

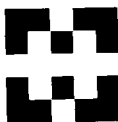


578

William Rainey Harper College
1976-77 Bulletin
Volume 10
January, 1976

Accreditation:

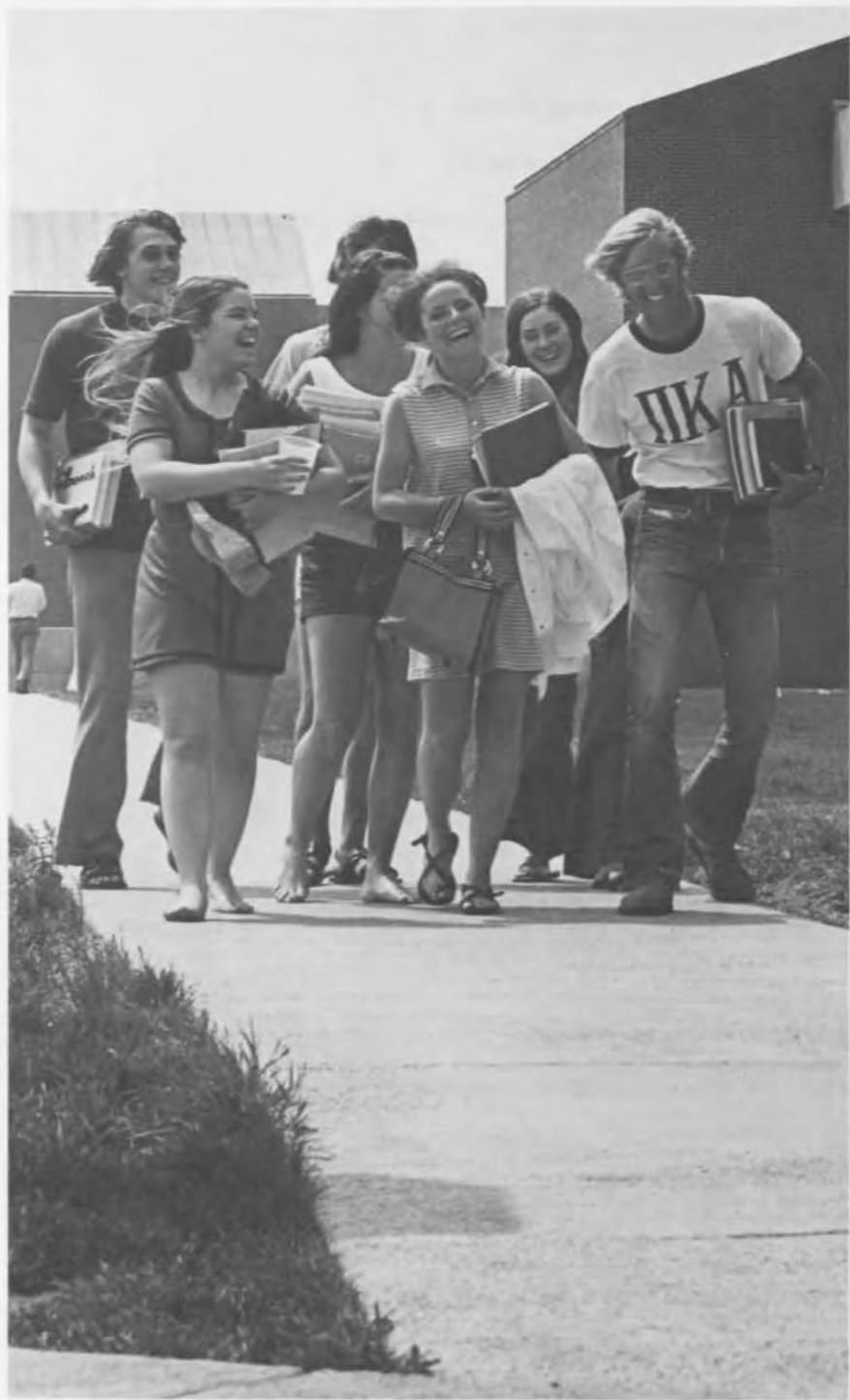
North Central Association of Colleges and Secondary Schools
American Personnel and Guidance Association
American Dental Association
Community/Junior College Member of the
National Association of Schools of Music



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

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WILLIAM RAINEY HARPER COLLEGE ACADEMIC CALENDAR 1976-77

First Semester — Fall, 1976

Open Registration As Scheduled	July 5-August 6
Faculty Report	August 17
Late Registration	August 19, 20, 21
Classes Begin	August 23
Last Day for Late Registration	August 27
Last Day for Adding Classes	August 27
Labor Day	September 6
Last Day for Refunds	September 17
Columbus Day	October 11
Midterm	October 15
Veterans' Day	November 11
Thanksgiving	November 25-November 28
Classes Resume	November 29
Last Day for Withdrawals	December 10
Final Exams	December 13-December 18
Semester Break Begins	December 20

Winterim Session — 1977

Registration	January 3
Last Day for Withdrawals	January 13
Classes in Session	January 4-January 14

Second Semester — Spring, 1977

Open Registration As Scheduled	November 1-December 10
Faculty Report	January 12
Late Registration	January 13, 14, 15
Classes Begin	January 17
Last Day for Late Registration	January 21
Last Day for Adding Classes	January 21
Lincoln's Birthday	February 12
Last Day for Refunds	February 11
Midterm	March 11
Good Friday	April 8
Spring Vacation	April 9-April 17
Classes Resume	April 18
Last Day for Withdrawals	May 13
Final Exams	May 16-May 21
Graduation	May 22

Summer Session (8 Weeks) — 1977

Registration	June 2-June 3
Classes Begin	June 6
Last Day for Late Registration	June 8
Last Day for Refunds	June 17
Midterm	July 1
Independence Day	July 4
Last Day for Withdrawals	July 25
Final Exams	July 28-July 29



**THE COLLEGE:
GENERAL INFORMATION**

William Rainey Harper

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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 48 public two-year community colleges 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.



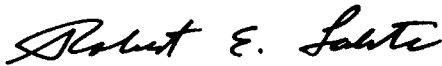
THE PRESIDENT'S MESSAGE

The word "community" is not in our name, but it is very much in our reason for being. And that reason lies in our service to the needs of the communities around us.

We're a youthful institution, just entering our second decade of existence. The absence of a long tradition frees us from the confines of education-as-usual found at many two- and four-year colleges and universities. But our touchstone to providing a vibrant, dynamic, and innovative educational experience lies in the heritage of our namesake, William Rainey Harper, founder of the University of Chicago and "father" of the two-year college concept.

Education at Harper is organized around the philosophy that learning is a life-long objective and that the community college must provide a comprehensive range of educational opportunities. Our ultimate goal is one of helping you to learn and develop—in a career, as a person, as a citizen.

It is that kind of experience which we wish for you during your time on the Harper campus.

A handwritten signature in black ink, reading "Robert E. Lahti". The signature is written in a cursive, flowing style with a large initial 'R'.

Robert E. Lahti

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, Buffalo Grove, 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 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 non-voting student representative elected by the student body for a one-year term. Regular members serve a term of three years. Board elections are held the second Saturday of April each year.

Meetings of the board of trustees, which are open to the public, are held on the second Thursday of each month at 8:00 p.m. 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.

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 counseling center at Harper is accredited by the American Personnel and Guidance Association; the clinic operated by Harper's Dental Hygiene career program is accredited by the American Dental Association; and the Harper Music Department is accredited as a Community/Junior College Member of the National Association of Schools of Music.

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 Citizens' Committee. The success of the committee was exhibited in a 3-2 vote 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 its 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. By fall, 1975, enrollment had topped 20,000.

The college opened its Willow Park Center in Wheeling in fall, 1975 making available day and evening credit and non-credit offerings.

A successful referendum held in September, 1975 will enable 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. All plans are 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.

Harper continues to evaluate itself as it plans for the next decade. 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 need 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.

The mission of William Rainey Harper College, within the framework of this philosophy, is to provide the highest quality community college program of education, to seek out the most modern, creative, and effective organizational and educational ideas, and to test, improve, and implement those ideas which meet the needs of the community. Inherent in this mission is the responsibility of providing these programs at a reasonable cost to the student and at an efficient and reasonable cost to the community. The ultimate goal is an institution that allows the individual student maximum opportunity to learn and develop.

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 adjustment 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 educational and cultural purposes by all citizens of the community.

DEGREES

Harper College offers four degrees: The Associate in Arts, the Associate in Science, the Associate in Applied Science, and the Associate in Liberal Studies. 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, and the A.L.S. is designed for students with special needs.

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 two-week Winterim between the fall and spring semesters and an eight-week summer session. Day and evening classes are conducted throughout the college year.

COLLEGE HOURS

The campus is open Mondays through Fridays from 6:30 a.m. until midnight and on Saturdays from 6:30 a.m. until noon. The campus is closed on Sundays.

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 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 facility have been completed. Next off the drawing board is the vocational technology building, which has been approved by the State Capital Development Board for completion about 1977.

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, counseling 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 a 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, is open Monday through Thursday from 8:00 a.m. to 8:00 p.m., and on Friday from 8:00 a.m. to 4:30 p.m. The bookstore offers a full range of new and used textbooks, current paperbacks, magazines, newspapers, student supplies, educational aids, and sundries.

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.

LEARNING RESOURCES CENTER

The mission of the learning resources center is to support the instructional program of the college by providing appropriate resource services to both faculty and students. The staff is qualified and ready to help in the development and use of instructional and library materials. The LRC contains about 70,000 volumes, over 700 magazines, and extensive back issues of the Chicago Tribune and New York Times on microfilm, as well as instructional media such as tapes, records, slides, films, videotapes, and film strips.

LRC Resources Service

Resources Service is located on both floors of the LRC and provides for the circulation of the books, periodicals, and various audio-visual media, distribu-

tion of television programs, and supervision of materials placed on reserve. Reference service is also available on the second floor. Copy machines are placed conveniently for patron use on both floors.

LRC Processing Service

Processing Service is located on the south side of the second floor and provides for the acquisition, cataloging, and indexing of all materials added to the collection arranged according to the Library of Congress classification.

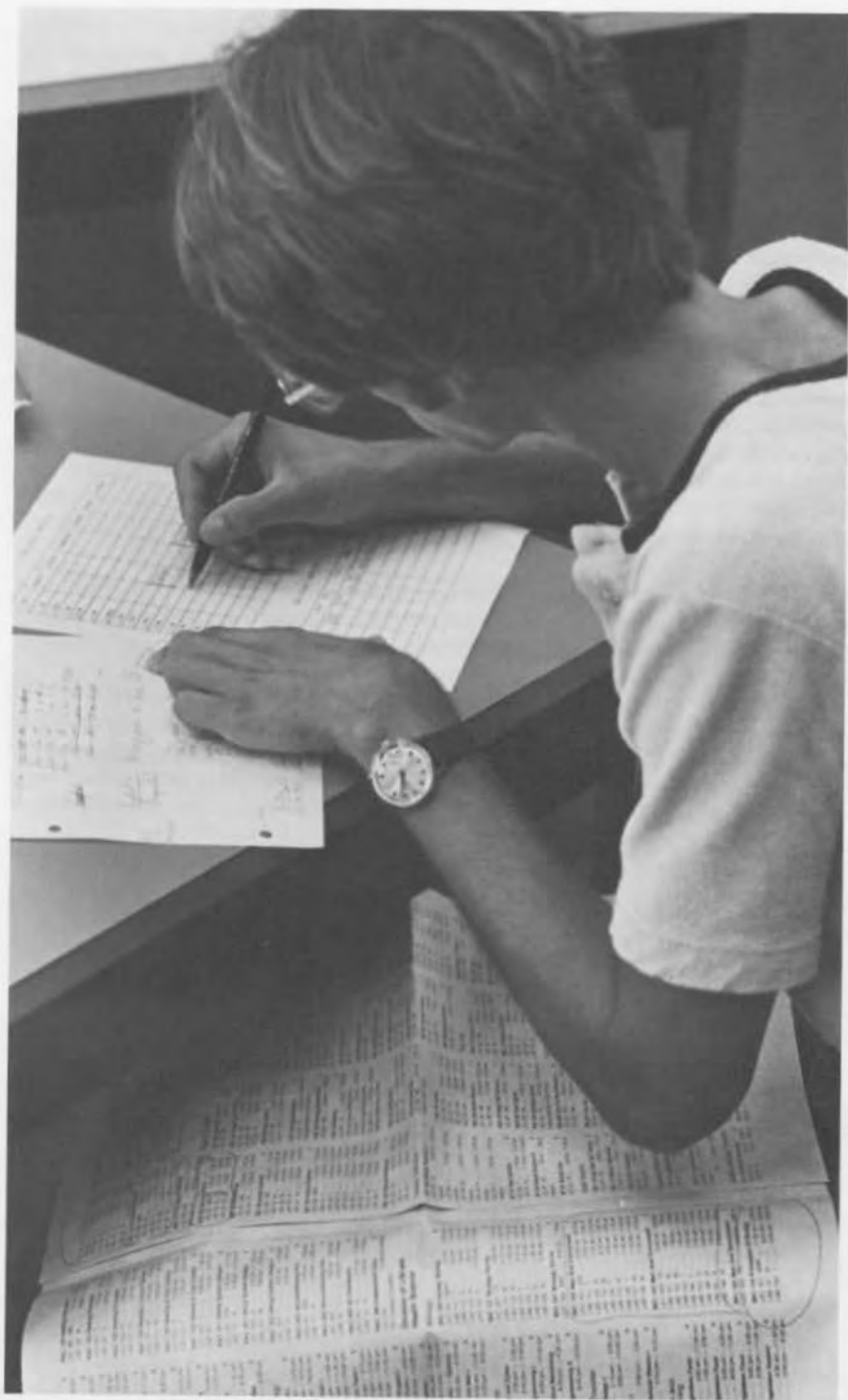
LRC Production Service

Production Service is located in the middle and south side of the first floor. The television studio is available for staff and student productions. The TV, photographic, and graphics areas design and develop institutional graphics, publications, and instructional media productions aimed at making instruction more effective.

Flexible Facilities for Instruction

Seven lecture/demonstration facilities, designed for large group instruction and equipped with audio systems, remote media projection, and television linked directly to the learning resources center, provide the teachers and students with flexible resources for instructional use.

Other instructional areas and the LRC independent study facility, each equipped with a variety of media, are available to support instruction.



