____	3
PAD 212 Public Personnel Management _____	3
PAD 214 Planning in the Public Agency _____	3
	<u>15</u>

Real Estate

A two-year program in professional development for those men and women who desire to excel as real estate salespersons or wish to expand their career opportunities to include managing or owning a real estate business. Career objectives might also include appraising, banking, savings and loan, title company, mortgage brokerage, estate counseling and others.

First Year _____

First Semester

ATE 209 Building Construction Principles for Realtors _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
PSY 101 Introduction to Psychology _____	3
RES 101 Real Estate Transactions _____	3
SPE 115 Interviewing _____	1
	<u>16</u>

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
ENG 130 Business Writing I _____	3
PSY 145 Psychology in Business and Industry _____	3
RES 121 Advanced Principles, Marketing and Brokerage _____	3
RES 123 Real Estate Law _____	3
	<u>15</u>

Second Year _____

First Semester

DPR 101 Introduction to Data Processing _____	3
ECO 200 Introduction to Economics _____	3
MKT 245 Principles of Marketing _____	3
RES 122 Real Estate Appraisal I _____	3
RES 124 Real Estate Finance _____	3
	<u>15</u>

Second Semester

ECO 210 Money and Banking _____	3
Elective _____	3
Humanities elective ¹ _____	3
MKT 140 Salesmanship or RES or Business elective _____	3
RES 233 Real Estate Problems Seminar _____	3
	<u>15</u>

¹Electives: PAD 215, PAD 220, PAD 222.

¹PHI 110 or PHI 115 recommended.

Recreation

The successful completion of the recreation transfer program will enable the student to obtain an associate in arts degree and to transfer with junior status to most four-year colleges and universities. To ensure satisfactory transfer, the student is advised to investigate the institution to which he or she plans to transfer for specific general education requirements.

First Year _____

First Semester

BIO 101 Biology Survey (3) or	
BIO 110 Principles of Biology (4)	3-4
ENG 101 Composition	3
Humanities elective	3
REC 200 Leisure: Its Uses and	
Resources	2
REC 202 Foundations for Recreation	
and Park Services	2
SPE 101 Fundamentals of Speech	
Communication	3
	<u>16-17</u>

Second Semester

Elective ¹	3
ENG 102 Composition	3
Humanities elective	3
PED 201 First Aid	2
REC 206 Principles of Camping	
Management	3
Science elective	3
	<u>17</u>

Second Year _____

First Semester

PED 204 Selected Physical	
Education Activities	2
PSY 101 Introduction to Psychology	3
REC 208 Outdoor Recreation Planning	2
REC 210 Performing Arts As Leisure	
Opportunities	2
Science elective	3
Social Science elective	3
	<u>15</u>

Second Semester

Mathematics or Science	
elective ²	3-4
REC 204 Introduction to	
Therapeutic Recreation	2
REC 214 Basic Field Experience	2
Science elective	3
Social Science elective	3
	<u>13-14</u>

¹Elective: HST 111, HST 112, or PSC 201.

²Completion of mathematics elective is contingent on requirements of four-year college or university to which student is transferring.



Refrigeration and Air Conditioning Technology

Refrigeration and Air Conditioning Technology is a two-year technical program leading to an associate in applied science degree. The courses in the curriculum are theory and service oriented. Theory courses deal with energy conversions. Service courses are strongly related to a "hands-on" philosophy. Emphasis is placed upon operating and servicing equipment.

Graduates from this program may be employed as engineering laboratory assistants, equipment salesmen, heating and refrigeration servicemen, estimators and system designers, or stationary engineers.

First Year¹ _____

First Semester

English elective ² _____	3
PSY 101 Introduction to Psychology _____	3
RAC 101 Refrigeration Fundamentals _____	3
RAC 103 Heating Principles _____	3
RAC 105 Heating and Cooling Controls _____	4
	<hr/> 16

Second Semester

English elective ² _____	3
MET 101 Elements of Drafting ³ _____	3
RAC 102 Refrigeration Systems _____	4
RAC 104 Residential Comfort Systems _____	4
	<hr/> 14

Second Year¹ _____

First Semester

Humanities elective ⁴ _____	3
RAC 201 Refrigeration System Design I _____	4
RAC 203 Air Conditioning Principles _____	4
Social Science elective _____	3
	<hr/> 14

Second Semester

Electives ⁵ _____	6
RAC 202 Refrigeration System Design II _____	4
RAC 204 Air Distribution _____	3
RAC 208 Pneumatic Controls _____	3
	<hr/> 16

¹RAC 290 may be substituted for some of the listed RAC courses, with approval of coordinator.

²Students may take ENG 100 or ENG 101 the first semester depending upon their test scores and the advice of a student development faculty member; ENG 102, ENG 103, or ENG 130 are suggested second semester electives.

³Students will enroll in sections of MET 101 designed for RAC students.

⁴Suggested humanities elective: ART 122 or PHI 110.

⁵ATE 211, CHM 110, ENG 103, MGT 111, MGT 154, MGT 160, MKT 140, MTH 100, MTH 102, or MTH 106.

Science and Mathematics

The following program is typical of the first two years of a bachelor's degree program in physical science, mathematics, or computer science.

Special care should be taken in selecting the laboratory science courses appropriate to the student's career plans. The student's program should be designed so that course sequences are completed at Harper before transfer.

Chemistry and Chemical Engineering majors should elect CHM 131-132 and CHM 204-205, while Physics majors should aim at MTH 201-202 and PHY 201-202 and 203.

Mathematics majors should complete the sequence of MTH 105-201, 202 and 203 or 212, as should computer science majors who should also elect MTH 215. Mathematics courses numbered MTH 104 or below usually may not be used for credit other than as electives in these programs.

Some transfer institutions do not require foreign languages in mathematics and science programs. Thus, students may wish to defer their language program until the second year, when transfer plans are known.

First Year _____

First Semester

ENG 101 Composition _____	3
Foreign Language elective _____	4
Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
	<hr/>
	14-17

Second Semester

ENG 102 Composition _____	3
Foreign Language elective _____	4
Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
	<hr/>
	14-17

Second Year _____

First Semester

Elective _____	3-4
Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
Social Science elective _____	3
	<hr/>
	13-17

Second Semester

Elective _____	3-4
Mathematics elective _____	4-5
Laboratory Science elective _____	4-5
Social Science elective _____	3
	<hr/>
	14-17

Secretarial Career

See: Executive Secretarial Development
Legal Secretary
Medical Office Assistant

Supervisory and Administrative Management

Supervisory and Administrative Management is a two-year career program designed to assist students in a wide variety of business occupations. The associate degree curriculum is structured to meet the needs of individuals interested in gaining or improving management skills. The program not only develops abilities to organize, coordinate, and evaluate the functions of a unit, department, or branch of an organization either in an industrial or administrative management capacity, but it also provides the fundamental management skills needed by the successful owner-manager of a business.

First Year _____

First Semester

ACC 101 Principles of Accounting Theory I _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 160 Principles of Supervision _____	3
PSY 101 Introduction to Psychology _____	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II _____	3
DPR 101 Introduction to Data Processing _____	3
English elective ¹ _____	3
MGT 270 Principles of Management _____	3
PSY 145 Psychology in Business and Industry _____	3
	<u>15</u>

Second Year _____

First Semester

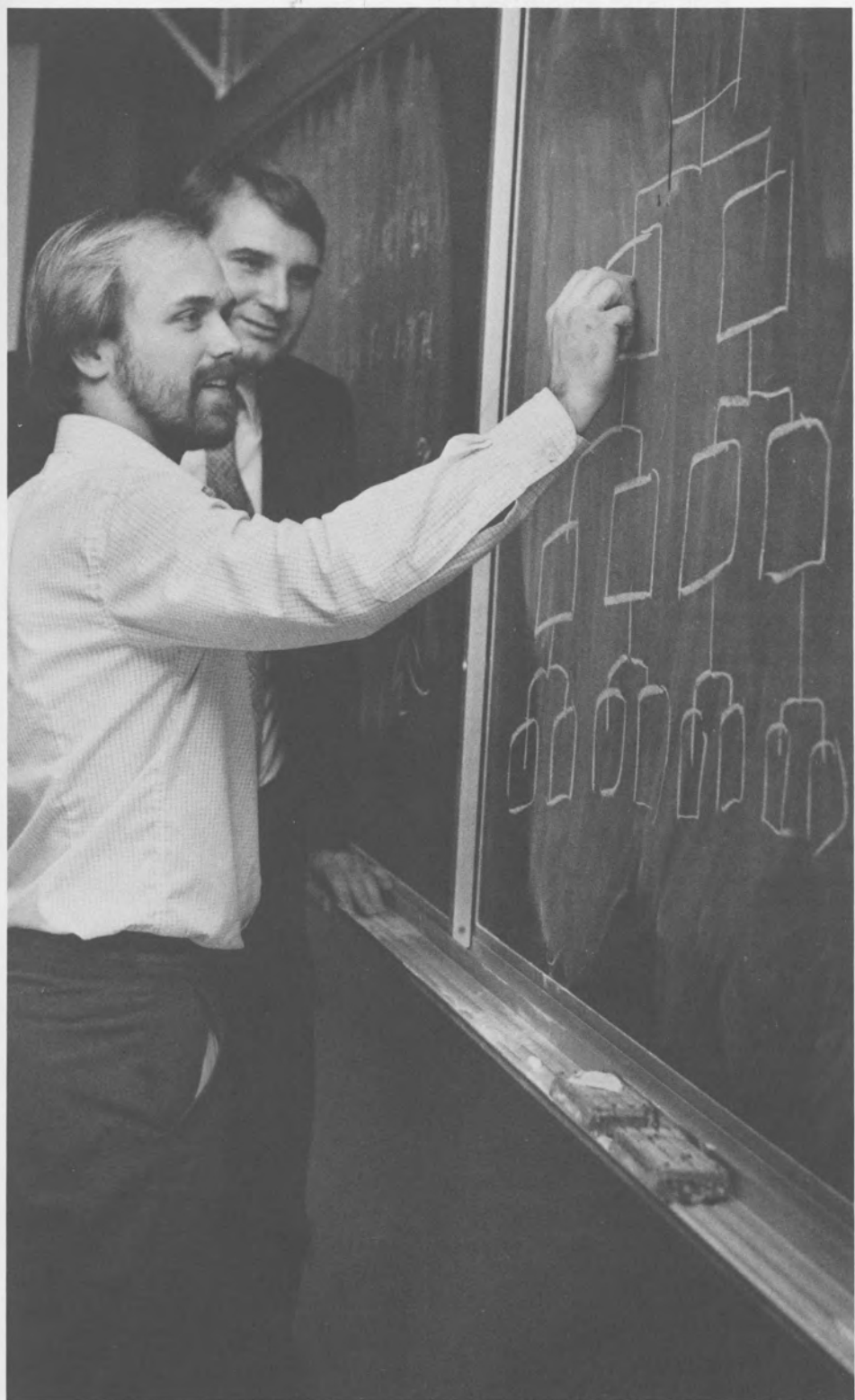
ACC 211 Business Law I _____	3
ECO 200 Introduction to Economics _____	3
MGT electives ² _____	6
MKT 245 Principles of Marketing _____	3
	<u>15</u>

Second Semester

Humanities elective _____	3
MGT electives ² _____	6
MGT 218 Introduction to Finance _____	3
MGT 291 Problems in Management and Supervision _____	3
	<u>15</u>

¹To be selected from a "100" level course or above.

²These electives require approval of the coordinator or a student development faculty member.



Certificate Programs

A certificate program is a sequence of courses in a specialized academic and/or technical area requiring approximately two to three years of part-time or one year of full-time course work. There are currently 52 programs of this type at the college. Completion of the course work required for a specific program with a grade point average of 2.0 (C) or higher entitles the student to a certificate of achievement in that field of specialization.

Courses in certificate programs are offered in the evening as well as during the day to permit part-time evening students to meet their particular training needs and to reach an obtainable goal within a reasonable period of time. All courses creditable toward a certificate are also applicable toward an associate degree.

Accounting Aide _____

This is a certificate program for persons interested in pursuing careers as junior accountants in business, industry and government. Despite the increasing use of data processing in accounting work, there is an acute shortage of persons with the training and basic intellect needed to be successful in accounting.

ACC 101 Principles of Accounting Theory I _____	3
ACC 102 Principles of Accounting Theory II _____	3
ACC 155 Tax and Payroll Accounting _____	4
ACC 201 Intermediate Accounting I _____	3
ACC 202 Intermediate Accounting II _____	3
ACC 203 Introductory Cost Accounting _____	3
	<hr/>
	19

Accounting Clerk _____

This certificate program provides the student with the courses needed for an entry level position in such areas as accounts payable, accounts receivable, and inventory accounting.

ACC 099 Business Recordkeeping _____	3
MGT 150 Business Math _____	3
Typing elective ¹ _____	2
	<hr/>
	8

¹Typing elective: SEC 121, SEC 122, or SEC 221 depending upon previous training and consent of the instructor.

Accounting—Payroll _____

This certificate curriculum in payroll accounting will provide the student with the courses needed for an entry level position in this particular area. The certificate could be earned in one, or no more than two, semesters.

ACC 155 Tax and Payroll Accounting _____	4
MGT 150 Business Math _____	3
Typing elective ¹ _____	2
	<hr/>
	9

¹Typing elective: SEC 121, SEC 122, or SEC 221 depending upon previous training and consent of the instructor.

Air Conditioning _____

See: Refrigeration and Air Conditioning

Architectural Technology _____

This is a technical program leading to a certificate upon completion of any of the following course offerings totaling 15 credit hours, providing the combination has approval of a student development faculty member. The curriculum emphasis is on architecture in the related areas of construction, drafting, computer programming, estimating, and specifications.

ATE 101 Introduction to Architectural Tech. I _____	4
ATE 102 Introduction to Architectural Tech. II _____	4
ATE 103 Building Materials Technology I _____	4
ATE 104 Building Materials Technology II _____	4
ATE 105 Computer Math for Architectural Tech. I _____	3
ATE 106 Computer Math for Architectural Tech. II _____	3
ATE 201 Comprehensive Building Project I _____	4
ATE 202 Comprehensive Building Project II _____	4
ATE 203 Construction Problems I _____	4
ATE 204 Construction Problems II _____	4
ATE 205 Computer Graphics and Optimization _____	3
ATE 206 Computer Applications in Architecture _____	3
ATE 207 Behavior of Architectural Materials I _____	3
ATE 208 Behavior of Architectural Materials II _____	3

Baking _____

This is a one-year certificate program planned to prepare students for entrance into the food service and baking industry. Graduates may be able to secure positions as qualified bakers and baker's helpers in institutional, retail, and commercial bakeries.

First Semester	
FSM 090 Basic Quantity Baking _____	10
FSM 111 Introduction to Food Service _____	2
FSM 114 Food Standards and Sanitation _____	3
	15

Second Semester

FSM 091 Advanced Quantity Baking _____	10
FSM 115 Menu Planning _____	2
Elective _____	3
	15

Banking, Finance and Credit _____

This program is designed for those currently employed in, or seeking employment in banks, savings and loan associations, or in other finance-oriented enterprises. The curriculum emphasizes developing the competencies necessary for supervisory and public contact positions in the finance field. Students may apply this entire program toward the two-year associate degree in Banking, Finance and Credit.

ACC 101 Accounting I _____	3
BFC 101 Principles of Financial Institution Operations _____	3
BFC 102 Commercial Law _____	3
BFC 115 Personal Banking or BFC 118 Credit Administration _____	3
BFC 211 Accounting for Financial Institutions _____	3
Elective ¹ _____	3

¹Elective: BFC 110, BFC 117, BFC 200, BFC 212, BFC 213, BFC 215, BFC 216, BFC 217, BFC 219, BFC 220, BFC 229, ECO 210.

Brokers License Certification _____

This certificate program will provide the minimum number of hours and mandatory courses to complete the education requirements for application to take the State of Illinois Real Estate Brokers test.

RES 108 Brokers Licensure Preparation I _____	2
RES 109 Brokers Licensure Preparation II _____	2
RES 120 Principles of Real Estate _____	2
	6

Building Codes and Enforcement _____

This certificate program, which totals 24 credit hours, is designed to provide specialized education for those interested in entry level positions in this field as well as for those currently employed in building code enforcement.

This certificate will satisfy college credit requirements for entry level positions in the building code enforcement field.

(Continued on next page.)

BCE 101 Basic Construction for Building Codes	3
BCE 102 Basic Code Enforcement Techniques	3
BCE 103 Plumbing and Electrical Codes	3
BCE 104 Basic Mechanical and Energy Conservation Codes	3
BCE 201 BOCA Basic Building Codes	3
ENG 103 Report Writing	3
FIS 115 Construction Design and Fire Safety	3
SPE 101 Fundamentals of Speech Communication	3

Certified Professional Secretary

This is a certificate program specifically designed for individuals with a high degree of secretarial skill and business experience who are currently employed as secretaries and wish to raise their level of professionalism and/or qualify for promotion into executive secretarial, administrative assistant, or managerial types of positions within a company.

This program emphasizes advanced secretarial and business training in order to provide the secretary with a deeper and broader understanding of the dynamics of the business world and the vital role performed by the secretary in the ever increasing demands of the business.

SEC 260 Environmental Relationships in Business	1
SEC 261 Business Law and Public Policy	1
SEC 262 Economics and Management	1
SEC 263 Financial Analysis and the Mathematics of Business	1
SEC 264 Communications, Work Flow, and Decision Making	1
SEC 265 Advanced Office Procedures	1
	6

Child Development

This certificate program, totaling 15 credit hours, emphasizes theoretical and practical aspects of early childhood education. This certificate will satisfy preliminary college credit requirements for employment in child development and early childhood education centers for normal and handicapped children.

Required:

CCA 102 Child Development I	3
CCA 103 Child Development II	3

Electives: Select any 9 credit hours from the following courses:

CCA 101 Introduction to Child Development Careers	3
CCA 209 Language Arts for the Young Child	3
CCA 210 Creative Activities for Young Children	3
CCA 214 Principles of Preschool Education	6
CCA 218 Principles of Special Education	6
CCA 219 Psychology of Exceptional Children	3
CCA 220 Child Development Practicum Internship	6
CCA 221 Workshop in Early Childhood Education	3
CCA 225 Mental Health in Child Development	3
CCA 230 Movement and Rhythms for the Young Child	3
CCA 252 Child-Family-Community	3
CCA 253 Administration of Early Childhood Programs	3
HSC 220 Health, Nutrition and Safety	3

Cooking

This is a one-year certificate program planned to prepare students for entrance into the food service industry. Graduates may be able to secure positions as head cooks, assistant cooks, specialty cooks or chefs' assistants.

First Semester

FSM 095 Basic Quantity Cooking	10
FSM 111 Introduction to Food Service	2
FSM 114 Food Standards and Sanitation	3
	15

Second Semester

FSM 096 Advanced Quantity Cooking	10
FSM 115 Menu Planning	2
Elective	3
	15

Criminal Justice

This certificate program is designed to provide specialized education for those currently employed, or other interested persons, who wish to obtain a certificate indicating completion of the courses as a group. Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has coordinator approval. These courses must be taken at Harper College.

CRJ 101 Introduction to Criminal Justice	3
CRJ 105 Criminal Courts of the U.S.	3
CRJ 116 Introduction to Forensics	3
CRJ 203 Law and Society	3
CRJ 207 Vice and Drug Control	3
CRJ 212 Traffic Administration	3
CRJ 213 Crime Prevention	3
CRJ 215 Alternatives to Confinement	3
CRJ 216 Investigative Process	3
CRJ 220 Police Administration	3
CRJ 222 Police Operations	3
CRJ 224 Police Supervision	3
CRJ 226 Case Management	3

Data Processing—Clerical

This is a two-semester certificate program which includes the study of introduction to data processing, keypunching and verifying, business machines operations, and general clerical subjects. Graduates may find employment as keypunch operators, verifier operators, or other clerical positions in data processing installations in business, industry, and government.

First Semester

ACC 101 Principles of Accounting Theory I	3
DPR 101 Introduction to Data Processing	3
DPR 103 Keypunching and Verifying ¹	3
ENG 101 Composition ²	3
MGT 150 Business Math	3
	15

Second Semester

Business or Data Processing elective	3-5
Elective	2-3
ENG 130 Business Writing	3
SEC 131 Business Machines	2
SOC 101 Introduction to Sociology	3
	13-16

¹Entry into DPR 103 requires successful completion of a typing course.

²Students not qualifying for ENG 101 may take ENG 100.

Data Processing—Computer Operator

This is a two-semester certificate program which includes the study of introduction to data processing, computer logic and programming technology, programming systems, an internship at an industrial training station, and general clerical subjects. Graduates may find employment as computer operators, tape librarians, peripheral equipment handlers, or other clerical positions in data processing installations in business, industry, and government.

First Semester

DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	3
DPR 135 Computer Operator (DOS)	3
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
	15

Second Semester

DPR 137 Internship/Computer Operator Field Project	3
DPR 202 Programming Systems	3
ENG 103 Report Writing	3
MGT 150 Business Math	3
	12

Data Processing—Technical

This is a certificate program designed to either familiarize the student with, or to upgrade his knowledge of, the field of data processing. Contingent upon the particular sequence of courses taken, the student may be able to upgrade his current position or enter the data processing field in a variety of positions. Any combination of 15 credit hours may be selected from the courses listed below, providing the appropriate prerequisites have been satisfied.

DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	3
DPR 108 Computer Programming—COBOL	5
DPR 110 Computer Programming—Basic Assembler Language	5
DPR 135 Computer Operator (DOS)	3

(Continued on next page.)

DPR 140 Report Program Generator (RPG Programming) _____	3
DPR 142 PL/I Programming Language _____	3
DPR 150 Business FORTRAN _____	3
DPR 202 Programming Systems _____	3
DPR 203 Systems Analysis and Design I _____	3
DPR 204 Advanced Systems Analysis and Design _____	3
DPR 208 Computer Programming—Advanced COBOL _____	4
DPR 210 Computer Programming—Advanced Assembler Language _____	4
DPR 212 Programming for the Minicomputer _____	3
DPR 240 Advanced RPG II _____	3
DPR 250 Data Processing Math and Computer Statistics _____	4

Digital Electronics and Microprocessor Technology _____

This is a 23 hour certificate program designed to give the student a job entry level skill in the field of digital electronics and microprocessors.

ELT 110 Introductory Electronics _____	2
ELT 111 Electronics I, Resistive _____	3
ELT 203 Electronics II, Digital _____	5
ELT 206 Electronic Computers _____	5
ELT 210 Computer Programming _____	3
MTH 106 Mathematics I _____	5

Electronics _____

Any combination of 16 credit hours may be selected from the courses listed below, providing the combination has approval of program coordinator.

ELT 101 Circuits I _____	5
ELT 102 Circuits II _____	4
ELT 103 Circuits III _____	5
ELT 105 Electro-Mechanical Drafting _____	3
ELT 110 Introductory Electronics _____	2
ELT 111 Electronics I, Resistive _____	3
ELT 203 Electronics II, Digital _____	5
ELT 204 Electronics III, Advanced Electronics _____	5
ELT 205 Electronic Instrumentation _____	4
ELT 206 Electronic Computers _____	5
ELT 207 UHF Communications and Reception _____	4
ELT 210 Computer Programming _____	3
ELT 215 Electrical Controls and Motors _____	4

MTH 100 Basic Applied Mathematics _____	3
MTH 106 Mathematics I _____	5
MTH 107 Mathematics II _____	5
MTH 206 Mathematics III _____	3

Fashion Design* _____

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has coordinator approval.

FAS 101 Flat Pattern Design and Draping I _____	3
FAS 102 Flat Pattern Design and Draping II _____	4
FAS 103 Apparel Design and Construction I _____	3
FAS 104 Apparel Design and Construction II _____	4
FAS 105 Fashion Design Illustration I _____	1
FAS 106 Fashion Design Illustration II _____	1
FAS 107 Textiles I _____	2
FAS 108 Textiles II _____	2
FAS 109 Fashion Arts and Design _____	2
FAS 110 Costume History _____	2
FAS 201 Advanced Flat Pattern Design and Draping I _____	4
FAS 202 Advanced Flat Pattern Design and Draping II _____	4
FAS 203 Advanced Diversified Apparel Design I _____	4
FAS 204 Advanced Diversified Apparel Design II _____	4
FAS 205 Tailoring Techniques I _____	2
FAS 206 Tailoring Techniques II _____	2
FAS 209 Advanced Fashion Illustration I _____	1
FAS 120 Advanced Fashion Illustration II _____	1
FAS 212 Visual Fashion Merchandising _____	2

*Fashion Design is a limited enrollment program. Contact the Office of Admissions for details.

Fire Science Technology _____

This certificate program is designed to upgrade people currently employed in the fire science field and to enable them to seek more responsible positions within that field by furthering their knowledge in special areas of fire science.

Electives: Select at least 6 credit hours from the following courses:

ENG 100 Composition _____	3
ENG 101 Composition _____	3
ENG 103 Report Writing _____	3
SOC 101 Introduction to Sociology _____	3
MTH 100 Basic Applied Mathematics _____	3

Electives: Select at least 9 credit hours from the following courses, providing the combination has approval of a student development faculty member:

FIS 101 Municipal Fire Administration I _____	3
FIS 112 Fire Alarm and Extinguishing Systems _____	3
FIS 115 Construction Design and Fire Safety _____	3
FIS 122 Fire Inspection Principles _____	3
FIS 132 Hazardous Materials I _____	3
FIS 133 Hazardous Materials II _____	3
FIS 201 Municipal Fire Administration II _____	3
FIS 222 Fire Inspection Applications _____	3
FIS 242 Fire Hydraulics _____	3
FIS 245 Fire Causes and Investigation _____	3
FIS 252 Automatic Sprinkler Systems _____	3
FIS 262 Water Supply Analysis _____	3
HSC 110 Emergency Medical Technician Training _____	5

Food Service Management _____

This certificate program is designed for people presently employed in the food service industry to enable them to upgrade their management skills or to assume more responsible positions. A minimum of 15 credit hours may be selected from the courses listed below.

FSM 111 Introduction to Food Service _____	2
FSM 114 Food Standards and Sanitation _____	3
FSM 115 Menu Planning _____	2

FSM 130 Hospitality Law and Risk Management _____	4
FSM 210 Hospitality Facility Maintenance _____	3
FSM 211 Purchasing and Storage _____	3
FSM 212 Food Service Supervision _____	4
FSM 214 Cost Control _____	3
FSM 215 Restaurant Layout and Equipment _____	3

Horticulture _____

This is a 16 credit hour program designed for students wishing to acquire basic knowledge and techniques in the ornamental horticulture field for personal or vocational use is the primary purpose of this program. The technical training will benefit those students who are currently employed or contemplating employment in any of several ornamental horticulture occupations.

Required:

BIO 120 General Botany _____	4
PKM 110 Soil Science _____	4
PKM 111 Basic Horticultural Skills _____	4

Elective: Select one course

PKM 101 Ornamental Plants _____	4
PKM 102 Plant Diseases and Pests _____	4

Industrial and Retail Security _____

This certificate program is designed to provide a specialized group of courses for those presently employed and for those who may wish to have a better knowledge of this employment area when seeking employment in the security field. To qualify for the certificate, students must take a total of 15 credit hours at Harper College.

Required:

CRJ 250 Industrial Security Administration _____	3
CRJ 252 Industrial Fire Protection, Disaster Control _____	3
CRJ 253 Safety Management _____	3

Electives:¹

CRJ 201 Criminal Law I _____	3
CRJ 202 Criminal Law II _____	3
CRJ 213 Crime Prevention _____	3
CRJ 216 Investigative Process _____	3
CRJ 222 Police Operations _____	3
CRJ 226 Case Management _____	3

¹Students having special needs should see the coordinator.

Industrial Sales Management and Development _____

This program is designed to provide in-service and pre-service training and development for industrial sales and sales management personnel representing manufacturers, service marketers, wholesalers or other marketing middlemen. Through the selection of courses this program can satisfy both the career needs of individuals seeking to develop and expand their selling and account servicing skills and individuals preparing for sales management responsibilities. This program would be especially appropriate for individuals who are entering the professional sales field without a formal sales or marketing education.

Program requirements are satisfied by completing 6 hours from Group I and 9 hours from Group II for a total minimum of 15 credit hours. To achieve an individual program designed to complement the student's industrial and education background, the selection of courses should be made in consultation with the coordinator.

Electives: Group I (select at least two courses¹)

MKT 140 Salesmanship _____	3
MKT 141 Sales Management _____	3
MKT 240 Advanced Sales Skills _____	3
MKT 247 Consumer Buying Behavior _____	3

Electives: Group II (select at least three courses¹)

ACC 211 Business Law I _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 160 Principles of Supervision _____	3
MKT 141 Sales Management _____	3
MKT 240 Advanced Sales Skills _____	3
MKT 245 Principles of Marketing _____	3
MKT 246 Industrial Marketing _____	3
MKT 247 Consumer Buying Behavior _____	3
MAT 125 Purchasing _____	3

¹Students must satisfy prerequisites for each course selected.

Legal Secretary _____

This certificate program is designed for persons who possess a high degree of office secretarial skill and are interested in pursuing secretarial careers in law firms, government, or law departments of business firms. This is a 25 or 26 credit hour program in which 14 credit hours are required and 11 to 12 credit hours are electives.

Required:

SEC 221 Advanced Typing ¹ _____	2
SEC 225 Dictation and Transcription ¹ _____	3
SEC 234 Legal Office Procedures _____	3
SEC 235 Legal Dictation and Transcription ¹ _____	3
SEC 236 Secretarial Procedures _____	3

Electives: Select any four of the following courses with the advice of the coordinator.

ACC 101 Principles of Accounting Theory I _____	3
ACC 211 Business Law I _____	3
ACC 212 Business Law II _____	3
ECO 200 Introduction to Economics _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 267 Office and Administrative Management _____	3
RES 120 Principles of Real Estate _____	2

¹Placement into courses contingent upon previous training.

Legal Technology* _____

This certificate program is designed for those who are currently employed or employable in the legal field or those who, due to experiential backgrounds, could benefit most from these specialty options. The various choices available allow the student to develop special interests and skills. All students are required to take LTE 101, Introduction to Legal Technology, and then a minimum of five other courses from those listed below, provided the combination has approval of the coordinator or a student development faculty member.