ADMISSIONS INFORMATION, TUITION, AND FEES

Admission

Admission Options

Transfer Students

Readmission

Application Procedures

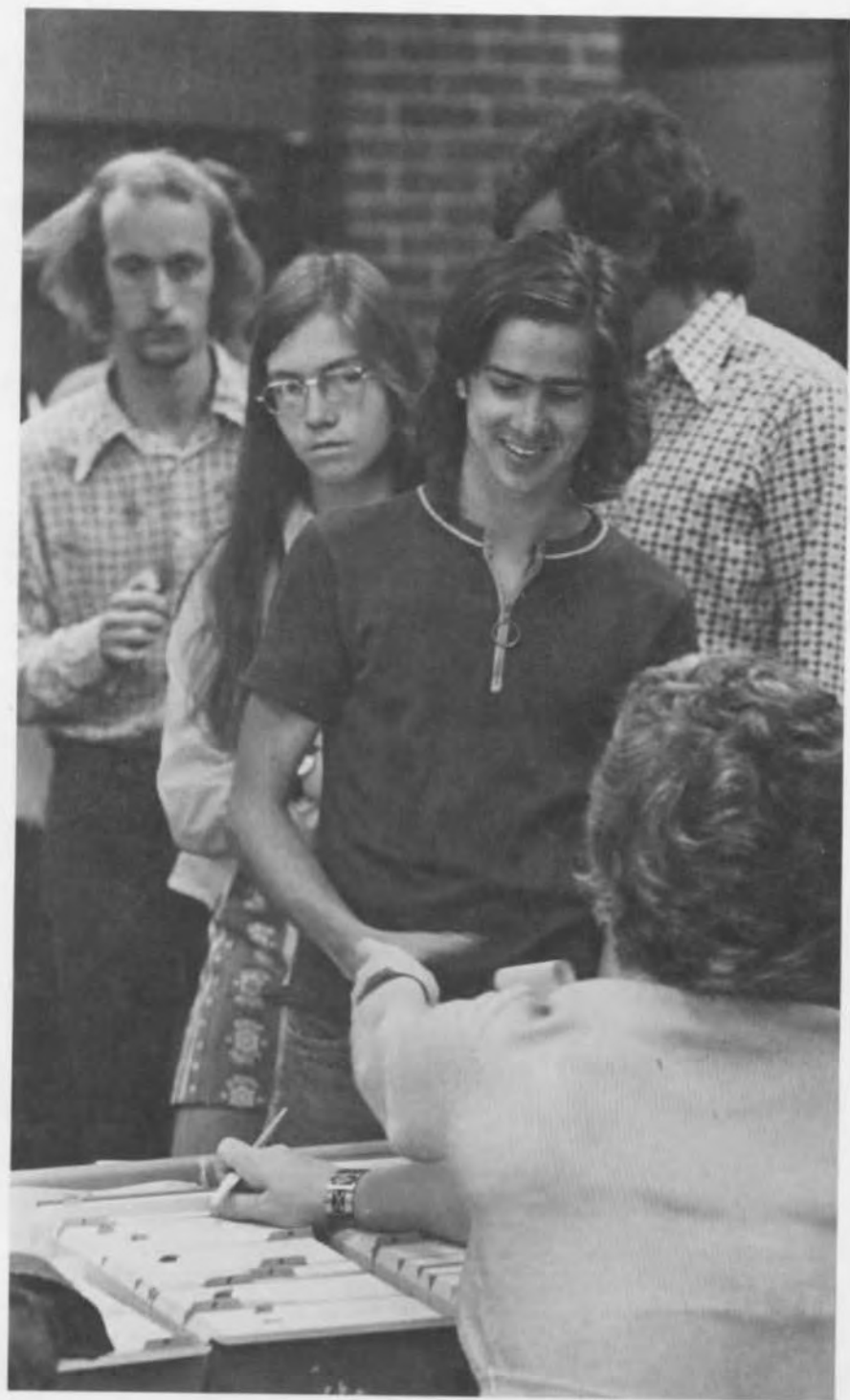
Residency

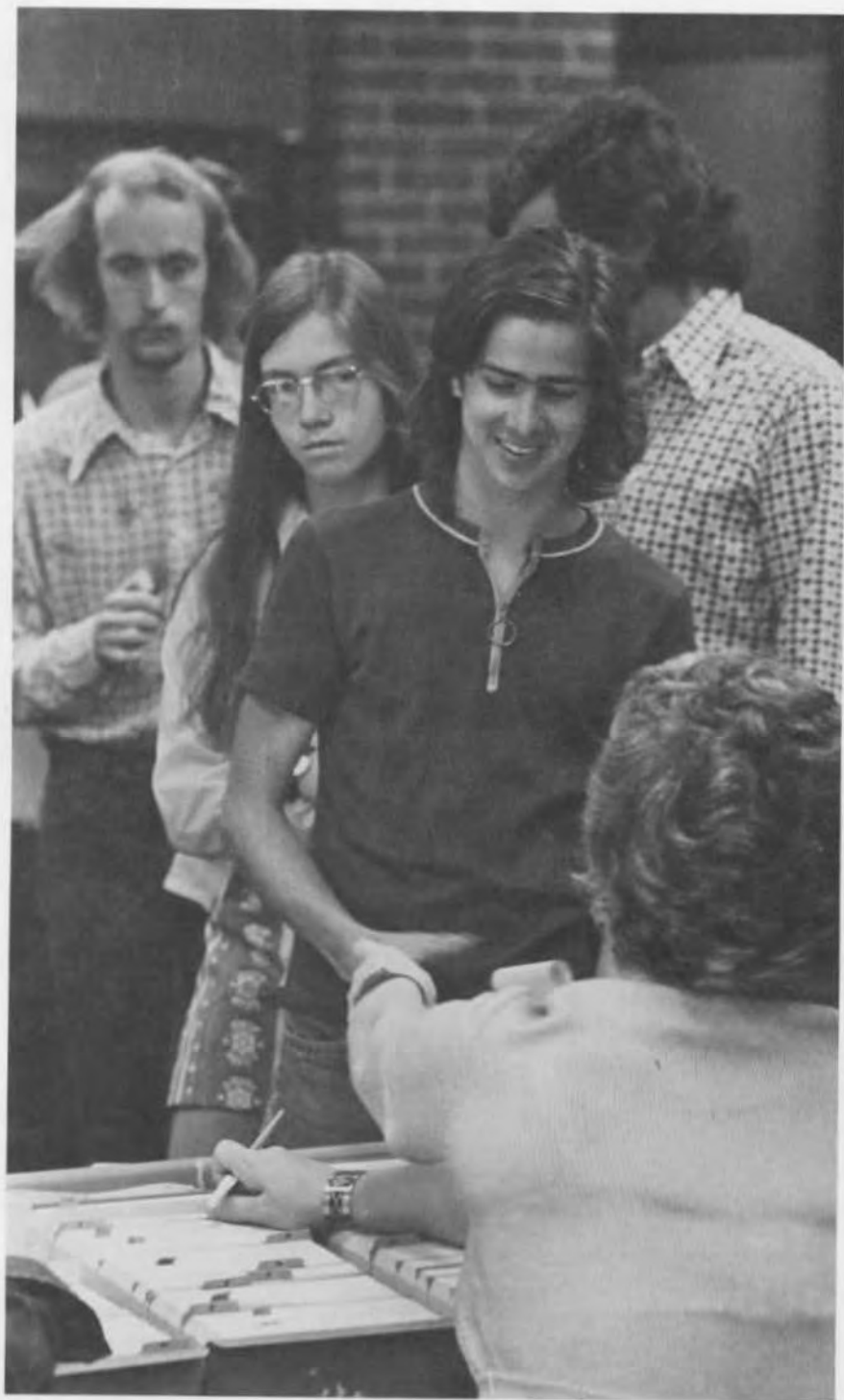
Tuition and Fees

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. 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.

High School Students

High school students may be admitted to selected courses upon the written recommendation of their high school principal and the college director of admissions.

ADMISSION OPTIONS

Potential 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. Students may apply at any time and must comply with the procedures outlined in the Application Procedures.

Career Programs

These sequences of courses are designed for individuals who desire to pursue a specific curriculum to prepare them for a particular career. Descriptions of requirements for admission to individual programs are contained in the curriculum outlines in this bulletin. Those programs identified in the Applications Procedures have space limitations. Therefore, students seeking admission must follow the specific application procedures as well as comply with the general procedures.

Liberal Studies Program

This highly flexible alternative is provided for students seeking a non-traditional program emphasizing an individualized approach. A complete description of

program requirements is contained in the explanation of the Liberal Studies Program in this bulletin. Students may apply at any time and should follow the standard application procedures.

General Studies Program

Individuals desiring college course work for personal enrichment who register for General Studies courses are automatically enrolled in this program. Upon completion of program requirements, students qualify for a Certificate in General Studies. Program requirements are outlined in the explanation of the General Studies Program in this bulletin. Students may apply at any time and should follow the procedures for enrolling in an Adult or Continuing Education course.

Students not identifying one of the program options are encouraged to consult with a college counselor for advisement and assistance.

TRANSFER STUDENTS

Students transferring from another accredited institution of higher learning must provide the Admissions Office with official college transcripts covering all previous college work. Students transferring with a cumulative grade point average of 2.0 or better will be given credit for all courses passed if applicable at Harper College. Students transferring with less than a "C" average will be given credit for courses in which a "C" or better is earned. The registrar will specify acceptable courses. Students dismissed from another institution for disciplinary reasons must be reviewed by Harper's vice president of student affairs.

READMISSION

Any student who has previously attended Harper College and who is returning after an absence of four semesters or more must complete an application for readmission. If a student has attended any other educational institution since previous attendance at this college, official transcripts must be supplied for all academic work taken since last attending Harper College. Students dismissed for disciplinary reasons must be reviewed by Harper's vice president of student affairs.

APPLICATION PROCEDURES

Candidates seeking admission to either transfer or general studies may apply at any time. Specific procedures for full-time and part-time admission are listed in this section.

Career students can apply at any time unless a space limitation exists in the desired program. It will be the student's responsibility to contact the college to determine the admission status of a desired program. Certain career programs such as Dental Hygiene, Dietetic Technician, Fashion Design, Interior Design, Legal Technology, Medical Laboratory Technician, Medical Office Assistant, Medical Transcriptionist, Nursing, and Operating Room Technician fall into this category and require that the candidate make application according to the following guidelines:

Applications for admission into such programs will be processed beginning October 1, 1976 for the fall term, 1977. Candidates must be high school graduates or equivalent (GED), or have completed six semesters of high school work prior to applying. If, on October 1, more applications have been received than space available, those candidates with the highest qualifications will be selected. If space is available after October 1, students meeting program requirements for admission will be accepted based on date of application. In-district students will be given priority until April 1.

After April 1, 1977 all qualified applicants will be admitted to remaining vacancies on the basis or order of date of receipt of application. Notification will be made by May 1, 1977.

Full-Time Student Admission

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

1. Apply for admission using forms supplied by the college.
2. Submit official transcripts of all high school work and all college work attempted.
3. Take the college admissions battery. Any one of the following test batteries will meet this requirement: American College Test (ACT), Scholastic Aptitude Test (SAT), and Comparative Guidance and Placement Test (CGP). If one 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 or CGP at Harper College. (Students who have completed 12 semester hours of "C" work or better, either at Harper or at another accredited institution, are exempt from this procedure unless it is an admission requirement for a specific program.) For information, contact the Office of Testing Services.
4. Forward personal medical history and physical examination form completed by your physician.
5. Pay a \$10.00 non-refundable application fee.

Part-Time Student Admission

Part-time students (11 semester hours or less) are required to:

1. Complete all sections of the application form.
2. Pay a \$10.00 non-refundable application fee.
3. Forward completed personal medical history form.

International Student Admission

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 \$53.68 per semester hour (subject to change without notice).

Before any action can be taken on their applications, international students who wish to become degree-seeking students at Harper College 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 are intending to begin their studies:

1. A completed application form with a non-refundable \$10.00 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, 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 426 (the twenty-fifth percentile) or above. Students who score below the fiftieth percentile may be restricted to a remedial program.
4. Forward a personal medical history and physical examination form, completed by a licensed United States physician, to the Admissions Office.
5. Affidavit of self-support.

6. 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).

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	\$14.00 per semester hour
Non-Resident Tuition (see Charge-Back)	\$35.28 per semester hour
Out-of-State Tuition	\$53.68 per semester hour
International Student Tuition	\$53.68 per semester hour
Senior Citizen Tuition	\$ 3.00 per semester hour

All tuition and fees are due and payable during registration unless arrangements are made at the Office of Placement and Student Aids or the Office of Admissions and Records.

A one-time application fee of \$10.00 is charged to each new student applying for admission. 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 \$12.00 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 non-credit (Continuing Education) courses or Harper classes taught off-campus (extension courses). However, students enrolled only in non-credit 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 \$56.00 per semester. This entitles the student to one private lesson per week. Major applied music students will pay \$112.00 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 \$10.00 includes the cost of the diploma (see: Graduation Requirements).

Laboratory and Music Fees

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

Late Registration Fee

A fee of \$5.00 is charged any student who registers after the close of the official registration period.

Program Change Fee

A fee of \$3.00 is charged for program changes following registration. The fee will be waived for changes made at the college's request.



CHARGE-BACK TUITION

Resident Students desiring to pursue a certificate or degree program not available at Harper College may apply for charge-back tuition if they attend another public community college in Illinois which offers that program.

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 Admissions.

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 should be made in the Office of the Registrar. Refunds will be made according to the following schedule:

	Per Cent of Refund
First week of classes*	80
Second week of classes	60
Third week of classes	40
Fourth week of classes	20
After fourth week	None

Courses not following the regular semester schedule will be prorated based on the length of the course.

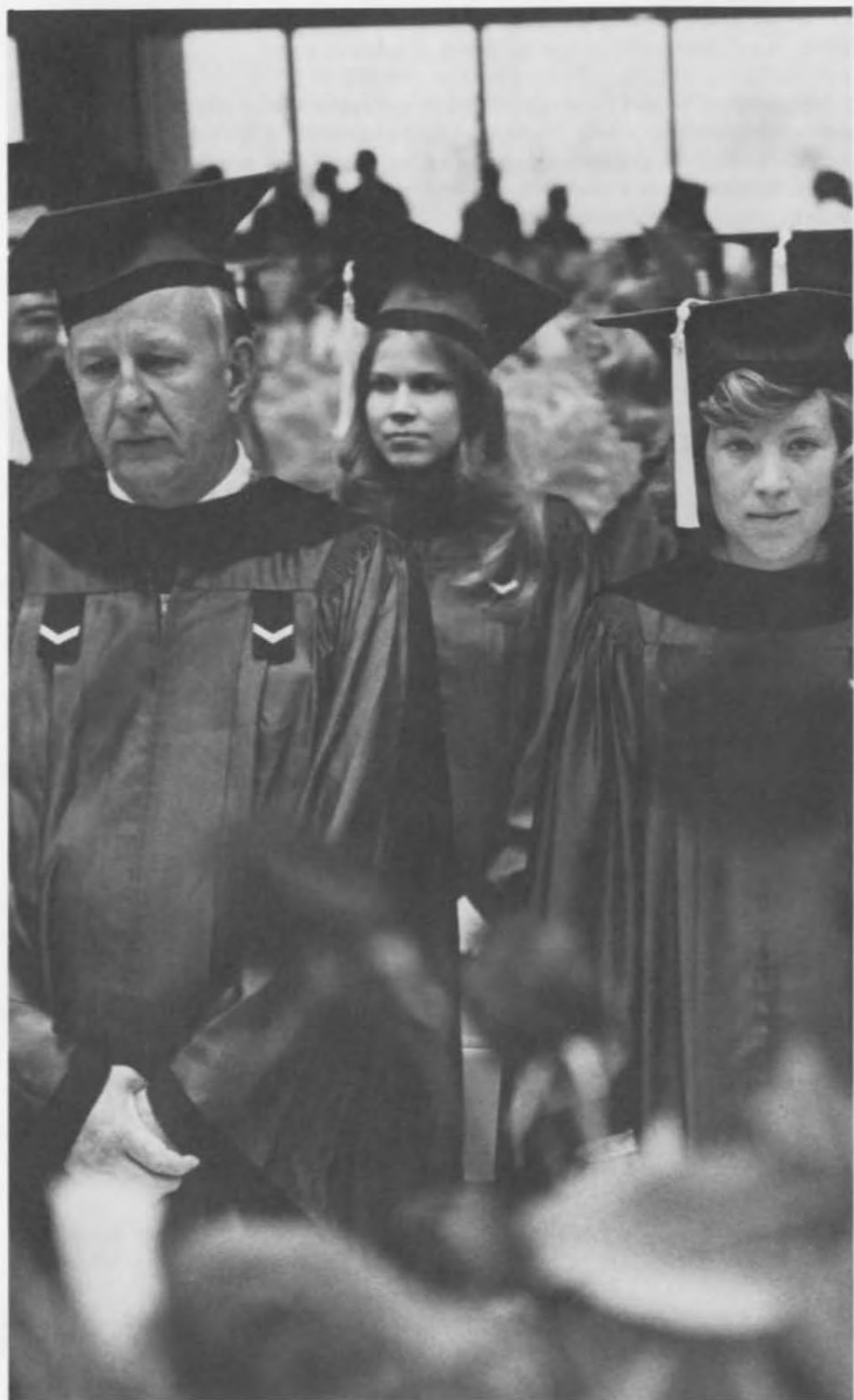
WITHDRAWALS

When a student wishes to withdraw from a class after regular registration, he must withdraw officially by petition approved by his counselor. The following guidelines determine grades for an official withdrawal:

1. Classes dropped prior to the beginning of the fourth week will not become a part of the student's permanent record.

*Terminates with the Friday ending the first full week of classes in accordance with the college calendar.

2. A "W" grade will be assigned to a class dropped after the beginning of the fourth week and prior to the sixteenth academic week.
3. A grade of "F" will be assigned to a class dropped after the beginning of the sixteenth academic week. If extenuating circumstances exist, students may petition for a "W" grade through the office of the vice president of academic affairs. Students not withdrawing officially through the Counseling Office are subject to an "F" grade.



ACADEMIC INFORMATION

Grading

Academic Honors

Standards for Academic Performance

Honors Program

Probation

Incomplete Grades

Auditing a Course

Transcripts

Transfer to a Senior Institution

Transfer of Credit to Harper College



GRADING

At midterm and 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. Midterm grades have no official standing and are given to provide students with an indication of academic progress. The official grade point average is computed only on the basis of final grades awarded at the end of each semester or summer 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
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

Students achieving a grade point average of 3.50 to 3.74 during any semester are placed on the Dean's Honor List.

Honors List

Students with a grade point average of 3.25 to 3.49 are given recognition on the Honors List.

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.

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.

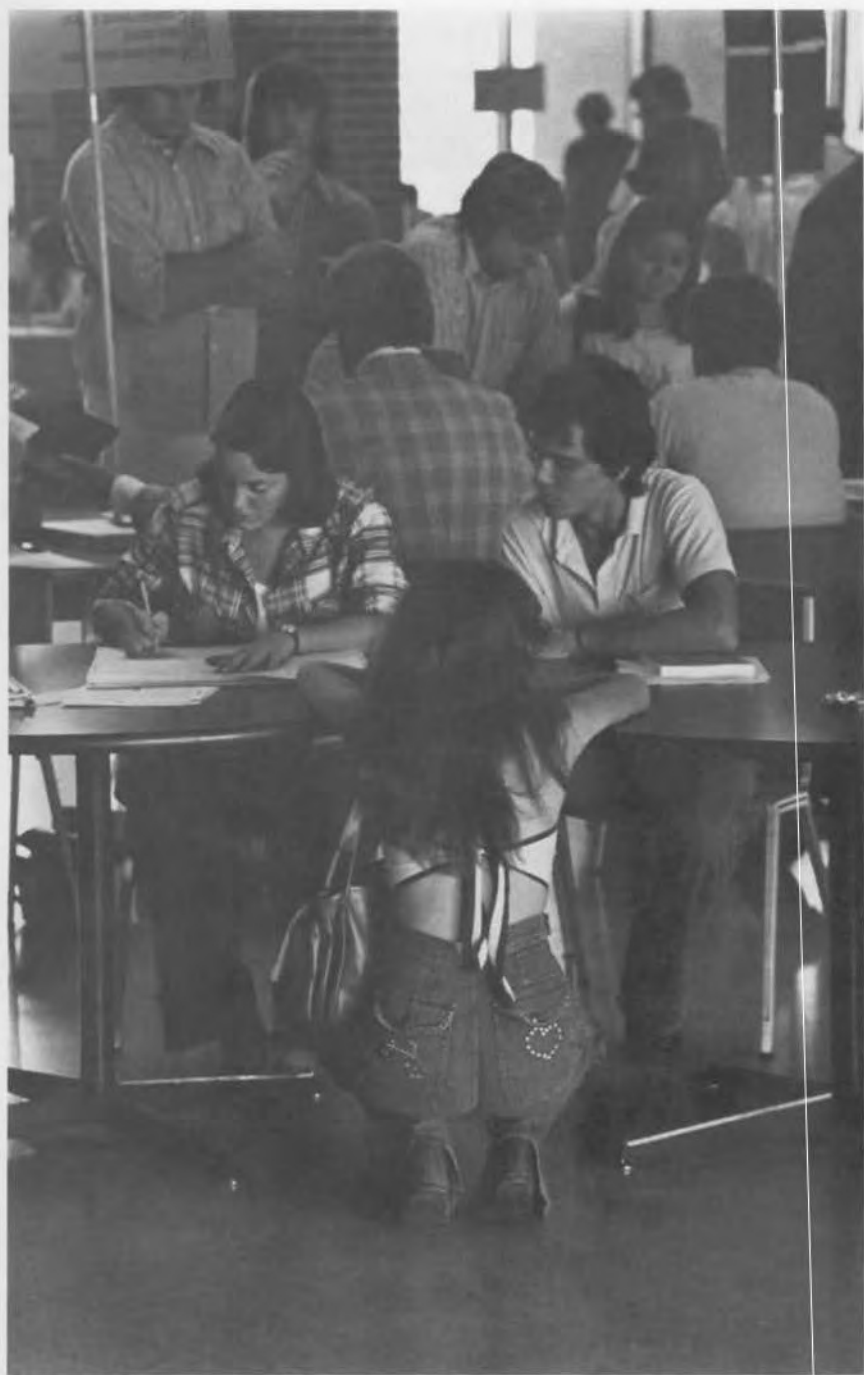
Students whose cumulative GPA remains unsatisfactory for more than one semester may be considered for dismissal.

Repeat Policy

Students who have received “Ds” or “Fs” will be allowed to repeat the 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 cumulative GPA.

Behavioral Contracting

Behavioral contracting is the development of an agreement between a counselor or teacher and a student on probation, 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

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 units, upon the recommendation of his counselor, as an added incentive to increase academic performance.

INCOMPLETE GRADES

A student may receive a grade of "X" for unfinished work in a course provided the work is incomplete because of circumstances deemed by the instructor to be unavoidable.

The unfinished work must be satisfactorily completed by the midterm of the following semester, or the instructor may assign a final grade of "F" or "N".

AUDITING A COURSE

A student desiring to audit a course without credit must, at the time of registration, receive approval from the instructor or division chairman and from the registrar. Students will be required to pay full tuition and fees, and will receive a grade of "H" for the course. An auditor cannot change his status to that of a credit student, nor can credit for the audited course be established at a later date.

TRANSCRIPTS

Official transcripts of a student's academic record will be issued and sent, upon request, to other educational institutions and prospective employers. Each student is entitled to ten transcripts without charge. A fee of \$1.00 is charged for each additional copy.

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 counselor 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. The student's work at each institution is evaluated independently if several institutions were attended.
3. 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 a grade of "C" or above.
4. 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.
5. 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 SERVICES

Counseling

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

Health Services

Hearing Impaired Program



COUNSELING

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

The Counseling Center maintains a collection of information on vocational and college selection, including a career library, a machine used for assisting the student in 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. A Career Corner in the Learning Resource Center contains information on a variety of careers and educational programs.

A decentralized counseling approach is used at Harper, with counselors housed within divisional offices. Counselors are thus readily accessible to students on an appointment basis. Counselors are also on duty in the counseling center for students who do not have an appointment. Hours are the regular college hours during the daytime and evening (except Friday night).

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 counselors. Other small group experiences are also offered from time to time.

ORIENTATION

Students are invited to participate in the college orientation program held each year during the months of August and January. General information about the college is presented, and students meet with their counselors for academic advisement.

VOCATIONAL AND ACADEMIC TESTING SERVICES

A comprehensive testing program is available to students without charge. Test results, through proper interpretations, can give valuable information needed to make 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 United States Armed Forces Institute (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 basic general education requirements in English, Humanities, Natural Sciences, or Social Sciences. A student who has completed the CLEP General Examinations should request that the scores be sent to the Office of Admissions. Information regarding the CLEP General Examinations may be obtained by requesting a copy of the CLEP "Bulletin of Information for Candidates" from the Harper Office of Testing Services. Criteria for granting credit have been determined by each academic division.

Harper College Proficiency Examination Program

A student who wishes to receive credit for a course by taking a Harper College proficiency examination must secure an application from the Office of Testing Services. 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 the United States Armed Forces Institute (USAFI) will receive credit and advanced placement 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

- Law Enforcement (Grants and Loans)
- College Work Study (on and off campus)
- National Direct Student Loans
- Nursing Loans and Scholarships
- Armed Forces Tuition Assistance
- Supplemental Educational Opportunity Grants
- Basic Educational Opportunity Grants
- Federally Insured Loans

State-Sponsored Aid Programs

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

Many private and public agencies are ready and able to assist the worthy college student. The Harper College board of trustees offers a series of tuition scholarships to graduates of high schools in the college district (512). Funds are also available through local organizations such as women's clubs, chambers of commerce, the American Association of University Women, business, and industry.

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 \$1,500 a 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 (about 25 percent) are receiving some form of assistance in programs administered by the Office of Placement and Career Development.

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. Basic Educational Opportunity Grant
 - C. Student Financial Statement

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

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

PLACEMENT AND CAREER DEVELOPMENT SERVICES

Harper College offers a full complement of Placement and Career Development services to students. These services include:

1. Assisting Services—namely, preparatory information on how to seek employment, file applications, write letters, resumes, prepare for interviews, and generally approach the task of becoming employable.
2. Information Services—career, occupational and employer data is collected, disseminated, and discussed with faculty and students so that better decisions on careers can be made in light of current needs and openings.
3. Record Maintenance Services—recommendations, referrals, transcripts, work experience and other supportive data is maintained and disseminated on student request.
4. Counseling and Testing Services—are provided in conjunction with the Harper Counseling staff and the Community Counseling Center.
5. Community and Alumni Services—are also provided with priority given to Harper students and recent graduates of degree or certificate programs.
6. Recruiting and on site visitation service.

The Placement and Career Development Office is also engaged in frequent wage salary surveys, follow-up studies, and contacts with employers, graduates, federal, state, and local governmental agencies in conjunction with the Harper Office of Planning and Development.

Questions concerning placement opportunities should be directed to the Office of Placement and Career Development.

VETERAN SERVICES

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

Eligible veterans under the Viet-Nam G.I. Bill receive a monthly educational allowance to attend school. Developmental 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 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 I 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 \$50 per month for a maximum of \$450) for individual tutoring.

Harper offers, to military in-service personnel, a Predischarged Education Program. PREP provides servicemen and women the developmental skills necessary for the pursuit of a college education.

Harper has been designated as a Servicemen'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.

An active Veterans' Organization at Harper provides social activities for its members and other students as well as sponsoring worthwhile projects on and off campus.

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 publication, *Point of View*; a closed circuit student radio station; speech activities; a student travel program; and a program for student leadership development.

A number of clubs and organizations are also active, and students are encouraged to begin other organizations within the established guidelines. Among the clubs recognized are: Association of Legal Students, Astronomy Club, Behavioral Science Club, Catholic Campus Ministry, Christian Science Organization, Collegiate Association of the Deaf, Food Service Executives Association, Future Secretaries Association, Harper's Bizarre, Intramural Sports Board, Dental Hygiene Association, Cheerleaders, Operating Room Technicians, Phi Theta Kappa, Physical Education Majors, Political Science Club, Pom Pon Squad, Sophomore Nurses Club, Seekers, Ski Club, and Vet's Club.