ACC 211 Business Law I _____	3
ACC 212 Business Law II _____	3
CRJ 105 Criminal Courts of the U.S. _____	3
CRJ 201 Criminal Law I _____	3
CRJ 202 Criminal Law II _____	3
IDS 290 Independent Study _____	3
LTE 102 Fundamentals of Legal Research _____	3
LTE 103 Litigation _____	3
LTE 105 Family Law _____	3
LTE 123 Real Property Law _____	3
LTE 200 Probate _____	3
LTE 201 Tort and Insurance Law _____	3
LTE 202 Estate Planning _____	3
LTE 203 Income Taxation I _____	3
LTE 204 Income Taxation II _____	3
LTE 206 Conference Course in Legal Technology _____	3

LTE 210 Corporate and Securities Law	3
LTE 212 Law Office Systems	3
LTE 220 Community Law	3
RES 124 Real Estate Finance	3

Certificate Specialties Available

Corporate Law	Criminal Law	Family Law
ACC 212	CRJ 105	Elective
Elective	CRJ 201	LTE 101
LTE 101	CRJ 202	LTE 103
LTE 204	Elective	LTE 105
LTE 206	LTE 101	LTE 200
LTE 210	LTE 206	LTE 202

General Practice	Litigation
Elective ¹	Elective
LTE 101	LTE 101
LTE 103	LTE 103
LTE 123	LTE 105
LTE 200	LTE 201
LTE 202	LTE 206

Real Estate	Tax Law
ACC 211	Elective
Elective	LTE 101
LTE 101	LTE 200
LTE 123	LTE 202
LTE 206	LTE 203
RES 124	LTE 204

*Legal Technology is a limited enrollment program. Contact the Office of Admissions for details.

¹Elective: CRJ 201, LTE 201, LTE 212, LTE 220.

Machinist

This certificate program allows for those interested or presently engaged in metalworking to develop knowledge and skills to assume responsible positions in the field.

MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
MET 110 Basic Welding	3
MET 205 Advanced Machine Shop	3
Technical electives ¹	3-5

15-17

¹Technical electives: MET 108, MET 202, MET 210, MTH 100, MTH 106.

Material Management

This certificate program is designed to provide in-service education for those persons working directly in, or in fields related to, material management and physical distribution. This particular curriculum format is especially suitable for those who may be in the field and are seeking to fill in knowledge or skill "gaps" in their total preparation. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.

Required:

MAT 101 Fundamentals of Material Management	3
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Electives: Group I (select at least four courses)

MAT 120 Production Control Concepts	3
MAT 121 Principles of Physical Distribution	3
MAT 122 Inventory Control for Material Managers	3
MAT 123 Traffic and Transportation	3
MAT 124 Material Handling and Packaging	3
MAT 125 Purchasing	3

Electives: Group II (select one course)

DPR 203 Systems Analysis and Design I	3
MGT 225 Applied General Statistics	3
MGT 270 Principles of Management	3
MAT 220 Advanced Production Control	3
MAT 221 Distribution Center Operations	3
MAT 223 Transportation Law	3
MAT 224 Advanced Material Handling and Warehousing	3
MAT 225 Practice of Regulatory Agencies	3
MAT 226 Material Requirements Planning (MRP)	3
MAT 228 Finance for Material Managers	3
MAT 259 Advanced Purchasing	3
MAT 280 Material Management Policy	3

Mechanical Drafting _____

This certificate program has been developed in conjunction with the area industries to prepare students for challenging careers in drafting. The program may be completed in one semester of day school or two semesters of evening school.

MET 102 Technical Drafting _____	3
MET 202 Advanced Technical Drafting _____	3
MTH 100 Basic Applied Mathematics _____	3
Technical electives ¹ _____	4-6
	<hr/> 13-15

¹Electives: MET 103, MET 104, MET 105, and MET 201.

Mechanical Technician _____

This certificate program, developed in conjunction with area industries, prepares students for employment as industrial technicians, lab technicians, shop technicians, or engineering assistants. The program may be completed in one semester of day school or two semesters of evening school.

MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop _____	3
MTH 100 Basic Applied Mathematics _____	3
Technical electives ¹ _____	4-6
	<hr/> 13-15

¹Electives: MET 110, MET 205, MET 209, NMC 101, with approval of coordinator.

Medical Transcriptionist _____

This is a certificate program designed for persons interested in pursuing skills necessary to become medical transcriptionists.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy ¹ _____	4
ENG 101 Composition _____	3
HSC 112 Medical Terminology _____	2
SEC 101 MOA/MT Orientation Seminar _____	2
SEC 122 Intermediate Typing ² _____	2
SEC 240 Medical Transcription Typing I _____	3
	<hr/> 16

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology ¹ (4) _____	3-4
HSC 213 Medical Law and Ethics _____	2
PSY 101 Introduction to Psychology _____	3
SEC 130 Automatic Word Processing Equipment I _____	1
SEC 221 Advanced Typing _____	2
SEC 242 Medical Transcription and Typing II _____	3
	<hr/> 14-15

¹Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

²The student will be placed into more advanced courses depending upon previous training and consent of the instructor.

Numerical Control Technician _____

This certificate program allows for in-depth course work in numerical control. Such courses should provide an individual with the necessary background to assume a responsible position in this area.

MET 105 Basic Machine Shop _____	3
MET 209 Applied Digital Control _____	3
NMC 101 Introduction to Numerical Control _____	2
NMC 105 Part Programming I _____	3
Technical electives ¹ _____	4-6
	<hr/> 15-17

¹Technical electives may be chosen from: ELT 110, MET 205, MTH 100, MTH 106, NMC 215, NMC 220.

Operating Room Technician* _____

This certificate program is one full year in length, two semesters and an eight-week summer session. It prepares students to function as members of the surgical team under the supervision of qualified professional nurses in hospital areas concerned with the principles and practice of surgical asepsis as applied to the surgical patient before, during and following surgery.

** Admission requirements include:

- Fulfillment of the General Admission requirements of Harper College.
- High school graduation or equivalent (GED)
- Completion of at least one year of high school course work in biology with grades of "C" or better or 1 semester of college course work in biology with a grade of "C" or better.
- A satisfactory personal interview with the coordinator of the Operating Room Technician Program.

Upon successful completion of the program the students will be eligible to take the National Certification Examination of the Association of Operating Room Technicians.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy _____	4
HSC 112 Medical Terminology _____	2
ORT 101 Operating Room Techniques _____	6
ORT 111 Clinical Hospital Practicum I _____	5
	17

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology (4) _____	3-4
ORT 102 Operating Room Techniques II _____	6
ORT 112 Clinical Hospital Practicum II _____	6
PSY 101 Introduction to Psychology _____	3
	18-19

Summer Session

ORT 103 Operating Room Techniques III _____	2
ORT 113 Clinical Hospital Practicum III _____	7
	9

*Operating Room Technician is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

Park and Grounds Operation Management _____

This certificate program is designed to provide technical training for students who are currently employed or contemplating employment in the many facets of park and ground maintenance operations. These courses can also be taken by students wishing to acquire techniques and knowledge in this area for personal or vocational use. Any combination of 16 credit hours may be selected from courses listed below, providing the combination has coordinator approval.

BIO 120 General Botany _____	4
PKM 100 Introduction to Park Management _____	1
PKM 101 Ornamental Plants _____	4
PKM 102 Plant Diseases and Pests _____	4
PKM 110 Soil Science _____	4
PKM 111 Basic Horticultural Skills _____	4
PKM 121 Facilities Management _____	3
PKM 140 Grounds Equipment and Shop Operation _____	4
PKM 210 Drainage and Irrigation _____	3
PKM 212 Turfgrass Science _____	4
PKM 214 Principles of Park Design and Construction _____	4
PKM 220 Arboriculture _____	4
PKM 230 Contracts, Specifications Estimating _____	3
PKM 240 Grounds Equipment Power Units _____	4
PKM 241 Management of Ice Rink Facilities _____	3
PKM 242 Golf Course Management _____	4
PKM 245 Management of Aquatic Facilities _____	4

Production Engineering Technician _____

This certificate program allows for in-depth course work in the technical aspects of manufacturing, quality control, and production planning. Such a program should provide an individual with the necessary background to assume a responsible position in these areas. Any combination of at least 15 credit hours may be selected from the courses listed below, provided that the combination has the program approval of the coordinator.

(Continued on next page.)

MAT 120 Production Control	3
MTH 100 Basic Applied Mathematics	3
MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
MET 108 Manufacturing Processes and Materials	3
MET 111 Quality Control	3
MET 211 Process Planning and Tool Design	4
NMC 101 Introduction to Numerical Control	2
NMC 105 Part Programming I	3
NMC 201 Numerical Controlled Machining	3
NMC 215 Part Programming II	3
NMC 220 Special Problems	3

Production Welding

This certificate program allows for those interested or presently working in a welding occupation to prepare for work and/or a more responsible position in the field. This certificate is not to be confused with the American Welding Society or local industrial welding certifications.

MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
MET 110 Basic Welding	3
MET 210 Advanced Welding	3
Technical electives ¹	3-5

15-17

¹Technical electives: MET 108, MET 205, MET 206, MTH 100.

Public Administration

This is a 15 credit hour certificate program designed for people employed in government service who wish to upgrade their management skills or to assume more responsible positions.

Required:

PAD 201 Governmental Management	3
PAD 202 Organization Behavior	3

Electives: Select any 9 credit hours from the following courses:

PAD 101 Introduction to Municipal and Governmental Management	3
PAD 203 Management Process	3
PAD 210 Public Finance and Budget Process	3
PAD 212 Public Personnel Management	3
PAD 214 Planning in the Public Agency	3

Real Estate

This is a certificate program of professional development for those presently engaged in the real estate business and for those who want an opportunity to explore the field. A total of 18 credit hours is required for this program. Any of the required courses in the sequence can be applied toward meeting the educational requirements of the Illinois Real Estate Licensure Laws.

Required:

RES 101 Real Estate Transactions	3
RES 121 Advanced Principles, Marketing and Brokerage	3
RES 122 Real Estate Appraisal I	3
RES 123 Real Estate Law	3
RES 124 Real Estate Finance	3

Elective: Select one course

ATE 209 Building Construction Principles for Realtors	3
RES 230 Property Management Methods	3
RES 232 Real Estate Appraisal II	3
RES 233 Real Estate Problems Seminar	3

Refrigeration and Air Conditioning Certificates

The following certificate programs are designed to prepare the students for servicing refrigeration and heating equipment or selling environmental equipment to contractors and/or servicemen.

Heating Service

RAC 103 Heating Principles	3
RAC 105 Heating and Cooling Controls	4
	7

Refrigeration Service

RAC 101 Refrigeration Fundamentals	3
RAC 102 Refrigeration Systems	4
RAC 105 Heating and Cooling Controls	4
	11

Refrigeration and Air Conditioning _____

Required:
MET 101 Elements of Drafting _____ 3

Electives: Select any 14 credit hours from the following courses, provided the combination has coordinator approval:

RAC 101 Refrigeration Fundamentals _____	3
RAC 102 Refrigeration Systems _____	4
RAC 103 Heating Principles _____	3
RAC 104 Residential Comfort Systems _____	4
RAC 105 Heating and Cooling Controls _____	4
RAC 201 Refrigeration System Design I _____	4
RAC 202 Refrigeration System Design II _____	4
RAC 203 Air Conditioning Principles _____	4
RAC 204 Air Distribution _____	3
RAC 208 Pneumatic Controls _____	3
RAC 290 Independent Study _____	3

Residential Comfort Systems

RAC 101 Refrigeration Fundamentals _____	3
RAC 103 Heating Principles _____	3
RAC 104 Residential Comfort Systems _____	4
RAC 105 Heating and Cooling Controls _____	4
14	

Retail Merchandising _____

This is a 14 credit hour certificate program designed for individuals with career interests in the retail management field. It is especially appropriate for those individuals employed in retailing who are seeking skills and knowledge which may prepare them for career advancement.

Required:

FAS 212 Design Communication _____	2
MKT 106 Merchandising of Furnishings and Softline Goods or	
MKT 250 Retailing _____	3
MKT 251 Retail Merchandise Management _____	3

Electives: Select at least 6 credit hours from the following courses:

ACC 099 Business Recordkeeping or	
ACC 101 Principles of Accounting Theory I _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 154 Small Business Management _____	3
MGT 160 Principles of Supervision _____	3
MKT 106 Merchandising of Furnishings and Softline Goods _____	3
MKT 245 Principles of Marketing _____	3
MKT 250 Retailing _____	3

Secretarial and General Office Certificates _____

The following certificate programs are designed specifically for individuals without any formal office training or for persons currently in the work force who want to acquire additional knowledge and skills for specific office positions. Credit hours received for one certificate may be applied toward any other certificate or degree program in Secretarial Science.

Certified Professional Secretary

See: Certified Professional Secretary

Clerical¹ _____

ENG 100 Composition or	
ENG 101 Composition _____	3
SEC 099 Typewriting Review (1) or	
SEC 121 Elementary Typing (2) or	
SEC 122 Intermediate Typing (2) _____	1-2
SEC 131 Business Machines _____	2
6-7	

¹Placement into courses contingent upon previous training.

Clerk-Typist¹ _____

SEC 099 Typewriting Review (1) or	
SEC 121 Elementary Typing (2) _____	1-2
SEC 122 Intermediate Typing _____	2
SEC 221 Advanced Typing _____	2
5-6	

¹Placement into courses contingent upon previous training.

General Office Assistant¹ _____

A combination of 28 credit hours may be selected from the following courses, with approval of the coordinator or a student development faculty member:

ACC 099 Business Recordkeeping _____	3
DPR 101 Introduction to Data Processing _____	3
ENG 100 Composition or	
ENG 101 Composition _____	3
ENG 130 Business Writing I _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 150 Business Math _____	3
SEC 099 Typewriting Review _____	1
SEC 121 Elementary Typing _____	2
SEC 122 Intermediate Typing _____	2
SEC 130 Automatic Word Processing Equipment I _____	1

(Continued on next page.)

SEC 131 Business Machines _____	2
SEC 135 Automatic Word Processing Equipment II _____	1
SEC 221 Advanced Typing _____	2
SEC 236 Secretarial Procedures _____	3
SPE 101 Fundamentals of Speech Communication _____	3

¹Placement into courses contingent upon previous training.

Legal Secretary

See: Legal Secretary

Secretarial¹ _____

A combination of 15 credit hours is required for this certificate with approval of the coordinator or student development faculty member.

Required:

SEC 221 Advanced Typing _____	2
SEC 225 Dictation and Transcription (3) or	
SEC 230 Executive Machine Transcription (2) _____	2-3
SEC 236 Secretarial Procedures _____	3

Electives: Select at least 8 credit hours from the following courses:

ENG 130 Business Writing I _____	3
SEC 122 Intermediate Typing _____	2
SEC 126 Intermediate Shorthand _____	3
SEC 130 Automatic Word Processing Equipment I _____	1
SEC 131 Business Machines _____	2
SEC 135 Automatic Word Processing Equipment II _____	1
SEC 171 Word Processing Dictation and Transcription _____	2
SEC 225 Dictation and Transcription _____	2
SEC 230 Executive Machine Transcription _____	2

¹Placement into courses contingent upon previous training.

Stenographer¹ _____

SEC 098 Review Shorthand (2) or	
SEC 125 Elementary Shorthand (4) or	
SEC 140 Elementary Machine Shorthand (4) _____	2-4
SEC 126 Intermediate Shorthand _____	3
SEC 225 Dictation and Transcription _____	3
	8-10

¹Placement into courses contingent upon previous training.

Supervisory and Administrative Management _____

This is a certificate program requiring completion of 18 credit hours.

Required:

MGT 160 Principles of Supervision _____	3
MGT 270 Principles of Management _____	3
MGT 291 Problems of Management and Supervision ¹ _____	3

Electives: Select at least 9 credit hours from the following courses:

ACC 099 Business Recordkeeping _____	3
ACC 101 Principles of Accounting Theory I _____	3
MGT 154 Small Business Management _____	3
MGT 167 Records Management _____	3
MGT 168 OSHA Standards and Compliance Procedures _____	3
MGT 265 Personnel Management _____	3
MGT 267 Office and Administrative Management _____	3
MGT 275 Labor-Management Relations _____	3
PSY 145 Psychology in Business and Industry _____	3

¹MGT 291 should be the last course taken in completing this sequence.

Vending Machine Repair _____

This is a certificate program designed to develop entry level job skills in the repair of vending machines. Major emphasis is on actual experience working on vending machine equipment.

ELT 121 Automatic Vending Machine Repair I _____	2
ELT 122 Automatic Vending Machine Repair II _____	2
ELT 123 Automatic Vending Machine Repair III _____	2
	6

Word Processing

This certificate program prepares individuals for careers in word processing with specific training in procedures, equipment and personnel. The program is designed to provide a broad general knowledge in word processing in order to give the student the widest range of employment options.

First Semester

DPR 101 Introduction to	
Data Processing	3
ENG 130 Business Writing I	3
SEC 130 Automatic Word Processing	
Equipment I or	
SEC 135 Automatic Word Processing	
Equipment II or	
SEC 136 Automatic Word Processing	
Equipment III	1
SEC 170 Introduction to Word	
Processing	2
SEC 171 Word Processing Dictation	
and Transcription Techniques	2
SEC 221 Advanced Typing	2
SEC 236 Secretarial	
Procedures	3
	16

Second Semester

Electives ¹	5
MGT 160 Principles of	
Supervision	3
SEC 130 Automatic Word Processing	
Equipment I or	
SEC 135 Automatic Word Processing	
Equipment II or	
SEC 136 Automatic Word Processing	
Equipment III	1
SEC 230 Executive Machine	
Transcription	2
SEC 272 Principles of Word	
Processing Management	3
	14

¹Electives: ENG 103, MGT 167, MGT 267, PSY 145, SEC 122, SEC 234, SEC 237, SEC 240, SPE 101.

Word Processing Operator

This certificate program is designed for the individual with good typing skills who is interested in entering the field of word processing as a word processing operator.

SEC 122 Intermediate Typing	2
SEC 130 Automatic Word Processing	
Equipment I or	
SEC 135 Automatic Word Processing	
Equipment II or	
SEC 136 Automatic Word Processing	
Equipment III	1
SEC 170 Introduction to Word	
Processing	2
SEC 171 Word Processing Dictation	
and Transcription Techniques	2
	7



Course Descriptions

Course Numbering System

Courses Offered at Harper College

Course Numbering System

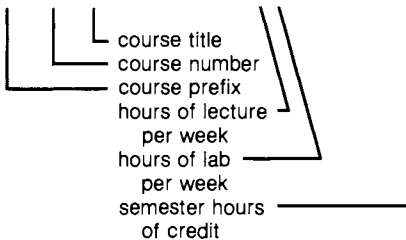
In general, courses numbered below 100 are not intended for transfer credit. These courses may be counted toward the A.A.S. degree, but not the A.A. or A.S. degrees.

Courses numbered 100 or above may be expected to fulfill transfer requirements. In some cases the courses designed primarily for vocational programs may not be acceptable in transfer to all four-year institutions. Students should see a student development faculty member for clarification on the transferability of these courses.

Courses numbered 200 and above are intended for the sophomore level.

Sample Course Listing

ACC 211 Business Law I (3-0) 3 hrs.



The following outlines of courses offered at Harper College describe the content of each course at the time of publication of the Bulletin. Harper College reserves the right to revise course content to reflect changing conditions, trends, and information within the discipline.

Accounting

ACC 099 Business Recordkeeping (3-0) 3 hrs.

Standard bookkeeping procedures for small firms, both business and professional. Journalizing, posting, and preparing trial balances and financial statements. Procedures for handling petty cash and bank deposits and withdrawals.

ACC 101 Principles of Accounting Theory I (3-0) 3 hrs.

Presents course material in the following sequential order with emphasis on the basic structure of accounting, accounting for a merchandise enterprise, receivables, payables, inventories, deferrals and accruals, intangible assets, accounting systems, and payroll systems.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

ACC 102 Principles of Accounting Theory II (3-0) 3 hrs.

Presents course material in the following sequential order with emphasis on partnerships, corporations, branch accounting, cost accounting (job order and process cost), standard cost, individual income taxes, cost-volume-profit relationships, statement of changes in financial condition, and financial statement analysis.

Prerequisite: ACC 101.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

ACC 155 Tax and Payroll Accounting (4-0) 4 hrs.

Explanation of the federal tax structure and instruction in the application of tax principles to specific problems. Also, the preparation of payroll records including tax returns for old age benefits and employment insurance.

ACC 201 Intermediate Accounting I (3-0) 3 hrs.

Problem-solving course in accounting principles begun in ACC 101 and ACC 102. Accounting and reporting process, accounting theory, inventories, tangible and intangible fixed assets.

Prerequisite: ACC 102.

ACC 202 Intermediate Accounting II (3-0) 3 hrs.

Accounting for corporations including capital stock, retained earnings, bonds payable, income statement and balance sheet analysis, pensions and leases, fund flow analysis, consignments, and installment sales.

Prerequisite: ACC 201.

ACC 203 Introductory Cost Accounting (3-0) 3 hrs.

Includes an examination of the nature of costs and the use of relevant accounting data for purposes of improved decision making. Topics covered are product costs (process, job order, and standard), overhead variance, by-product costs, joint-product cost, and direct and variable costing.

Prerequisite: ACC 102.

ACC 211 Business Law I (3-0) 3 hrs.

History of the source of law, civil and criminal wrongs, law of contracts, agency, employment, property, and related topics. Problems and case material are used.

ACC 212 Business Law II (3-0) 3 hrs.

Business organizational concepts, commercial transactions, basic legal concepts of commercial paper, sales, secured transactions, creditors' rights and related topics. Problems and case materials are used.

Prerequisite: ACC 211.

Air Conditioning

See: Refrigeration and Air Conditioning

Anthropology

ANT 101 Introduction to Anthropology (3-0) 3 hrs.

Addresses such central questions as "What does it mean to be human?" and "How did we get to be the way we are?". Among the topics to be examined will be human, physical and cultural evolution, the origin of culture, language, religion, kinship, economics, and the impact of contemporary life on the world's populations.

ANT 202 Cultural Anthropology (3-0) 3 hrs.

Describes and analyzes how people throughout the world define and resolve the problems of life that are found everywhere. Some of the specific topics studied will be religion, social structure, law, "the unknown," economics, and the formation of behavior within particular groups.

ANT 203 American Indians (3-0) 3 hrs.

Designed to acquaint the student with our American heritage. There are detailed studies of various American Indian groups, both before and after the arrival of the Europeans. The religion, social organization, art work, and relationship to the natural environment of the native American is viewed as offering solutions for some of the problems that confront the Western world of today.

ANT 204 Archeology and Physical Anthropology (3-0) 3 hrs.

Describes 20 million years of human development and evolution, through viewing the fossil record and other sources of archeological information. The rise and development of modern civilization is studied, as are the archeological methods of scientists who examine culture change through the long prehistorical growth of mankind.

Architectural Technology

ATE 101 Introduction to Architectural Technology I (1-6) 4 hrs.

Pragmatic fundamentals of architecture consisting of general technical procedures, drafting and sketching, working drawing outline, mechanical and electrical services, estimating format, specification format, and computer relationships.

ATE 102 Introduction to Architectural Technology II (1-6) 4 hrs.

Orthographic, oblique, perspective projections, cross-referencing, indexing, specifications, cost control budgeting; development of working drawings and specifications.

ATE 103 Building Materials Technology I (2-4) 4 hrs.

Typical brick bearing walls and their methods of bonding; wood floor, wall and ceiling construction based on balloon and platform framing.

ATE 104 Building Materials Technology II (2-4) 4 hrs.

Typical column, beam, girder, and cladding assemblies based on bolted and welded construction techniques.

Prerequisite: ATE 103 or consent of instructor.

ATE 105 Computer Mathematics for Architectural Technologies I (3-0) 3 hrs.

Basic algebra and an introduction to trigonometry; introduction to FORTRAN IV, application to architectural area and volume computations for gross floor and exterior wall designs.

ATE 106 Computer Mathematics for Architectural Technologies II (3-0) 3 hrs.

Algebra, trigonometry, and analytic geometry related to computer techniques applicable to architectural building materials, SYMAP planning, critical path, and building geometry. Prerequisite: ATE 105 or consent of instructor.

ATE 201 Comprehensive Building Project I (0-8) 4 hrs.

Architecture as a profession emphasizing computer technology for building project, finish materials, zoning and building ordinance

formats, auto specifications, mechanical and electrical equipment coordination, site utilities, working drawings, shop drawing format, and building optimization in estimating.

Prerequisite: ATE 102.

ATE 202 Comprehensive Building Project II (0-8) 4 hrs.

Analysis of zoning and building code requirements applicable to developing and completing building project, architectural practice, construction, scheduling, itemized cost estimates, contingency provisions, general condition, and architect-engineer-contractor fee schedule.

Prerequisite: ATE 201.

ATE 203 Construction Problems 1 (2-4) 4 hrs.

Detailing; investigation and analysis of fire resistivity of materials, construction type, Underwriters Laboratories hourly ratings, fireproofing, sprinkling, and insurance requirements.

Prerequisite: ATE 104.

ATE 204 Construction Problems II (2-4) 4 hrs.

Detailing of stairs; glazing; sealants; millwork; suspended ceiling systems; doors; windows; ceramic tile; roofing; investigation of bronze, aluminum, stainless steel, interior terrazzo, granite, and marble.

Prerequisite: ATE 203.

ATE 205 Computer Graphics and Optimization (3-0) 3 hrs.

Basic principles of differential and integral calculus for computer applications related to graphics, zoning ordinances, and building codes.

Prerequisite: ATE 106.

ATE 206 Computer Applications in Architecture (3-0) 3 hrs.

Special problems emphasizing actual job conditions using total computer techniques for building specifications, perspectives, working drawings, and optimization programs in estimating.

Prerequisite: ATE 205.

ATE 207 Behavior of Architectural Materials I (3-0) 3 hrs.

Strength of materials with physics integrated. Major concepts in scientific thought, interpretation of physical measurement, and structural development of matter in its various forms applicable to building construction.

Prerequisite: ATE 104.

ATE 208 Behavior of Architectural Materials II (3-0) 3 hrs.

Continues ATE 207. Interactions of matter interpreted through concepts of force, motion and energy, visible and invisible

electromagnetic spectrum, and nature of electric fields and forces; Hooke's Law; elasticity, shear and moment diagrams.

Prerequisite: ATE 207.

ATE 209 Building Construction Principles for Realtors (3-0) 3 hrs.

Fundamental aspects of building such as legal descriptions, surveys, foundations, masonry and frame walls, roofing, insulation, interior finishes, painting, heating, ventilating, air conditioning, plumbing, and electrical. A building plan and specifications will be part of the test material from which the class will receive instruction in plan reading. The fundamentals of cost estimating will be covered.

ATE 210 Cost Estimating (3-0) 3 hrs.

Introduces methods of preparing estimates for various types of building contracts. Covers order of magnitude, scope, fast track, guaranteed maximum, guaranteed maximum of cost saving contingency, and lump sum contract.

Prerequisite: ATE 203 or consent of instructor.

ATE 211 Solar Energy Architecture (3-0) 3 hrs.

Surveys fundamentals of solar energy for low temperature applications, covering history of solar energy, sun power, climatic data, energy conservation, heat loss calculations, state of solar art, solar calculations, systems, and costs.

Art

ART 100 Art Seminar (1-0) 1 hr.

Problems relating to the artist and art student. Required of all majors. May be repeated up to two hours credit in sequent semesters.

ART 105 Introduction to Arts (3-0) 3 hrs.

Introduction to the study of visual arts with an emphasis on the following aspects: building the student's awareness of aesthetic concepts, theory and criticism. Developing sensitivity to works of art and acquainting the student with vocabulary applicable to describe visual situations. Required of all art majors.

ART 110 Drawing I (0-6) 3 hrs.

Studio course emphasizing the design elements and principles as applied to visual imagery.

ART 111 Design II (0-6) 3 hrs.

Studio course emphasizing the interaction between design abilities, image, and content.

Prerequisite: ART 110 or consent of instructor.

ART 121 Design I (0-6) 3 hrs.

Studio course emphasizing the use of design elements and principles as applied to concepts of second dimension.

ART 122 Design II (0-6) 3 hrs.

Studio course emphasizing the use of design elements and principles as applied to concepts of the third dimension.

Prerequisite: ART 121 or consent of instructor.

ART 201 Drawing Studio (0-6) 3 hrs.

Studio course emphasizing drawing as visual idea. May be repeated up to six hours credit.

Prerequisite: ART 111 or consent of instructor.

ART 206 Printmaking Studio (0-4) 2 hrs.

Emphasis on traditional and contemporary methods of graphic reproduction of visual ideas pertaining to the fine arts. May be repeated up to six hours credit.

Prerequisite: ART 111, ART 121, or consent of instructor.

ART 225 Figure Drawing Studio (0-6) 3 hrs.

Studio course with primary emphasis on drawing the human figure in action and from still poses. Rapid sketching, long poses, memory work. Studio and lecture. May be repeated up to six hours credit.

Prerequisite: ART 111 or consent of instructor.

ART 236 Composition (0-4) 2 hrs.

Pictorial composition in line, value, pattern, and color. Studio and lecture. May be repeated up to six hours credit.

Prerequisite: ART 111 and ART 121.

ART 261 Painting Studio (0-4) 2 hrs.

Studio course with primary emphasis on the relationship between painting and visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 111, ART 121, or consent of instructor.

ART 270 Stagecraft (0-6) 3 hrs.

Emphasizes the technical processes of the stage. Includes stage structures and scenery, construction processes, lighting theory and practices, costuming, and relating equipment and hardware. Laboratory work will be correlated with the school's theatrical productions.

ART 291 Ceramic Studio (0-4) 2 hrs.

Studio course with the primary emphasis on the exploration of ceramic media as related to the expression of visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 122 or consent of instructor.

ART 296 Sculpture Studio (0-4) 2 hrs.

Studio course with primary emphasis on the exploration of sculptural media as related to visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 122 or consent of instructor.



Astronomy _____

AST 101 Introductory Astronomy (3-0) 3 hrs.

Gives a descriptive account of the universe, galaxies, stars, comets, meteors, the solar system, and their compositions, origins, evolutions and motions.

Recommended corequisite: Concurrent enrollment in AST 111.

AST 111 Introductory Astronomy 1 hr.

Lab (0-2)

Complements and illustrates concepts developed in AST 101, including telescope work and star charting.

Prerequisite: Successful completion of or concurrent enrollment in AST 101.

Banking, Finance and Credit _____

BFC 101 Principles of Financial Institution Operations (3-0) 3 hrs.

Surveys the internal operations of a bank and of a savings and loan association. Emphasizes the general principles of operations applicable to institutions of all sizes. Provides a sound foundation for newcomers to the industry regardless of age or prior academic experience.

BFC 102 Commercial Law (3-0) 3 hrs.

Provides a general knowledge of and prepares the banker to act in accordance with legal principles pertaining to business and to banking. Topics include contracts, commercial paper, bank deposits and collections, sales, titles agency, the Statute of Frauds, and the Uniform Commercial Code.

BFC 110 Principles of Insurance (3-0) 3 hrs.

Surveys the concepts of risk management for individuals and companies. Analyzes the various types of life, health, real property and liability insurance and the rights and obligations of the policy owner and the life insurance company.

BFC 112 Principles of Property and Casualty Insurance (2-0) 2 hrs.

Presents the fundamental principles of property and casualty insurance. Designed for those seeking to qualify for the insurance profession in the State of Illinois. Subject matter includes the legal and ethical characteristics of property and liability insurance.

BFC 113 Principles of Life Accident and Health Insurance (2-0) 2 hrs.

Presents the fundamental principles of life, accident and health insurance. Designed for those seeking to qualify for the insurance profession in the State of Illinois. Subject matter includes the contractual, legal and ethical characteristics of life, accident and health insurance.

BFC 115 Personal Banking (3-0) 3 hrs.

Surveys the concepts of personal banking and account administration. Describes the procedures and concepts relating to checking accounts, savings accounts, negotiable orders of withdrawal accounts and certificates of deposit. Includes the contractual nature of accounts, types of ownership, insurance coverage and loans secured by savings accounts.

BFC 117 Marketing for Financial Institutions (3-0) 3 hrs.

Provides an overview of the essentials of public relations and marketing for financial institutions. Includes the goals, development, implementation and evaluation of internal and external public relations and marketing plans.

BFC 118 Credit Administration (3-0) 3 hrs.

Emphasizes the identification and examination of factors influencing and determining institutional loan policy. Topics include methods of credit investigation and analysis, credit operation techniques, case problems in credit administration, and standard and unconventional types of loans.

BFC 200 Investments of Financial Institutions (3-0) 3 hrs.

Describes the concepts of investment and liquidity management for banks and savings associations. Analyzes topics such as cash flow, reserve requirement calculations, the risk factor and portfolio management.

Prerequisite: BFC 101.

BFC 211 Accounting for Financial Institutions (3-0) 3 hrs.

Basic accounting procedures, techniques and systems used in banks, savings and loans, and other financial institutions. Emphasis on the components of the Statement of Condition, and Income Statement.

Prerequisite: ACC 101, BFC 101 and consent of coordinator.

BFC 212 Home Mortgage Lending (3-0) 3 hrs.

Emphasizes the role of the mortgage loan officer seeking to develop a sound mortgage portfolio. The mortgage market is described, followed by the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing, and finally the obligations of the mortgage loan officer in overall portfolio management. Recommended prerequisite: ACC 211.

BFC 213 Trust Functions and Services (3-0) 3 hrs.

Introduction to trust operations. Presents the duties of, and services rendered by, institutions engaging in trust business, differentiating between the business and legal

aspects of trust functions. Intended for all bankers and not limited to only those specializing in trust functions and services.

BFC 215 Analyzing Financial Statements (3-0) 3 hrs.

Characteristics of financial statements and financial statements analysis. Emphasis is on the income statement, balance sheet, and sources and uses of funds statement. Effects of reserves, inventory valuations, depreciation, depletion, amortization, subsidiaries, and affiliates. Cash flow, reported earnings, and taxable earnings. Interpretation of the financial data by means of per-share figures and ratio analysis.

Prerequisite: ACC 102. (ACC 211 is recommended.)

BFC 216 Bank Auditing and Internal Control (3-0) 3 hrs.

Principles, standards, techniques, and professionalism in bank auditing. External audits and the role of the external auditor. Internal control, audit procedures, and the role of the internal auditor. Audits by directors, trust department audits, EDP audits, other audits. Customer confirmations.

Prerequisite: ACC 101. (MGT 111 is recommended.)

BFC 217 Uniform Commercial Code (3-0) 3 hrs.

The Uniform Commercial Code and related uniform acts and their impact on common documents. Instruments considered include negotiable instruments, non-negotiable instruments, and quasi-negotiable instruments. Topics include formal requirements form and content, interpretation, delivery, negotiation, endorsement, presentment, notice of dishonor and protest, acceptance and certification, and discharge.

Prerequisite: ACC 211.

BFC 219 Consumer Credit (3-0) 3 hrs.

Techniques of installment lending. Emphasis is on establishing credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Other topics are inventory financing, special loan programs, business development and advertising, and public relations in installment lending.

BFC 220 Bank Management (3-0) 3 hrs.

Presents new trends in the philosophy and practice of bank management. The study and application of the principles presented provide new, as well as experienced, bankers with working knowledge of bank management techniques. Since the case study is well established as an effective management learning technique, this course incorporates the use of case problems.

Prerequisite: BFC 215, and ECO 200 or ECO 201. (MGT 160 and MGT 270 are recommended.)

BFC 229 Commercial Lending (3-0) 3 hrs.

Exposes the student to practical lending situations. Emphasis is on the application of the case method to credit analysis and practical loan situations. Techniques of lending to specific industries are examined, including loans to minority enterprises. Curriculum includes secured and unsecured loans, sources and documentation of credit information, installment and term lending, slow loans and workouts.

Prerequisite: BFC 215. (ACC 211 is recommended.)

Biology

BIO 101 Biology Survey (3-0) 3 hrs.

Surveys the science of biology, emphasizing chemical and physical properties of living things; overview of plant and animal kingdoms; systems of control; growth; differentiation; reproduction; genetics; ecology and evolution.

BIO 103 Man and Environment (3-0) 3 hrs.

Surveys and analyzes man's role as an environmental modifier. Ecological, social-cultural, economic and political influences on environment are considered. The historical and current pollution problems and other environmental disruptions are analyzed and evaluated. Possible remedial courses of action are discussed and evaluated.

BIO 110 Principles of Biology (3-3) 4 hrs.

Studies and emphasizes cell structure and function by exploring the various patterns that have evolved within cells for carrying out important life functions. This includes cell ultrastructure, cell surface-volume relationships, cellular metabolism and energetics, mitosis and meiosis, genetics, DNA, RNA and protein synthesis, gene action, population genetics, development and environment.

Prerequisite: High school biology with "C" or better, BIO 101, or consent of instructor.

BIO 120 General Botany (3-3) 4 hrs.

Surveys the plant kingdom emphasizing ecological relationships, plants and their growth, structure, physiology, and reproduction.

Prerequisite: High school biology with "C" or better, BIO 101, or consent of instructor.

BIO 122 Heredity, Evolution, and Culture (3-0) 3 hrs.

Examines life and the evolutionary record with emphasis on man and the gene pool. Factors such as social and environmental entities and the problems of the 20th century are considered.

BIO 130 Microbiology (2-4) 4 hrs.

Examines characteristics and importance of micro-organisms, emphasis on identification, anatomy and physiology, control, relationship to health and disease, and economic importance.

Prerequisite: High school biology with "C" or better, BIO 101 or BIO 110 or consent of instructor. College chemistry or equivalent is desirable.

BIO 135 Introduction to Human Anatomy and Physiology (4-0) 4 hrs.

Surveys the human body, with emphasis on basic physical and chemical concepts, anatomy, physiology, and embryology.

Designed to meet the needs of students in certain allied health career programs.

BIO 136 Introduction to Human Disease (3-0) 3 hrs.

Surveys the nature of human diseases, with emphasis on the functional disturbances within the body systems. Designed to meet the needs of students in certain allied health career programs.

Prerequisite: BIO 135, BIO 160 or consent of instructor.

BIO 140 General Zoology (3-3) 4 hrs.

Surveys the animal kingdom based on theory of organic evolution, including morphology, histology, physiology, taxonomy, parasitology, embryology, and ecology.

Prerequisite: High school biology with "C" or better, BIO 101, or consent of instructor.

BIO 150 Field Biology (2-4) 4 hrs.

Emphasizes field and laboratory work with local soils, flora, fauna, their collection, identification and ecological relationships.

Assists students in acquiring basic working knowledge in field work. Field work or field trips every class day, weather permitting.

Prerequisite: BIO 120, BIO 140, or consent of instructor.

BIO 160 Human Anatomy (3-2) 4 hrs.

Introduces the anatomy of the human body, the following systems studied either regionally or systemically: integumentary, skeletal, articular, muscular, circulatory, lymphatic, nervous, respiratory, digestive, excretory, endocrine and reproductive. Includes some introductory histology. Specially designed for students in health careers, biology, and physical education.

Prerequisite: Academic average of "C" or better or consent of instructor.

BIO 161 Human Physiology (3-2) 4 hrs.

Emphasizes physiological principles at the molecular, cellular, tissue, organ, and system level, as they pertain to the human organism. The following systems are studied in detail: skeletal, muscular, circulatory, nervous, digestive, respiratory, urinary, reproductive, and endocrine. In this course, special applications will be made to meet the needs of students in health careers, biology, and physical education.

Prerequisite: BIO 160.

Building Codes and Enforcement

BCE 101 Basic Construction for Building Codes (3-0) 3 hrs.

Introduces materials used in building construction, their growth or manufacture, preparation and application. Emphasizes frame and masonry construction types, working drawings and structural details for code compliance.

BCE 102 Basic Code Enforcement Techniques (3-0) 3 hrs.

Introduces building inspection principles.

Focuses on codes based on performance, plan review, permit issuance process, municipal zoning enforcement, inspection of single family dwellings, and inspection report writing.

Prerequisite: ENG 103 or consent of instructor.

BCE 103 Plumbing and Electrical Codes (3-0) 3 hrs.

Introduces basic theory and code requirements for plumbing and electrical systems and their installation. Concentrates on procedures, practices, and layouts and code inspection problems for residential installations up to and including six unit dwellings.

BCE 104 Basic Mechanical and Energy Conservation Codes (3-0) 3 hrs.

Introduces the theory and code requirements for mechanical and energy conservation systems. Also covers procedures, layouts and safety principles for heating, cooling and ventilation systems. Will use actual code inspection problems for residential installations.

BCE 201 BOCA Basic Building Codes (3-0) 3 hrs.

Introduces principles and analysis of the BOCA basic building code, organization and arrangement of the BOCA basic building code with its regulations to construction of buildings and structures and the installation of fixtures and equipment.

Chemistry

CHM 100 Chemistry for the Health Sciences (3-3) 4 hrs.

Introduces basic concepts of inorganic, organic, and biochemistry. Emphasizes chemical principles applied to biological systems. Laboratory exercises apply theory to biological and consumer products. Especially designed for students in allied health sciences. Meets the prerequisite of the Nursing program.

CHM 110 Fundamentals of Chemistry (3-3) 4 hrs.

Introduces concepts of chemistry. Emphasizes the composition of matter, the periodic table, the chemistry of solutions, and chemical calculations. For students whose preparation does not permit enrollment in CHM 121 and CHM 131.

Prerequisite: MTH 102 or concurrent enrollment.

CHM 121 General Chemistry I (3-3) 4 hrs.

Studies principles of atomic structure, bonding, stoichiometry, states of matter, and kinetic theory. Provides laboratory experience in volumetric, gravimetric, gas analytical methods, and in molecular weight determinations.

Prerequisite: Two semesters of high school chemistry or CHM 110. MTH 102 or concurrent enrollment.

CHM 122 General Chemistry II (3-3) 4 hrs.

Continues CHM 121. Principles of chemical kinetics, equilibria, thermo-chemistry, redox, descriptive chemistry of metals and non-metals, and an introduction to organic chemistry. Laboratory includes the theory and practice of qualitative analysis.

Prerequisite: CHM 121.

CHM 131 College Chemistry I (3-6) 5 hrs.

Studies principles of chemistry including molecular, atomic, nuclear, and electronic theories of matter and their relations to the periodic table. Quantitatively treats oxidation-reduction, chemical thermodynamics, bonding, behavior of gases, kinetics, equilibrium and solutions. Emphasizes interpretation of laboratory data. Primarily for students in chemistry, chemical engineering, or physical sciences.

Prerequisite: Two semesters of high school chemistry with at least a "B" average or at least a "B" in CHM 110. MTH 103 or concurrent enrollment.

CHM 132 College Chemistry II (3-6) 5 hrs.

Continues CHM 131. Primarily for students in chemistry, chemical engineering or physical science curricula. Laboratory includes qualitative analysis.

Prerequisite: CHM 131.

CHM 201 Basic Organic Chemistry (3-3) 4 hrs.

Survey of organic chemistry covering nomenclature, structure, reactions and synthesis of the major classes of organic compounds including hydrocarbons, alcohols, aldehydes, ketones, carboxylic acids, and amines. The laboratory includes experiments in distillation, crystallization, chromatography, extraction, synthesis, and analysis. Prerequisite: CHM 122 or consent of instructor.

CHM 204 Organic Chemistry I (3-6) 5 hrs.

Application of modern theories of electronic structures to the study of chemical and physical properties of organic compounds. Laboratory includes syntheses, qualitative organic analyses, IR and visible spectrophotometry, gas chromatography, thin-layer chromatography, polarimetry, and refractometry.

Prerequisite: CHM 122 or CHM 132.

CHM 205 Organic Chemistry II (3-6) 5 hrs.

Continues CHM 204.

Prerequisite: CHM 204.

CHM 210 Quantitative Analysis (3-6) 5 hrs.

Chemical methods applied in quantitative analysis, formation and properties of precipitates, theory of neutralization, basic procedures in gravimetric analysis, titrimetry. Prerequisite: CHM 122 or CHM 132.

Child Development

CCA 101 Introduction to Child Development Careers (3-0) 3 hrs.

Introduction to history and application of child development principles in child care professions. Organization, structure, and cooperation of child development centers. Review of career opportunities.

CCA 102 Child Development I (3-0) 3 hrs.

Research and theory related to child development from conception through preschool years. Professional application of principles and theory to programming for individual children and for children in groups. Field observations and discussion of professional practice.

CCA 103 Child Development II (3-0) 3 hrs.

In-depth study of human growth and development age nine through maturity. Major developmental processes of each stage: physical, social, emotional and intellectual. Relevance of theoretical knowledge to career in human development.

<p>CCA 111 First Three Years of Life (3-0) 3 hrs.</p> <p>Examines the theories and research related to infants and toddlers in the first three years of life, with a focus on methods of care given in both home based and school based infant programs. Observing various types of infant programs will be one aspect of the course.</p>	<p>CCA 219 Psychology of Exceptional Children (3-0) 3 hrs.</p> <p>Designed for parents and for teachers responsible for programming of exceptional children individually and in groups. Classification of exceptional children. Reviews special needs and specialized educational approaches for exceptional children. Prerequisite: PSY 101.</p>
<p>CCA 209 Language Arts for the Young Child (3-0) 3 hrs.</p> <p>Techniques and methods for development of language skills in the young child. Included are techniques for stimulating discussion and improving vocabulary and speech in the child. A survey and critical analysis of prose and verse for children and techniques of story telling are included. The use of records for children will be taught.</p>	<p>CCA 220 Child Development Practicum Internship (3-15) 6 hrs.</p> <p>Places the student as a participant in a child care center. The student will utilize, under supervision, the skills and techniques which have been learned in specialized methods courses. In addition to field work the student will meet each week for conferences, reports, reports of supplementary reading, and discussion of problems. Prerequisite: Sophomore standing or consent of coordinator.</p>
<p>CCA 210 Creative Activities for Young Children (3-0) 3 hrs.</p> <p>Acquaints the student with the variety of creative art materials and methods appropriate for use in programs for young children. Includes firsthand experience with materials as well as opportunity for participation in use of these materials with children in the group situation. The place of art experience in the curriculum and the meaning of these experiences in the individual development of the child are stressed.</p>	<p>CCA 221 Workshop in Early Childhood Education (3-0) 3 hrs.</p> <p>Suggestions for experiences suitable for the preschool and early primary child. The course will be directed to new media, construction of teacher-made materials, and trends and issues in preschool education.</p>
<p>CCA 214 Principles of Preschool Education (5-2) 6 hrs.</p> <p>Surveys theory and practice of early childhood education in nursery school, day care centers, and primary grades. The course deals with curriculum, program planning, use of materials and equipment, role of teacher, techniques of classroom management, and meeting the needs of individual children in the group situation. Students will observe and participate in a professional child service center. Prerequisite: Sophomore standing.</p>	<p>CCA 225 Mental Health in Child Development (3-0) 3 hrs.</p> <p>Self-analysis. Personal characteristics and their effects on adult-child interaction. Problems of discipline; aggression, passivity, over-activity of young children and adult coping strategies. Available referral resources in the community for children and families who need help. Prerequisite: PSY 101.</p>
<p>CCA 218 Principles of Special Education (5-2) 6 hrs.</p> <p>Examines the growth and development of severely and profoundly handicapped children. Children with special needs will be studied, with a focus on special education programs, family issues and community concerns. The relevant laws at federal, state and local levels will be discussed. Students will observe and become involved with children in special education programs in the community and become conversant with the language of special education. Prerequisite: PSY 101 or concurrent, and Sophomore standing.</p>	<p>CCA 230 Movement and Rhythms for the Young Child (3-0) 3 hrs.</p> <p>Essential movement for preschool children taught with manufactured and homemade equipment, rhythms on playground and in classroom; and introduction to methods and materials appropriate for use in music programs for young children.</p> <p>CCA 252 Child-Family-Community (3-0) 3 hrs.</p> <p>Interrelationship of social groups and institutions within the community and their effect on the child. Effect of ethnic and cultural composition upon family life and individuals. Other topics include alternate family styles, families in crisis, community resources and legal responsibility of teachers with respect to social problems.</p>

CCA 253 Administration of Early Childhood Programs (3-0) 3 hrs.
Establishment and operation of a preschool center; bookkeeping, licensing procedures, building and safety codes, insurance, transportation, interaction with staff, evaluating procedures, utilizing community resources.

Criminal Justice

CRJ 101 Introduction to Criminal Justice (3-0) 3 hrs.
History, role, development, and constitutional aspects of law enforcement and public safety. Review of agencies and functions involved in processes of administration of criminal justice.

CRJ 104 Introduction to Corrections (3-0) 3 hrs.
Provides the student with an integrated knowledge about the system through which the criminal offender is processed. Emphasis will be placed upon the philosophical bases of punishment and treatment techniques in institutional community-based programs plus parole programs.

CRJ 105 Criminal Courts of the U.S. (3-0) 3 hrs.
Provides the student with a broad body of knowledge concerning the court structures of the United States. The course will examine the historical development of the judicial branch of government, the role of the courts in the criminal justice system, levels of courts, and roles of persons employed in this unit of the Criminal Justice program.

CRJ 116 Introduction to Forensics (3-0) 3 hrs.
Introduces student to the use of scientific disciplines in crime investigation. Identifies the variety of sources of evidence and the means by which comparative analysis can be made. Introduces student to probability theory. Develops skills in crime scene technology, fingerprinting, photography, and recording.

CRJ 201 Criminal Law I (3-0) 3 hrs.
Principles of administration and criminal law, theory, history, and purpose. Substantive crimes and their punishment, rules of evidence, and general criminal procedures.

CRJ 202 Criminal Law II (3-0) 3 hrs.
Continues CRJ 201. Principles of arrest, search, and seizure; evaluation of evidence and proof including kinds, degrees, admissibility, and competence. Rules of evidence of particular importance of operational level in law enforcement. Courtroom and criminal trial procedures. Prerequisite: CRJ 201 or consent of coordinator.

CRJ 203 Law and Society (3-0) 3 hrs.
Focuses on the concept of law and its relationship to crime and the administration of criminal justice in a democratic society. Attention is directed toward the historical background of American law, social norms, criminal law, law and force, morals, justice, freedom, and custom. An examination of the functions of the executive, legislative, and judicial branches of government is made in relationship to law and the administration of criminal justice in present and future societal problems.

CRJ 205 Juvenile Delinquency (3-0) 3 hrs.
Organization, jurisdiction, and functions of juvenile agencies. Juvenile court movement, juvenile detention, processing, and treatment. Statutes and court procedures for juveniles. Problems of juvenile delinquency, theories of causation and prevention programs. Police responsibilities and contacts, current community, state, and federal prevention programs.

CRJ 207 Vice and Drug Control (3-0) 3 hrs.
Historical and sociological development of problems in drug addiction and vice control; fundamental understanding of narcotic addiction and effects of hypnotic drugs; the operation of lotteries, bookmaking and other types of gambling and prostitution as these factors are involved in the daily routine of police work.

CRJ 209 Police Public-Community Relations (3-0) 3 hrs.
Examines current issues in relationships between the police and the community, with emphasis on distinguishing between the concepts of public and community relations, problem areas of racial minority groups, juveniles, the adult criminal offender, the press, and the prevention of crime.

CRJ 210 Introduction to Criminology (3-0) 3 hrs.
Nature and extent of crime in American society, theories of crime causation, methods of crime control, and treatment of offenders. Prerequisite: SOC 205.

CRJ 212 Traffic Administration (3-0) 3 hrs.
History and growth of traffic problems; organization for traffic control, accident investigation, and analysis and interpretation of accidents. Survey of traffic laws including the Illinois Vehicle Code.

CRJ 213 Crime Prevention (3-0) 3 hrs.
Crime prevention as a specific function of police service requiring inputs from both private and public interests. Explores deterrent reducing

reducing programs and introduces contemporary concepts of site-hardening and opportunity reduction. Examines the philosophy and organization structure of crime prevention units, their service targets and potential problem areas.

CRJ 215 Alternatives to Confinement (3-0) 3 hrs.

Study of formal and informal alternatives to custodial handling of offenders. Takes systems approach to examine traditional and contemporary offender diversion programs. Theories, objectives and the systematic consequences of change are examined.

CRJ 216 Investigative Process (3-0) 3 hrs.

Studies the art of investigation to reconstruct facts and circumstances of any event. Prepares students to plan and execute investigations commonly performed in civil and criminal work with concentration on obtaining direct evidence through interviewing, interrogation, observation and the use of documents and records.

CRJ 220 Police Administration (3-0) 3 hrs.

Introduces basic principles of police administration and management as applied to the police function. Emphasis on organization structure and management processes, identifying the police role in staff functions.

CRJ 222 Police Operations (3-0) 3 hrs.

Examines police operations, including patrol, investigation, traffic, juvenile and special operations. Manpower distribution, analysis of operations and enforcement policy will be stressed.

CRJ 224 Police Supervision (3-0) 3 hrs.

Focuses on supervisory problems within a police organization, equating sound principles of human relations and supervisory techniques to effective police performance. Course includes the topics of morale and discipline motivation, authority and control, the supervisory process and its responsibilities, principles of communications, professional ethics, and the decision-making process. Prerequisite: CRJ 101 or consent of coordinator.

CRJ 226 Case Management (3-0) 3 hrs.

Studies the investigative process from a supervisory and managerial perspective. Emphasizes means of assessing case priorities, resource allocation, performance evaluation, and the investigator's relationships with others influencing the successful completion and prosecution of criminal investigation.

CRJ 250 Industrial Security Administration (3-0) 3 hrs.

Organization and management of industrial security units including government security; protection of commercial and industrial manpower, facilities, and installations; security and police operations; administrative, legal, and technical problems; specialized programs for factories, railroads, retail stores, insurance firms, credit bureaus, etc.

CRJ 252 Industrial Fire Protection, Disaster Control (3-0) 3 hrs.

Administration of fire and accident prevention programs; development of policy, rules, and regulations; operations for fire and accident control; equipment facilities, inspections, investigations, and records. Special problems and hazards.

CRJ 253 Safety Management (3-0) 3 hrs.

Principles, responsibility, and procedures of management for controlling operations to provide safety in business and industry. Analysis of accident costs, organization and operation of a safety program, psychological aspects, physical conditions, and radiation hazards.

CRJ 295 Criminal Justice Internship (0-20) 4 hrs.

Provides an orientation to fulltime work in a criminal justice related agency. Students work with agency personnel to receive a thorough knowledge of agency functions, observe and participate in application of theory learned in other classes, and develop skill in performing routine criminal justice operations. Prerequisite: Consent of coordinator.

CRJ 299 Criminal Justice Practicum (2-5) 3 hrs.

Designed to provide students with a broad educational experience through appropriate observation and directed experience in operating segments of the criminal justice system. Students will be assigned to a criminal justice agency in addition to participation in a seminar. Prerequisite: Sophomore standing or consent of instructor.

Data Processing

DPR 101 Introduction to Data Processing (3-0) 3 hrs.

Covers the history, scope, and significance of data processing including the following areas: mechanical data processing, unit record data processing, and electronic data processing systems and equipment. Included in the section on electronic data processing will be a

brief study of a rudimentary programming language where the student will write a series of elementary level case studies using the language.

(Note: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

DPR 103 Key punching and Verifying (1-4) 3 hrs.

Development of high level of skill in programming and operating the IBM 029 keypunch and 059 verifier, including speed and accuracy in keypunching and verifying. Operating the IBM 129 keypunch is also included to introduce the student to newer techniques of keypunching.
Prerequisite: Successful completion of a typing course.

DPR 106 Computer Logic and Programming Technology (2-2) 3 hrs.

Familiarizes the student with the necessary tools to design efficiently the steps in a computer program. Includes advanced concepts of the BASIC programming language. Requires the students to code and debug their own sample cases. Also teaches documentation, problem analysis, decision tables, system flow-charting, basic logical programming routines, table utilization and file maintenance.
Prerequisite: DPR 101 or concurrent enrollment.

DPR 108 Computer Programming— COBOL (4-4) 5 hrs.

In-depth study of COBOL. Extensive laboratory experience in writing, testing, debugging, and documenting programs for business application.
Prerequisite: DPR 101 and DPR 106 with grade of "C" or better or consent of instructor.

DPR 110 Computer Programming— Basic Assembler Language (4-4) 5 hrs.

Program writing, testing, debugging, and documentation using IBM S/360 assembler language. Extensive laboratory experience in planning, writing, and testing programs for typical business application.
Prerequisite: DPR 108 with grade of "C" or better or consent of instructor.

DPR 135 Computer Operator (DOS)(1-4) 3 hrs.

Covers actual computer operations, giving the student experience handling and setting up disk and tape file runs. He will also learn card reader and printer operations.
Prerequisite: Concurrent enrollment in DPR 101 and DPR 106 and consent of instructor.

DPR 137 Internship/Computer Operator Field Project (1-15) 3 hrs.

Provides students with coordinated computer operations or related experience in a data processing installation. Case studies will be used in the event that training stations are not available.

Prerequisite: Consent of coordinator.

DPR 140 Report Program Generator (RPG Programming) (2-2) 3 hrs.

Experience in writing, testing, debugging, and documenting programs for business applications using a report writing type language (RPG).
Prerequisite: DPR 101 and DPR 106 with grade of "C" or better or consent of instructor.

DPR 142 PL/1 Programming Language (2-2) 3 hrs.

Programming techniques in the PL/1 language will be developed for a wide variety of programs of both a business and a non-business nature.
Prerequisite: DPR 101 and DPR 106 with grade of "C" or better or consent of instructor.

DPR 150 Business FORTRAN (2-2) 3 hrs.

Introduces FORTRAN IV as it is applied to general applications. Includes such programming projects as numerical, non-numerical and business-related uses of FORTRAN. Points out the advantages of FORTRAN over other compiler languages.
Prerequisite: DPR 101 and MTH 102, or consent of instructor.

DPR 200 Introduction to Business Computer Programming (3-0) 3 hrs.

Studies the application of modern data processing equipment to business information systems. Familiarizes student with basic concepts of high level computer programming. The student will write programs suitable to process data for business applications. The use of packaged programs for statistical applications will be introduced. Designed for transfer students only.

DPR 202 Programming Systems (3-1) 3 hrs.

Indicates purpose and function of various programming systems such as program compilers, micro and macro generators, utility programs, sort/merges, and job control language.
Prerequisite: Grade of "C" or better in any of the following: DPR 108, DPR 110, DPR 135, DPR 142, or consent of instructor.

DPR 203 Systems Analysis and Design I (3-0) 3 hrs.

Functions and techniques of systems analysis, design, and development. Analysis of information flow, developing, organizing and using management data, establishing system specifications and equipment needs, and implementation of management information systems. Stresses methods and tools used in systems analysis and design.

Prerequisite: DPR 101 with grade of "C" or better and completion of or concurrent enrollment in ACC 101, or consent of instructor.

DPR 204 Advanced Systems Analysis and Design (3-0) 3 hrs.

Continues DPR 203. Advanced concepts in management information systems to extend the student's knowledge of the systems approach to problems in business and industry. Specific data processing systems as they relate to inventory control, production planning, finance, purchasing, and accounting will be presented. Source data automation, data capture equipment, time-sharing systems, and total integrated information systems concepts. Prerequisite: DPR 203 with grade of "C" or better or consent of instructor.

DPR 208 Computer Programming— Advanced COBOL (3-2) 4 hrs.

Continues DPR 108. Familiarizes the student with COBOL programming for magnetic tape and magnetic disk using sequential, direct access and indexed sequential access methods under DOS. Overlay techniques and report writer will also be covered.

Prerequisite: DPR 108 with grade of "C" or better or consent of instructor.

DPR 210 Computer Programming— Advanced Assembler Language (3-4) 4 hrs.

Continues DPR 110. Programming magnetic tape, random storage devices, and remote terminal systems. Includes use of IOCS for input-output devices.

Prerequisite: DPR 110 with grade of "C" or better or consent of instructor.

DPR 212 Programming for the Minicomputer (3-0) 3 hrs.

Familiarizes programmers with programming techniques for a minicomputer at the symbolic assembler language level. Emphasis will be placed on implementation of real time communication and control system applications. Lectures will include conceptual methods of implementation with student exercises in writing, testing, and debugging of program modules.

Prerequisite: DPR 101, DPR 106, and DPR 110 or consent of instructor.

DPR 230 Internship and/or Case Study (1-15) 3 hrs.

Application of data processing skills in practical situation. Field project or case study in local data processing installation. Open only to data processing degree candidates.

Prerequisite: Fourth semester standing with a 2.0 or higher G.P.A. and consent of instructor.

DPR 240 Advanced RPG II (2-2) 3 hrs.

Provides instruction in advanced concepts of the RPG language. Emphasis is on disk and tape applications involving multiple input and output files, tables, arrays and subroutines.

Prerequisite: DPR 140 with grade of "C" or better or consent of instructor.

DPR 250 Data Processing and Computer Statistics (4-0) 4 hrs.

Concepts of the use and interpretation of quantitative methods for data processing will be stressed. Topics will include classical and inferential statistics, probability concepts, theoretical distributions, correlation and regression analysis. The student will also be introduced to the use of gaming and simulation techniques as well as other elementary linear programming models.

Prerequisite: MTH 102 and ECO 200, or consent of instructor.