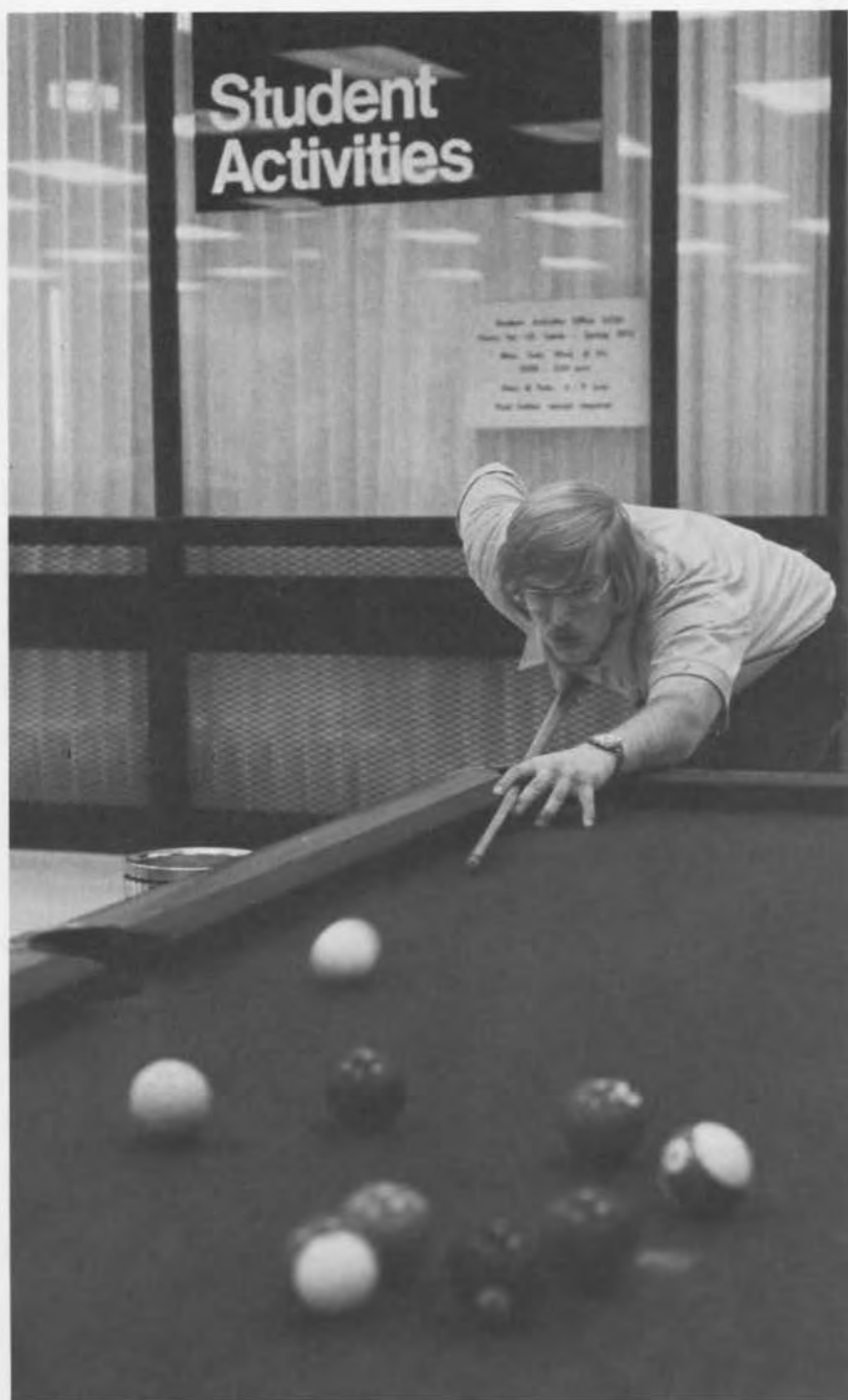
The college center is an integral part of the Harper activity program. It is the setting for lectures, concerts, informal discussions, exhibits, theater, meetings, conferences, and a variety of other activities. Facilities include food service areas, lounges, meeting rooms, game room, offices for student government, student publications, counseling, health services, job placement, and student financial aids.

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 Colleges 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, ice hockey, wrestling, women's gymnastics, track, tennis and baseball.

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 main cafeteria. Operating hours are as follows:

Monday through Thursday	7:30 a.m.-8:00 p.m.
Friday	7:30 a.m.-3:15 p.m.

Other facilities include a snack bar in the College Center operating Monday through Friday from 9:00 a.m. to 1:15 p.m., and a dining room operating Monday through Friday from 11:15 a.m. to 1:15 p.m. when classes are in session.

Food Service also does "on campus" catering for breakfasts, luncheons, dinners, and special events.

STUDENT SENATE

The Student Senate is the main vehicle through which students are involved in the decision-making process of the college. The Senate is asked to assume a major role in keeping the administration informed of student concerns, and forward appropriate recommendations for resolution of these concerns. Students are also appointed to college committees which make policies directly affecting them.

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 in the health service to see, diagnose, treat, and refer students as necessary. 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.

The college also recognizes that the health services program has a role in the health education of students. Symposiums and literature on various health-related topics are available to students as well as to community residents.

HEARING IMPAIRED PROGRAM

Supportive services are offered to those students with hearing impairments. The services, which include interpreters, notetakers, a teacher of the deaf, counselor, and the director of the program, allow the hearing impaired student to be integrated into the hearing classroom as his abilities permit. This philosophy enables the student to choose from the entire Harper curriculum in making his choice in his post-secondary educational experience.

The program provides a Preparatory Program which allows the students to determine their capability in the credit classroom. They also have the opportunity to enter a college program, pursue a four-year college degree, or take courses for personal information and enrichment.

Students receive guidance and counseling during their educational experiences regarding their career and personal goals. Tutoring sessions and individual and group discussions are also held as the need arises.

Hearing impaired students who wish to attend Harper College should contact the Director of the Hearing Impaired Program for further information about registration and the supportive services.



COMMUNITY EDUCATION AND SERVICES

Continuing Education

Learning Laboratory

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 non-credit courses. 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 non-credit extension courses are offered at industrial plants, high schools, libraries, apartment houses, 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.

Women's Programs

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 courses, 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.

Management and Supervisory Training Seminars

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representatives who serve as members of the Harper 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.

A list of seminars held at Harper during the past year includes such subjects as management by objectives, improving employee performance through coaching, the art and skill of delegation, motivation, efficient communication, team building, employee relations, executive stress, managing time, and the woman as a manager.

Northwest suburban business concerns can now arrange to have their employees attend the local management seminars at a fraction of what it would cost to attend these same seminars 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.

Senior Citizen Program

Senior citizens are a constantly growing segment of the northwest suburban population, and their needs are of vital concern to Harper College. The program is directed by a Senior Citizens' Coordinator with the assistance of a senior citizens' advisory committee composed of district residents who are either senior citizens or are working with older persons in some capacity.

Objectives of the program are to make Harper's existing services and programs more accessible to older persons, to structure a variety of 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 65 or older are eligible for reduced tuition rates for all courses and workshops offered by the college. Many programs are placed at locations in the community, including parks, churches and nursing homes, so that transportation problems are minimized. The services of the college, including the Counseling Center, Dental Hygiene Clinic and Learning Resource Center are all open to senior citizens. Older persons are welcome and encouraged to attend cultural events sponsored by the Student Activities office.

Community Leadership Training 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.

Conferences

The Community Service Office is the coordinating office for special conferences and workshop experiences for community groups, professional associations, and individuals sharing special interests. The facilities of the college provide well-equipped meeting rooms and food service for evening programs, full-day seminars and week-end conferences. The Community Services staff will assist local groups in planning, publicizing and operating conferences, or can independently implement and design any special learning experiences to meet identified needs in the community.

English as a Second Language

English as a Second Language and a course in language development are offered for adults who do not speak English as their first language. Each student is placed in a class according to ability in speaking English. The use of laboratory tapes allows students to progress at their own rate. Emphasis is on the spoken language, with an increase in reading and writing skills as the student progresses through the program. Funded by the State of Illinois, these classes are free to students. For further information, contact the Coordinator of Adult Basic Education.

Adult Basic Education

The Adult Basic Education Program is designed to provide academic instruction for persons whose skills in mathematics, English, and reading are below the twelfth grade level. Daytime and evening courses are offered in English as a Second Language (Language Development and Advanced Conversation and Composition), Developmental Reading, Reading for Comprehension (G.E.D.), Basic English Skills, English Grammar Review (G.E.D.), Basic Mathematics, Intermediate Mathematical Skills (G.E.D.), Consumer Education, and Citizenship Training.

Entering students are tested to determine proper placement and are given individualized instruction to meet their particular needs. Free tutoring services are provided for all Adult Basic Education students in each of the subject areas.

The Adult Basic Education Program is funded by the Illinois Office of Education and all instruction and services are free to the students. For further information, please contact the Coordinator of Adult Basic Education.

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.

LEARNING LABORATORY

Harper College has established a learning laboratory to assist students who encounter academic difficulty.

Students entering college with academic deficiencies may be referred to the learning laboratory. After completing a battery of tests and having an interview with a counselor, a program designed around the needs of the student would be recommended. This program could consist of any combination of the following courses presently offered through the learning laboratory and would be supplemental to other courses the student may choose to take:

CMN 097, Spelling Improvement; CMN 098, Vocabulary Development; CMN 099, Language Skills; RDG 099, Developmental Reading; RDG 104, Reading Acceleration; MTH 094, Arithmetic; MTH 095, Elementary Algebra; MTH 096, Geometry; ESL 098-099, English As A Second Language; PSY 099, Learning and Adjustment to College; PSY 110, Human Potential Seminar.

(Courses in the Learning Laboratory are offered through individualized instruction.)

Tutoring Services

As a part of the Learning Laboratory a "walk in" tutoring center has been developed and is available free of charge to any Harper student. During posted time periods, a student can come to the Learning Laboratory and receive academic assistance. Tutoring is available for most every subject offered by the college. Further information can be obtained from the Learning 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 contemporary society. These programs are scheduled regularly throughout the year.

OPEN TEST CENTER FOR CLEP

The College Level Examination Program (CLEP) tests sponsored by the College Entrance Examination Board are administered monthly 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.

**COMMUNITY COUNSELING CENTER —
A SERVICE FOR NON-HARPER CLIENTS**

Counseling and testing services are available, on a fee basis, to non-Harper clients regardless of age. A student finishing high school (or recently out of high school) could become a client because of problems involving the choice of an appropriate career or occupational goal, finding a suitable college or other educational institution, obtaining information about different kinds of work, or diagnosing academic difficulties. Another client may have questions regarding the desirability of returning to school, the suitability of some specialized career training program, or the wisdom of changing to another occupation after some years of experience in his present work. In addition to vocational and academic counseling and testing, personal, family, and marriage counseling services are also available. For information, contact the Community Counseling Center.



PROGRAMS OF STUDY

Graduation Requirements

General Education Requirements

General Studies Certificate Requirements

Associate in Liberal Studies Program

Career Programs

Transfer Programs

Associate Degree Curricula

Certificate Program Curricula



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 this 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.
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 and associate in liberal studies degrees.
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 on 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, associate in science, and associate in liberal studies.
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 group requirements.
7. A student must apply for graduation and pay the graduation fee of \$10.00. Students are encouraged to complete their petition for graduation when registering for the semester in which his graduation requirements will be fulfilled. 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.
8. In addition to the above requirements, students enrolled in specific career programs will fulfill the requirements outlined in the programs. Any substitution of courses will require written approval of the vice president of academic affairs.

GENERAL EDUCATION REQUIREMENTS

	Associate in Arts	Associate in Science	Associate in Applied Science	Associate in Liberal Studies ¹
I. COMMUNICATION SKILLS ENG 101, ENG 102	6 hours	6 hours	6 hours ²	
II. SOCIAL SCIENCES anthropology, economics, geography, history, political science, psych- ology, sociology	6 hours	6 hours	6 hours	
III. SCIENCE OR MATHEMATICS biology, chemistry, engineering ³ , geology, mathematics, physical science, physics	8 hours	20 hours	6 hours ⁴	
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: communications, social sciences, science, or mathematics, humanities	12 hours			
VI. Any 60 hours of college courses at the 100 level or above, including a minimum of nine hours in Liberal Studies Seminars from at least three divisions				60 hours
TOTAL	38 hours	38 hours	21 hours	60 hours

¹Contractual agreement required for A.L.S. degree.

²The following courses may be used to satisfy this requirement if a part of the approved career program: ENG 099, ENG 103, ENG 130, JNM 130, JNM 131, JNM 133.

³Courses in engineering may apply to the general education requirements in Group III in the Associate in Science and Associate in Applied Science degrees.

⁴Students majoring in a career program may count courses in their major toward fulfillment of this requirement.

GENERAL STUDIES CERTIFICATE REQUIREMENTS

Students enrolled in Continuing Education courses 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 courses.

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. Course/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 Dean of Continuing Education. Anyone who registers for a Continuing Education course automatically enters the Certificate in General Studies program.

Check the current college course schedule for a list of those courses 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.

ASSOCIATE IN LIBERAL STUDIES PROGRAM

The Associate in Liberal Studies (ALS Degree Program) is a major attempt by Harper College to provide a non-traditional and highly flexible alternative to existing degree programs.

The nature of the ALS program recognizes that learning can take place anywhere and need not be restricted to college classrooms. The major emphasis of the program is to allow the student, with the assistance of a faculty advisor, to develop a program of study that is unique for him. This program is free from traditional requirements and may consist of any valid learning experience on or off campus that applies to the student's goals. Credit and advanced standing can be obtained through an evaluation of life and work experience.

To receive an Associate in Liberal Studies degree, a student must complete all of the requirements and learning experiences identified on his learning contract. This contract must contain nine (9) hours of liberal studies seminar credit to be taken from three different divisions of the college. In addition, the contract must contain the equivalent of 60 credit hours of work with a minimum 2.0 grade point average.