Dental Hygiene

DHY 100 Pre-Clinic and Orientation (2-6) 4 hrs.

Introduces the dental and dental hygiene professions and stresses development of a professional attitude. Provides basic exposure to a variety of dental subject matter, including all facets of oral prophylaxis. Applies theory practically in the dental hygiene clinic.

Prerequisite: Freshman standing in Dental Hygiene.

DHY 101 Clinical Dental Hygiene I (1-8) 5 hrs.

Applies theoretical concepts in a clinical setting. Refines clinical skills and emphasizes the preventive aspects of dentistry. The student performs traditional dental hygiene clinical functions.

Prerequisite: DHY 100 and freshman standing in Dental Hygiene program.

DHY 102 Field Experience in Dental Assisting (0-5) 1 hr.

Provides the student with experience as a member of the dental health team under the joint supervision of a licensed dentist and a dental hygiene faculty member. The student will participate in various dental office procedures and gain practical knowledge and experience in the field. Students will be assisted in the selection of appropriate office sites by the supervisory faculty member. An

individual program consistent with students' interest, experience and needs will be arranged between the student and supervisory faculty member.

(NOTE: Offered in summer only.)

Prerequisite: DHY 100, DHY 101, and freshman standing in Dental Hygiene program.

DHY 111 Dental Radiology (2-2) 3 hrs.

Theory of X-ray radiation, exposure and protection are pursued in the course. Film placement, intra-oral technique, extra-oral technique, darkroom procedures, film mounting and interpretation are covered in detail both didactically and in a practical application setting.

Prerequisite: Freshman standing in Dental Hygiene program.

DHY 160 Introductory Nutrition (1-0) 1 hr.

Study of basic nutrients, their function in the human body and their role in medical/dental health diseases. Students will study basic nutrients and their varying needs through the life cycle.

Prerequisite: Freshman standing in Dental Hygiene program and CHM 100.

DHY 161 Dental Anatomy (2-3) 3 hrs.

Studies the development, growth and function of human dentition and supporting structures. Emphasizes oral anatomy and its relationship to the structure of the head and neck. The student learns to recognize, describe and reproduce by drawings and carvings the structure of all natural tooth forms.

Prerequisite: Freshman standing in Dental Hygiene program.

DHY 190 Oral Pathology (2-2) 3 hrs.

Studies fundamentals of microscopic and gross pathology and general pathological processes. Specially emphasizes diseases of dental and periodontal tissues and of the supporting oral structures. Correlates clinical manifestations of disease with dental hygiene practice.

Prerequisite: Freshman standing in Dental Hygiene program.

DHY 199 Introductory Periodontology (1-0) 1 hr.

Introduces periodontics: the recognition, treatment and prevention of diseases affecting the periodontium. Covers definition, clinical characteristics, radiographic signs, histopathology, etiology, nutritional implications, prognosis, treatment, and patient education. Emphasizes the inflammatory periodontal conditions.

Prerequisite: Freshman standing in Dental Hygiene program.

DHY 200 Advanced 1 hr.

Periodontology (1-0)

Continues studying periodontal diseases. Emphasizes advanced treatment procedures and patient care.

Prerequisite: DHY 199 and sophomore standing in Dental Hygiene program.

DHY 201 Seminar (2-0) 2 hrs.

Practice administration, dental ethics and jurisprudence. Orientation in cost accounting and bookkeeping in dental office. Dental office policies and procedures, application of ethics in everyday practice, legal responsibilities of dentist and dental hygienist, jurisprudence, state dental laws governing the practice of dental hygiene.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 220 Community Dentistry I (2-2) 3 hrs.

Introduces public health principles. Emphasizes community patterns of dental caries and periodontal diseases; dental delivery systems; third party payments; fluoridation and other preventive measures; and interpretation of dental research. Provides field experiences with geriatrics, handicapped, mentally retarded and other community groups.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 221 Community Dentistry II (2-2) 3 hrs.

Introduces principles of dental health education. Emphasizes communication skills and the development of learning strategies, classroom activities and visual aids for classroom and private office use. Provides field experience in classroom teaching.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 240 Dental Pharmacology and Anaesthesia (1-0) 1 hr.

Basic dental pharmacopeia, uses of anaesthetics, antibiotics, analgesics, hypnotics, and handling of dental office emergencies.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 250 Clinical Dental Hygiene II (0-12) 4 hrs.

Continues DHY 150.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 251 Clinical Dental Hygiene III (0-12) 4 hrs.

Continues DHY 250.

Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 260 Advanced Nutrition and Dietary Counseling (1-2) 2 hrs.

Through observation and practice, knowledge of basic nutrition and dental disease will be correlated with learning theories to develop skills in dietary counseling. Nutritional assessment and management of patient with special needs will be emphasized. Prerequisite: Sophomore standing in Dental Hygiene program.

DHY 280 Dental Materials and Dental Assisting (2-2) 3 hrs.

Introduction to operations performed, treatments given in dental office, chairside assisting, reception, and records. Materials used in restorative dentistry, prosthetic dentistry, and orthodontics, and their manipulation and application in dentistry. Product introduction and orientation. Prerequisite: Sophomore standing in Dental Hygiene program.

Dietetic Technician

DIT 100 Introduction to the Dietetic Technician Program (2-3) 3 hrs.

Introduces the program including the history of nutrition care services and role of the dietetic technician. Includes dietetic clinical laboratory practice in a local hospital. Prerequisite: Freshman standing in Dietetic Technician program and concurrent enrollment in DIT 101, BIO 135 or BIO 160, FSM 114 and consent of the coordinator.

DIT 101 Basic Nutrition (3-0) 3 hrs.

Introduces the principles of human nutrition and their application to the needs of normal individuals of all age groups.

DIT 102 Advanced Nutrition (3-0) 3 hrs.

Studies the nutritional care of a patient through the prescription of modified diets. Emphasis on techniques of diet counseling. Prerequisite: Freshman standing in Dietetic Technician program or consent of instructor.

DIT 110 Principles of Food Preparation (2-2) 3 hrs.

Introduces the scientific principles of food preparation, menu planning for individuals and families of different socio-economic backgrounds, grocery shopping. Laboratory practice includes adjusting recipes for modified diets, demonstration, and use of equipment. Prerequisite: FSM 114 or consent of instructor.

DIT 150 Dietetic Clinical Laboratory I (1-6) 3 hrs.

Offers integrated clinical approach to the nutritional care of patients in a community hospital. Provides practice processing diet

orders, assisting patients with menu selection, checking meal trays, taking diet histories, making nutrient analyses, and giving diet instructions.

Prerequisite: DIT 100 and concurrent enrollment in DIT 102, BIO 102 or BIO 161, DIT 110 or consent of instructor.

DIT 200 Dietetic Clinical Laboratory II (1-9) 4 hrs.

Offers clinical experience in community agencies that include nutrition as one of their services. Assigned progression can include school lunch, day care centers, retirement centers, home-delivered meals, commercial processors, and hospitals. Prerequisite: DIT 150 and consent of instructor.

DIT 201 Nutritional Services in Institutions (3-0) 3 hrs.

Surveys institutions, agencies, and organizations that assist the community in meeting nutritional needs of its people. Studies nutritional needs of various age groups under different socio-economic conditions. Prerequisite: Sophomore standing in Dietetic Technician program.

DIT 202 Nutrition Care Seminar (2-0) 2 hrs.

Reviews planning, implementing, and evaluating nutrition care given to individuals and groups of people having specific disease conditions, both acute and chronic. Prerequisite: DIT 201.

DIT 203 Dietetic Seminar (1-0) 1 hr.

Identifies and discusses the employment opportunities in the nutritional care field, roles of the dietetic technician, responsibilities of allied health professionals, and membership in professional organizations. Prerequisite: DIT 201.

DIT 250 Dietetic Clinical Laboratory III (1-9) 4 hrs.

Offers student assigned clinical laboratory experience in approved community agencies. Provides opportunity to reach entry-level position competence by practicing skills under the supervision of a registered dietitian. Prerequisite: Sophomore standing in Dietetic Technician program, consent of coordinator, and concurrent enrollment in DIT 202 and DIT 203.

Economics

ECO 115 Consumer Economics (3-0) 3 hrs.

Consumer practices with emphasis on buying of investments, shelter, insurance, and basic commodities.

ECO 200 Introduction to Economics (3-0) 3 hrs.

Descriptive rather than a quantitative approach to the study of economics. Major topics cover economic history, the elements of macro-economics, micro-economics, and a comparative look at other economic systems. Specifically designed for students in career-vocational curricula.

ECO 201 Principles of Economics I (3-0) 3 hrs.

Economic problems faced by our society. Examination of resource allocation, national income, and economic development, from a macro-economic approach.

ECO 202 Principles of Economics II (3-0) 3 hrs.

Continues ECO 201. Economic problems faced by the individual and the firm. Examination of market structures, price, and output determination. The micro-economic approach. Prerequisite: ECO 201.

ECO 210 Money and Banking (3-0) 3 hrs.

Stresses the practical aspects of money and banking, and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Historical treatment has been kept to a minimum. Emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, governmental fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. Prerequisite: ECO 200 or ECO 201.

Education

EDU 201 Introduction to Education (3-0) 3 hrs.

Organization, structure, and operation of schools in the United States, including elementary, secondary, college, and adult education. Evaluation of each student's potential for this occupation.

EDU 202 Pre-Student Teaching Clinical Experience (0-2) 1 hr.

Provides an in-depth study of classroom practices in the subject and age category that each student is training to teach. Students will observe classrooms in their area of interest and will attend a seminar once weekly to discuss their experience.

EDU 211 Educational Psychology (3-0) 3 hrs.

Psychology principles as applied to education. Assessment of attitudes, capacities, interests, and achievements. Educational implications of physical, emotional, and social development. Student, teacher, school, and home as factors in educative process. Prerequisite: PSY 101 or consent of instructor.

Electronics

ELT 101 Circuits I, Resistive Circuit Analysis (3-4) 5 hrs.

Resistive circuits with time-varying source voltage. Physics of electricity, plus units, definitions, symbols, and notations for electrical quantities. Circuit properties and their applications to significant circuit configurations. Prerequisite: High school algebra or consent of instructor.

ELT 102 Circuits II, Single Time Constant Circuits (3-3) 4 hrs.

Examines R-C and R-L single time constant circuits. Treats these circuits with sinusoidal, square wave, and step voltages as sources. Prerequisite: ELT 101, MTH 106 or consent of instructor.

ELT 103 Circuits III, Networks (3-4) 5 hrs.

Covers resonance, factors affecting Q and bandwidth, RLC filters, power matching with pi, T and L networks. In addition, double tuned circuits, ringing, and transient response of RLC circuits are discussed. Prerequisite: ELT 102 or consent of instructor.

ELT 105 Electro-Mechanical Drafting (1-6) 3 hrs.

Drafting fundamentals and techniques with introduction to electronic and mathematical symbols, basic circuitry, electronic devices, and fabrication processes. This background culminates in the design and construction of an individual and a course project.

ELT 110 Introductory Electronics (0-6) 2 hrs.

Laboratory instruments, circuit components, basic measuring techniques, and basic circuits used as building blocks in any electronics system.

ELT 111 Electronics I, Resistive (2-3) 3 hrs.

Resistive circuits involving electronic devices. Volt-ampere characteristics and physics of diodes, transistors, and other semiconductor devices. The emphasis is upon biasing and the setting of DC levels to make the device function. Prerequisite: ELT 110 or consent of instructor.

ELT 121 Automatic Vending Machine Repair I (1-3) 2 hrs.
Introduces skills and knowledge needed to service automatic vending equipment. Emphasizes attitudes for successful job entry and advancement in the industry.

ELT 122 Automatic Vending Machine Repair II (1-3) 2 hrs.
Continues ELT 121. Emphasis upon current vending equipment and components. Emphasizes theory, demonstrations, and hands-on work on component parts.
Prerequisite: ELT 121 or consent of instructor.

ELT 123 Automatic Vending Machine Repair III (1-3) 2 hrs.
Continues ELT 122. Trouble shooting of actual machines and real problems. Emphasizes rapid machine repair and timely service techniques. Covers late model machines and practice.
Prerequisite: ELT 122 or consent of instructor.

ELT 203 Electronics II, Digital (3-4) 5 hrs.
Examines the building blocks of digital circuits. These elements are then blended into topics and applications. A sampling of the topics are Boolean algebra, Karnaugh mapping, counters, and microprocessors.
Prerequisite: ELT 111.

ELT 204 Electronics III, Advanced Electronics (3-4) 5 hrs.
Examines electronic circuits which use non-linear devices. May apply linear equivalent circuits in this analysis. Studies power supplies, amplifiers, feedback circuits, oscillators, modulation systems, and detectors.
Prerequisite: ELT 103 and ELT 111 or consent of instructor.

ELT 205 Electronic Instrumentation (3-4) 4 hrs.
Methods of sensing and controlling physical industrial processes. Components involved are transducers, indicators, recorders, and controllers
Prerequisite: ELT 203 or consent of instructor.

ELT 206 Electronic Computers (3-4) 5 hrs.
Studies computer architecture through the use of microprocessors, digital computer algorithms, and software programming. The utilization of microprocessors is extensive.
Prerequisite: ELT 203 or consent of instructor.

ELT 207 UHF Communications and Reception (3-4) 5 hrs.
Emphasizes design techniques in communication circuits, the relationship of modulation systems to bandwidth requirements, and frequency spectrum. A design project is part of the course work.
Prerequisite: ELT 203 or consent of instructor.

ELT 210 Computer Programming (3-0) 3 hrs.
Involves the use of the computer and microprocessor as special tools and introduces the student to computer architecture, languages and programming.
Prerequisite: MTH 106 or consent of instructor.

ELT 215 Electrical Controls and Motors (3-4) 5 hrs.
Designed to cover topics in the following areas: motor controls, switches (relays, thermostatic, limit, and solenoid), relay logic, AC and universal motors, residential and commercial service entrance, National Electrical Code, safety devices, and shop safety practices.
Prerequisite: ELT 110 or consent of instructor.

ELT 216 Microprocessor Software Applications (3-4) 5 hrs.
Compares microprocessor instruction sets: study of assemblers, cross assemblers, interrupts, computational algorithms, search and sort routines, stack routines, problem definition, program design, debugging and documentation.
Prerequisite: ELT 206 or consent of instructor.

ELT 217 Microprocessor Peripheral Systems (3-4) 5 hrs.
Examines interfacing and operation of peripheral systems commonly used with microprocessor and mini-computers. Includes video displays, teleprinters modems, codecs, and smart terminals.
Prerequisite: ELT 216 or consent of instructor.

ELT 218 Principles of Microprocessor Systems Design (3-4) 5 hrs.
Examines central processor unit architecture, monitor program structure, system control timing, input-output control, and data bus structures. Considers input-output hardware design, interrupts, hardware and software design.
Prerequisite: ELT 206 or consent of instructor.

Engineering

EGR 100 Introduction to Engineering and Technology (0-3) 1 hr.
Laboratory experience course in which the student is introduced to engineering and technological techniques, methods, and design.

EGR 120 Engineering Graphics I (0-6) 3 hrs.
Graphical methods in mathematical calculations, including vectors, limit dimensioning, forces, tolerances, and nomography. Basic conceptual design through working drawings, assembly views, intersections, and developments.

EGR 121 Engineering Graphics II (0-6) 3 hrs.

Graphical methods in orthogonal projections, developments, topographics, sketching, plotting, charts, and curves. Practical and theoretical analysis of common geometrical magnitudes of points, lines, planes, other surfaces, and pictorials.

Prerequisite: EGR 120.

EGR 122 Graphical Display Systems (0-4) 2 hrs.

Application of graphical principles applied to modern digital computers. Graphical output on current display devices. Application made to graphical display system.

Prerequisite: EGR 120 or consent of instructor.

EGR 150 Analytical Mechanics (Statics) (3-0) 3 hrs.

Resultants of force systems; algebraic and graphical conditions of equilibrium of force systems; analysis of forces acting on members of trusses, frames, etc.; forces due to friction, centroids.

Prerequisite: MTH 105.

EGR 211 Analytical Mechanics (Dynamics) (3-0) 3 hrs.

Displacement, velocity, and acceleration of a particle, relation between forces acting on rigid bodies and changes in motion produced, translation, rotation, plane motion, solutions using principles of force, mass and acceleration, work and energy, and impulse and momentum.

Prerequisite: EGR 150.

EGR 212 Mechanics of Deformable Bodies (3-0) 3 hrs.

Elastic and inelastic relationships between external forces (loads) acting on deformable bodies and stresses and deformations produced, tension and compression members, members subjected to torsion and to bending, buckling (columns), combined stresses, repeated loads (fatigue), energy loads, impact, and influence of properties of materials.

Prerequisite: EGR 150.

EGR 215 Surveying I (2-3) 3 hrs.

Use of transit and level, reading verniers and angles, linear measurement, extending straight lines, differential and profile leveling, simple transverse survey, computation, and keeping notes.

Prerequisite: MTH 104 or MTH 106.

English**CMN 094 Grammar and Usage Review (0-2) 1 hr.**

Reviews the basic principles of grammar, nouns, verbs, modifier and clauses. Also covers sentence structure and frequent sentence errors. Course material will be individualized. Carries no transfer credit.

CMN 095 Punctuation Review (0-2) 1 hr.

Reviews punctuation and covers various conversations of form for written communication. Course material will be individualized. Carries no transfer credit.

CMN 096 Organization Skills for Effective Writing (0-2) 1 hr.

Reviews the skills or organization needed for written communication. Covers outlining, patterns of organization, and other pre-writing topics. Course material will be individualized. Carries no transfer credit.

CMN 097 Spelling Improvement (1-0) 1 hr.

Individualized spelling improvement program for the student who needs assistance in developing adequate spelling skills. Carries no transfer credit.

CMN 098 Vocabulary Development (1-0) 1 hr.

Individualized vocabulary development program for the student who needs assistance in developing an appropriate vocabulary for college or career. Carries no transfer credit.

CMN 099 Language Skills (3-0) 3 hrs.

Individualized program for the student who needs assistance in developing language skills. Carries no transfer credit.

ENG 100 Composition (3-0) 3 hrs.

Use of clear, correct English in vocational settings designed for students in vocational career programs. Carries no transfer credit. Prerequisite: Placement test.

NOTE: Cannot be used for Group I or V General Studies requirement for A.A. or A.S. degree.

ENG 101 Composition (3-0) 3 hrs.

College composition emphasizing the organization and development of expository prose. Introduction to the critical reading of selected essays.

Prerequisite: Satisfactory score on a placement test or ENG 100.

ENG 102 Composition (3-0) 3 hrs.

Continues ENG 101. Reading and writing of various types of prose. Introduces methods used in writing investigative papers.

Prerequisite: ENG 101 or consent of associate dean.

ENG 103 Report Writing (3-0) 3 hrs.
Fundamentals of semantics, syntax, and rhetoric as applied to business, industrial, legal and governmental report writing.
Prerequisite: ENG 101 or consent of associate dean or instructor.

ENG 130 Business Writing I (3-0) 3 hrs.
Formal and psychological aspects of business correspondence. Introduction to various kinds of business letters, memoranda, and reports. Improvement of grammar, spelling, and word usage.

ENG 201 Advanced Composition (3-0) 3 hrs.
Advanced skills in expository and argumentative writing.
Prerequisite: ENG 102.

ENG 220 Creative Writing (3-0) 3 hrs.
Provides guided practice in various types of creative writing. Emphasizes skills common to creative expression including description, plotting, narration, dialogue, and verse.
Prerequisite: ENG 102 or consent of associate dean or instructor.

SGN 101 Basic Sign Language (3-0) 3 hrs.
Presents manual communication skills of fingerspelling and sign language used by American deaf. This course is designed for students with no previous experience in sign language.

SGN 102 Intermediate Sign Language (3-0) 3 hrs.
Reviews basic sign language vocabulary and fingerspelling with emphasis on developing skills in the simultaneous method. New vocabulary, intensive practice on fingerspelling of words and numbers. Introduces receptive skills and the translation of English idioms into sign.
Prerequisite: SGN 101 or consent of instructor.

SGN 201 Advanced Sign Language (3-0) 3 hrs.
Reviews English idioms translated into sign. Includes general overview of sign language idioms and their English counterparts; conversation building with emphasis on clarity, fluidity, accuracy in various settings with intensive practice in reverse interpreting.
Prerequisite: SGN 102 or consent of instructor.

Fashion Design

FAS 101 Flat Pattern Design and Draping I (1-4) 3 hrs.

Basic industrial techniques of pattern making combined with best features of draping. Variety of slopers (bodices, skirts, sleeves, etc.) developed. Accuracy and professional standards stressed. Patterns tested in muslin for fit.

Prerequisite: Consent of coordinator.

FAS 102 Flat Pattern Design and Draping II (2-4) 4 hrs.

Further development of basic sloper set. Patterns tested in muslin for fit.

Prerequisite: FAS 101 or consent of coordinator.

FAS 103 Apparel Design and Construction I (1-4) 3 hrs.

Basic principles of using master sloper set to develop patterns for original designs. Professional design room techniques.

Prerequisite: Consent of coordinator.

FAS 104 Apparel Design and Construction II (2-4) 4 hrs.

Development of basic sloper set in patterns. Actual construction of finished garments. Emphasis on styling, fit, and professional finishing.

Prerequisite: FAS 103.

FAS 105 Fashion Design Illustration I (0-2) 1 hr.

Basic fashion sketching—front, back, and side views. Relationship of figure and garment. Sketching of original design.

Prerequisite: Consent of coordinator.

FAS 106 Fashion Design Illustration II (0-2) 1 hr.

Advanced fashion sketching, fabric rendering. Emphasis on development of individual style. Basic layout and presentation.

Prerequisite: FAS 105 or consent of coordinator.

FAS 107 Textiles I (1-2) 2 hrs.

Studies basic design and color principles in development of creative fabrics. General analysis and identification of fabrics, and employment of various methods such as weaving, printing, and dyeing.

Prerequisite: Consent of coordinator.

FAS 108 Textiles II (1-2) 2 hrs.

Continues FAS 107. Contemporary fabrics analyzed and studied.

Prerequisite: FAS 107.

FAS 109 Fashion Arts and Design (2-0) 2 hrs.	FAS 205 Tailoring Techniques I (0-4) 2 hrs.
Focuses on theory and principles of design for fashion. The elements of design and color are covered. Develops the perception and awareness to judge good design and to analyze potential trends. Studies the influence of present day cultural trends on the field of design. Prerequisite: Consent of coordinator.	Professional assembling procedures, details, and finishes. Particular emphasis on coats and suits. Prerequisite: Consent of coordinator.
FAS 110 Costume History (2-0) 2 hrs.	FAS 206 Tailoring Techniques II (0-4) 2 hrs.
Introduces the elements of design and color in historical perspective. A survey of historical periods of design focusing on costumes. Examines the influences on these periods of social, political, and economic forces. Prerequisite: Consent of coordinator.	Continues FAS 205. Tailoring or original garments. Prerequisite: FAS 205.
FAS 111 Twentieth Century Costume and Trends (3-0) 3 hrs.	FAS 209 Advanced Fashion Illustration I (0-2) 1 hr.
Presents an overview of fashion history and current trends in the 20th century. Includes fashion design, merchandising and factors which influence fashion from the merchandiser's point of view such as arts, technology and socio-economic aspects. Prerequisite: FAS 110.	Work on a professional studio level—stressing individual approaches—work sketches as well as finished art. Fashion illustration as advertising, publicity, promotion, and display. Prerequisite: FAS 106.
FAS 112 Fashion Basics (1-4) 3 hrs.	FAS 210 Advanced Fashion Illustration II (0-2) 1 hr.
Presents fashion merchandise through evaluation of fashion products. Develops awareness of construction, as well as workmanship and design elements, such as fabric, color silhouette and taste.	Continues FAS 209. Preparation of professional portfolio. Prerequisite: FAS 209.
FAS 201 Advanced Flat Pattern Design and Draping I (2-4) 4 hrs.	FAS 212 Visual Fashion Merchandising (2-0) 2 hrs.
Continued advanced development of basic sloper set, including coat and suit slopers, basics of grading (sizing). Patterns tested in muslin for fit and accuracy. Prerequisite: FAS 101 and FAS 102.	Studies the communications of design. Determining and interpreting consumer needs and motivations. Exploring the methods and techniques of educating the consumer and promoting good design through advertising, publicity, display, fashion shows, special events, employee development, etc. Prerequisite: FAS 110 or consent of coordinator.
FAS 202 Advanced Flat Pattern Design and Draping II (2-4) 4 hrs.	FAS 229 Promotion of Fashion (3-0) 3 hrs.
Continues FAS 201. Prerequisite: FAS 201.	Various techniques and media for methods to sell fashion. Emphasis on advertising: newspapers, magazines, direct mail, catalogs, radio and television. Playing important roles in sales promotion also will include: visual presentation in windows, interior displays and shops; special events, fashion shows and publicity. Analysis of practical creative assignments developed by the students. Prerequisite: FAS 102 or consent of coordinator.
FAS 203 Advanced Diversified Apparel Design I (2-4) 4 hrs.	FAS 230 Contemporary Living (3-0) 3 hrs.
Development of patterns for the translation of original designs into completed garments. Visits to manufacturers, and speakers from industry. Prerequisite: FAS 104.	Understanding of the social, economic, political and psychological forces that influence fashion. The shifting patterns and population profiles will be examined. The student will be involved in the world of fashion through visits to professional, civic, cultural and sports events. The consumer point of view of fashion in contemporary living will be observed by studying characteristics of Chicago and suburban stores. Fashions presented by these stores and those accepted by customers in their life styles of today will also be analyzed. Prerequisite: FAS 102 or consent of instructor.
FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.	
Continues FAS 203. Prerequisite: FAS 203.	

FAS 240 Fashion Projects (3-0) 3 hrs.
Studies the use of oral and written communication in a fashion career with special emphasis on preparing for and staging fashion shows. Also, practice in effective speaking in small groups or to individuals; effect of grooming and etiquette on communication; style and technique in getting a job; and performing effectively in the fashion industry.
Prerequisite: FAS 229.

Fine Arts

FNA 111 History of Art I (3-0) 3 hrs.
History of art from 20,000 B.C. to 1400 A.D. A survey of the outstanding works of art produced by Western civilizations presented inseparably with the cultural backgrounds of civilizations from the prehistoric age to Gothic Italy. Recommended for art majors as a sequential course after ART 105.

FNA 112 History of Art II (3-0) 3 hrs.
History of art from 1400 to 1890. A survey of the outstanding works of art produced in the Renaissance tradition presented inseparably with the cultural backgrounds of Western Europe from the Renaissance to Art Nouveau. Recommended prerequisite: FNA 111.

FNA 113 History of Art III (3-0) 3 hrs.
History of art from 1900 to the present. An historical critical analysis of the "isms" of modern art both stylistically and ideologically as it relates to our own century.
Recommended prerequisite: FNA 112.

Fire Science

FIS 101 Municipal Fire Administration I (3-0) 3 hrs.
Organization and function for fire protection, personnel management, distribution of equipment, records, and fire safety problems.

FIS 112 Fire Alarm and Extinguishing Systems (3-0) 3 hrs.
The function, classification, and operating principles of fixed extinguishing systems, detection systems, alarm systems, signaling systems and portable extinguishing equipment installed for fire protection and fire prevention purposes.

FIS 115 Construction Design and Fire Safety (3-0) 3 hrs.
Development of skills and competencies needed to recognize various types of building construction and materials. Emphasis on how materials react and their effects in fires; materials and techniques that provide a fire-safe environment.

FIS 122 Fire Inspection Principles (3-0) 3 hrs.
Fundamentals of fire inspection organization including building construction, standard symbols, inspection maps, and inspection reports.

FIS 132 Hazardous Materials I (3-0) 3 hrs.
Review of basic chemistry, storage, handling, laws, standards, and fire fighting practices pertaining to hazardous materials.

FIS 133 Hazardous Materials II (3-0) 3 hrs.
Second semester course in hazardous materials covering storage, handling, laws, standards, and fire practices, with emphasis on fire fighting and control at the company officer level.
Prerequisite: FIS 132.

FIS 201 Municipal Fire Administration II (3-0) 3 hrs.
Advanced course including records and fire safety problems, communications and fire alarm systems, legal aspects of fire protection.

FIS 222 Fire Inspection Applications (3-0) 3 hrs.
Actual inspection of buildings to locate hazards and present recommendations for correction. Code application to various occupancies. Complete records, including maps, are submitted for each occupancy inspected.

FIS 242 Fire Hydraulics (3-0) 3 hrs.
Review of basic mathematics, hydraulic laws and formulas as applied to the fire service, application of formulas and mental calculation to hydraulic problems, water supply problems, underwriter's requirements for pumps.

FIS 245 Fire Causes and Investigation (3-0) 3 hrs.
Introduction to arson and incendiarism, arson laws, and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses. Procedures in handling juveniles, court procedure, and giving court testimony are covered.

FIS 252 Automatic Sprinkler Systems (3-0) 3 hrs.
Practical analysis of the various types of automatic sprinkler systems, codes governing installation, system devices, and system design.

FIS 262 Water Supply Analysis (3-0) 3 hrs.
Study of municipal water supply requirements, system design, and flow measurements for fire protection.

Food Service Management

FSM 090 Basic Quantity Baking (0-20) 10 hrs.

Basic training in the elements of quantity baking under the guidance of a master baker. Students will be exposed to the theory and "hands on" experience of baking through participation in the production of the college bake shop and discussion sessions.
Prerequisite: Consent of coordinator or instructor.

FSM 091 Advanced Quantity Baking (0-20) 10 hrs.

Continues FSM 090. Emphasis on more advanced techniques of baking including cake decorating, hotel pastry, and display pieces.
Prerequisite: FSM 090 or consent of coordinator or instructor.

FSM 095 Basic Quantity Cooking (3-15) 10 hrs.

Basic training in the elements of quantity food preparation under the guidance of a master chef. Students will be exposed to the theory and "hands on" experience of food preparation through participating in the production of the food service department and discussion sessions.
Prerequisite: Consent of coordinator or instructor.

FSM 096 Advanced Quantity Cooking (0-20) 10 hrs.

Continues FSM 095. Emphasis on more advanced techniques of food preparation including culinary art and buffet work.
Prerequisite: FSM 095 or consent of coordinator or instructor.

FSM 111 Introduction to Food Service (2-0) 2 hrs.

History and organization of food service hospitality industry including career opportunities in various food fields, organizational structures of food service establishments, and operational considerations and problems.

FSM 112 Quantity Food Production (3-3) 4 hrs.

Basic training in the theory and practice of quantity food preparation with emphasis placed on actual food preparation in the college kitchens under the guidance of master chefs and bakers.

FSM 113 Quantity Food Service (4-0) 4 hrs.

Theory and practice of food service including practical experience in college cafeterias, dining rooms, and catering service.

FSM 114 Food Standards and Sanitation (3-0) 3 hrs.

Function of food ingredients, evaluation of finished products including convenience food products and uses, food service sanitation standards, and procedures.

FSM 115 Menu Planning (2-0) 2 hrs.

Practical applications of nutrition as related to food service operations. Menu planning theory and methods for all types of food operations and special events; menu planning as a determination of food cost.

FSM 130 Hospitality Law and Risk Management (4-0) 4 hrs.

Surveys our legal system as applied to the hospitality industry. Examines contracts, torts, and various labor laws pertinent to the industry. Analyzes insurance costs, including fire, accident, workmen's compensation, and employee liability, and their effect on various types of facilities.

FSM 210 Hospitality Facility Maintenance (3-0) 3 hrs.

Focuses on the organization, duties and administration of a restaurant and lodging facility maintenance department. Discusses purchasing furniture, carpeting, linens, and supplies. Identifies and evaluates care and maintenance techniques of the areas serviced by a facility maintenance department.

FSM 211 Purchasing and Storage (3-0) 3 hrs.

Standards and identification of quality meats, dairy products, produce, groceries, frozen foods, and supplies. Methods of purchasing, purveyor relations and proper storage techniques, and purchase standards for convenience foods.

FSM 212 Food Service Supervision (4-0) 4 hrs.

Study of the theory and techniques of supervision as related to the food service industry.

FSM 213 Seminar and Internship (2-15) 4 hrs.

Part of the credit for this course will be given for participation in a supervised cooperative work experience program in a college approved training station. Enrollment is restricted to sophomores in the Food Service Management program.
Prerequisite: FSM 212 or consent of instructor.

FSM 214 Cost Control (3-0) 3 hrs.
Practical application and theory of various food and beverage cost control systems.

FSM 215 Restaurant Layout and Equipment (3-0) 3 hrs.
Maximizing employee productivity through various types of food equipment and proper equipment arrangement. Effects of use of convenience foods on equipment planning.

French

FRN 101 Elementary French I (4-0) 4 hrs.
Beginning course in the language skills of listening, understanding, speaking, reading, and writing in their logical sequence. Designed for students with no previous experience in French.

FRN 102 Elementary French II (4-0) 4 hrs.
Continues FRN 101. Situational conversations in French; reading and writing stressed.
Prerequisite: FRN 101, one year of high school French, or consent of instructor.

FRN 201 Intermediate French (4-0) 4 hrs.
Conversation with emphasis on pronunciation, intonation, stress, and rhythm. Introduction to composition, reading of short stories, and grammar review.
Prerequisite: FRN 102, two years of high school French, or consent of instructor.

FRN 202 Intermediate French (4-0) 4 hrs.
Continues FRN 201. Accuracy and speed in reading, study or syntax, and extensive composition.
Prerequisite: FRN 201, three years of high school French, or consent of instructor.

FRN 205 Intensive Oral Practice (3-0) 3 hrs.
Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern French works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: FRN 202 or equivalent, or consent of instructor.

FRN 210 Introduction to Modern French Literature (3-0) 3 hrs.
Reading of selected 20th century masterpieces. Introduction to poetry and "analyse de texte." Oral readings stressing pronunciation and diction. Speaking based on discussions of works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: FRN 202 or equivalent, or consent of instructor.

Geography

GEG 101 World Geography (3-0) 3 hrs.
Economic, political, and cultural geography of the modern world. Raw materials, industrial resources, and trade connections related to war and peace.

Geology

GEO 101 Physical Geology (3-2) 4 hrs.
Materials, structure, and sculpture of the earth's surface. One-day field trip required.

GEO 102 Historical Geology (3-2) 4 hrs.
Geological history of the earth including principles employed to reconstruct this history. One-day field trip required.
Prerequisite: GEO 101, high school earth science, or consent of instructor.

GEO 201 Rocks and Minerals (3-2) 4 hrs.
Physical description of minerals and rocks. Introduction to crystallography, economic minerals, natural resources. Field trip required.
Prerequisite: GEO 101, CHM 121, or consent of instructor.

GEO 202 Paleontology (3-2) 4 hrs.
Fossil record of life, principles of evolution and ecology. One-day field trip required.
Prerequisite: GEO 102, BIO 101, BIO 140 or consent of instructor.

German

GER 101 Elementary German I (4-0) 4 hrs.
Beginning course in the language skills of listening, understanding, speaking, reading, and writing in their logical sequence. Designed for students with no previous experience in German.

GER 102 Elementary German II (4-0) 4 hrs.
Continues GER 101. Situational conversations in German; reading and writing stressed.
Prerequisite: GER 101, one year of high school German, or consent of instructor.

GER 201 Intermediate German (4-0) 4 hrs.
Conversation, with emphasis on pronunciation, intonation, stress, and rhythm. Introduction to composition, reading of short stories, and grammar review.
Prerequisite: GER 102, two years of high school German, or consent of instructor.

GER 202 Intermediate German (4-0) 4 hrs.
Continues GER 201. Accuracy and speed in reading, study of syntax, and extensive composition.
Prerequisite: GER 201, three years of high school German, or consent of instructor.

GER 205 Intensive Oral Practice (3-0) 3 hrs.
Conversational practice to develop oral facility; specially designed exercises for improvement of pronunciation, stress, and rhythm. Individual readings of modern German works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: GER 202 or equivalent, or consent of instructor.

GER 210 Introduction to Modern German Literature (3-0) 3 hrs.
Readings of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussions of works read. Writings based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: GER 202 or equivalent, or consent of instructor.

History

HST 111 The American Experience to 1877 (3-0) 3 hrs.
Survey of the American experience through the pre-revolutionary period, the expansion westward and the Civil War. Special stress is placed upon the social, economic, cultural, political and constitutional development of the United States.

HST 112 The American Experience Since 1877 (3-0) 3 hrs.
End of Reconstruction to the present, with primary stress on political and economic development. Also includes social, intellectual and cultural phases, expanded role of government in national affairs, and the participation of the United States in International relations.

HST 141 History of Western Civilization to 1650 (4-0) 4 hrs.
Stresses political, social, cultural, economic and technological developments from prehistoric times and concludes with the last manifestation of essentially medieval ideology, i.e., the Protestant Reformation.

HST 142 History of Western Civilization Since 1650 (4-0) 4 hrs.
Continues HST 141. Commences with the emergence of modern times, i.e., the development of royal absolutism and the beginnings of the modern nation state and concludes with the 20th century and the modern world.

HST 210 Women: The American Experience (3-0) 3 hrs.
History of the status, roles, and contributions of women in America, and a survey of the attitudes and movements that have affected the lives of women in America.

HST 214 The Afro-American and the American Experience (3-0) 3 hrs.
In-depth study of American black from African slave trade through slavery, Reconstruction, years of neglect and Civil Rights Revolution in the United States and his contributions to American culture.

HST 218 Illinois and Local History (3-0) 3 hrs.
Surveys Illinois history from earliest times to the present day. Emphasizes the social and economic development of the prairie state. Gives special attention to the local setting. Projects in local history will be encouraged.

HST 243 The Far East in the Modern World (3-0) 3 hrs.
History of East Asia since 1800. The traditional cultures of China and Japan, the Western impact, and the Asian response will be covered.

Humanities

HUM 101 The Creative Nature of Man I (3-0) 3 hrs.

Creative personality of Western tradition and the creative process with emphasis upon form, function, influence of the patron, and prevailing attitudes on music, literature, and art of representative periods. Lecture-demonstration discussion, panels, and field activity.

HUM 102 The Creative Nature of Man II (3-0) 3 hrs.

Representative points of view regarding life and death in Eastern and Western worlds; problems in developing a coherent philosophy of one's own. Focus upon 20th century issues as reflected in contemporary art, music, and literature.

HUM 110 Women and Creativity (3-0) 3 hrs.

Explores the nature of female creativeness, focusing on women in the traditionally male arenas of art and literature and on areas in which the female creative impulse manifests itself under other names: the shaping of social attitudes, domestic arts, and religious experiences.

HUM 115 International and Regional Studies in Humanities 1-4 hrs.

Students travel with faculty to international or regional locations which may vary from year to year to study the humanities. May emphasize the literature, language, philosophy, or humane arts of the locale visited. Presentation by on-site individualized study, lectures, field trips. Classes held on campus prior to and following the off-campus learning experience. Travel expenses are paid for by the student.

One Credit: Students must attend all classes and field trips, submit a daily log covering one week of travel and write a personal essay of at least five typewritten pages.

Two Credits: Students must attend all classes and field trips, submit a log covering 1-2 weeks of travel, and write a research paper of at least eight typewritten pages, plus bibliography and footnotes.

Three Credits: Students must participate in all classes and field trips, submit a log covering three weeks of travel, and write a research paper of at least ten typewritten pages, plus bibliography and footnotes.

Four Credits: Students must participate in all classes and field trips, submit a log covering four weeks of travel, and write a research paper of at least twelve typewritten pages, plus bibliography and footnotes.

Human Services

HSC 110 Emergency Medical Technician Training (4-2) 5 hrs.

Designed to train emergency medical technicians, covers all emergency care procedures short of those rendered by physicians or by allied medical personnel under direct supervision of a physician. Emphasizes the development of student skills in recognition of symptoms of illnesses and injuries and proper procedures of emergency care. Reliance is heavily placed on demonstration and practice as a teaching method. This course has special admission requirements. Contact the Admissions Office for details.

HSC 112 Medical Terminology (2-0) 2 hrs.

Emphasizes the basic structure of medical words and includes prefixes, suffixes, roots, combining forms, and plurals. Pronunciation, spelling, and definition of medical terms. Emphasis will be on rendering a professional vocabulary required for work in the medical field.

HSC 211 Clinical Procedures I (2-6) 4 hrs.

Introduces examination and treatment room procedures for the medical office assistant. Includes sterilization techniques, principles of medication, and assisting the physician with examinations and minor surgical procedures. Emphasis is placed on demonstration of clinical office skills. Prerequisite: Consent of instructor.

HSC 212 Clinical Procedures II (2-3) 3 hrs.

Designed primarily for students in the Medical Office Assistant program. This course will include lectures, discussion, and practice with respect to basic medical laboratory procedures requested by physicians. Additional emphasis will be placed on reports, specimen collections, and specimen handling. Prerequisite: Consent of instructor.

HSC 213 Medical Law and Ethics (2-0) 2 hrs.

Acquaints the medical office assistant and medical transcriptionist with the legal and ethical responsibilities of the physician, patient and allied health personnel in medical practice. Emphasis given to professional attitudes and behavior.

HSC 220 Health, Nutrition and Safety (3-0) 3 hrs.

Discusses habits to promote good health. Relationship of nutrition and routine to child's physical well-being. Using snacks and meals to establish good eating habits, planning curriculum to provide a proper balance of active and quiet periods. Developing safe, healthy environments.

Independent Study

IDS 290 Independent Study 1-4 hrs.

Designed to permit the student to pursue a course of study not typically available under traditional course structure. The student will contract with the appropriate faculty member for the objectives to be accomplished in the course. May be repeated up to a maximum of 4 credit hours.

Prerequisite: Sophomore standing, "C" average, or consent of instructor.

Interior Design

IND 101 Basic Interior Design I (2-6) 5 hrs.

Surveys today's customer, elements in design of scale, balance and proportion, functional planning, visual sales presentation techniques, color, product sources, and applied principles of planning.

Prerequisite: Consent of coordinator.

IND 102 Basic Interior Design II (2-6) 5 hrs.

Continues study and application of color planning, functional room analysis, pattern and texture. Introduces window treatments and accessories.

Prerequisite: IND 101.

IND 103 Furniture History (3-0) 3 hrs.

Surveys furniture, design motifs, and structures from antiquity to the present. Studies authentic designs and their relationship to contemporary applications and the basis for determining the taste level and quality of reproductions and adaptations on the market today, including current sources.

Corequisite: IND 101 or IND 102.

IND 201 Advanced Interior Design I (3-6) 6 hrs.

Concentrates on advanced planning and color, mixing styles of furniture, textiles, lighting, client analysis, and sales presentations. Introduces the home furnishings manufacturing field.

Prerequisite: IND 102; IND 103 with grade of "C" or better; and ART 121.

IND 202 Advanced Interior Design II (3-6) 6 hrs.

Details estimating wallcoverings, flooring, and draperies; construction, blueprint readings, budgeting; advanced portfolio preparation with professional critiques.

Prerequisite: IND 201.

Corequisite: MKT 106 and MKT 140.

Journalism

JNM 130 Fundamentals of Journalism (3-0) 3 hrs.

History and current role of the newspaper, emphasizing leads, stories, editorials, features and reviews, copyreading, and makeup.

JNM 131 News Reporting and Writing (3-0) 3 hrs.

Techniques of gathering and writing news in political, police, social and civic coverage.

Prerequisite: JNM 130 or consent of coordinator.

JNM 133 Feature Writing (3-0) 3 hrs.

Stresses specialized newswriting emphasizing human element in the news. Presents techniques, story approaches for individualistic treatment. Examines newspaper and magazine procedures.

JNM 134 Media Adjuncts (2-4) 4 hrs.

Planning and production work in advertising, public relations, and publication—business, industrial, and consumer magazines.

JNM 234 Mass Communication (3-0) 3 hrs.

Impact of modern media, subtle and overt, on affairs of men. Influence of political, social and commercial campaigns and trends on human beings in international, national, regional and local settings.

JNM 235 Copy Reading and News Editing (2-4) 4 hrs.

Focuses on preparation of copy for newspaper publication. Incorporates headline writing, copy editing, treatment of story placement, and effective display of typographically pleasing makeup. A newspaper is prepared by the class.

Prerequisite: JNM 130 and JNM 131 or consent of coordinator.

JNM 236 Radio and Television News (3-2) 4 hrs.

Studies reporting and writing of broadcast news. Emphasizes broadcast style in all phases of newswriting and editing. A monthly radio newscast and a television newscast are prepared.

Prerequisite: JNM 130 and JNM 131 or consent of coordinator.

JNM 237 Externship Study (2-15) 5 hrs.

Practical reporting practice and observation in professional one-day-a-week assignments at newspapers, news bureaus, and television and radio newsrooms.

Prerequisite: Successful completion of three program semesters and consent of coordinator.

Legal Technology

LTE 101 Introduction to Legal Technology (3-0) 3 hrs.

Survey of the functions of law; courts and lawyers in modern society; analysis of the origin, training, and role of the legal technician; professional responsibilities of the lawyer; outline of the fields and specializations within the practice of law; and instruction in legal research and writing upon a review of the sources and works of law.

Prerequisite: Legal Technology entrance examination and consent of coordinator.

LTE 102 Fundamentals of Legal Research (3-0) 3 hrs.

Orients students to law library and a variety of legal publications, treatises, and other legal writings encountered in day to day practice of law. Emphasizes developing student capability to analyze, interpret and communicate facts, ideas and law through comprehension of legal research techniques.

Prerequisite: LTE 101 or consent of coordinator.

LTE 103 Litigation (3-0) 3 hrs.

Analysis of civil procedure and instruction in preparation of documents used in lawsuits, covering pre- and post-trial matters, evidentiary problems, and assistance during trials.

Prerequisite: LTE 101 or consent of coordinator.

LTE 105 Family Law (3-0) 3 hrs.

Examination of domestic relations law with emphasis on marriage, divorce, annulment, separation agreements, adoption, and other legal matters involving the family.

Prerequisite: LTE 101 or consent of coordinator.

LTE 123 Real Property Law (3-0) 3 hrs.

Provides historical study of common law estates and interests, and statutes. Emphasizes the role of and relationship between the attorney and the paralegal in preparing the more common types of real property transactions and conveyances, such as deeds, contracts, leases; drafting problems involving these various instruments; special research projects related to the subject matter; and a study of the system of recording and search of public documents.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 200 Probate (3-0) 3 hrs.

Survey of principles, history, and sources of probate law; examination of probate court forms and tax returns; and detailed instruction in gathering information and preparing documents for the paralegal assistant's supervising attorney.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 201 Tort and Insurance Law (3-0) 3 hrs.

Study of basic tort and insurance law principles; examination of insurance claim procedures and pleading forms used in litigation of various actions.

Prerequisite: Consent of coordinator.

LTE 202 Estate Planning (3-0) 3 hrs.

Examination of common forms of wills and trusts; survey of legal principles applicable thereto; and instruction in draftmanship of documents by the paralegal assistant for the supervising attorney.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 203 Income Taxation I (3-0) 3 hrs.

Detailed examination of federal and state income taxation as applicable to individuals, and instruction in preparation of returns and forms; survey of administrative and judicial procedures relative thereto.

Prerequisite: Consent of coordinator or instructor.

LTE 204 Income Taxation II (3-0) 3 hrs.

Detailed examination of federal, state and local taxes with instruction in preparation of corporate, partnership, fiduciary, and other returns and forms.

Prerequisite: Consent of coordinator or instructor.

LTE 206 Conference Course in Legal Technology (3-0) 3 hrs.

Personalized study designed to provide advanced training in the student's specialty area.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 210 Corporate and Securities Law (3-0) 3 hrs.

Prepares paralegal student to aid in incorporation, corporate record keeping and compliance with administrative regulations. This includes the understanding of statutes, rules, forms and releases pertaining to the principal acts administered by the Securities and Exchange Commission.

Prerequisite: Consent of coordinator.

LTE 212 Law Office Systems (3-0) 3 hrs.
Study of law office management relying on the systems analysis approach to examine design, method and processes necessary for integrating the paralegal into the hierarchy of the organization of a law office with emphasis on defining functions of the lawyer, paralegal, and legal secretary.
Prerequisite: Consent of coordinator.

LTE 220 Community Law (3-0) 3 hrs.
Development of skills and competencies needed to recognize legal problems and comply with the procedures relating to various government agencies. Emphasis will be on federal housing and landlord-tenant law; mental and civil commitments; welfare laws; labor law; social security law; and consumer protection law.
Prerequisite: Consent of coordinator.

Literature _____

LIT 105 Poetry (3-0) 3 hrs.
Analysis and appreciation of poetry of many periods. Diction, themes, symbols, images, rhythm, and meter.

LIT 110 Drama and Film (3-0) 3 hrs.
Analysis and appreciation of representative plays and films of various eras. Attention to origins and trends. Material read as literature. See SPE 111 for theatrical study of drama and film.

LIT 115 Fiction (3-0) 3 hrs.
Novel and short story. Structural analysis, understanding, and appreciation of various types. Individual sections may concentrate on particular periods of topics, e.g., science fiction, fiction of alienation. Consult registration materials for any given semester.

LIT 206 World Literature to 1800 (3-0) 3 hrs.
Selected works of universal significance contributed by peoples and civilizations from ancient times to 1800.

LIT 207 World Literature since 1800 (3-0) 3 hrs.
Continues LIT 206. Selected works of universal significance contributed by peoples and civilizations from 1800 to the present.

LIT 210 Introduction to Shakespeare (3-0) 3 hrs.
Introduces Shakespeare's acting company, theater, and audience. Discusses his

techniques in building scenes, developing characters, handling dialogue. Readings and interpretations will consist of representative comedies, tragedies, histories, and problem plays.

LIT 216 Science Fiction (3-0) 3 hrs.
Surveys science fiction short stories and novels. Considers science fiction as popular literature and assesses its unique contribution to the history of ideas.

LIT 217 Detective and Mystery Fiction (3-0) 3 hrs.
Presents detective and mystery fiction from its beginning to the present. Includes long and short works representing the various types of mystery fiction. Examines the literature's contributions to and influences upon contemporary popular fiction.

LIT 221 American Literature from Colonial Days to Civil War (3-0) 3 hrs.
American literature as an expression of American life through early social and political documents, novels, short stories, and poems.

LIT 222 American Literature from the Civil War to 1914 (3-0) 3 hrs.
American prose and poetry to the turn of the century, including regional literature, literary journalism, criticism, and social and historical novels. Established criteria for judging American literary output.

LIT 224 Women in America Literature (3-0) 3 hrs.
Study of women authors in American literature and the presentation of women in literature by American authors.

LIT 231 English Literature to 1800 (3-0) 3 hrs.
Survey of English writers from beginning English literature to 1780. Reading and interpretation of writers such as Boswell, Chaucer, Congreve, Donne, Dryden, Johnson, Jonson, Malory, Milton, Pope, and Swift.

LIT 232 English Literature 1800-1914 (3-0) 3 hrs.
Survey of English writers from Romantic Period to World War I. Reading and interpretation of such writers as Austen, Browning, Byron, Conrad, Dickens, Hardy, Keats, Shaw, Tennyson, and Wordsworth.

LIT 241 20th Century British and American Literature (3-0) 3 hrs.
Survey of important writers and writings in British and American literature since World War I.

Management

- MGT 111 Introduction to Business Organization (3-0)** 3 hrs.
Nature of business and the environment in which it operates. Forms of business ownership, introduction to operative and facilitating facets of business operation, management, marketing, accounting, statistics, business law, finance, investments, insurance, and labor-management relations.
- MGT 150 Business Math (3-0)** 3 hrs.
Arithmetic as a tool of business. Topics include fractions, decimals and percentages, computations of interest, bank discounts, depreciation, commissions, compound interest, payrolls and taxes, and graph and chart design.
- MGT 154 Small Business Management (3-0)** 3 hrs.
Organization and operation of the small-scale retail, trading, service or manufacturing business. Location, financing, marketing, labor, accounting, and in the case of manufacturing, production, plus related problems of stock control, taxes, and insurance.
Prerequisite: MGT 111 or consent of instructor.
- MGT 160 Principles of Supervision (3-0)** 3 hrs.
Introduces the responsibilities of the first or second echelon supervisor in either the industrial or administrative environment. Leadership qualities, human relations skills, motivation, communications, training techniques, and problems of the work group are discussed.
- MGT 167 Records Management (3-0)** 3 hrs.
Includes the study and analysis of what records to keep, how to store them, how to find them quickly when needed, and how to apply the criteria for determining their disposition or retention.
- MGT 168 OSHA Standards and Compliance Procedures (3-0)** 3 hrs.
Development of skills and competencies needed in instituting proper occupational safety and health environment in commercial and manufacturing business establishments for compliance with federal OSHA standards.
- MGT 170 Principles of Individual Financial Planning (3-0)** 3 hrs.
Introduces investment principles, methods and opportunities of personal investments. The course deals with the markets, stocks and bonds, investment funds, and insurance with emphasis on starting a personal portfolio.

MGT 218 Introduction to Finance (3-0) 3 hrs.
Methods of financing business enterprises and their relationships to personal and company investment policies.
Prerequisite: ACC 101 and MGT 111.

MGT 225 Applied General Statistics (3-0) 3 hrs.
Introduces both descriptive and inductive statistics. Collection of data; frequency distributions and measures of data; frequency distributions and measures of location (mean, median, mode); measures of variation; probability, theoretical distributions including sampling distributions, estimation, tests of hypotheses; correlation, regression analysis and index numbers; and time series.
Prerequisite: MTH 124.

MGT 226 Elementary Quantitative Methods (3-0) 3 hrs.
Introduces quantitative methods as applied to business problems. The standard gamble, the payoff matrix, and problems of uncertainty and risk; formulating and defining business problems for quantitative solutions.

MGT 265 Personnel Management (3-0) 3 hrs.
Personnel problems and labor relations. Employment techniques, wages and hours, job evaluation, training, rating, collective bargaining, pensions, and fringe benefits.
Prerequisite: MGT 270 or consent of instructor.

MGT 267 Office and Administrative Management (3-0) 3 hrs.
Application of fundamental management practices to administrative type work both in the "office" and throughout the organization. Planning, organizing, and controlling business services, systems and procedures, office automation, cost reduction, and human relations practices.
Prerequisite: MGT 270 or consent of instructor.

MGT 270 Principles of Management (3-0) 3 hrs.
Presents the theory and major functions of management and describes the role of the manager. Major concepts in organization are developed along with an understanding of the decision-making process and consideration of the human factor in management.
Prerequisite: MGT 111 or MGT 160.

MGT 274 Industrial Management (3-0) 3 hrs.
Introductory course in industrial management stressing operational problems. The characteristics of industrial enterprise, the problems of materials procurement, plant organization and layout, labor relations and personnel policies, efficiency techniques, automation, and production development are considered. Related problems of inventory control, quality control, production control, and budgetary control are included.
Prerequisite: MGT 270 or consent of instructor.

MGT 275 Labor-Management Relations (3-0) 3 hrs.
Deals with the processes and the framework that influence both the day-to-day and the long-run relationships between management and labor. The history of the union movement, collective bargaining, arbitration procedures, labor legislation, union organization, and the characteristics of the labor market are discussed.
Prerequisite: MGT 270 or consent of instructor. (Prior or concurrent enrollment in ECO 201 recommended.)

MGT 280 Human Relations in Business (3-0) 3 hrs.
Emphasizes a managerial and interpersonal relations process approach to problem solving, communication, and group dynamics. Specific treatment is given to managing change, appraisal and reward, solving communication problems, status needs of the work force, understanding individuals, group dynamics, and reducing conflict.
Prerequisite: MGT 160 or MGT 270.

MGT 291 Problems in Management and Supervision (3-0) 3 hrs.
Provides the student with a logical integration of management principles with representative supervisory problems found in business firms. Emphasis is given to decision making. Case problems, simulation, and directed reading.
Prerequisite: MGT 160 and MGT 270, or consent of the instructor. (Prior or concurrent enrollment in ECO 201 is recommended.)



Marketing

MKT 106 Merchandising of 3 hrs.

Furnishings and Softline Goods (3-0)

Focuses upon retailing of furnishings, apparel and other softline merchandise including the role and qualifications of the buyer and the influence of consumer preference. Includes budgeting by dollars and assortment, pricing strategy, managing assortments, the selection and promotion of merchandise, and the coordination of merchandising functions and processes.

MKT 140 Salesmanship (3-0) 3 hrs.

General salesmanship involving factors of successful selling of goods or ideas. Buying motives, sales psychology, customer approach, and sales techniques.

MKT 141 Sales Management (3-0) 3 hrs.

Focuses on the responsibilities of the sales executive as he plans and evaluates sales activities as well as supervises a sales force. Attention is given to the administrative activities of sales managers at all levels with emphasis directed to the management of sales forces of manufacturers, service marketers, and wholesaling middlemen.
Prerequisite: MKT 140 or consent of coordinator.

MKT 217 Advertising (3-0) 3 hrs.

Purposes of advertising, how advertisements are prepared and delivered in media, and how effectiveness of advertising is measured and evaluated in relation to the selling and marketing process.
Prerequisite: MKT 245 or consent of instructor.

MKT 240 Advanced Sales Skills (3-0) 3 hrs.

Develops and refines sales skills established in previous course work and/or on-the-job experience. Through role playing and simulated sales presentations, opportunities will be offered to apply specific selling skills to various situations and product categories.
Prerequisite: MKT 140 or consent of coordinator.

MKT 245 Principles of Marketing (3-0) 3 hrs.

Principles of methods involved in distribution of goods and services. Role and functions of marketing institutions in business system. Product, price, promotion, and distribution channel policies.
Prerequisite: MGT 111. Prior or concurrent enrollment in ECO 200 or ECO 201 recommended.

MKT 246 Industrial Marketing (3-0) 3 hrs.

Provides a comprehensive understanding of industrial marketing by analyzing concepts and techniques in each of the major functional

areas of industrial marketing. Topics to be investigated would include market development, product planning, price competition, promotional strategies, customer relations and marketing logistics.
Prerequisite: MKT 245 or consent of coordinator.

MKT 247 Consumer Buying Behavior (3-0) 3 hrs.

Reviews and analyzes areas of consumer and organizational buying behavior that guide marketing management decisions. The focus of this course will be directed toward the application of concepts on buying behavior to specific functional areas of marketing management in both the industrial and consumer markets.
Prerequisite: MKT 245 or consent of coordinator.

MKT 250 Retailing (3-0) 3 hrs.

Survey of types of retail institutions, including consideration of store location and organizational procedures, buying and merchandising practices, promotional and personnel policies.
Prerequisite: MKT 245 or consent of coordinator.

MKT 251 Retail Merchandise Management (3-0) 3 hrs.

Emphasizes the nature and importance of retail merchandise management to the success of the retail firm. The buyer's role and activities are considered. Main thrust in the areas of merchandise assortment planning; models for merchandise management; retail pricing strategies and policies; and retail operating statement analysis.
Prerequisite: MKT 106 or MKT 250.

MKT 255 Marketing Research (3-0) 3 hrs.

Provides students with a basic overview of marketing research. Includes an understanding of how and why marketing research is conducted and how it interacts with marketing decision making.

MKT 260 International Marketing (3-0) 3 hrs.

Allows students to gain a broad understanding of the field of international marketing. It also provides insight into how international marketing is conducted, the requisites for effective performance and a knowledge of the special problems involved in language, finance and customs. Most importantly it assists students in understanding international marketing problems and how marketing procedures apply to international business.

MKT 265 Marketing Planning and Decision Making (3-0) 3 hrs.

Centers around three major activity areas: 1) managerial analysis of the marketing environment; 2) marketing opportunity analysis, and 3) design, implementation and control of marketing strategy—all consistent with the organizational framework of the mission of the organization.

MKT 280 Marketing Problems (3-0) 3 hrs.

Designed for the marketing mid-management major unable to participate in the sophomore internship phase of the curriculum. The focus of attention will be on the application of marketing skills and knowledge to marketing problems, case studies, projects, decision-making simulation, and independent study. This course should be one of the last courses taken in the sequence.

Prerequisite: Consent of coordinator.

Material Management _____

MAT 101 Fundamentals of Material Management (3-0) 3 hrs.

Provides an introduction and overview to the field of material management and physical distribution. Topics covered include production and inventory control, purchasing, transportation, warehousing and materials handling, order processing, communications, and problems and issues related to the field.

MAT 120 Production Control Concepts (3-0) 3 hrs.

Describes the development, scope, and objectives of production control. Specific attention will be given to scheduling, control, critical path, machine loading, materials requirements planning, and other techniques, functions, and activities which are implicit in this aspect of material management operations.

Prerequisite: MAT 101 or consent of coordinator.

MAT 121 Principles of Physical Distribution (3-0) 3 hrs.

Movements of goods from production to delivery to distribution of channel intermediaries. Attention is focused upon distribution channels, traffic management, warehousing, inventories, organization, control, and communication. Heavy emphasis is given to distribution system design and distribution system analysis.