CAREER PROGRAMS

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

Accounting Aide	Legal Technology
Accounting Clerk ¹	Library Technical Assistant ⁴
Accounting–Payroll ¹	Machinist ¹
Architectural Technology	Marketing Mid-Management:
Baking ¹	General Marketing option ²
Banking, Finance and Credit	Supermarket Management option
Brokers License Certification ¹	Material Management
Child Development	Mechanical Drafting ¹
Clerical ¹	Mechanical Engineering Technology:
Clerk-Typist ¹	Mechanical Engineering option
Cooking ¹	Production Engineering option
Criminal Justice	Medical Laboratory Technician ²
Data Processing–Clerical ¹	Medical Office Assistant ²
Data Processing–Computer Operator ¹	Medical Transcriptionist ¹
Data Processing Technology	Municipal and Governmental
Dental Hygiene ²	Management
Dental Laboratory Technology ³	Numerical Control Technician ¹
Dietetic Technician ²	Nursing
Electronics Technology	Operating Room Technician ¹
Executive Secretarial Development	Park and Grounds Operation
Fashion Design:	Management
Design	Production Welding ¹
Merchandising option ²	Real Estate
Fire Science Technology	Refrigeration and Air Conditioning
Food Service Management	Refrigeration Service ¹
General Office Assistant ¹	Residential Comfort Systems ¹
Heating Service ¹	Respiratory Care ³
Industrial and Retail Security ¹	Retail Merchandising ¹
Industrial Sales Management and	Stenographer ¹
Development ¹	Supervisory and Administrative
Interior Design	Management
Journalism ²	Teacher Aide ¹
Legal Secretary	X-Ray Technology ³

¹Certificate program only.

²Associate degree program only.

³This program is offered by Triton College through cooperative agreement. Contact the Admissions Office for details.

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

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. A student planning to transfer should therefore study the graduation requirements listed in the catalog of the senior institution of his choice and discuss them with a counselor at Harper College. A student planning to pursue a four-year baccalaureate program, but not sure of his area of specialization, is 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.

Harper College offers the first two years of most baccalaureate college programs. For example, students interested in the following areas of study can spend their first two years at Harper College qualifying for an associate degree and then transfer to a four-year institution without loss of time or credit.

Business (Business Administration)	Electrical Engineering	Optometry
Accounting	Industrial Engineering	Pharmacy
	Mechanical Engineering	Veterinary Medicine
Business Information Systems (Data Processing)	Humanities and Fine Arts (Liberal Arts)	Science and Mathematics
Finance	Art	Biology
Management	English	Botany
Marketing	Foreign Languages	Chemistry
	Journalism	Geology
Education (Liberal Arts)	Law	Mathematics
Business Education	Liberal Arts	Physics
Education	Literature	Zoology
Library Science	Music	Social Sciences
Personnel and Guidance	Philosophy	(Liberal Arts)
Physical Education	Speech	Anthropology
Special Education	Theology	Economics
Engineering	Medicine (Liberal Arts)	Geography
Architecture	Dentistry	History
Chemical Engineering	Medicine	Political Science
Civil Engineering	Nursing	Psychology
		Social Work
		Sociology

ASSOCIATE DEGREE CURRICULA

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

English ¹	3
Mathematics ²	3
BUS 101 Accounting I	3
BUS 111 Introduction to Business Organization	3
SEC 131 Business Machines	<u>2</u>
	14

SECOND SEMESTER

ENG 130 Business Writing I ¹	3
SPE 101 Fundamentals of Speech Communication	3
DPR 101 Introduction to Data Processing	3
BUS 101 Accounting II	3
ECO 200 Introduction to Economics	<u>3</u>
	15

Second Year

FIRST SEMESTER

BUS 155 Tax and Payroll Accounting	4
BUS 211 Business Law I	3
BUS 201 Intermediate Accounting I	3
PSY 101 Introduction to Psychology	3
Humanities elective	<u>3</u>
	16

SECOND SEMESTER

PSY 145 Psychology in Business and Industry	3
BUS 202 Intermediate Accounting II	3
BUS 203 Cost Accounting	3
BUS 270 Principles of Management	3
BUS 218 Introduction to Finance	<u>3</u>
	15

AIR CONDITIONING

See: Refrigeration and Air Conditioning

¹Students may elect ENG 099, ENG 101, or ENG 102, depending on their test scores and advice of their Business Division counselor. Business Writing may be taken as the second English course.

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

ARCHITECTURAL DESIGN

A student completing the following program should be eligible, on a subject matter basis, for junior standing in most Illinois schools of architecture to which he transfers. The student would receive credit toward graduation in the subject matter areas shown. It should be noted that many schools of architecture require five or even six years of study for the degree of bachelor of architecture. The student should realize that three or even four years of study in addition to the Harper program will be required.

During his first semester at Harper, the student is advised to consult the school of architecture at the institution to which he desires to transfer. This will assure minimum problems in the transfer of credits.

The minimum requirements for enrollment in the Architectural Design program are three years of high school mathematics consisting of algebra, geometry, and trigonometry. In addition, a year of high school physics and above average class standing are preferred.

First Year

FIRST SEMESTER	SECOND SEMESTER
ARC 101 Basic Design I 3	ARC 102 Basic Design II 3
ARC 205 Architectural History I 3	ARC 206 Architectural History II 3
ART 110 Drawing Studio I 3	ART 111 Drawing Studio II 3
ENG 101 Composition 3	ENG 102 Composition 3
MTH 105 Analytic Geometry 4	MTH 201 Calculus I 5
16	17

Second Year

FIRST SEMESTER	SECOND SEMESTER
ARC 201 Design I 4	ARC 202 Design II 4
ATE 105 Computer Mathematics for Architectural Technologies I 3	PHY 122 Introductory Physics II 5
PHY 121 Introductory Physics I ... 5	SOC 205 Social Problems 3
EGR 150 Analytical Mechanics 3	Elective ¹ 3
SOC 101 Introduction to Sociology 3	15
18	

¹ATE 106, EGR 212, Social Science or Humanities course.

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a two-year technical career program leading to an associate in applied science degree. Curriculum emphasis is on architecture, but courses in communication skills, 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 to 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	<u>3</u>
	17

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	<u>3</u>
	17

Second Year

FIRST SEMESTER

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

SECOND SEMESTER

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

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

²ENG 099, ENG 103 or ENG 130 may be used, under certain conditions, to satisfy this requirement.

³Technical elective selected from the following: ATE 205, ATE 206, EGR 150, EGR 215, MTH 101, MTH 102, MTH 103, MTH 104, MTH 105, MTH 201, MTH 202, NMC 214, RAC 101.

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 major students with permission of the instructor. Courses without prerequisites are open for enrollment to all students.

First Year

FIRST SEMESTER	SECOND SEMESTER
ART 100 Art Seminar ¹ 1	ART 100 Art Seminar ¹ 1
ART 105 Introduction to Arts 3	ART 111 Drawing Studio II 3
ART 110 Drawing Studio I 3	ART 122 Design Studio II 3
ART 121 Design Studio I 3	FNA 111 History of Art I 3
Mathematics or Science elective ² 3-4	Mathematics or Science elective ² 3-4
ENG 101 Composition 3	ENG 102 Composition 3
16-17	16-17

Second Year

FIRST SEMESTER	SECOND SEMESTER
FNA 112 History of Art II 3	FNA 112 History of Art III 3
Studio electives 6-8	Studio electives 9-11
Social Science elective 3	Social Science elective 3
Elective ³ 3	15-17
15-17	

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.
³First semester elective: Communication, Mathematics or Social Science.



BANKING, FINANCE AND CREDIT

Banking, Finance and Credit is a two-year career program leading to an associate in applied science degree. The program is designed for those currently employed or seeking employment in banks, savings and loan associations, or in other finance-oriented enterprises. Emphasis in the curriculum is given to developing competencies required for operating and middle level management positions in the finance field.

First Year

FIRST SEMESTER

BFC 101 Principles of Bank Operations	3
BUS 111 Introduction to Business Organization	3
BUS 150 Business Math	3
ENG 101 Composition	3
Approved elective¹	3
	15

SECOND SEMESTER

BUS 101 Accounting I	3
BUS 211 Business Law I	3
ECO 115 Consumer Economics ...	3
SPE 101 Fundamentals of Speech Communication	3
SPE 115 Interviewing	1
Approved elective¹	3
	16

Second Year

FIRST SEMESTER

BFC 217 Uniform Commercial Code	3
BUS 102 Accounting II	3
ECO 200 Introduction to Economics	3
ENG 130 Business Writing I	3
Approved Elective¹	3
	15

SECOND SEMESTER

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
Approved elective¹	3
	15

¹Approved electives (to be selected with approval of program coordinator):

BFC 102 Commercial Law	3	BUS 270 Principles of Management	3
BFC 117 Bank Public Relations and Marketing	3	RES 120 Principles of Real Estate	2
BFC 211 Bank Accounting Systems	3	RES 122 Real Estate Appraisal I	3
BFC 212 Home Mortgage Lending	3	RES 123 Real Estate Law	3
BFC 213 Trust Functions and Services	3	RES 124 Real Estate Finance	3
BFC 216 Bank Auditing and Internal Control	3	RES 232 Real Estate Appraisal II	3
BFC 218 Credit Administration	3	DPR 101 Introduction to Data Processing	3
BFC 219 Consumer Credit	3	LTE 200 Probate	3
BFC 220 Bank Management	3	LTE 202 Estate Planning	3
BFC 229 Commercial Lending	3	LTE 203 Income Taxation I	3
ATE 209 Building Construction Principles for Realtors	3	LTE 204 Income Taxation II	3
BUS 160 Principles of Supervision	3	PSY 101 Introduction to Psychology	3
BUS 212 Business Law II	3	SEC 122 Intermediate Typing	2
BUS 218 Introduction to Finance	3	SEC 126 Intermediate Shorthand	3
BUS 225 Applied General Statistics	3	SEC 131 Business Machines	2
BUS 265 Personnel Management	3	SEC 236 Secretarial Procedures	3
		ECO 201 Principles of Economics I	3
		ECO 202 Principles of Economics II	3

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	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
BUS 111 Introduction to Business Organization 3	BUS 101 Accounting I 3
Science elective 3-4	Science elective 3-4
Mathematics elective ¹ 3	DPR 101 Introduction to Data Processing 3
SPE 101 Fundamentals of Speech Communication <u>3</u>	Mathematics elective ¹ <u>3-4</u>
15-16	15-17

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 102 Accounting II 3	ECO 202 Principles of Economics II 3
BUS 211 Business Law I 3	BUS 203 Introductory Cost Accounting 3
ECO 201 Principles of Economics I 3	BUS 225 Applied General Statistics 3
Humanities elective 3	BUS 212 Business Law II or Social Science elective ² 3
Social Science elective <u>3</u>	Humanities elective <u>3</u>
15	15

¹Mathematics elective to be selected from MTH 103, MTH 124 or MTH 134.
²BUS 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 educate the student in child development and to prepare the student for work in preschool centers, day care centers, public school classrooms as aides, and centers for the handicapped. The Child Development program fulfills Department of Children and Family Services requirements for child care workers.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
CCA 101 Introduction to Child Development Careers 3	SOC 101 Introduction to Sociology 3
CCA 102 Child Development I ... 3	EDU 201 Introduction to Education 3
PSY 101 Introduction to Psychology 3	CCA 103 Child Development II ... 3
Humanities elective <u>3</u>	Elective ¹ <u>3</u>
15	15

Second Year

FIRST SEMESTER	SECOND SEMESTER
SOC 215 Group Dynamics 3	PED 201 First Aid 2
EDU 211 Educational Psychology 3	CCA 210 Creative Activities for Young Children 3
CCA 209 Language Arts for the Young Child 3	CCA 219 Psychology of Exceptional Children 3
CCA 214 Principles of Preschool Education ² or	CCA 220 Child Development Practicum Internship I 6
CCA 218 Assisting the Severely Handicapped 4	Elective ¹ <u>3</u>
CCA 215 Children's Laboratory ... <u>2</u>	17
15	

¹Electives may include any course with CCA prefix. Electives may also include courses useful in child development such as art, music, speech, physical education, etc.

²Preschool teachers will take CCA 214. Workers with exceptional children will take CCA 218. Teacher Aides in regular classrooms will take CCA 260 and CCA 261. (see: Teacher Aide certificate program.)

CRIMINAL JUSTICE

Criminal Justice is a two-year career program leading to an associate in applied science degree. It is designed to prepare men and women for careers in criminal justice service at the local, state and federal level, including positions as municipal or state policeman or security officer, technical opportunities in state or federal agencies and work in crime prevention, probation, corrections, courts, records and communication, often with special assignment to detective and vice units in local police work. Special options are available for those students who wish to concentrate on courses in Industrial and Retail Security. Also provided are options for students planning 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.

Harper College participates in the federally-funded Law Enforcement Education Program (LEEP) and has grant and loan funds available to help finance the education of criminal justice students.

First Year

FIRST SEMESTER	SECOND SEMESTER
English ¹ 3	English ¹ 3
SOC 101 Introduction to Sociology 3	SOC 205 Social Problems 3
PSY 101 Introduction to Psychology 3	PSY 217 Adolescent Psychology 3
CRJ 101 Introduction to Law Enforcement and Criminal Justice 3	PSC 201 Contemporary American Politics 3
CRJ elective ² <u>3</u>	CRJ 102 Police Administration and Organization <u>3</u>
15	15

Second Year

FIRST SEMESTER	SECOND SEMESTER
SPE 101 Fundamentals of Speech 3	CRJ 202 Criminal Law II 3
CRJ 201 Criminal Law I 3	CRJ 211 Criminal Investigation ... 3
CRJ 210 Introduction to Criminology 3	CRJ elective ² 3
CRJ elective ² 3	Humanities elective 3
CRJ 104 Introduction to Corrections <u>3</u>	CRJ 105 Criminal Courts of the U.S. <u>3</u>
15	15

(See footnotes on the next page.)

*Students will take ENG 099, ENG 101, ENG 102, or ENG 103 depending upon their test scores and the advice of the coordinator. Business Writing may be taken as the second English course.

*CRJ electives must be taken from the following Criminal Justice offerings:

CRJ 110 Police Operations	3	CRJ 254 Interviewing and Case Preparation	3
CRJ 116 Introduction to Forensics	3	Industrial and Retail Security options:	
CRJ 203 Law and Society	3	CRJ 250 Industrial Security Administration	3
CRJ 205 Juvenile Delinquency	3	CRJ 252 Industrial Fire Protection, Disaster Control	3
CRJ 207 Vice and Drug Control	3	CRJ 253 Safety Management	3
CRJ 208 Police Supervision	3	CRJ 299 Criminal Justice Practicum	3
CRJ 209 Police Public-Community Relations	3		
CRJ 212 Traffic Administration	3		
CRJ 213 Crime Prevention	3		
CRJ 215 Probation and Parole	3		

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 and unit record equipment operators.