Prerequisite: MAT 101 or consent of coordinator.

MAT 122 Inventory Control for Material Managers (3-0) 3 hrs.

Overview of the dynamics of managing inventory in the constantly changing industrial and commercial environment. Topics include forecasting sales and inventory requirements, computer applications to inventory control problems, building inventory models, simulation, and the relationships of inventory control to marketing management and production control.

Prerequisite: MAT 101 or consent of coordinator.

MAT 123 Traffic and Transportation (3-0) 3 hrs.

Overview of transportation systems and the impact on cost and service that each system provides. Examines costs in various modes and routings. Reviews operational aspects of the transportation function.

MAT 124 Material Handling and Packaging (3-0) 3 hrs.

Presents material handling and packaging as tools for use in a total system of material management. Material handling concepts include palletization, containerization, conveyor systems, fully automated warehousing, and integrated production lines. Packaging is treated as a function with ramifications far beyond the mere protection of a product.

Prerequisite: MAT 101 or consent of coordinator.

MAT 125 Purchasing (3-0) 3 hrs.

Covers the nature and importance of the procurement function in modern business organizations. Principles, tools, methods, and techniques employed for the acquisition of materials, supplies and equipment.

Prerequisite: MAT 101 or MKT 245.

MAT 220 Advanced Production Control (3-0) 3 hrs.

Continues Mat 120. Production forecasting, shop loading, capacity planning, shop floor control techniques, and short interval scheduling are considered, as well as job shop versus continuous flow systems. Further attention is devoted to materials requirements planning.

Prerequisite: MAT 120 or consent of coordinator.

MAT 221 Distribution Center Operations (3-0) 3 hrs.

Continues MAT 121. Concepts of warehousing, location strategies, and techniques.

Administrative aspects, including order processing, recordkeeping, computerization, and control, will be covered. Includes a project on warehousing layout and design.

Prerequisite: MAT 121 or consent of coordinator.

MAT 223 Transportation Law (3-0) 3 hrs.
Examines the law especially as it pertains to transportation-related activities. Topics include bills of lading, claims, rate structures, storage in transit, private carriage, contract carriers, and import/export operations.
Recommended prerequisite: MAT 123.

MAT 224 Advanced Material Handling and Warehousing (3-0) 3 hrs.
Continues MAT 124. Material handling ramifications for warehousing, shipping, and receiving operations are considered. Plan layout, facility layout, automated warehousing, and equipment (mobile, racks, conveyors, and other specialized types) are considered.
Prerequisite: MAT 124 or consent of coordinator.

MAT 225 Practice of Regulatory Agencies (3-0) 3 hrs.
Describes the history and practices of regulatory agencies impacting upon the transportation field. The structuring of rates and tariffs is also considered.
Recommended prerequisite: MAT 123.

MAT 226 Material Requirements Planning (MRP) (3-0) 3 hrs.
Covers computer-based Material Requirements Planning (MRP) systems, important to modern material management. Focuses on using MRP systems to reduce inventories, set priorities, initiate orders, purchase requirements, and develop master production schedules.
Prerequisite: MAT 122 or consent of coordinator.

MAT 228 Finance for Material Managers (3-0) 3 hrs.
Blends managerial accounting concepts pertinent to material managers with distribution cost analysis techniques. Factors influencing capital outlay decisions such as ROI, present value, make or buy, depreciation, and tax considerations are considered.
Prerequisite: ACC 102.

MAT 259 Advanced Purchasing (3-0) 3 hrs.
Continues MAT 125. Emphasis to be given to managerial aspects of purchasing, contract negotiation and administration, and speculative purchasing.
Prerequisite: MAT 125.

MAT 280 Material Management Policy (3-0) 3 hrs.
Seminar-type course designed to integrate material management concepts developed throughout the Material Management sequence. Broad higher-level management concerns and current topics relative to the

material management function are developed. Should be one of the last courses taken by Material Management majors.
Prerequisite: 11 credit hours in MAT course work or consent of coordinator.

Mathematics

MTH 051 Arithmetic of Whole Numbers (1-0) 1 hr.

Covers whole number operations. In addition to the four basic processes of addition, subtraction, multiplication, and division, estimation is introduced as an aid to better computation. Factors of whole numbers are also included. Optional unit on use of hand held calculators is available but not required. Course material will be individualized. Carries no transfer credit.

MTH 052 Arithmetic of Common Fractions (1-0) 1 hr.

Covers the operations associated with addition, subtraction, multiplication, and division of common fractions and mixed numbers, and an introduction to ratio and proportion. Course material will be individualized. Carries no transfer credit.
Prerequisite: MTH 051 or equivalent.

MTH 053 Arithmetic of Decimals, Percent and Metric Measurement (1-0) 1 hr.

Covers operations with decimals, percent and the SI Metric Measurement System. Course material will be individualized. Carries no transfer credit.
Prerequisite: MTH 052 or equivalent.

MTH 061 Beginning Algebra: Basic Concepts and Components (1-0) 1 hr.

Introduces basic algebraic vocabulary and operations. Highly recommended for students who have not had high school algebra. Course material will be individualized. Can also be taken as part of a lecture course in beginning algebra that includes MTH 062 and MTH 063. Carries no transfer credit.

MTH 062 Beginning Algebra: Equations, Inequalities, and Applications (1-0) 1 hr.

Covers solution of linear equations and inequalities, solution of formulas, and word problems. Recommended for students with no high school algebra. Course material will be individualized. Can also be taken as part of a lecture course in beginning algebra that includes MTH 061 and MTH 063. Carries no transfer credit.
Prerequisite: MTH 061 or equivalent.

MTH 063 Beginning Algebra: 1 hr.**Factoring Polynomials and Systems of Equations (1-0)**

Introduces multiplication and factoring of polynomials, the rectangular coordinates, and systems of equations. Recommended for students who have had no high school algebra. Course material will be individualized. Can also be taken as part of a lecture course that includes MTH 061 and MTH 062. Carries no transfer credit.

Prerequisite: MTH 062 or equivalent.

MTH 096 Geometry (3-0) 3 hrs.

Concepts of Euclidean geometry, including lines, angles, polygons, and circles. Offered through the Learning Skills Laboratory.

Prerequisite: One year of high school algebra with grade of "C" or better or MTH 063, or equivalent, with grade of "C" or better

MTH 100 Basic Applied Mathematics (3-0) 3 hrs.

Introduces topics in arithmetic, algebra, trigonometry, and problem solving with calculators. Intended for students in career-vocational programs.

NOTE: Cannot be used for Group III or V General Studies requirement for A.A. or A.S. degree.

MTH 102 Intermediate Algebra (4-0) 4 hrs.

Introduces roots of quadratic equations, complex numbers, rational exponents, radicals, logarithms, inequalities, and the binomial theorem.

Prerequisite: MTH 062 and MTH 096 or equivalent, and placement test.

MTH 103 College Algebra (3-0) 3 hrs.

Develops topics of functions, determinants, matrices, sequences, progressions, permutations and combinations. Introduces the theory of equations.

Prerequisite: MTH 102, or equivalent with grade of "C" or better, and placement test.

MTH 104 Plane Trigonometry (3-0) 3 hrs.

Develops trigonometric functions and relations, solutions of triangles, complex numbers, identities, equations and applications.

Prerequisite: MTH 102 or equivalent with grade of "C" or better.

MTH 105 Analytic Geometry (4-0) 4 hrs.

Develops rectangular and polar coordinate systems, the straight line and conic sections. Introduces vectors, coordinate transformations, parametric equations and analytic geometry in three dimensions.

Prerequisite: MTH 103 and MTH 104 or equivalent with grade of "C" or better, and placement test.

MTH 106 Mathematics I (5-0) 5 hrs.

Introduces topics in algebra, vectors, trigonometry, and problem solving by computer using FORTRAN or BASIC language. For students in Electronics Technology or Mechanical Engineering Technology.

Prerequisite: Two years of high school mathematics or consent of instructor.

MTH 107 Mathematics II (5-0) 5 hrs.

Continues MTH 106 with additional topics in trigonometry, analytic geometry, logarithms, differential and integral calculus.

Prerequisite: MTH 106 with grade of "C" or better or consent of instructor.

MTH 108 BASIC Computer Programming (1-2) 2 hrs.

Introduces computer programming in the BASIC language. Emphasizes applications in fields other than business data processing.

Prerequisite: MTH 103 or consent of instructor.

MTH 110 Laboratory Mathematics (3-0) 3 hrs.

Develops techniques of mathematics and applies them to practical problems which arise in chemistry, life science, and the clinical laboratory.

Prerequisite: MTH 063 or equivalent with grade of "C" or better.

MTH 120 Introduction to Modern Mathematics (3-0) 3 hrs.

Introduces sets, logic, numeration systems, and probability. Reviews selected topics in algebra and geometry. A general education course in mathematics.

Prerequisite: MTH 063 and MTH 096, or equivalent with grade of "C" or better.

MTH 124 Finite Mathematics (3-0) 3 hrs.

Develops the mathematics of simple models in behavioral, social, and management sciences. Studies applications of set theory, vectors and matrices, linear programming, combinations, probability spaces, Markov chains, and game theory with computer assistance.

Prerequisite: MTH 102 with grade of "C" or better, or consent of instructor.

MTH 134 Calculus for Social Scientists (4-0) 4 hrs.

Develops an intuitive approach to concepts of differential and integral calculus. Applies these concepts to problems in social, behavioral, and management sciences. Not for physical science or mathematics majors.

Prerequisite: MTH 103, with grade of "C" or better, or consent of instructor.

MTH 165 Elementary Statistics (3-0) 3 hrs.
Introduces representation and analysis of data statistical inference, sampling distribution of means, regression and correlation analysis, and probability. Demonstrates use of statistics in education, business, natural and social sciences.
Prerequisite: MTH 102 with grade of "C" or better, or consent of instructor.

MTH 201 Calculus I (5-0) 5 hrs.
Studies differentiation of elementary and transcendental functions with applications to geometry, physics, and other sciences. Introduces the definite integral.
Prerequisite: MTH 105 with grade of "C" or better or high school equivalent.

MTH 202 Calculus II (5-0) 5 hrs.
Continues MTH 201. Emphasis on the definite integral. Includes techniques of integration, vectors, parametric equations, partial differentiation, multiple integration, and series, with applications for science and engineering.
Prerequisite: MTH 201 with grade of "C" or better.

MTH 203 Linear Algebra (3-0) 3 hrs.
Introduces vector spaces, linear dependence bases, and transformations using systems of linear equations, matrices and determinants. Studies geometric and physical applications.
Prerequisite: MTH 201 or concurrent enrollment, or consent of instructor.

MTH 206 Mathematics III (3-0) 3 hrs.
Continues MTH 107. Introduces differential equations and LaPlace transforms. For students in Electronics Technology.
Prerequisite: MTH 107 with grade of "C" or better, or consent of instructor.

MTH 208 FORTRAN Computer Programming (2-2) 3 hrs.
Computer programming using the language FORTRAN.
Prerequisite: MTH 103 or MTH 107 with grade of "C" or better, or consent of instructor.

MTH 212 Differential Equations (3-0) 3 hrs.
Continues MTH 202. Emphasizes solutions of first order differential equations, linear differential equations, special second order equations, and series solutions. Studies selections from these topics: LaPlace transforms, Fourier series, numerical methods, and applications of matrix algebra.
Prerequisite: MTH 202 with grade of "C" or better.

MTH 215 Introduction to Computer Science (3-0) 3 hrs.
Computer arithmetic and error analysis, machine organization, storage and retrieval of data, numerical methods, data structures and problem analysis; numeric and non-numeric applications.
Prerequisite: Working knowledge of a programming language and MTH 103 or MTH 107. MTH 208 or comparable language programming course is recommended preparation for this course.

Mechanical Engineering Technology

MET 101 Elements of Drafting (1-5) 3 hrs.
Lettering, orthographic projection, dimensioning, auxiliary views, shop drawings, free-hand sketching, and methods of reproducing drawings. For refrigeration and air conditioning students only.

MET 102 Technical Drafting (1-5) 3 hrs.
Lettering, orthographic projection, size and location, dimensioning, surface finishes, auxiliary view, sketching, diazo printing techniques.

MET 103 Descriptive Geometry (0-6) 3 hrs.
Analysis of common geometrical magnitudes of points, planes, and curved surfaces. Includes rotations, auxiliary views, developments, and homography. Applications of geometrical methods in projections, assemblies and details.
Prerequisite: MET 102, MTH 106, or consent of instructor.

MET 104 Statics (3-0) 3 hrs.
Resultants of force systems; algebraic and graphical conditions of equilibrium of force systems; analysis of forces acting on members of trusses, frames, etc.; forces due to friction; centroids.
Prerequisite: MTH 106 or consent of instructor.

MET 105 Basic Machine Shop (1-5) 3 hrs.
Fundamentals of machine shop theory and practices. Familiarization with tools, equipment, and practices of tool, die, and precision metal working industries. Students make working tools and fixtures.

MET 108 Manufacturing Processes and Materials (3-0) 3 hrs.
Materials, principles, utilization, expectations, and evaluation of principal manufacturing processes. Manufacture of metals and alloys. Iron and steel types and classification systems. Machinability, cutting fluids, and power requirements. Elements of metrology. Production and facilities planning.
Prerequisite: MTH 106 or concurrent enrollment, or consent of instructor.

MET 110 Basic Welding (1-5) 3 hrs.

Fundamentals of welding theory and practices. Includes equipment, set-up procedures and practice of oxyacetylene and electric arc welding techniques. Students will practice welding of various horizontal joints; butt; fillet; lap and tent.

MET 111 Quality Control (3-0) 3 hrs.

Techniques of establishing and maintaining quality of product, including statistical quality control applications.

Prerequisite: MTH 107 or consent of instructor.

MET 201 Mechanisms (3-3) 4 hrs.

Fundamentals of displacement, velocity, and acceleration of rigid bodies as a basis for the study of the kinematics of mechanisms. Motion analysis of cams, gears, and linkages. Study of conjugate shapes and gear tooth development. Prerequisite: MTH 107 or consent of instructor.

MET 202 Advanced Technical Drafting (1-5) 3 hrs.

Orthographic considerations of mechanical and tooling systems, limit and tolerance dimensioning, sketching, product illustration, and assembly drafting presentations; tooling details, fixtures and jigs, and empirical data diagrams.

Prerequisite: MET 102.

MET 204 Strength of Materials (3-0) 3 hrs.

Elastic and inelastic relationships between external forces (loads) acting on deformable bodies and stresses, and deformations produced; tension and compression members; members subjected to torsion and bending, buckling (columns); combined stresses; and influence of properties of materials.

Prerequisite: MTH 107, MET 104, or consent of instructor.

MET 205 Advanced Machine Shop (1-5) 3 hrs.

Advanced application of machine shop theory and practice. Use of equipment such as lathes; O.D. and I.D. grinders; tool grinder; mills; and study of production machining, feed and speed application and quality control techniques are included.

Prerequisite: MET 105 or consent of instructor.

MET 206 Metallurgy and Heat Treatment (1-3) 2 hrs.

Selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals.

Prerequisite: MET 108 or consent of instructor.

MET 207 Machine Design (2-6) 4 hrs.

Design principles applied to machine elements with respect to size, shape, material, geometry, environment, and economy. Clutches, brakes, belts, chains, fasteners, gear shafts, and gears. Emphasis on principles and calculations necessary to determine fits, stresses, loads, deformations, economy, and finishes.

Prerequisite: MET 201, MET 204, and MET 206.

MET 209 Applied Digital Control (2-3) 3 hrs.

Principles and techniques of digital control as applied to mechanical machines. Consists of topics such as control logic and algebra, control sensors and logic devices (both mechanical and electrical), and applications of elements to the solution of control problems.

Prerequisite: MTH 107 or consent of instructor.

MET 210 Advanced Welding (1-5) 3 hrs.

Advanced welding theory and practice. Includes discussions of equipment, setup procedures and practice of unusual positions in welding using oxyacetylene, electric arc, MIG and TIG techniques. Students will practice welding in various unusual positions on joints such as Butt and Fillet, also practice welding pipe, and Bearing Journal Surfaces.

Prerequisite: MET 110 or consent of instructor.

MET 211 Process Planning and Tool Design (3-3) 4 hrs.

Selected topics in the control of the manufacturing process; the analysis and organization of manufacturing steps, operation sheets; the economics of industrial operations; economic justification of equipment purchase/ lease; tool, fixture, and work place design.

Prerequisite: MTH 106 and MET 108, or consent of instructor.

MET 215 Fluid Power (3-0) 3 hrs.

Technology of the transmission and storage of energy by means of pressurized fluids, both compressible and incompressible.

Prerequisite: MTH 107 and MET 104, or consent of instructor.

Music

- MUS 100 Introduction to Music Careers (1-0)** 1 hr.
Issues relating to the successful pursuit of a career in music. Recommended for anyone pursuing a professional music career.
- MUS 101 Fundamentals of Music Theory (3-0)** 3 hrs.
Suitable for pre-teachers and non-music majors. Provides background to interpret and understand language of music through study of notation, rhythm, scales, intervals, triads, cadences, basic forms, and musical terms. Students prepared for study of harmony and for practical music activity.
- MUS 103 Music Appreciation (3-0)** 3 hrs.
Surveys music from primitive to modern times through listening to outstanding examples of the various methods, with explanations of content and structure. Vocal and instrumental works, examples of folk music, church music, and symphonic forms for non-music majors.
- MUS 104 Introduction to American Music (3-0)** 3 hrs.
For non-music majors. Develops a stylistic frame of reference for judging popular music. Surveys characteristic elements of jazz, rhythm and blues, popular music, and their relation to western classical music.
- MUS 111 Theory of Music I (3-0)** 3 hrs.
Provides intensive training in the fundamentals of musicianship, dealing principally with mechanical aspects of music: clefs, notation, scales, intervals, meters, rhythm, etc. Analysis and composition procedures of the Common Practice Period.
Corequisite: MUS 115.
- MUS 112 Theory of Music II (3-0)** 3 hrs.
Provides harmony, counterpoint, and analysis, with emphasis on the 18th and 19th century techniques; basic principles of art of musical composition. Written assignments, historical examples, individual research problems, and complete process of writing, preparing, and bringing to performance with voices and instruments specific individual and group projects in musical composition.
Prerequisite: MUS 111.
Corequisite: MUS 116.
- MUS 115 Aural Skills I (0-2)** 1 hr.
Develops skills in melodic, harmonic, and rhythmic dictation and sight singing.
Corequisite: MUS 111.
- MUS 116 Aural Skills II (0-2)** 1 hr.
Develops skills in melodic, harmonic, and rhythmic dictation, and sight singing.
Corequisite: MUS 112.

- MUS 120 Introduction to Music Literature (3-0)** 3 hrs.
A survey of the styles, periods, literature, and personalities in each of the commonly accepted music periods, with primary emphasis on hearing music of each style.
- MUS 130 Choir (0-3)** 1 hr.
Mixed-voice chorus for average or above-average ability. Fundamentals of good choral diction and tone developed in choral works of various styles and types. May be repeated up to maximum of 4 credit hours.
Prerequisite: Consent of instructor.
- MUS 136 Community Chorus (0-3)** 1 hr.
Variety of choral experience including larger choral works such as oratorios and cantatas, and selection from grand opera, comic opera, and musical comedy. May be repeated up to a maximum of 4 credit hours.
- MUS 140 Band (0-3)** 1 hr.
Open to all students proficient in playing of band instruments. Band music of various types and styles. Sight reading and musicianship stressed. May be repeated up to maximum of 4 credit hours.
Prerequisite: Consent of instructor.
- MUS 145 Ensembles (0-3)** 1 hr.
Ensembles such as string or vocal quartets, brass or voice ensembles, stage bands, madrigal groups, or other combinations. For students with advanced proficiency on an instrument or in voice. To further skills, musical understanding, and enjoyment. May be repeated up to a maximum of 4 credit hours.
Prerequisite: Consent of instructor.
- MUS 150 Orchestra (0-3)** 1 hr.
Open to all student proficient in playing of orchestral instruments. Orchestral music of various types and styles. Sight reading and musicianship stressed. May be repeated up to a maximum of 4 credit hours.
Prerequisite: Consent of instructor.
- MUS 161 Woodwind Instrument Class I (1-2)** 2 hrs.
For students who have had no experience playing an orchestral or band instrument, and for instrumentalists already proficient but who desire to play several instruments. May be repeated up to a maximum of 4 credit hours.
- MUS 162 Brass Instrument Class I (1-2)** 2 hrs.
For students who have had no experience playing an orchestral or band instrument, and for instrumentalists already proficient but who desire to learn to play several instruments. May be repeated up to a maximum of 4 credit hours.

MUS 163 Percussion Instrument Class I (1-2) 2 hrs.

For students who have had no experience playing an orchestral or band instrument, and for instrumentalists already proficient but who desire to learn to play several instruments. May be repeated up to a maximum of 4 credit hours.

MUS 165 Class Piano I (1-2) 2 hrs.

Similar to MUS 161. For students who desire a rudimentary knowledge of the keyboard and playing skills sufficient to cope with simple, practical situations. Emphasis on tonal notation, rhythmic notation, harmonization, transposition, sight reading, improvisation, ensemble playing, and basic piano literature.

MUS 166 Class Piano II (1-2) 2 hrs.

Continues MUS 165.
Prerequisite: MUS 165 or proficiency examination.

MUS 167 Class Guitar (1-2) 2 hrs.

Similar to MUS 161. For students who desire to learn to play the guitar. May be repeated up to a maximum of 4 credit hours.

MUS 168 String Instrument Class I (1-2) 2 hrs.

Similar to MUS 161. For students who desire to learn to play a string instrument. May be repeated up to a maximum of 4 credit hours.

MUS 169 Class Voice (1-2) 2 hrs.

For students who have no refined skills in vocal technique and who desire to sing.
Prerequisite: MUS 101.

MUS 180 - 199 Minor Applied Music Subject (1-6) 2 hrs.

Instruction for those majoring in music education, musicology, and for those desiring to improve their skills on a particular instrument. One half-hour lesson per week. Minimum of six hours of practice per week. Jury examination required. May be repeated up to a maximum of 8 credit hours.

Flute and Piccolo, 180; Oboe and English Horn, 181; Clarinet, 182; Bassoon and Contra Bassoon, 183; Saxophone, 184; French Horn, 185; Trumpet, 186; Trombone, 187; Baritone, 188; Tuba, 189; Percussion, 190; Violin, 191; Viola, 192; Cello, 193; String Bass, 194; Harp, 195; Piano, 196; Organ, 197; Voice, 198; and Classical Guitar, 199.

MUS 211 Theory of Music III (3-0) 3 hrs.

Studies form, harmonic content, and composition procedures common in works of the 19th century. Review of various analytical approaches that may be applied to this literature. A comprehensive musicianship approach to romantic music.
Prerequisite: MUS 112.
Corequisite: MUS 215.

MUS 212 Theory of Music IV (3-0) 3 hrs.

Introduces the multiple styles of the 20th century, beginning with the later works of Richard Wagner. An examination of representative works and possible analytical approaches, with particular emphasis on imitative writing. Comparison of the techniques with later medieval and proto-Renaissance writing.
Prerequisite: MUS 211.
Corequisite: MUS 216.

MUS 215 Aural Skills III (0-2) 1 hr.

Develops skills in melodic, harmonic, and rhythmic dictation and sight singing.
Corequisite: MUS 211.

MUS 216 Aural Skills IV (0-2) 1 hr.

Develops skills in melodic, harmonic, and rhythmic dictation and sight singing.
Corequisite: MUS 212.

MUS 223 Instrumental Literature (3-0) 3 hrs.

A survey of the music literature available for performance by musical instruments, excluding keyboard instruments and voice.

MUS 224 Keyboard and Vocal Literature (3-0) 3 hrs.

Survey of music literature available for performance by keyboard and voice, including opera.

MUS 265 Class Piano III (1-2) 2 hrs.

Continues development of skills begun in MUS 165 and MUS 166. Greater emphasis on keyboard harmony, ensemble playing, and jazz improvisation.
Prerequisite: Two semesters of class piano or proficiency examination.

MUS 266 Class Piano IV (1-2) 2 hrs.

Continues MUS 265.
Prerequisite: Three semesters of class piano or proficiency examination.

MUS 271 Piano Pedagogy I (3-0) 3 hrs.

Surveys the basic teaching philosophies, methods, materials, and skills needed to teach the beginning piano student. Observation of individual and group instruction.
Prerequisite: MUS 265 or consent of instructor.

MUS 272 Piano Pedagogy II (2-2) 3 hrs.
Continues development of skills begin in MUS 271. Emphasis will be placed on methods and materials for teaching the intermediate piano student. Lab includes supervised student teaching to aid in individual development. Prerequisite: MUS 271.

MUS 280 -299 Major Applied Music Subject (2-12) 4 hrs.
Instruction for those desiring to become professional performers. One hour lesson per week. Minimum of twelve hours of practice per week. Jury examination required. May be repeated up to a maximum of 16 credit hours. Prerequisite: Successful audition.

Flute and Piccolo, 280; Oboe and English Horn, 281; Clarinet, 282; Bassoon and Contra Bassoon, 283; Saxophone, 284; French Horn, 285; Trumpet, 286; Trombone, 287; Baritone, 288; Tuba, 289; Percussion, 290; Violin, 291; Viola, 292; Piano, 296; Organ, 297; Voice, 298; and Classical Guitar, 299.

Numerical Control

NMC 101 Introduction to Numerical Control (2-0) 2 hrs.

Survey information on numerical control. Advantages and applications of numerical control. Tapes, tape coding, tape readers, and control system theories. Cartesian coordinate machine tool axis designations. Introduction to manual and computer programming for numerically controlled machines, techniques, and application of computers to monitoring conventional machine systems. Basic manual programming of point-to-point numerical control machines.

NMC 105 Part Programming I (2-2) 3 hrs.

Manual programming of point-to-point and contouring systems. Discussion and practice in programming of various manufacturers' equipment. Includes running programs on N/C lathe and mill.

NMC 201 Numerical Controlled Machining (1-4) 3 hrs.

Numerical control machines, with emphasis placed upon their application, maintenance, and justification. Practices in process planning, tooling, and fixturing techniques will be discussed and applied.

Prerequisite: MET 105 or consent of instructor.

NMC 214 Computer Graphics (1-4) 3 hrs.

Numerical controlled drafting machine, with aid of computer, used to develop various phases of working drawings. Emphasis on phases of working drawings more efficiently done by graphic display equipment.

Prerequisite: MET 102 or consent of instructor.

NMC 215 Part Programming II (2-2) 3 hrs.

Programming for numerically controlled metalcutting machines using AD-APT. Student will utilize PATTERN, COPY, TRACUT AND LOOP features. Introduction to interactive N/C languages.

NMC 216 Part Programming III (2-2) 3 hrs.

Continues NMC 215. Advanced problems in APT and AD-APT using TRACUT, REFSYS, and TABCYL features, multi-axis contouring, and efficient use of the languages will be included. Prerequisite: NMC 215.

NMC 220 Special Problems (0-6) 3 hrs.

Special projects in numerical control to strengthen specific areas of weakness. Projects to be arranged with instructor before registration.

Nursing

NUR 101 Nursing Fundamentals (4-15) 9 hrs.

Study and practice of principles and fundamental nursing skills basic to the nursing care of patients of all age groups. Human needs basic to all individuals will be identified and assessed. Accomplishment of these fundamental skills in the simulated setting will precede application in the clinical setting.

NUR 102 Nursing Care of Hospitalized Patients (4-15) 9 hrs.

Study and concurrent practice of methods of nursing intervention for hospitalized patients of all ages. Discusses parenting and common physical health interferences on basic physical and emotional needs. Emphasizes skills needed to: (1) identify the effects of the patient's physical condition on his or her physical and emotional needs and those of the patient's family, and (2) assure implementation of the plan of care.

Prerequisite: NUR 101, PSY 101, and BIO 135 or BIO 160.

NUR 103 Nursing Survey I (1-0) 1 hr.

Surveys nursing roles including consideration of the following: evaluation of nursing; patterns of health care delivery; members of the nursing team, including students; the relationship of the nursing team to the health team; ethical and legal responsibilities of all levels of nurses and the organizations which represent them; legal implications of licensure for practical and registered nurses; current world health problems as compared to health problems in this community; the need for continued education to maintain competence; and the responsibility of all nurses to become involved in community activities as educated persons.

NUR 104 Nursing Field Experience (0-12) 4 hrs.

Application of knowledge and skills obtained through the study of nursing and supportive courses to the direct care of patients with common physical health problems and emotional needs. Opportunity for experience as a member of a nursing care team, assuming the role and responsibilities of the practical nurse, under the supervision of an instructor, will be provided. The student will have opportunity to develop the technical skills required of the practical nurse in providing care for patients of all age levels with common health problems and emotional needs.

Prerequisite: NUR 102 and NUR 103, BIO 136 or BIO 161, and PSY 216.

NUR 201 Advanced Nursing I (4-12) 8 hrs.

Application of the nursing process as it is utilized to assist individuals from a variety of age groups experiencing physical problems to

their level of optimum wellness. Concurrent practicum will provide opportunity for the assessment of needs and the planning, provision and evaluation of direct patient care based on the needs identified.

Prerequisite: NUR 102, BIO 161, and PSY 216.

NUR 202 Advanced Nursing II (4-12) 8 hrs.

Provides theory and concurrent practice in the care of patients hospitalized for acute, chronic and psychological illness. Focuses on identifying subtle clues to unmet human needs, and developing an effective plan of care treating the patient both as an individual and as a member of a family. Develops communication skills and techniques as group dynamics in supervising and coordinating others in providing direct care to patients. Emphasizes the importance of the promotion of optimum wellness.

Prerequisite: NUR 201, NUR 203, and BIO 130.

NUR 203 Nursing Survey II (1-0) 1 hr.

Surveys current issues and responsibilities in nursing. Content will include: current trends in nursing and the implications for the registered nurse; provisions of the nurse practice act in the State of Illinois and other states; the legal implications of licensure as a registered nurse; ethical responsibility; self-development through continuing education and participation in nursing organization; the responsibility of the nurse as an educated member of a community; and management principles.

Prerequisite: NUR 103.

Office and Administrative Services

SEC 098 Review Shorthand (0-4) 2 hrs.

Designed for students with one semester of Gregg shorthand. Provides a complete review of theory and additional dictation practice to enable the student to reach the 60 wpm rate required for entry into SEC 126.

Prerequisite: Consent of instructor or coordinator.

SEC 099 Typewriting Review (0-2) 1 hr.

Designed for those with one semester of previous instruction on the keyboard. Work will help correct deficiencies in speed, accuracy, and manipulative skills on the electric typewriter. Successful completion will enable student to reach entry requirements for SEC 122.

Prerequisite: Knowledge of the keyboard and a minimum typing speed of 25 words per minute.

SEC 101 Medical Office Assistant/ Medical Transcriptionist Orientation Seminar (2-0) 2 hrs.

Introduces careers in medical office assisting and medical transcription. Emphasizes roles

within the health care team, community responsibilities, medical communications and records, health care trends and professionalism.

SEC 102 Survey of Law Office Practice (2-0) 2 hrs.

Introduces the student to numerous types of law practices and the skills and duties necessary for a legal secretary in each type of practice. Familiarizes the student with the legal secretary's role in the court process and ethical considerations in the legal field.

SEC 110 Basic Keyboarding (0-3) 1 hr.

Provides basic keyboarding skill for students desiring personal use or for vocational purposes other than secretarial. Includes alphabetic, symbols and top line numeric instruction.

SEC 121 Elementary Typing (1-3) 2 hrs.

Introduces the operation, use and care of typewriters. Typing by the touch system, emphasizing basic typing problems. Drills on speed and accuracy building will be used throughout the course.

SEC 122 Intermediate Typing (1-3) 2 hrs.

Development of production work in typing manuscripts, business letters, forms, and tables.

Prerequisite: SEC 121 with grade of "C" or one year high school typing. Minimum speed of 50 gross words per minute.

SEC 125 Elementary Shorthand (3-2) 4 hrs.

Introduces theory leading to development of skill in reading and fluency in writing shorthand. This is the first of a sequence of shorthand courses.

Prerequisite: Prior or concurrent enrollment in SEC 121 or typing speed of 40 words per minute.

SEC 126 Intermediate Shorthand (2-2) 3 hrs.

Continues development of shorthand skill and speed dictation in shorthand with emphasis on vocabulary development, mechanics of English, and transcription techniques.

Prerequisite: SEC 125 or equivalent with grade of "C" and SEC 121 or equivalent. (Prior or concurrent enrollment in ENG 101 recommended.)

SEC 130 Automatic Word Processing Equipment I (0-2) 1 hr.

Introduces the features of the standalone display automatic typewriter equipment currently used in business today including machine operation in preparing business correspondence and reports, and the revising, storing, retrieving, and merging of data. Students will complete assignments on an

individualized basis in a laboratory situation. Prerequisite: Typing speed of 50 words per minute.

SEC 131 Business Machines (1-2) 2 hrs.

Develops skills necessary to operate electronic business calculators with emphasis on business-related problems. A student must have a thorough basic math knowledge.

Prerequisite: Prior or concurrent enrollment in MGT 150 or consent of instructor.

SEC 135 Automatic Word Processing Equipment II (0-2) 1 hr.

Introduces the features of the Mag Card Selectric typewriter, including machine operation in preparing business correspondence and reports and the revising, storing, retrieving, and merging of data.

Students will complete assignments on an individualized basis in a laboratory situation.

Prerequisite: Typing speed of 50 words per minute.

SEC 136 Automatic Word processing Equipment III (0-2) 1 hr.

Introduces the features and functions of ForeWord, a shared-logic word processing system. Students learn to operate the equipment in preparing business correspondence and reports; revision, storage, retrieving and merging of data; document assembly; formatting; creating and using a glossary, etc. Instruction is on a self-paced basis in a laboratory situation.

Prerequisite: Typing speed of 50 words per minute.

SEC 140 Elementary Machine Shorthand (3-2) 4 hrs.

Theory leading to the development of skill in reading and proficiency in the operation of a shorthand machine.

Prerequisite: Prior or concurrent enrollment in ENG 101 and typing.

SEC 170 Introduction to Word Processing (2-0) 2 hrs.

Introduces fundamentals of word processing. Emphasizes current office practices, changes in organizational structure, word processing work flow (origination, processing, reproducing, and distribution), equipment, role of management and secretary, and career opportunities.

SEC 171 Word Processing Dictation and Transcription Techniques (2-0) 2 hrs.

Introduces and provides effective training in dictation and transcription techniques and procedures. Surveys dictation and transcription equipment currently on the market.

Prerequisite: Typing speed of 40 words per minute.

SEC 221 Advanced Typing (1-3) 2 hrs.

Development of high speed and proficiency in production typing from rough drafts, tabulations, and unstructured materials typical of executive, professional, government, and technical offices.

Prerequisite: SEC 122 with grade of "C" or proficiency test with instructor.

SEC 225 Dictation and Transcription (2-2) 3 hrs.

Strengthening of dictation speed and developing competence in transcribing mailable letters.

Prerequisite: SEC 122 and SEC 126, or proficiency test with instructor, and ENG 101.

SEC 230 Executive Machine Transcription (1-2) 2 hrs.

Provides training and extensive skill building in machine transcription and in the operation of machine transcribers.

Prerequisite: SEC 122 or a minimum typing speed of 50 words per minute.

SEC 234 Legal Office Procedures (3-0) 3 hrs.

Organization and operation of a law office, with emphasis on office management, records control, and procedures used in the preparation of legal documents.

SEC 235 Legal Dictation and Transcription (2-2) 3 hrs.

Development of speed and facility in taking dictation and transcribing legal documents.

Prerequisite: SEC 225 or equivalent with grade of "C" or higher. Shorthand speed of at least 100 wpm and typing speed of at least 60 wpm.

SEC 236 Secretarial Procedures (3-0) 3 hrs.

Emphasizes secretarial responsibilities in the office, including office organization, mail handling, travel arrangements, records, management, telephone techniques, time management, knowledge of up-to-date office supplies and equipment, human relations, exploring job opportunities, and interviewing techniques.

SEC 237 Secretarial Seminar and Internship I (1-15) 3 hrs.

Preparation for and cooperative work experience in secretarial science. Part of the credit for this course will be given for participation in supervised cooperative work experience wherein an organized training plan will be followed in a college approved training station. One lecture hour per week for a seminar devoted to issues dealing with preparation for success in a secretarial career.

Prerequisite: Consent of instructor and admission in either the Executive Secretarial or Legal Secretary programs.

SEC 238 Secretarial Seminar and Internship II (1-15) 3 hrs.

Continues SEC 237.

Prerequisite: Consent of instructor.

SEC 239 Medical Office Assistant Seminar and Externship (1-15) 4 hrs.

Provides supervised administrative and clinical experience in medical offices to enhance the student's technical skills. One hour seminar each week devoted to medical issues.

Prerequisite: SEC 241 and HSC 211 with grade of "C" or better, and consent of instructor.

SEC 240 Medical Transcription and Typing I (2-2) 3 hrs.

Develops speed and accuracy in transcribing medical reports using a transcription machine. Familiarizes student with typing various medical and insurance forms.

Prerequisite: Prior or concurrent enrollment in SEC 122, HSC 112, and BIO 135 or BIO 160.

SEC 241 Medical Office Procedures (4-0) 4 hrs.

Offers development of skills of patient reception, appointment, scheduling, telephone techniques, mail handling, medical records management, written communications, billing and collections, and insurance.

Prerequisite: Consent of instructor.

SEC 242 Medical Transcription and Typing II (2-2) 3 hrs.

Offers advanced specialized dictation to improve skills and confidence in transcribing medical reports using a transcription machine.

Prerequisite: SEC 240.

SEC 260 Environmental Relationships in Business (1-0) 1 hr.

Offers an understanding of human relations, group dynamics, and effective communications as they contribute to the success of the role and function of the secretary in dealing with people in the office environment. Emphasizes the relationship between the secretary or administrative assistant, the supervisor, and people the secretary comes in contact with in the business setting.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 261 Business Law and Public Policy (1-0) 1 hr.

Emphasizes knowledge of business law as it applies in the secretary's work-a-day world and the implications of governmental controls as they impact upon business and office operations.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 262 Economics and Management (1-0) 1 hr.

Furnishes an understanding of the basic concepts of economics and management underlying the United States business system as they relate to the secretary's role in business.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 263 Financial Analysis and the Mathematics of Business (1-0) 1 hr.

Stresses fundamental accounting principles that a secretary must possess in order to assist the supervisor in the preparation, summarization, and interpretation of financial data. Emphasizes the secretary's application of basic math to business situations.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 264 Communications, Work Flow, and Decision Making (1-0) 1 hr.

Gives an understanding of setting priorities in the office and the role of the secretary or administrative assistant in taking action on these priorities. Emphasizes correspondence styles and the production of this correspondence.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 265 Advanced Office Procedures (1-0) 1 hr.

Emphasizes knowledge that a secretary must possess pertinent to business data processing, communications techniques, advances in office management, records management, and office systems, layout and design.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 272 Principles of Word Processing Management (3-0) 3 hrs.

Techniques of management and supervision for word processing centers—organizing and operating the center; selecting, training, and motivating personnel; preparing procedure and policy manuals, work measurement tools, and work flow charts; evaluating and selecting word processing equipment and "software" support; and studying work environment requirements.

Operating Room Technician

ORT 101 Operating Room Techniques I (6-0) 6 hrs.

Fundamentals of operating room techniques involving the principles of sterile technique in relation to the pre-operative, operative, and post-operative care of the surgical patient. Introductory principles of micro-biology are included in relation to surgical asepsis.

Prerequisite: Admission into the Operating Room Technician program.

ORT 102 Operating Room Techniques II (6-0) 6 hrs.

Continues ORT 101. Provides the student with the principles and techniques used to prepare for and assist with common operative procedures within various surgical specialties. Included is the use of anesthesia and its effects on the surgical patient.

Prerequisite: ORT 101, ORT 111, HSC 112 and BIO 135 or BIO 160.

ORT 103 Operating Room Techniques III (0-4) 2 hrs.

Continues ORT 102. Provides the student with the principles and techniques used to prepare for and assist with common operative procedures within the specialties of thoracic, cardiovascular, and neurosurgery. An introduction to nursing procedures related to care of the surgical patient is also provided.

Prerequisite: ORT 102, ORT 112, BIO 136 or BIO 161, and PSY 101.

ORT 111 Clinical Hospital Practicum I (0-15) 5 hrs.

Students will actively participate as members of the surgical team in local hospitals. Under supervision, they will develop the fundamental skills required of the operating room technician in the care of the surgical patient before, during and immediately following surgery.

Prerequisite: Admission into the Operating Room Technician program.

ORT 112 Clinical Hospital Practicum II (0-18) 6 hrs.

Continues ORT 111. Students will participate as members of the surgical team in preparing for and assisting with common operative procedures within various surgical specialties. Supervised experience will be provided in emergency and out-patient departments for the observation of out-patient care.

Prerequisite: ORT 101, ORT 111, HSC 112, and BIO 135 or BIO 160.

ORT 113 Clinical Hospital Practicum III (0-20) 7 hrs.

Continues ORT 112. Students will observe and participate as members of the surgical team in preparing for and assisting with common operative procedures within the specialties of thoracic, cardiovascular, and neurosurgery. Supervised experience in performing certain basic nursing skills related to the surgical patient is provided.
Prerequisite: ORT 102, ORT 112, BIO 136 or BIO 161, and PSY 101.

Park and Grounds Operation Management

PKM 100 Introduction to Park Management (1-0) 1 hr.

Introduces the student to the field of park and grounds operation management. Major emphasis directed toward the history of park development and the past and present concepts of recreation.

PKM 101 Ornamental Plants (3-3) 4 hrs.

Identification, growth habits, cultural requirements, and the use of ornamental shrubs, trees, vines, ground covers and herbaceous plants adapted to Illinois and the Midwestern area.
Prerequisite: PKM 111 or consent of instructor.

PKM 102 Plant Diseases and Pests (3-3) 4 hrs.

Identification, prevention and control of insects, diseases and pests significant to the turf, soils and plant materials found in parks and other landscape areas.

PKM 104 Floral Design (2-3) 3 hrs.

Presents basic principles of floral design including classic designs, centerpieces, corsages, boutonnières, dried flower arrangements, holiday and special occasion designs. Emphasis is placed on design elements of color, line and form utilizing foliage and flowers of different varieties. Attention is given to commercial floral piece arrangements and mechanics of construction.

PKM 110 Soil Science (3-3) 4 hrs.

Studies the properties and use of soils in relation to plant growth and development. Special emphasis on soil texture, structure, moisture relations, biological activity, organic matter content and plant nutrients as they relate to park management.

PKM 111 Basic Horticultural Skills (3-3) 4 hrs.

Develops specialized skills in ornamental horticulture including planting, transplanting, fertilizing, watering and pruning of trees, shrubs and herbaceous plants in both indoor and outdoor locations. Details seed and

vegetative plant propagation methods; causes of plant disorders; installation, care and maintenance of plants used in landscape.
Prerequisite: BIO 120 or concurrent enrollment.

PKM 121 Facilities Management (2-3) 3 hrs.

Details the management of park facilities, including buildings, swimming pools, play equipment, ice rinks, athletic fields and all surfaced areas within the jurisdiction of a park district. Fundamentals of plumbing, masonry and electricity in relation to the function of park structures and landscape installations.

PKM 140 Grounds Equipment and Shop Operation (1-6) 4 hrs.

Operation, maintenance, selection, and care of equipment used in park management. Practical experience in the repair, adjustment and trouble-shooting of engines and other specialized equipment.

PKM 150 Park Management Internship (0-35) 5 hrs.

Internship whereby the first year student can receive field training under the supervision of an experienced park administrator. First year students should receive training in several areas of park and grounds operation management in order to gain practical knowledge and experience in the field.
Prerequisite: Consent of instructor.

PKM 210 Drainage and Irrigation (2-3) 3 hrs.

Study of the design and installation of drainage and irrigation systems. Particular attention toward types of systems, materials and costs.

PKM 212 Turfgrass Science (3-3) 4 hrs.

Basic characteristics, soil requirements, environmental adaptation, propagation, and uses of turfgrass. Special emphasis on the establishment of grasses and their identification. The management of established turfgrasses, emphasizing the essential maintenance practices of fertilization, weeds and their control, mowing, aeration, verticutting, renovation, and spraying for disease and insect control. A study of business procedures essential to turfgrass managers including budgeting, recordkeeping, purchasing, and time studies.
Prerequisite: PKM 110.

PKM 214 Principles of Landscape Design and Construction (3-3) 4 hrs.

Presents the fundamentals of construction as applied to landscape projects, the use of materials, installation techniques, tools, equipment, structures, surveying, and grading used in landscape construction. Emphasizes basic drafting techniques and principles of landscape design.
Prerequisite: PKM 101 and PKM 110.

PKM 220 Arboriculture (1-6) 4 hrs.

Care and management of ornamental trees. Techniques and demonstration of planting, staking, pruning, spraying, fertilizing and general care of shade and specimen trees. Instruction in the techniques of climbing and use of safety equipment, methods of bracing, cabling and guying of trees, cavity repair and surgical practices, and the organization and management of municipal street tree departments.

Prerequisite: PKM 111.

PKM 230 Contracts, Specifications, Estimating (2-3) 3 hrs.

Emphasizes interpretation of maps, grading plans, construction drawings and landscape design plans especially specifications, cost estimates, and client relationships. Additional topics which deal with land use, land acquisition, park planning, and the legal aspects of park and landscape contracting.

Prerequisite: PKM 214.

PKM 240 Grounds Equipment Power Units (1-6) 4 hrs.

Explains the operation, repair, servicing and preventive maintenance of power units, electrical systems, power trains, hydraulic systems and associated components commonly found on grounds equipment. Gives special attention to applied mechanical learning experiences similar to those a student can expect to encounter in a grounds equipment service operation.

Prerequisite: PKM 140.

PKM 241 Management of Ice Rink Facilities (2-3) 3 hrs.

Techniques and procedures in managing ice rink facilities. Presents supervisory role in managing ice rink personnel, scheduling of facilities, budgetary responsibilities, and maintenance.

PKM 242 Golf Course Management (3-3) 4 hrs.

Surveys daily activities and maintenance practices utilized in the operation of both public and private golf courses including associated elements of planning, design and construction.

PKM 244 Nursery Management (2-3) 3 hrs.

Studies operations fundamental to the nursery business including the propagation, planting, culture, harvesting and handling of nursery crops. Emphasis is placed on equipment, materials, procedures and ornamental plant dissemination through production and care of nursery plant materials.

Prerequisite: PKM 111.

PKM 245 Management of Aquatic Facilities (3-3) 4 hrs.

Provides practical experience and management skills essential to the operation of swimming pools, ponds, lakes and similar bodies of water utilized in the recreation and park industry.

PKM 247 Floral Shop and Garden Center Operations (2-3) 3 hrs.

Details the fundamentals of facility planning, designing, establishing and operating floral shops and garden centers including finance, material supplies, daily activities and business considerations.

Prerequisite: PKM 111.

PKM 250 Park Management Seminar (1-0) 1 hr.

Discussions by representatives of the park, landscaping, turf, and related fields to provide the student with new management concepts and practices.

Prerequisite: 30 hours credit in PKM courses.

Philosophy

PHI 105 Introduction to Philosophy (3-0) 3 hrs.

Principles and problems of philosophy as seen in different schools of thought. Topics: validity of human knowledge; nature of reality; mind and body; free will and determinism; moral and aesthetic values; and religious belief.

PHI 110 Logic (3-0) 3 hrs.

Formal reasoning, including language and meaning, deduction and induction, evidence, and the detection of fallacies. Traditional as well as modern modes of analysis.

PHI 115 Ethics (3-0) 3 hrs.

Consideration of problems of value and conduct, including the question of the "good life" or happiness; and contemporary moral issues such as war, violence, drugs, racism, crime, and punishment.

PHI 120 Social and Political Philosophy (3-0) 3 hrs.

Conceptual and historical analysis of the ideas of justice, liberty, equality, authority, power, law, order, rights and privileges.

PHI 150 Business Ethics (3-0) 3 hrs.

Introduces philosophical ethical theory and its application to business decisions. Considers theories of economic justice, social responsibility of corporations, regulation, conflicts of interest and obligation, ethics of advertising, product quality and safety, environmental responsibility, hiring practices, and rights of employees and employers.

PHI 180 Biomedical Ethics (3-0) 3 hrs.

Considers the ethics of the professional-patient relationship (confidentiality, informed consent, paternalism, truth-telling), the ethics of life and death (abortion, euthanasia, suicide), and the ethics of medicine on a social scale (the right to health care, the distribution of medical resources).

PHI 205 Religions of the World (3-0) 3 hrs.

Introduces the teachings, practices, social structures, and histories of the religions of India (mainly Buddhism and Hinduism), and China and Japan (mainly Confucianism, Shinto, and Taoism), and of the Middle East (mainly Christianity, Islam, and Judaism).

PHI 210 Death and Dying (3-0) 3 hrs.

Presents an interdisciplinary approach to the meaning of death. Focuses on biological, psychological, legal, philosophical and religious aspects of the phenomena of death and dying.

PHI 220 Philosophy of Religion (3-0) 3 hrs.

Examines the nature and presuppositions of Western religions, especially the reasons which can be given for and against the existence of God. Selected further topics: the problem of evil, life after death, the nature of religious experience, language, knowledge, and authority, religion and science, major philosophical theories on the nature of religion.

**PHI 231 History of Philosophy—
Ancient and Medieval (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the pre-Socratic Greeks through the 14th century. Emphasis on interpreting philosophical reflection in light of the social, political, religious, and cultural context from which it arises.

Prerequisite: A course in Philosophy or consent of instructor.

**PHI 232 History of Philosophy—
Modern (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the 15th to the 20th century. Emphasizes interpreting philosophical reflection in light of the social, political, religious and cultural context from which it arises.

Prerequisite: A course in Philosophy or consent of instructor.



Physical Education

- PED 100 Diet and Exercise for the Adult (0-2)** 1 hr.
Includes human performance laboratory physical fitness tests with individualized exercise program and methods for controlling weight through diet and exercise. May be repeated up to a maximum of 2 credit hours.
- PED 101 Selected Exercises for Occupations (0-2)** 1 hr.
Provides instruction in a program of exercises to increase the physical fitness levels necessary to meet the physical demands of various occupations. May be repeated up to a maximum of 2 credit hours.
- PED 104 Weight Training (0-2)** 1 hr.
Utilizes modern Nautilus and Universal health equipment for development and maintenance of strength and endurance for individual physical fitness needs. May be repeated up to a maximum of 2 credit hours.
- PED 105 Basketball (0-1)** .50 hr.
Provides instruction in the basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.
- PED 106 Weight Lifting—Olympic and Power (0-2)** 1 hr.
Provides instruction in olympic and power lifts. May be repeated up to a maximum of 2 credit hours.
- PED 108 Jogging (0-1)** .50 hr.
Provides instruction in easy slow-to-moderate pace running to improve cardiovascular fitness and control body weight. May be repeated up to a maximum of 1 credit hour.
- PED 109 Volleyball (0-1)** .50 hr.
Provides instruction in basic skills, rules, scoring, and terminology. May be repeated up to a maximum of 1 credit hour.
- PED 111 Gymnastics (0-2)** 1 hr.
Provides instruction in apparatus stunts, floor exercise and tumbling stunts. May be repeated up to a maximum of 2 credit hours.
- PED 117 Personal Defense (0-1)** .50 hr.
Provides instruction in the development of personal defense skills. May be repeated up to a maximum of 1 credit hour.
- PED 118 Archery (0-1)** .50 hr.
Provides instruction in basic archery techniques, rules and scoring. May be repeated up to a maximum of 1 credit hour.

- PED 120 Team Sports (0-2)** 1 hr.
Includes instruction in team sports, fundamental skills, offensive tactics of play, strategy, rules, terms selected from one or two of the following sports; touch football, floor hockey, soccer, softball. May be repeated up to a maximum of 2 credit hours.

- PED 130 Individual Sports (0-2)** 1 hr.
Provides instruction in individual sports, fundamental skills, offensive and defensive tactics of play, strategy, rules, terminology, and practice in one or two of the following sports: cross country skiing, fencing, horseback riding, ice skating, judo, snow skiing. May be repeated up to maximum of 2 credit hours.

- PED 131 Advanced Lifesaving (0-2)** 1 hr.
Provides instruction in the skills, methods and techniques involved in lifesaving and water safety. The American Red Cross Lifesaving certificate is awarded upon completion of the course.
Prerequisite: Ability to swim 500 yards continuously using the following strokes: back, breast, crawl, and side.

- PED 136 Wrestling (0-1)** .50 hr.
Introduces basic skills, knowledge, attitudes, and conditions of wrestling; offensive and defensive maneuvers, pinning combinations, and rules. May be repeated up to a maximum of 1 credit hour.

- PED 148 Recreational Water Sports and Games (0-1)** .50 hr.
Provides instruction in the skills and techniques of various water sports and games including water volleyball, water basketball, skin diving and underwater hockey. May be repeated up to a maximum of 1 credit hour.
Prerequisite: Ability to swim 50 yards.

- PED 149 Prescribed Exercises (0-2)** 1 hr.
Provides specialized therapeutic programs of prescribed exercises and sports activities to meet individual needs. May be repeated up to a maximum of 2 credit hours.

- PED 150 Bowling (0-2)** 1 hr.
All-levels class with beginners grouped separately for special attention. Etiquette, scoring, and techniques according to present ability. Intramural competition afforded. May be repeated up to a maximum of 2 credit hours.

- PED 152 Golf (0-1)** .50 hr.
Introduces golf fundamentals of grip, stance, and swing using irons and woods; terminology, etiquette, scoring, and safety standards. May be repeated up to a maximum of 1 credit hour.
- PED 153 Swimming-Beginning (0-2)** 1 hr.
Provides instruction for students who have never learned to swim or cannot swim one length of the pool. Instruction in basic swimming skills with emphasis on achievement and confidence in the water. May be repeated up to a maximum of 2 credit hours.
- PED 154 Swimming-Intermediate and Advanced (0-2)** 1 hr.
Provides instruction in front crawl, back crawl, side stroke, breast stroke, the butterfly, spring board diving, skin diving skills and some racing techniques. May be repeated up to a maximum of 2 credit hours.
Prerequisite: Ability to swim 50 yards.
- PED 155 Water Polo (0-1)** .50 hr.
Provides instruction in the basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.
Prerequisite: Swim a minimum of 50 yards.
- PED 156 Badminton (0-1)** .50 hr.
Provides recreational and conditioning activity with singles and doubles play, strategy, serving, rules, and interclass competition. May be repeated up to a maximum of 1 credit hour.
- PED 157 Scuba (0-1)** .50 hr.
Provides instruction in the basic principles and techniques of scuba diving. May be repeated up to a maximum of 1 credit hour.
Prerequisite: Swim 300 yards. Swim underwater two widths of the pool.
- PED 158 Tennis (0-1)** .50 hr.
Provides theory and practice, rules and scoring, development of serve, forehand drive, backhand drive, lob, volley, and footwork. Singles and doubles play and interclass competition. May be repeated up to a maximum of 1 credit hour.
- PED 159 Competitive Tennis (0-1)** .50 hr.
Provides rules, scoring, theory and practice of the skills of competitive tennis. Emphasizes game strategy in singles and doubles play. May be repeated up to a maximum of 1 credit hour.
- PED 160 Modern Dance I (0-2)** 1 hr.
Opportunity to explore movement potential, increase technical proficiency, and broaden rhythm background; skills in technique and composition stressed. May be repeated up to a maximum of 2 credit hours.
- PED 161 Modern Dance II (0-2)** 1 hr.
Provides students with an opportunity to explore modern dance techniques in greater depth. May be repeated up to a maximum of 2 credit hours.
Prerequisite: PED 160 or consent of instructor.
- PED 162 Introduction to Ballet (0-2)** 1 hr.
Provides instruction for students with little or no previous training in ballet. May be repeated up to a maximum of 2 credit hours.
- PED 163 Aerobic Dancing (0-1)** .50 hr.
Provides an aerobic style fitness program structured to tone and trim the body. Vigorous exercise routines are choreographed to music to increase flexibility, cardiovascular endurance and movement efficiency. May be repeated up to a maximum of 1 credit hour.
- PED 165 Contemporary Dance (0-1)** 1 hr.
Orientation to contemporary dance and instruction in executing the technique and composition of today's most popular dances. May be repeated up to a maximum of 2 credit hours.
- PED 167 Jazz Dance I (0-2)** 1 hr.
Provides students with the elements of ballet, modern dance and Afro-Haitian to combine them into a dance form that is idiomatic, syncopated and fast paced. May be repeated up to a maximum of 2 credit hours.
- PED 168 Racquetball (0-1)** .50 hr.
Offers theory and practice, rules and scoring, methods of serve, forehand drive, backhand drive, lob, volley and footwork. May be repeated up to a maximum of 1 credit hour.
- PED 169 Competitive Racquetball (0-1)** .50 hr.
Provides rules, scoring, theory and practice of the skills of competitive racquetball. Emphasis is on the strategy of singles and doubles play. May be repeated up to a maximum of 1 credit hour.

**Physical Education Courses—Theory—for
Major and Minor Students**

**PED 200 Introduction to
Physical Education (2-0) 2 hrs.**

Provides orientation and history of physical education in the United States. Presents aims and objectives, and new approach to physical education as an academic discipline.

PED 201 First Aid (2-0) 2 hrs.

Regulation American Red Cross instruction in first aid; immediate care given to a person who has been injured or has been suddenly taken ill. Includes self-help and home care if medical assistance is not available or is delayed. The Standard Red Cross Card is issued to those students who qualify.

PED 203 Health (2-0) 2 hrs.

An in-depth look at the physical, mental and social dimensions as they relate to the following topics: mental health, stimulants and depressants, family living, diseases, and environmental health.

**PED 204 Selected Physical
Education Activities (0-4) 2 hrs.**

Provides analysis of technique, planning of drills and experience in basketball, softball, swimming, tennis, weight training, and volleyball.

PED 205 Drugs in Our Culture (2-0) 2 hrs.

Deals with material about which many individuals have strong and sometimes unfounded beliefs. The intent of this course is to provide a potpourri of the facts, attitudes, and opinions necessary to understand what psychoactive drugs do, how they do it, who uses them, and why.

PED 207 Human Sexuality (2-0) 2 hrs.

Acquaints students with the familial, sociological, biological, and emotional implications of human sexuality. Attention is also given to such pathological conditions as venereal diseases.

PED 210 Sports Officiating (2-0) 2 hrs.

Provides comprehensive instruction on rules and officiating techniques in interscholastic sports in preparation for Illinois High School Athletic Association certification. Officiating experience opportunities provided in college intramural and intercollegiate athletic programs.

**PED 220 Track and Field
Techniques (2-0) 2 hrs.**

Development and understanding of strategy and rules of track and field. Basic skills of running, jumping, and throwing as performed in track and field; emphasis on knowledge and techniques essential to teaching track and field.

PED 222 Football Techniques (2-0) 2 hrs.

Fundamental and organizational techniques of game skills, strategy, practice drills, conditioning, safety standards, and officiating techniques.

PED 224 Basketball Techniques (2-0) 2 hrs.

Knowledge and skill in fundamentals and in techniques of team organization; skills of each position, offensive and defensive skills and team play, strategy, and officiating.

PED 226 Baseball Techniques (2-0) 2 hrs.

Analysis, instruction, and demonstration of fundamental skills, strategy, practice drills, conditioning, safety standards, and officiating techniques in teaching and coaching baseball.

PED 228 Aquatics (2-0) 2 hrs.

Provides instruction in the theory and practice of fundamental skills and approaches to various phases of swimming. Planning, organization, development and management of aquatic programs.

Prerequisite: Ability to swim 50 yards.

PED 230 Water Safety Instructor (0-2) 1 hr.

Follows the standards established by the American Red Cross for teaching authorized swimming courses.

Prerequisite: Senior lifesaving certificate.

PED 270 Community Health (2-0) 2 hrs.

Presents basic principles of community living and examines scientific methods applied to environmental health in urban and rural communities. Focuses on the functions of community health organizations and the way they relate to the individual health needs.

Physical Science

PHS 101 Physical Science Survey (3-0) 3 hrs.

Designed to give the non-science major an understanding and appreciation of the universe, earth, energy, and matter.

PHS 105 Energy and Society (3-0) 3 hrs.

Studies the nature of energy as perceived by man through the sciences. Investigates the utilization of energy and its effects on life patterns.

PHS 111 Physical Science I (3-2) 4 hrs.

Motion, structure of matter, electricity and magnetism, waves and particles, and the atom. Course for non-science majors fulfilling laboratory science requirements.

PHS 112 Physical Science II (3-2) 4 hrs.

Examines topics from basic chemistry, materials of the earth, earth forms and history, weather, the sun, stars, and the universe. Course for non-science majors fulfilling laboratory science requirements.

Physics

PHY 101 Technical Physics I— Mechanics, Heat, and Sound (3-2) 4 hrs.