First Year

FIRST SEMESTER

DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	2
ENG 101 Composition	3
Social Science elective	3
MTH 102 Intermediate Algebra	<u>3</u>
	14

SECOND SEMESTER

DPR 108 Computer Programming-COBOL	5
DPR 203 Systems Analysis and Design I	3
BUS 101 Accounting I	3
BUS 111 Introduction to Business Organization	3
ENG 103 Report Writing	<u>3</u>
	17

Second Year

FIRST SEMESTER

DPR 110 Computer Programming- Basic Assembler	5
BUS 102 Accounting II	3
DPR 204 Advanced Systems Analysis and Design	3
Humanities elective	<u>3</u>
	14

SECOND SEMESTER

ECO 200 Introduction to Economics	3
DPR 208 Computer Programming- Advanced COBOL or	
DPR 210 Computer Programming- Advanced Assembler	4
DPR 202 Programming Systems ...	3
DPR 230 Internship and/or Case Study	3
Data Processing elective ¹	<u>3-4</u>
	16-17

¹Electives: BUS 203, DPR 140, DPR 142, DPR 150, DPR 208, DPR 210, or DPR 250.



DENTAL HYGIENE

Dental Hygiene is a two-year career program, including one summer session, leading to an associate in science degree in dental hygiene. The program is designed to train the hygienist and educate the person. Pre-admission requirements include high school graduation with a minimum of high school mathematics, chemistry, and biological science. Candidates must score satisfactorily on the National Dental Hygiene aptitude test and have a personal interview with a member of the dental hygiene faculty. Graduates, after passing state board examinations and achieving licensure, are qualified for private practice in dental offices, hospitals, health agencies, government, and the armed services.

First Year

FIRST SEMESTER

ENG 101 Composition	3
BIO 160 Human Anatomy	4
CHM 100 Introductory Chemistry	4
DHY 161 Dental Anatomy	3
DHY 100 Pre-Clinic and Orientation	<u>2</u>
	16

SECOND SEMESTER

DHY 101 Pre-Clinical Dental Hygiene	2
DHY 111 Dental Radiology	3
DHY 130 Nutrition	1
DHY 220 Community Dentistry I ..	3
BIO 161 Human Physiology	4
BIO 180 Histology and Embryology	<u>3</u>
	16

Summer Session

BIO 130 Microbiology	4
DHY 150 Clinical Dental Hygiene and Radiology I	2
SOC 101 Introduction to Sociology	<u>3</u>
	9

Second Year

FIRST SEMESTER

BIO 190 General Pathology	3
DHY 221 Community Dentistry II	3
DHY 230 Periodontology	2
DHY 240 Pharmacology and Anaesthesia	1
DHY 250 Clinical Dental Hygiene and Radiology II	4
DHY 280 Dental Materials and Dental Assisting	<u>3</u>
	16

SECOND SEMESTER

DHY 201 Seminar	2
DHY 251 Clinical Dental Hygiene and Radiology III	4
DHY 291 Dental Assisting	2
PSY 101 Introduction to Psychology	3
SPE 101 Fundamentals of Speech Communication	3
Humanities elective	<u>3</u>
	17

DIETETIC TECHNICIAN

Dietetic Technician is a two-year career program leading to an associate degree in applied science. This program prepares a student to serve as a nutritional care technician working as a first assistant to a clinical dietitian in a hospital or health care agency.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	PSY 101 Introduction to
BIO 100 Human Biology I 4	Psychology 3
DIT 101 Basic Nutrition 3	BIO 102 Human Biology II 3
DIT 100 Dietetic Practicum I 1	DIT 102 Advanced Nutrition 3
FSM 111 Introduction to Food	DIT 110 Principles of Food
Service 2	Preparation 3
FSM 114 Food Standards and	DIT 150 Dietetic Practicum II 3
Sanitation 3	15
16	

Second Year

FIRST SEMESTER	SECOND SEMESTER
SPE 101 Fundamentals of	ENG 103 Report Writing 3
Speech Communication 3	Humanities elective 3
SOC 101 Introduction to	PSY 145 Psychology in Business
Sociology 3	and Industry
DIT 200 Dietetic Practicum III 4	or
DIT 201 Nutrition Care 3	SOC 215 Group Dynamics 3
FSM 212 Food Service	DIT 202 Nutrition Care
Supervision 4	Seminar 2
17	DIT 203 Dietetic Seminar 1
	DIT 250 Dietetic Practicum IV 4
	16



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	SECOND SEMESTER
ELT 110 Introductory Electronics 2	ELT 111 Electronics I 3
ELT 101 Circuits I 4	ELT 102 Circuits II 4
MTH 106 Mathematics I 5	MTH 107 Mathematics II 5
ELT 105 Electro-Mechanical Drafting 3	ELT 210 Computer Programming 3
ENG 101 Composition 3	Humanities elective ¹ 3
17	18

Second Year

FIRST SEMESTER	SECOND SEMESTER
ELT 203 Electronics II, Pulse 4	ELT 204 Electronics III, Advanced Electronics 4
ELT 103 Circuits III, Networks 4	ELT elective ² 4
MTH 206 Mathematics III 3	Social Science elective ³ 3
PHY 101 Technical Physics I 4	ENG 103 Report Writing 3
Social Science elective ³ 3	PHY 102 Technical Physics II 4
18	18

(See footnotes on the next page.)

*Any three credit hour course in the Humanities area will meet this requirement.

*Technical Electives:

ELT 205 Electronic Instrumentation	4	ELT 211 Analog Simulation I	4
ELT 206 Electronic Computers	4	ELT 212 Analog Simulation II	4
ELT 207 UHF Communication and Reception	4	ELT 215 Electrical Controls and Motors	4

Courses may not be taken out of sequence without the consent of the instructor.

*The Social Science requirement can be completed by taking 6 credit hours from the following courses:

ANT 201 General Anthropology	3	HST 141 History of Western Civilization to 1815	4
ECO 201 Principles of Economics	3	PSC 201 American Government	3
GEG 101 World Geography	3	PSY 101 Introduction to Psychology	3
HST 111 The American Experience to 1877	3	PSY 145 Psychology in Business and Industry	3
HST 112 The American Experience since 1877	3	SOC 101 Introduction to Sociology	3

ENGINEERING

A student completing the following engineering transfer program at Harper College would be eligible, on a subject matter basis, for junior standing in any engineering school in Illinois to which he transfers. The student would receive credit toward graduation in these subject matter areas and would be expected to complete graduation requirements within two-and-one-half additional years of study. A large number of students enrolling in engineering schools throughout the country as freshmen commonly take four-and-one-half years to complete the requirements for a degree. Thus the transfer student completing this program is not placed at any comparative disadvantage.

If a student starts his study at Harper College, he is encouraged to complete two years of study, preferably completing all courses outlined in this typical pre-engineering program, before seeking transfer to an Illinois engineering school. In certain curricula there are courses at the sophomore level which are prerequisite for further studies. Prerequisites required for junior standing may be offered during a summer period at the four-year institution, or special permission may be given to enroll simultaneously in two courses not ordinarily taken concurrently.

First Year

FIRST SEMESTER

EGR 100 Introduction to Engineering and Technology ...	1
ENG 101 Composition	3
CHM 121 General Chemistry I ¹ ...	4
EGR 120 Engineering Graphics I	3
MTH 105 Analytic Geometry	4
Social Science elective	3
	<u>18</u>

SECOND SEMESTER

ENG 102 Composition	3
CHM 122 General Chemistry II ¹ ..	4
EGR 121 Engineering Graphics II ..	3
MTH 201 Calculus I	5
EGR 150 Analytical Mechanics (Statics)	<u>3</u>
	18

Second Year

FIRST SEMESTER

Social Science elective	3
MTH 202 Calculus II	5
PHY 201 General Physics I	4
Humanities elective	<u>3</u>
	15

SECOND SEMESTER

MTH 212 Differential Equations and Orthogonal Functions	3
PHY 202 General Physics II	4
EGR 211 Analytical Mechanics (Dynamics)	3
Humanities elective	3
Technical elective ²	<u>3</u>
	16

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

²Technical elective selected from the following: EGR 212, EGR 215, EGR 216, MTH 165, MTH 203, MTH 208, MTH 215, and PHY 203.

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	SECOND SEMESTER
ENG 101 Composition 3	ENG 130 Business Writing I 3
SEC 121 Elementary Typing ¹ (2) or	SEC 126 Intermediate
SEC 099 Typing Review ¹ (1) 1-2	Shorthand ^{1,2} 3
BUS 111 Introduction to	SEC 122 Intermediate
Business Organization 3	Typing ¹ 2
SEC 131 Business Machines 2	SEC 132 Office Practice 2
Mathematics elective ³ 3	PSY 101 Introduction to
SEC 125 Elementary	Psychology 3
Shorthand ^{1,2} (4) or	SEC 236 Secretarial
SEC 140 Elementary Machine	Procedures ⁴ <u>3</u>
Shorthand ^{1,2} (4) or	16
SEC 098 Review	
Shorthand ^{1,2} (2) <u>2-4</u>	
14-17	

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 101 Accounting I or	BUS 211 Business Law I 3
BUS 099 Business	ECO 200 Introduction to
Recordkeeping 3	Economics 3
SEC 221 Advanced Typing ¹ 2	Humanities elective 3
SEC 225 Dictation and	DPR 101 Introduction to
Transcription ^{1,2} 3	Data Processing 3
SPE 101 Fundamentals of Speech	SEC 238 Secretarial Seminar
Communication 3	and Internship II ⁵ <u>3</u>
SEC 237 Secretarial Seminar	15
and Internship I ⁵ <u>3</u>	
14	

(See footnotes on the next page.)

¹Placement 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 (see Course Description).

²Students will take ENG 101 concurrently with their first shorthand course.

³While students may take any mathematics course offered depending upon their test scores and the advice of their counselor, BUS 150 is recommended.

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.

Students interested in business related careers in fashion such as fashion merchandising, buying promotion, advertising, retailing, or window display, may elect the Fashion Merchandising option available in the sophomore year.

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

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 109 Micro Environmental Design I	2
English ¹	3
Social Science elective	3
	<u>17</u>

SECOND SEMESTER

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 110 Micro Environmental Design II	2
English ¹	<u>3</u>
	16

Second Year

FIRST SEMESTER (Design)

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
BUS 106 Introduction to Merchandising of Furnishings and Soft Goods	2
Social Science elective	3
	<u>16</u>

FIRST SEMESTER (Merchandising Option)

FAS 229 Promotion of Fashion	3
FAS 223 Fashion Seminar and Internship ²	3
BUS 106 Introduction to Merchandising of Furnishings and Softline Goods ³	2
BUS 140 Salesmanship ³	3
Humanities elective ⁴	3
	<u>14</u>

Second Year

SECOND SEMESTER (Design)

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 Design Communication ..	2
Humanities elective ⁴	3
	<u>16</u>

SECOND SEMESTER (Merchandising Option)

FAS 230 Contemporary Living	3
FAS 240 Communication	3
BUS 250 Retailing	3
BUS 251 Retail Merchandise Management	3
Social Science elective ⁵	3
	<u>15</u>

¹Students may elect ENG 099, ENG 101 or ENG 102, depending on their test scores and advice of counselor.

²FAS 233 may be taken either fall or spring, depending on the availability of internship stations as determined by the coordinator. Scheduling of the electives may be adjusted accordingly.

³Special sections of these courses may be set aside for fashion students provided that sufficient numbers of students register for the courses.

⁴Recommended elective: ART 105.

⁵Recommended electives are HST 210, PSY 101, or SOC 101.

FIRE SCIENCE TECHNOLOGY

The Fire Science Technology career 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. The student enrolling in Fire Science Technology will have preparational options available for the associate in applied science degree, associate in arts degree, or a certificate program. The certificate option will be identified by the educational and occupational needs of the student.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 103 Report Writing 3
PSY 101 Introduction to Psychology 3	FIS 101 Municipal Fire Administration I 3
Mathematics elective ¹ 3	FIS 122 Fire Inspection Principles 3
FIS 132 Hazardous Materials I 3	FIS 133 Hazardous Materials II 3
FIS 112 Fire Alarm and Extinguishing Systems <u>3</u>	SPE 101 Fundamentals of Speech Communication <u>3</u>
15	15

Second Year

FIRST SEMESTER	SECOND SEMESTER
Social Science elective ² 3	FIS 245 Fire Causes and Investigation 3
CHM 100 Introductory Chemistry ³ 4	FIS 252 Automatic Sprinkler Systems 3
FIS 201 Municipal Fire Administration II 3	FIS 262 Water Supply Analysis 3
FIS 222 Fire Inspection Applications 3	Physical Science elective ² 3
FIS 242 Fire Hydraulics <u>3</u>	Humanities elective ² <u>3</u>
16	15

¹Students may elect any mathematics course offered depending upon their test scores and advice of their vocational counselor; however, only MTH 095 or higher will satisfy this requirement.

²Electives must be selected upon the advice of counselors and program coordinator.

³If the student fulfills the prerequisites for CHM 121, he may take it in place of CHM 100.

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, with 15 credits required in the Business Division. Graduates will be qualified to assume positions as production supervisors, management trainees, and small unit managers. One-year certificate programs are offered in Cooking and Baking.