Statics, dynamics, energy, calorimetry, gas laws, waves and sound. Primarily for students in career programs. Other students see PHY 121 or PHY 201.

Prerequisite: MTH 106 or concurrent enrollment.

PHY 102 Technical Physics II— Electricity and Magnetism, Light (3-2) 4 hrs.

Electricity and magnetism: fields, induction, capacitance, direct and alternating current theory, circuits, and elements of electronics. Light: reflection, interference, resonance, lenses, diffraction, polarization, and Doppler effect. Primarily for students in career programs.

PHY 121 Introductory Physics I (4-3) 5 hrs.

Mechanics, heat, and sound. Lectures, demonstrations, and laboratory. For students in arts, sciences, and architecture. Other students see PHY 201.

Prerequisite: MTH 104.

PHY 122 Introductory Physics II (4-3) 5 hrs.

Continues PHY 121. Electricity, magnetism, and light.

Prerequisite: PHY 121.

PHY 201 General Physics I— Mechanics (3-2) 4 hrs.

Foundations of kinematics, statics, dynamics, and hydraulics. For students in engineering, mathematics, physics, and chemistry. Prerequisite: MTH 201 or concurrent enrollment.

PHY 202 General Physics II—Heat, Electricity, and Magnetism (3-2) 4 hrs.

Foundations of heat, thermodynamics, electricity, and magnetism.

Prerequisite: PHY 201, MTH 202, or concurrent enrollment.

PHY 203 General Physics III—Wave Motion, Sound, Light and Modern Physics (3-2) 4 hrs.

Foundations of wave, motion, sound, geometrical and physical optics, and modern physics.

Prerequisite: PHY 202 and MTH 202.

Political Science

PSC 101 American Politics and Government (3-0) 3 hrs.

Focuses on political involvement, elections, campaigns, and interest groups, Congress, courts, and the presidency. Discusses how our government runs as well as current political controversies. Utilizes political figures as guest speakers and offers opportunities for political participation, especially in election year.

PSC 220 Suburban, Urban and State Politics (3-0) 3 hrs.

Emphasizes politics in Illinois, Chicago, and the suburbs. Delves into machine politics, taxes, housing, and other issues. Provides opportunities for involvement in community politics and draws on elected officials and speakers.

PSC 250 Comparative Politics (3-0) 3 hrs.

Explores the politics of selected countries in Africa, Asia, Europe, Latin America, and/or the Middle East. Examines economic, social, and political patterns and problems in different nations.

PSC 270 Global Politics (3-0) 3 hrs.

Uses role playing to study how foreign policy is made. Explores human problems such as population, food, and energy on a global dimension. Examines international bodies, including the United Nations, and explores how nations interact.

Psychology

PSY 100 College Learning Strategies (3-0) 3 hrs.

Presents strategies and techniques of learning necessary for "survival" in the college curriculum. Includes theoretical understandings, but the stress is on the application of those skills which allow students to become efficient and effective leaders. Techniques of concentration, motivation, testing, organization, textbook and lecture notetaking are offered in both a group and individualized format. (Cannot be used to fulfill Social Science requirements.)

PSY 101 Introduction to Psychology (3-0) 3 hrs.

Human behavior with reference to perception, learning, individual differences, intelligence, and personality. Developmental method stressed rather than experimental. Reference made to daily life and everyday problems.

PSY 110 Human Potential Seminar (1-0) 1 hr.

Designed to facilitate the development of individual human potential through a variety of small-group experiences. Individual sections may focus on, but are not limited to values, attitudes, life style planning, interpersonal skills, leadership, assertive behavior and decision-making. This course is not repeatable for credit.

PSY 111 Career Planning and Development (0-2) 1 hr.

Varied activities from taking tests and interviewing professionals to examining one's strengths, weaknesses, likes and dislikes as they relate to the world of work. There are discussions on career development and planning intensive searches of two career paths.

PSY 145 Psychology in Business and Industry (3-0) 3 hrs.

Human behavior and its practical applications in business. Psychological applications in personnel and marketing problems, employee selection, morale, and supervisory practices. Prerequisite: PSY 101.

PSY 210 Introduction to Research in Psychology (3-0) 3 hrs.

Introduction to the logic and theory of the scientific method. Emphasis on the basic statistical procedures and principles of experimental design. The purpose is to promote critical interpretations of behavioral data through an understanding of methods used in psychology. Prerequisite: PSY 101.

PSY 216 Child Psychology I (3-0) 3 hrs.

Individual child from conception to fetal development, infancy, and latency. Emphasis placed on child rearing practices and techniques that appear beneficial in creation of independent and well-adjusted personality. Child's interaction with parents, siblings, peers, and greater community considered in the formation of the integrated self. Prerequisite: PSY 101.

PSY 217 Adolescent Psychology (3-0) 3 hrs.

Psychological study of the human organism from pubescence through adolescence and the beginnings of adulthood. Adolescence is studied as a time of rapid change resulting from increased drive state, physical maturity, and changed social expectation. Emphasis is on how these changes are influenced by social institutions such as the family, the schools, and the world of work, as well as by the divisions and conflicts taking place in society generally. Prerequisite: PSY 101.

PSY 218 Psychology of Adulthood and Aging (3-0) 3 hrs.

Focuses on human psychological development from young adulthood to old age and adult psychological processes of personality. Emphasizes identity and intimacy of young adults and changing male and female roles with maturity; the family; work; personality and psychopathology; aging and death. Prerequisite: PSY 101 or consent of instructor.

PSY 220 Biological Basis of Behavior (3-0) 3 hrs.

Studies the physiological aspects of behavior. Emphasizes the physiological foundations of motivation, consciousness, learning, emotion, aggression and stress. Clarifies the interaction between physiology, behavior, and environment. Prerequisite: PSY 101.

PSY 225 Psychology of Personality (3-0) 3 hrs.

Investigates the determining factors and dynamics of human personality. Studies major contemporary approaches such as psychoanalytic, humanistic learning as well as trait and factor theories. Also considers methods of personality assessment. Prerequisite: PSY 101.

PSY 230 Psychology of Human Adjustment and Abnormal Behavior (3-0) 3 hrs.

Studies scientifically the research and theories of psychology relevant to the dynamics of human adjustment. Emphasizes the meaning and concept of adjustment applied to motivation, frustration, conflict, stress, anxiety, learning, personality, psychological diagnosis, and psychotherapy.
Prerequisite: PSY 101.

Public Administration _____

PAD 101 Introduction to Municipal and Governmental Management (3-0) 3 hrs.

Reviews the history and present character of public management. Identifies the role of government and its relationship to the people. Defines the authority, responsibility and scope of government organization and processes by which these ends are achieved.

PAD 201 Governmental Management (3-0) 3 hrs.

Studies the application of management principles in the execution of public policy with emphasis on state and local government. Views both the role and value systems of the public manager in setting objectives and utilizing resources. Emphasizes contemporary and emergent forms of organization, process and language.
Prerequisite: PAD 101 or consent of coordinator.

PAD 202 Organization Behavior (3-0) 3 hrs.

Analysis and interpretation of human behavior in organization settings and how the dynamics influence decisions, goal setting, motivation, leadership, communication and conflict resolution. Emphasizes individual, small groups and informal organization within government settings.
Prerequisite: Consent of coordinator.

PAD 203 Management Process (3-0) 3 hrs.

Studies decision-making and problem-solving in governmental settings. Uses case study approach to integrate formal and experiential learning. Creates a problem-solving environment for the assimilation of knowledge from organization theory and behavior. Emphasizes leadership style, decision and change theory, centralization vs. decentralization.
Prerequisite: PAD 202.

PAD 210 Public Finance and Budget Process (3-0) 3 hrs.

Reviews sources of public revenue, including income, sales and property taxes. Closely examines the budget process, procedures and

contemporary methods. Emphasizes state and local budget cycles and processes. Encourages students to make detailed examination of budget process most appropriate to their anticipated needs.

PAD 212 Public Personnel Management (3-0) 3 hrs.

Examines traditional personnel processes as applied to government. Emphasizes contemporary problems in equal employment opportunity, public employee relations, employee productivity, and evaluation and career development programs.

PAD 214 Planning in the Public Agency (3-0) 3 hrs.

Examines planning decision theory and application of planning concepts as applied to local program development, resource acquisition and evaluation. Emphasizes methods and techniques of problem identification, program development, resource acquisition and evaluation tools.
Prerequisite: PAD 201 or consent of coordinator.

PAD 215 Government Bureaucracies (3-0) 3 hrs.

Studies the elements of bureaucracy found in the management of public affairs. Examines the purposes served by bureaucratic processes and principles along with resulting problems. Amplifies sources of conflict occurring both within and outside bureaucracies.

PAD 220 Governmental Management Problems (3-0) 3 hrs.

Practicum to examine and analyze selected local problems. Seminar approach is used for students and faculty to study problems in local government and to enumerate possible alternatives.
Prerequisite: Consent of instructor.

PAD 222 Research Methods in Government (3-0) 3 hrs.

Examines methods and styles in research applicable to government operations and the fundamentals of analyses. Project required.

Reading

RDG 099 Developmental Reading (2-0) 2 hrs.

Group and individualized work toward improvement of comprehension and rate in reading.

RDG 104 Reading Acceleration (2-0) 2 hrs.

Survey of basic reading techniques designed to accelerate reading rates. Emphasis placed on comprehension drills, skimming, and critical reading. Mechanical aids used to eliminate fixations, remove vocalizing habits, and accelerate present reading rates through perceptual training.

RDG 106 Critical College Reading Skills (3-0) 3 hrs.

Develops the full array of mature, fluent reading skills, including critical and analytical comprehension, content area reading, predictive reading, experiential or "creative" reading, vocabulary development, speed and flexibility. Also covers theories of comprehension and language development.

Real Estate

RES 101 Real Estate Transactions (3-0) 3 hrs.

Provides instruction in basic real estate fundamentals for those who wish to qualify for a real estate license. Applies to both the salesperson's and broker's license. Surveys real estate law, interests in real estate, ownership, the real estate business, financing and appraisal.

RES 108 Brokers Licensure Preparation I (2-0) 2 hrs.

Designed to meet the State of Illinois requirements toward obtaining a real estate brokers license and contains lecture and discussion of skills and competence needed in the operation of a real estate brokerage business. The advanced principles of real estate, as well as the sales and brokerage aspects of this career are the main topics, as are legal and ethical obligations.
Prerequisite: RES 120.

RES 109 Brokers Licensure Preparation II (2-0) 2 hrs.

Real estate conveyancing and finance are discussed in order to give a clear understanding of the movement of real property from owner to owner and the sources, types, and effects of borrowed money. Also covered are the legal forms of contracts, etc., now used in the many types of ownership of real estate.
Prerequisite: RES 120.

RES 120 Principles of Real Estate (2-0) 2 hrs.

Fundamental principles of real estate for the real estate practitioner, those seeking to qualify for the real estate market (the buyer, seller, or owner of real estate), and the person who has contact with the business in work with financial institutions. Subject matter includes the nature and economic characteristics of real estate and its ownership, titles, contracts, market values, brokerage, selling, development, taxation, appraisal, financing, and licensing laws.

RES 121 Advanced Principles, Marketing and Brokerage (3-0) 3 hrs.

Marketing applied to the real estate business. Sales planning, obtaining the qualifying prospects, securing listings, showing properties, and motivation are considered. Procedural matters pertaining to the business as office location, staffing, and office systems are discussed, as well as the laws, regulations and ethics of the business. Samples of currently used forms are integrated into the course.
Prerequisite: RES 120 or consent of coordinator.

RES 122 Real Estate Appraisal I (3-0) 3 hrs.

Covers the functions and purposes of appraisal and has been designed to examine the nature of real property value and the various functions and methods of estimating values, with emphasis on the residential market.
Prerequisite: RES 120 or consent of coordinator.

RES 123 Real Estate Law (3-0) 3 hrs.

Examines legal aspects of the real estate business, including contracts, interests in land, transactions, brokerage, leasing, closings, zoning, taxation, and the legal forms and remedies relative thereto.
Prerequisite: RES 120 or consent of coordinator.

RES 124 Real Estate Finance (3-0) 3 hrs.

Analysis of the various financial aspects of owning, buying, and marketing all types of real estate, including mortgages, construction loans, leasing, sale and leaseback, foreclosure, trading, governmental programs and contracts, and taxation.
Prerequisite: RES 120 or consent of coordinator.

RES 230 Property Management Methods (3-0) 3 hrs.

Covers property analysis, rental scheduling, collection, and budgeting; maintenance and repair; insurance; advertising; techniques of handling tenants; executive and management control techniques. Course emphasizes procedures and methodology.

Prerequisite: RES 123 or consent of coordinator.

RES 231 Income Properties (3-0) 3 hrs.

Basic concern of the course lies in the concept of real estate as an investment. Investment aspects of property management including vacant properties are considered. Other topics include: ground leases, sale and lease-back arrangements, highest and best use of property, distressed properties, characteristics of urban structure and growth, commercial and industrial properties as investments, and the role of syndicates, developers, builders, and financial institutions in promoting and managing income properties. Prerequisite: 9 credit hours of real estate or consent of coordinator.

RES 232 Real Estate Appraisal II (3-0) 3 hrs.

Depreciation factors, interest rates, capitalization rates and techniques, lease-hold interest values; use and application of compound interest tables in the appraisal process; operating statements in the appraisal of income property, net income estimates, and correlation of final value estimates pertaining to income producing properties such as apartment, commercial and industrial development; professional appraisal standards. Prerequisite: RES 122.

RES 233 Real Estate Problems Seminar (3-0) 3 hrs.

Contemporary issues in the real estate industry possibly including tax foreclosures, tax deeds, tax titles, special assessments, assessing methods and practices, legislative and judicial influences upon the industry, and effects of the current economic situation upon the real estate industry. Directed readings and analysis of case studies will be used extensively.

Prerequisite: Previously completed 9 credit hours of real estate course work.

Recreation

REC 200 Leisure: Its Uses and Resources (2-0) 2 hrs.

Orients students in the field of leisure studies by providing each student with opportunities to formulate a philosophy and some basic concepts regarding leisure, leisure delivery service systems and leisure service as a profession.

REC 202 Foundations for Recreation and Park Services (2-0) 2 hrs.

Introduces the recreation student to legislation, fiscal concerns, standards for planning, problems of cities and the relationship of professional organizations to recreation and park services.

REC 204 Introduction to Therapeutic Recreation (2-0) 2 hrs.

Introduction to concepts and principles of therapeutic recreation, types of illnesses and disabilities, programming and services, and role of the therapeutic recreator.

REC 206 Principles of Camping Management (3-0) 3 hrs.

Presents objectives, organization, techniques, counseling, activities and evaluation of outdoor camping.

REC 208 Outdoor Recreation Planning (2-0) 2 hrs.

Presents the planning process for designing and managing outdoor recreational areas and examines factors affecting the planning process.

REC 210 Performing Arts as Leisure Opportunities (2-0) 2 hrs.

Instruction in leadership skills in such program areas as recreational dance, drama, music, arts and crafts, and social recreation.

REC 214 Basic Field Experience (1-2) 2 hrs.

Directed field experience in public and private recreational agencies gives students majoring in recreation an introduction to working in actual field situation. Students work in college approved agencies of their own choice four or more hours per week.

Prerequisite: REC 200 and REC 202.

Refrigeration and Air Conditioning

RAC 101 Refrigeration Fundamentals (2-3) 3 hrs.

Basic terms used in the refrigeration trade, fundamental laws of energy conversions and gas behavior and their applications, description of various systems, pipe fitting techniques, trouble-diagnosing procedures, and charging of refrigeration systems.

RAC 102 Refrigeration Systems (3-3) 4 hrs.

Continues RAC 101. Attention given to assembling and constructing refrigeration systems to achieve desired results, trouble-diagnosing procedures for domestic and commercial equipment, and proper part replacement procedures.

Prerequisite: RAC 101.

RAC 103 Heating Principles (2-3) 3 hrs.

Description of heating equipment used in residential and light industrial systems, trouble diagnosing for common heating systems, proper repair procedures, and adjustment of controls for optimum performance of systems.

RAC 104 Residential Comfort Systems (3-3) 4 hrs.

Continues RAC 103. Integration of cooling equipment, installation of add-on cooling systems to present heating systems, and trouble diagnosing of combination systems.

Prerequisite: RAC 101 and RAC 103.

RAC 105 Heating and Cooling Controls (3-3) 4 hrs.

Description of operation and function of electric equipment, control of equipment, adjusting and testing the equipment and controls, and proper replacement of defective components.

RAC 201 Refrigeration System Design I (3-3) 4 hrs.

Factors considered in selection of refrigeration compressors, evaporators, and condensers. Factors that affect refrigeration effect. Characteristics of common refrigerants.

Prerequisite: RAC 102 or consent of instructor.

RAC 202 Refrigeration System Design II (3-3) 4 hrs.

Continues RAC 201. Factors considered in selection of metering devices, pipe sizing, piping design, oil migration, and system accessories.

Prerequisite: RAC 201 or consent of instructor.

RAC 203 Air Conditioning Principles (3-3) 4 hrs.

Properties of air and psychometrics. Computing heat gains and heat losses. Selection of equipment for residential and light commercial systems.

RAC 204 Air Distribution (2-3) 3 hrs.

Study of fans and fan performance. Factors considered in selection of fans. Duct systems, design fundamentals, sizing and location of registers.

RAC 208 Pneumatic Control (2-3) 3 hrs.

Description of construction and function of controls, diagnosis of malfunctions, and correction of defects.

RAC 211 Residential Solar Heating (3-0) 3 hrs.

Examines the nature of solar radiation and collection of solar energy. Studies existing systems for heating and cooling residential space and water.

Prerequisite: RAC 101 or consent of program coordinator.

RAC 290 Independent Study (3-0) 3 hrs.

For students with some experience who do not wish to duplicate their present knowledge, or who cannot attend classes regularly. Study plan to be worked out by instructor and student.

Secretarial Science

See: Office and Administrative Services

Sociology

SOC 101 Introduction to Sociology (3-0) 3 hrs.

Analysis and description of the structure and dynamics of human society. Application of scientific methods to the observation and analysis of social norms, groups, intergroup relations, social change, social stratification, and institutions.

SOC 120 The Family in Contemporary Society (3-0) 3 hrs.

Examines the family as a social institution and as a dynamic interactive system. Topics include courtship, marriage, family systems, parenting, non-traditional forms of the family.

Prerequisite: SOC 101 or consent of instructor.

SOC 150 Connections: Technology and Change (3-0) 3 hrs.

Explores America's relationship with science and technology. The evolution of eight major modern inventions and prospects for the future will be discussed in terms of technology and human values as they are reflected in society.

SOC 205 Social Problems (3-0) 3 hrs.

Analysis of contemporary social problems. Investigation of theories dealing with conformity and deviance, racial and minority group prejudice, crime and delinquency, personality problems, urbanization, and fundamental institutional problems due to social change.
Prerequisite: SOC 101.

SOC 210 Social Institutions (3-0) 3 hrs.

Primary social institutions, including family, religious, educational, economic, and political. Questions considered: who participates, what are the functions, what are the consequences, and an evaluation of the effects of the institutions on the society.
Prerequisite: SOC 101 and sophomore standing.

SOC 215 Introductory Social Psychology (3-0) 3 hrs.

Introduces the methods used to understand, explain, and predict how the thoughts, feelings, and actions of individuals are influenced by the thoughts and actions of social groups. Investigates how attitudes, beliefs, and behaviors are influenced by others within society and how society is influenced by the individual.
Prerequisite: PSY 101 or SOC 101.

Spanish

SPA 101 Elementary Spanish I (4-0) 4 hrs.

Beginning course in the language skills of listening, understanding, speaking, reading, and writing. Designed for students with no previous experience in Spanish.

SPA 102 Elementary Spanish II (4-0) 4 hrs.

Continues SPA 101. Situational conversations in Spanish; reading and writing stressed.
Prerequisite: SPA 101, two years of high school Spanish, or consent of instructor.

SPA 201 Intermediate Spanish (4-0) 4 hrs.

Conversation with emphasis on pronunciation, intonation, stress, and rhythm. Introduction to composition, reading of short stories, and grammar review.
Prerequisite: SPA 102, two years of high school Spanish, or consent of instructor.

SPA 202 Intermediate Spanish (4-0) 4 hrs.

Continues SPA 201. Plus accuracy and speed in reading, study of syntax, and extensive composition.
Prerequisite: SPA 201, three years of high school Spanish, or consent of instructor.

SPA 205 Intensive Oral Practice (3-0) 3 hrs.

Conversational practice to develop oral facility; especially designed exercises in pronunciation, stress, and rhythm. Individual readings of modern Spanish works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: SPA 202 or equivalent or consent of instructor.

SPA 210 Introduction to Modern Spanish Literature (3-0) 3 hrs.

Reading of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussions of works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: SPA 202 or equivalent or consent of instructor.

Speech

SPE 101 Fundamentals of Speech Communication (3-0) 3 hrs.

Theory and practice of oral communications. Development of poise, confidence, and skill in speech organization and delivery. Emphasis on frequent speaking, development of standards of criticism, and selection and organization of material.

SPE 102 Public Speaking and Communication Theory (3-0) 3 hrs.

Examination of communications principles underlying successful platform behavior. Development of proficiency in the logic of argument and skill of speaking. Consideration of forms of public address; analysis and delivery of one such form as a semester assignment.
Prerequisite: SPE 101 or consent of instructor.

SPE 107 Oral Interpretation (3-0) 3 hrs.

Performance course offering opportunities for selection, preparation, and presentation of various types of literature; development of facility in use of body and voice in oral reading.
Prerequisite: SPE 101 or consent of instructor.

SPE 111 Introduction to the Theatre (3-0) 3 hrs.

Introduction to theatrical and dramatic art. Emphasis on providing the student with the tools of analysis which give him insight into the total imaginative process that makes up the art of the theatre.

SPE 115 Interviewing (1-0) 1 hr.

Focuses on the unique demand of dyadic communication. The student will examine interview types, participate in model interview situations, and complete a programmed course in cognitive listening skills.

SPE 205 Discussion and Debate (3-0) 3 hrs.

Principles, techniques, and types of discussion and debate; experience in various types of discussion and debate activities.
Prerequisite: SPE 101.

SPE 212 Acting (3-0) 3 hrs.

Methods used in the art of acting; stress on practical acting situations.

Vending Machine Repair_____

ELT 121 Automatic Vending Machine Repair I (1-3) 2 hrs.

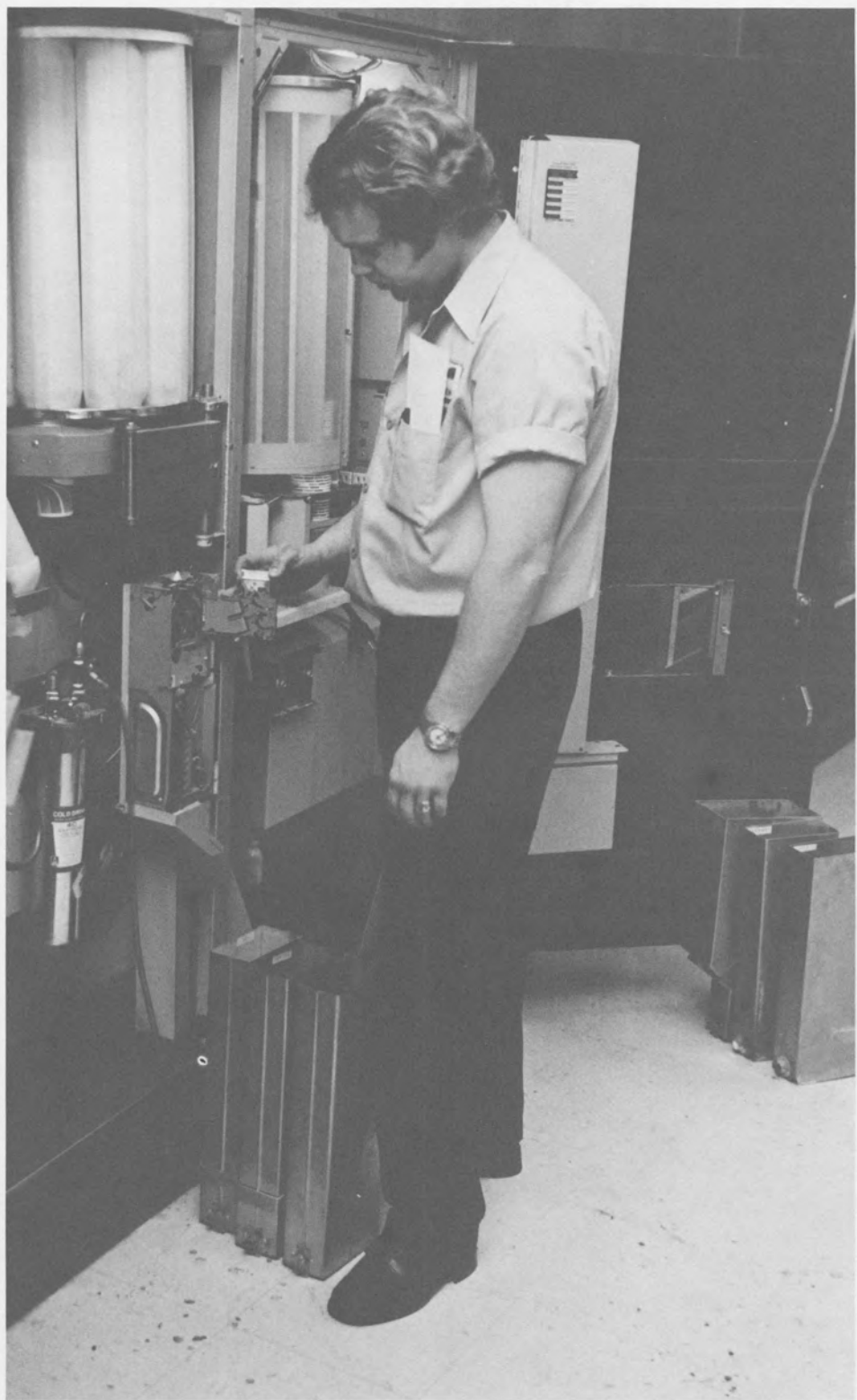
Introduces skills and knowledge needed to service automatic vending equipment. Emphasizes attitudes for successful job entry and advancement in the industry.

ELT 122 Automatic Vending Machine Repair II (1-3) 2 hrs.

Continues ELT 121 with emphasis on current vending equipment and components. Emphasizes theory, demonstrations, and "hands on" work on component parts.
Prerequisite: ELT 121 or consent of instructor.

ELT 123 Automatic Vending Machine Repair III (1-3) 2 hrs.

Continues ELT 122 with trouble shooting of actual machines and real problems. Emphasizes rapid machine repair and timely service techniques. Covers late model machines and practice.
Prerequisite: ELT 122 or consent of instructor.



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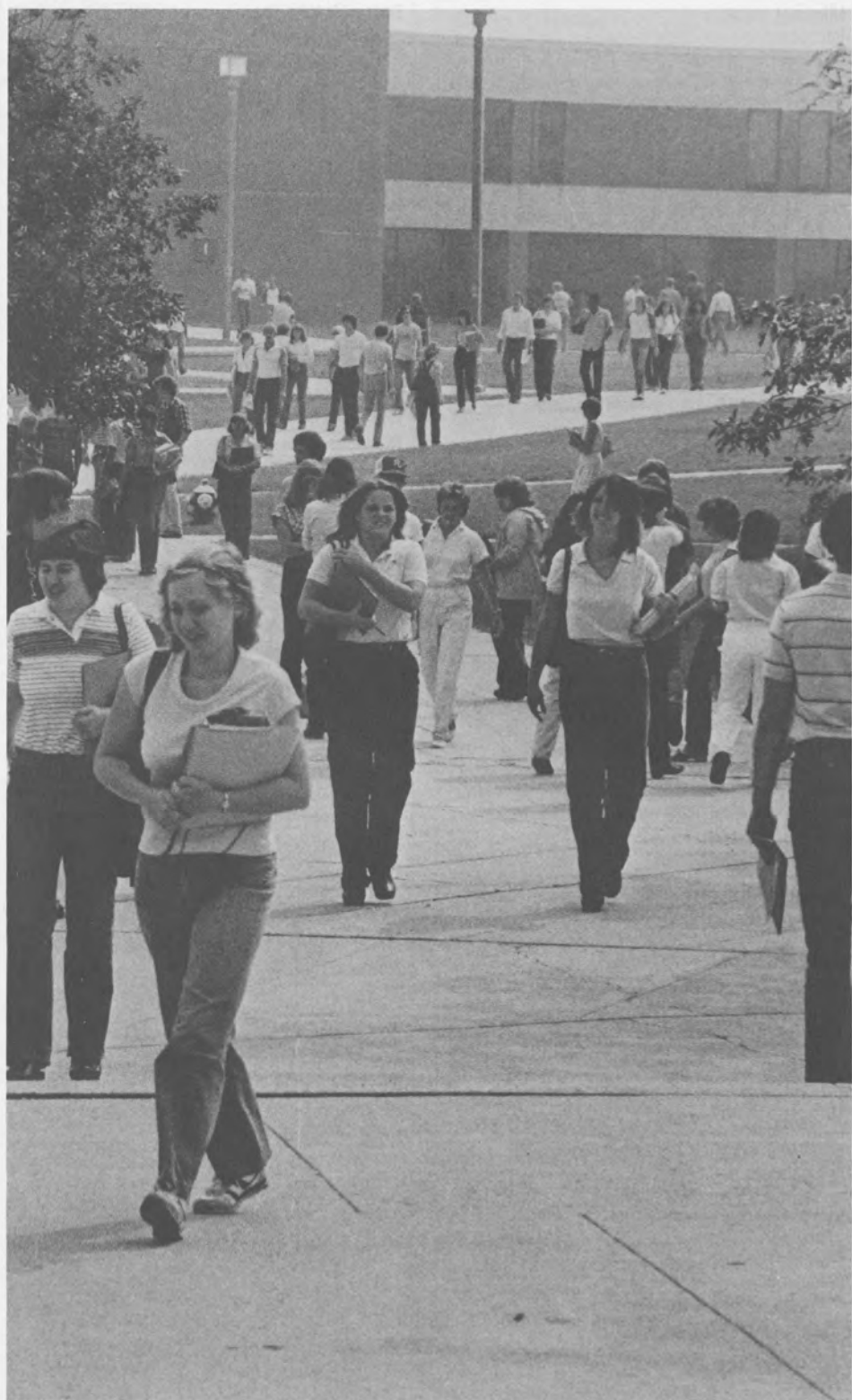
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