First Year

FIRST SEMESTER

ENG 099 or 101	
Composition	3
FSM 111 Introduction to	
Food Service	2
FSM 114 Food Standards and	
Sanitation	3
FSM 112 Quantity Food	
Production or	
FSM 113 Quantity Food	
Service	4
BUS 150 Business Math	3
	<u>15</u>

SECOND SEMESTER

ENG 101 or 102	
Composition	3
BUS 111 Introduction to	
Business Organization	3
FSM 115 Menu Planning	2
FSM 112 Quantity Food	
Production or	
FSM 113 Quantity Food	
Service	4
BUS 099 Business	
Recordkeeping or	
BUS 101 Accounting I	3
	<u>15</u>

Second Year

FIRST SEMESTER

PSY 101 Introduction to	
Psychology	3
Social Science elective	3
ENG 130 Business Writing I	3
FSM 211 Purchasing and	
Storage	3
FSM 212 Food Service	
Supervision	4
	<u>16</u>

SECOND SEMESTER

Humanities elective	3
SPE 101 Fundamentals of Speech	
Communication	3
FSM 214 Cost Control	3
FSM 215 Restaurant	
Layout and Equipment	3
FSM 213 Seminar and	
Internship	4
	<u>16</u>

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 Year

FIRST SEMESTER

English ¹	3
PSY 101 Introduction to Psychology	3
ART 121 Design Studio I	3
FNA 111 History of Art I	3
IND 101 Basic Interior Design I ...	<u>5</u>
	17

SECOND SEMESTER

ENG 130 Business Writing I	3
BUS 140 Salesmanship	3
SPE 101 Fundamentals of Speech Communication	3
FNA 112 History of Art II	3
IND 102 Basic Interior Design II ..	<u>5</u>
	17

Second Year

FIRST SEMESTER

IND 201 Advanced Interior Design I	6
JNM 133 Feature Writing (3) or JNM 134 Media Adjuncts (4)	3-4
BUS 111 Introduction to Business Organization or Business elective	<u>3</u>
	12-13

SECOND SEMESTER

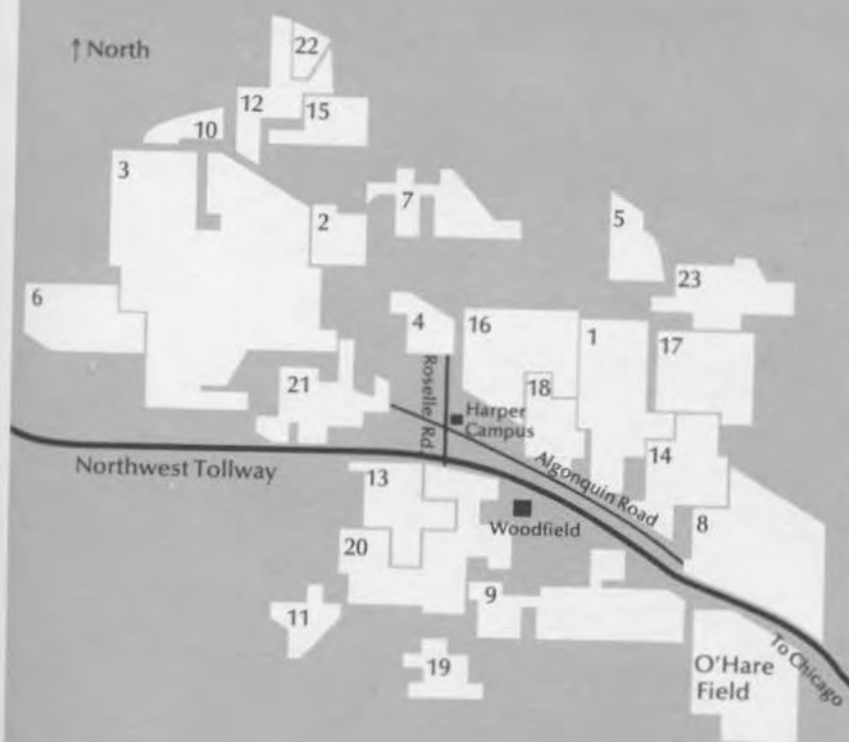
IND 202 Advanced Interior Design II	6
SOC 101 Introduction to Sociology	3
Business elective	3
Humanities elective	<u>3</u>
	15

¹Students will take ENG 099, ENG 101, or ENG 102, depending upon their test scores and the advice of their counselor.

Communities served by Harper College District No. 512

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

*Portions of these communities are included in the district.



JOURNALISM

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 SEMESTER¹

JNM 130 Fundamentals of Journalism	3
ENG 101 Composition	3
HST 111 The American Experience to 1877	3
PHS 101 Physical Science Survey	3
ECO 200 Introduction to Economics	
or	
ECO 201 Principles of Economics I	3
	<u>15</u>

SECOND SEMESTER

JNM 131 News Reporting and Writing	3
JNM 133 Feature Writing	3
JNM 134 Media Adjuncts	4
HST 112 The American Experience since 1877	3
PSC 201 Contemporary American Politics	3
	<u>16</u>

Second Year

FIRST SEMESTER

JNM 234 Mass Communication ...	3
JNM 235 Copy Reading and News Editing	4
JNM 236 Radio and Television News	4
HST 141 History of Western Civilization to 1815	4
	<u>15</u>

SECOND SEMESTER

JNM 237 Externship Study	5
HST 142 History of Western Civilization since 1815	4
PHI 105 Introduction to Philosophy	3
SOC 101 Introduction to Sociology	3
	<u>15</u>

¹Students unable to type 40 wpm are required to take SEC 121, during their first semester.

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
BUS 122 Intermediate Typing ¹	2
SEC 126 Intermediate Shorthand (Manual or Machine) ¹	3
SPE 101 Fundamentals of Speech Communication	3
RES 120 Principles of Real Estate	2
PSC 201 Contemporary American Politics	<u>3</u>
	16

SECOND SEMESTER

ENG 130 Business Writing I	3
SEC 221 Advanced Typing ¹	2
SEC 225 Dictation and Transcription (Manual or Machine) ¹	3
SEC 132 Office Practice	2
BUS 211 Business Law I	3
SEC 236 Secretarial Procedures	<u>3</u>
	16

Second Year

FIRST SEMESTER

SEC 234 Legal Office Procedures	3
SEC 235 Legal Dictation and Transcription	3
BUS 212 Business Law II	3
SEC 237 Secretarial Seminar and Internship I	3
Approved electives ²	<u>2-3</u>
	14-15

SECOND SEMESTER

ECO 200 Introduction to Economics	3
BUS 101 Accounting I or BUS 099 Business Recordkeeping	3
SEC 238 Secretarial Seminar and Internship II	3
Humanities elective	3
Approved electives ²	<u>2-3</u>
	14-15

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

²These electives require the approval of the program 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	SECOND SEMESTER
ENG 101 Composition 3	ENG 130 Business Writing I 3
SOC 101 Introduction to Sociology 3	PSY 101 Introduction to Psychology 3
BUS 101 Accounting I 3	BUS 102 Accounting II 3
LTE 101 Introduction to Legal Technology 3	PSC 201 Contemporary American Politics 3
LTE 103 Litigation 3	LTE 105 Family Law 3
15	15

Second Year

FIRST SEMESTER	SECOND SEMESTER
LTE 202 Estate Planning 3	LTE 200 Probate 3
LTE 203 Income Taxation I 3	BUS 212 Business Law II 3
BUS 211 Business Law I 3	Legal Technology elective ¹ 3
RES 123 Real Estate Law 3	Elective 3
Elective ¹ 3	Humanities elective 3
15	15

¹These electives require approval of the program coordinator or counselor.

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. He can often count each year of successful high school foreign language as one semester of college foreign language, and he may meet the math requirement of some universities by passing their math proficiency test.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
Social Science elective 3	Social Science elective 3
Laboratory science ¹ 4	Laboratory science ¹ 4
Mathematics or elective 3	Mathematics or elective 3
Foreign Language elective 4	Foreign Language elective 4
17	17

Second Year

FIRST SEMESTER	SECOND SEMESTER
English ² 3	English ² 3
Social Science elective 3	Social Science elective 3
Humanities elective ³ 3	Humanities elective ³ 3
Foreign Language ⁴ 3-4	Foreign Language ⁴ 3-4
Additional electives ⁵ 3-4	Additional electives ⁵ 3-4
15-17	15-17

¹Physical or biological science or physics, chemistry, botany, or other lab science.
²Advanced English, literature or speech.
³HUM 101 and HUM 102 are recommended, 3 credit hours each. Other humanities areas include art, music, literature, and philosophy.
⁴Consult your counselor for specific language requirements of the university to which you plan to transfer.
⁵Another 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.



**MARKETING MID-MANAGEMENT
(GENERAL MARKETING OPTION)**

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

English elective	3
PSY 101 Introduction to Psychology	3
BUS 111 Introduction to Business Organization	3
BUS 140 Salesmanship or other Marketing elective	2-3
BUS 150 Business Math	<u>3</u>
	14-15

SECOND SEMESTER

PSY 145 Psychology in Business and Industry	
ENG 130 Business Writing I	3
BUS 245 Principles of Marketing or other Marketing elective	2-3
BUS 270 Principles of Management	3
DPR 101 Introduction to Data Processing	<u>3</u>
	14-15

Second Year

FIRST SEMESTER

SPE 101 Fundamentals of Speech Communication	3
ECO 200 Introduction to Economics	3
BUS 101 Accounting I	3
BUS 281 Marketing Internship I ¹ ..	3
Marketing elective	<u>3</u>
	15

SECOND SEMESTER

Humanities elective	3
BUS 102 Accounting II or Marketing elective	3
BUS 211 Business Law I	3
Business elective	3
BUS 282 Marketing Internship II ¹	<u>3</u>
	15

Summer Options ²	6
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¹Part-time students who are unable to participate in the internship phase of the program due to their present employment position should substitute BUS 280, Marketing Problems, for either of the marketing internship courses (BUS 281 or BUS 282). The consent of the program coordinator is required, and the coordinator should be contacted to assist in determining when to make this substitution.

²The summer option may be taken on a voluntary basis as an optional part of the program. Approval of the program coordinator will be required for courses selected.

Marketing Mid-Management Electives

BUS 106 Merchandising of Furnishings and Softline goods . 2	BUS 217 Advertising 3
BUS 109 The Retail Food Distribution Industry 2	BUS 240 Advanced Sales Skills 3
BUS 140 Salesmanship 3	BUS 245 Principles of Marketing 3
BUS 141 Sales Management 3	BUS 246 Industrial Marketing 3
BUS 215 Supermarket Operations 3	BUS 247 Consumer Buying Behavior 3
BUS 216 Supermarket Merchandising 3	BUS 250 Retailing 3
	MAT 125 Purchasing 3

**MARKETING MID-MANAGEMENT
(SUPERMARKET MANAGEMENT OPTION)**

Supermarket Management is a two-year career occupational curriculum consisting of 64 semester hours of credit and leads to the award of an associate in applied science degree. The curriculum is designed to provide training and experience that can lead to managerial positions in the industry. The cooperative method of education is employed whereby the student alternates between terms of full-time attendance at school and full-time work experience during the course of the program.

This method is illustrated by the school term/work term patterns below.

Curriculum Patterns		
School Semester	Pattern No. 1 (Summer Start)	Pattern No. 2 (Fall Start)
First Year		
Summer	School Term	Work Term
Fall	School Term	School Term
Spring	Work Term	School Term
Summer	School Term	Work Term
Second Year		
Fall	Work Term	School Term
Spring	School Term	Work Term
Summer	Work Term	School Term

Course Work¹

Course work taken under the Supermarket Management Option is comparable to that taken under the General Marketing Option described on the preceding page, insofar as the general education and the general business courses are concerned. To support the Supermarket Management Option, the following specialized courses have been developed in cooperation with representatives of the supermarket industry:

- BUS 109 — The Retail Food Distribution Industry
- BUS 215 — Supermarket Operations
- BUS 216 — Supermarket Merchandising

¹Specific details as to the timing and sequence of particular courses will be determined through consultation with the program coordinator and the Business Division counselors.

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

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

SECOND SEMESTER

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

Second Year

FIRST SEMESTER

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

SECOND SEMESTER

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

¹Material Management electives are to be selected from the following list of courses. Selections must be made with the concurrence of the program coordinator or a Business Division counselor.

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 Transportation for Material Managers	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 Forecasting Material Requirements	3
MAT 259 Advanced Purchasing	3
MAT 280 Material Management Policy	3

Electives—Group III (select one course):

BUS 160 Principles of Supervision	3
BUS 225 Applied General Statistics	3
BUS 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 and/or inventory controllers, expeditors, tool design technicians, junior process or methods engineers, technical salesmen, etc.

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 099 Composition or	
ENG 101 Composition	3
MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
MTH 106 Mathematics I	5
NMC 101 Introduction to Numerical Control	<u>2</u>
	17

SECOND SEMESTER (Mechanical Engineering Option)

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

SECOND SEMESTER (Production Engineering Option)

ENG 103 Report Writing	3
MET 103 Descriptive Geometry ...	3
MET 108 Manufacturing Processes and Materials	3
MTH 107 Mathematics II	5
NMC 105 Part Programming I	<u>3</u>
	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
	<u>15</u>

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
	<u>15</u>

SECOND SEMESTER

(Mechanical Engineering Option)

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

SECOND SEMESTER

(Production Engineering Option)

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

¹Technical elective should be chosen from MET 110, MET 111, MET 205, PHY 101.

MEDICAL LABORATORY TECHNICIAN

Medical Laboratory Technician is a two-year career program, including one summer session, leading to an associate degree in applied science and completion of eligibility requirements to take the written examination given by the Board of Registry of the American Society of Clinical Pathologists. The program is open to men and women interested in a career as a medical laboratory technician.

Admission requirements: High school grade average of "C" in biology, chemistry, and algebra. Applicants may be required to take Harper College's Chemistry Department placement test. A personal interview with the program coordinator is also required.

Applicants with doubts as to their qualifications should contact the program coordinator for a personal interview.

First Year

FIRST SEMESTER	SECOND SEMESTER
BIO 130 Microbiology 4	BIO 161 Human Physiology 4
CHM 121 General Chemistry I 4	CHM 122 General Chemistry II ... 4
MTH 110 Laboratory Mathematics 3	MLT 102 Medical Technology II .. 3
MLT 101 Medical Technology I ... 3	MLT 104 Principles of Clinical Microbiology 3
ENG 101 Composition 3	ENG 102 Composition 3
17	17

Summer Session

CHM 210 Quantitative and Instrumental Analysis I 5
MLT 201 Medical Technology III .. 2
7

Second Year

FIRST SEMESTER	SECOND SEMESTER
MLT 201 Medical Technology IV .. 8	MLT 202 Medical Technology V .. 9
Social Science electives 6	Humanities elective 3
14	12

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

ENG 101 Composition	3
SEC 122 Intermediate Typing ¹	2
SEC 126 Intermediate Shorthand ¹	3
BIO 160 Human Anatomy	4
PED 201 First Aid	2
HSC 112 Medical Terminology ...	<u>2</u>
	16

SECOND SEMESTER

BIO 161 Human Physiology	4
SEC 221 Advanced Typing	2
SEC 240 Medical Transcription and Typing	3
ENG 130 Business Writing I	3
PSY 101 Introduction to Psychology	<u>3</u>
	15

Second Year

FIRST SEMESTER

SEC 241 Medical Office Procedures	4
HSC 211 Clinical Procedures I	3
Humanities elective	3
BUS 099 Business Recordkeeping .	3
DPR 101 Introduction to Data Processing	<u>3</u>
	16

SECOND SEMESTER

SEC 237 Secretarial Seminar and Internship I	3
HSC 212 Clinical Procedures II ...	3
HSC 213 Medical Law and Ethics	2
BUS 267 Office and Administrative Management	3
Social Science elective ²	<u>3</u>
	14

¹Students will be placed into more advanced courses depending upon previous training and consent of instructor.

²Recommended electives are ECO 115 or ECO 200.

MUNICIPAL AND GOVERNMENTAL MANAGEMENT

Municipal and Governmental Management 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	SECOND SEMESTER
ENG 101 Composition 3	ENG 103 Report Writing 3
DPR 101 Introduction to Data Processing 3	BUS 101 Accounting I 3
MGT 101 Introduction to Municipal and Governmental Management . 3	MGT 201 Organization Theory ... 3
PSY 101 Introduction to Psychology 3	PSC 202 Suburban, Urban and State Politics 3
SOC 101 Introduction to Sociology 3	Humanities elective 3
	15

Second Year

FIRST SEMESTER	SECOND SEMESTER
MGT 202 Organization Behavior 3	MGT 203 Management Processes . 3
MGT 210 Public Finance and Budget Process 3	MGT 212 Personnel Management . 3
SOC 215 Group Dynamics 3	MGT 214 Planning in the Public Agency 3
SPE 101 Fundamentals of Speech Communication 3	Elective ¹ 3
Elective ¹ 3	Elective ¹ 3
	15

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



MUSIC¹

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 degree 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 College is designed to provide the student with a program equivalent to the first two years of most four-year college programs. A student who successfully completed the courses suggested in this curriculum guide will have met all requirements for an associate in arts degree.

First Year
FIRST SEMESTER

ENG 101 Composition	3
Science or Math elective	3-5
MUS 111 Theory of Music I	3
MUS 115 Ear Training, Sight Singing and Keyboard Harmony I	1
Group Performance ²	1
Applied Music elective ³	<u>2-4</u>
	13-17

SECOND SEMESTER

ENG 102 Composition	3
Science or Math elective	3-5
MUS 112 Theory of Music II	3
MUS 116 Ear Training, Sight Singing and Keyboard Harmony II	1
Group Performance ²	1
Applied Music elective ³	<u>2-4</u>
	13-17

Second Year
FIRST SEMESTER

Social Science	3
MUS 120 Introduction to Music Literature	3
MUS 211 Theory of Music III	3
MUS 215 Ear Training, Sight Singing and Keyboard Harmony III	1
Instrumental or Vocal Techniques	2
Group Performance ²	1
Applied Music elective ³	<u>2-4</u>
Liberal Arts elective	<u>2</u>
	17-19

SECOND SEMESTER

Social Science	3
MUS 212 Theory of Music IV	3
MUS 216 Ear Training, Sight Singing and Keyboard Harmony IV	1
Instrumental or Vocal Techniques	2
MUS 233 Instrumental Literature or MUS 224 Keyboard and Vocal Literature	3
Group Performance ²	1
Applied Music elective ³	<u>2-4</u>
Liberal Arts elective	<u>2</u>
	17-19

¹All majors in music must demonstrate minimum proficiency on the piano.

²To be elected from MUS 130, 136, 140, 145, and 150.

³To be elected from courses numbered MUS 180 and MUS 280.

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 and sufficient and appropriate content to enable students to receive an associate degree in nursing at the completion of the two-year sequence.

The program is open to qualified men and women who are interested in nursing as a career. Specific requirements for admission include: high school grade average of "C" or higher or GED equivalency and/or college grade point average of 2.0 ("C") or higher; one unit of high school biology or its equivalent; ACT test; Psychological Corporation Entrance Examination; satisfactory health; and personal interview with the nursing faculty.

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

One unit of high school chemistry is required for candidates for the associate degree. If the course has been completed more than three years prior to intended entrance, candidates must repeat chemistry. Applicants who have had a college chemistry course will be evaluated individually.

First Year

FIRST SEMESTER

BIO 100 Human Biology I	
or	
BIO 160 Human Anatomy ¹	4
PSY 101 Introduction to	
Psychology	3
NUR 101 Nursing	
Fundamentals	9
	16

SECOND SEMESTER

BIO 102 Human Biology II (3)	
or	
BIO 161 Human Physiology ¹ (4) .	3-4
PSY 216 Child Psychology	3
NUR 102 Introduction to Care of	
Patients with Health	
Interferences	9
NUR 103 Nursing Survey I	1
	16-17

Summer Session

NUR 104 Field Experience in	
Nursing ²	4

(See footnotes on the next page.)

Second Year

FIRST SEMESTER

ENG 101 Composition	3
NUR 201 Advanced Nursing I	7
BIO 130 Microbiology	4
SOC 101 Introduction to Sociology	3
	<u>17</u>

SECOND SEMESTER

ENG 102 Composition	3
NUR 202 Advanced Nursing II	7
NUR 203 Nursing Survey II	1
Humanities elective	3
Elective	3
	<u>17</u>

¹Practical Nursing students may take BIO 100 or BIO 160 and BIO 102 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, including one summer session, leading to an associate degree in applied science. 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	SECOND SEMESTER
PKM 100 Introduction to Park Management 4	PKM 101 Ornamental Plants 4
PKM 110 Soil Science 4	PKM 102 Plant Diseases and Pests 4
PKM 140 Grounds Equipment and Shop Operation 3	PKM 111 Basic Horticultural Skills 4
BIO 120 Botany 4	PKM 121 Facilities Management .. 3
PED 201 First Aid 2	English ¹ <u>3</u>
English ¹ <u>3</u>	18
17	

Summer Session

PKM 150 Park Management Internship 5

Second Year

FIRST SEMESTER	SECOND SEMESTER
PKM 210 Drainage and Irrigation 3	PKM 220 Arboriculture 3
PKM 212 Turfgrass Management 4	PKM 230 Contracts, Specifications, Estimating 3
PKM 214 Principles of Park Design and Construction 5	PKM 250 Park Management Seminar 1
PKM elective ² 3	PKM elective ² 3-4
Social Science elective <u>3</u>	Humanities elective 3
18	Social Science elective <u>3</u>
	16-17

¹Students will take ENG 099, ENG 101 or ENG 102, depending upon their test scores and the advice of the coordinator.
²Electives: PKM 241, PKM 242, PKM 245.

PHYSICAL EDUCATION

The successful completion of the Physical 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 he plans to transfer for specific general education requirements. Physical Education courses 201 (First Aid), 203 (Health), and 204 (Methods of Teaching Physical Education Activities) can serve to satisfy the three semester hour physical education teacher certification requirement for the State of Illinois.

First Year

FIRST SEMESTER

ENG 101 Composition	3
SPE 101 Fundamentals of Speech Communication	3
BIO 110 Principles of Biology	4
PED 200 Introduction to Physical Education	2
PED 204 Methods of Teaching Physical Education Activities	2
Physical Education Activity	<u>1</u>
	15

SECOND SEMESTER

ENG 102 Composition	3
BIO 140 General Zoology	4
Mathematics elective	3
PED 203 Health	2
PED 226 Baseball Techniques	2
Physical Education activity	<u>1</u>
	15

Second Year

FIRST SEMESTER

BIO 160 Human Anatomy	4
Social Science elective	3
Humanities elective	3
PED 201 First Aid	2
PED 210 Sports Officiating	2
PED 222 Football Techniques	<u>2</u>
	16

SECOND SEMESTER

BIO 161 Human Physiology	4
HST 112 The American Experience since 1877	3
Humanities elective	3
PED 220 Track and Field Techniques	2
PED 228 Aquatics	2
PED 224 Basketball Techniques ...	<u>2</u>
	16

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	SECOND SEMESTER
ATE 209 Building Construction Principles for Realtors 3	BUS 101 Accounting I 3
BUS 111 Introduction to Business Organization 3	PSY 145 Psychology in Business and Industry 3
ENG 101 Composition 3	RES 121 Advanced Principles, Marketing and Brokerage 3
PSY 101 Introduction to Psychology 3	RES 123 Real Estate Law 3
RES 120 Principles of Real Estate .. 2	ENG 130 Business Writing I 3
SPE 115 Interviewing 1	15
15	

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 245 Principles of Marketing .. 3	BUS 140 Salesmanship or
DPR 101 Introduction to Data Processing 3	RES or BUS elective 3
RES 122 Real Estate Appraisal I ... 3	ECO 210 Money and Banking 3
RES 124 Real Estate Finance 3	RES 233 Real Estate Problems Seminar 3
ECO 200 Introduction to Economics 3	Humanities elective ¹ 3
15	Elective 3
	15

¹PHI 110 or PHI 115 recommended.

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 can be employed as engineering laboratory assistants, equipment salesmen, heating and refrigeration servicemen, estimators and system designers, and stationary engineers.

First Year¹

FIRST SEMESTER

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

SECOND SEMESTER

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

Second Year¹

FIRST SEMESTER

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

SECOND SEMESTER

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

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

²Students may take ENG 099 or ENG 101 the first semester depending upon their test scores and the advice of their counselor. 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 electives: ART 122 or PHI 110.

⁵BUS 111, BUS 140, BUS 160, BUS 255, CHM 100, ENG 103, MTH 101, or MTH 102.

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 those interested in computer science 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 science and math programs. Thus, students may wish to defer their language program until the second year, when transfer plans are known.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
Foreign Language elective 4	Foreign Language elective 4
Mathematics elective 3-5	Mathematics elective 3-5
Laboratory Science elective <u>4-5</u>	Laboratory Science elective <u>4-5</u>
14-17	14-17

Second Year

FIRST SEMESTER	SECOND SEMESTER
Social Science elective 3	Social Science elective 3
Mathematics elective 3-5	Mathematics elective 4-5
Laboratory Science elective 4-5	Laboratory Science elective 4-5
Elective <u>3-4</u>	Elective <u>3-4</u>
13-17	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

BUS 101 Accounting I	3
BUS 111 Introduction to Business Organization	3
ENG 101 Composition	3
DPR 101 Introduction to Data Processing	3
PSY 101 Introduction to Psychology	3
	<u>15</u>

SECOND SEMESTER

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

Second Year

FIRST SEMESTER

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

SECOND SEMESTER

Humanities elective	3
Social Science elective	3
BUS 218 Introduction to Finance	3
Business electives ¹	<u>6</u>
	15

¹Electives may include any course with a "BUS" prefix, or a combination of "BUS" courses and the following:

DPR 203 Systems Analysis and Design I 3
SEC 131 Business Machines 2

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 47 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

Accounting Aide 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.

BUS 155 Tax and Payroll	
Accounting	4
BUS 101 Accounting I	3
BUS 102 Accounting II	3
BUS 201 Intermediate	
Accounting I	3
BUS 202 Intermediate	
Accounting II	3
BUS 203 Introductory Cost	
Accounting	<u>3</u>
	19

ACCOUNTING CLERK

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

BUS 099 Business	
Recordkeeping	3
BUS 150 Business Math	3
Typing elective ¹	<u>2</u>
	8

ACCOUNTING-PAYROLL

The 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.

BUS 155 Tax and Payroll	
Accounting	4
BUS 150 Business Math	3
Typing elective ¹	<u>2</u>
	9

AIR CONDITIONING

See: Refrigeration and Air Conditioning

¹The student may select courses from SEC 121, SEC 122, or SEC 221 depending upon previous training and consent of the instructor.

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a technical program leading to a certificate upon completion of any of the following course offerings totaling 15 credit hours. The curriculum emphasis is on architecture in the related areas of construction, drafting, computer programming, estimating, and specifications.

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

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

BAKING

The Baking certificate program is a one-year trade oriented course planned to prepare students for entrance into the food service and baking industry.

Graduates are trained to secure positions as qualified bakers and baker's helpers in institutional, retail, and commercial bakeries.

FALL	SPRING
FSM 090 Basic Quantity Baking	FSM 091 Advanced Quantity Baking
FSM 111 Introduction to Food Service	FSM 115 Menu Planning
FSM 114 Food Standards and Sanitation	Elective
	15
15	

BANKING, FINANCE AND CREDIT

A one-year program leading to a certificate in Banking, Finance and Credit. The program is designed for those currently employed, or seeking employment, in banks, savings and loan associations, or in other finance-oriented enterprises. Emphasis in the curriculum is given to developing competencies required for supervisory and public contact positions in the finance field. If the student later wishes further breadth and depth in future academic preparation, this entire program can be applied toward the two-year associate degree in Banking, Finance and Credit.

FIRST SEMESTER

BFC 101 Principles of Bank Operations	3
BUS 111 Introduction to Business Organization	3
BUS 150 Business Math	3
ENG 101 Composition	3
Approved elective ¹	<u>3</u>
	15

SECOND SEMESTER

BUS 101 Accounting I	3
BUS 211 Business Law I	3
ECO 115 Consumer Economics ...	3
SPE 101 Fundamentals of Speech Communication	3
SPE 115 Interviewing	1
Approved elective ¹	<u>3</u>
	16

BANKING, FINANCE AND CREDIT

A one-semester program leading to a certificate in Banking, Finance and Credit. The program is designed for those currently employed, or seeking employment, in banks, savings and loan associations, or in other finance-oriented enterprises. Emphasis in the curriculum is given to developing competencies required for entry level positions in the finance field. If the student later wishes further breadth and depth in future academic preparation, this entire program can be applied toward the one-year certificate and two-year associate degree in Banking, Finance and Credit.

BFC 101 Principles of Bank Operations	3
BUS 111 Introduction to Business Organization	3
BUS 150 Business Math	3
ENG 101 Composition	3
Approved elective ¹	<u>3</u>
	15

¹See the associate degree program in Banking, Finance and Credit for approved elective.

BROKERS LICENSE CERTIFICATION

This mini program will provide the minimum number of hours and the 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 ..	<u>2</u>
	6

CHILD DEVELOPMENT

The Child Development certificate program, totaling 15 credit hours, emphasizes theoretical and practical aspects of early childhood education. The Child Development certificate will satisfy preliminary college credit requirements for employment in child development and early childhood education centers for normal and handicapped children. (See: Teacher Aide certificate program.)

Required:

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

Any 9 credit hours may be selected from the courses listed below:

CCA 101 Introduction to Child Development Careers	3	CCA 218 Assisting the Severely Handicapped	4
CCA 209 Language Arts for the Young Child	3	CCA 219 Psychology of Exceptional Children	3
CCA 210 Creative Activities for Young Children	3	CCA 220 Child Development Practicum Internship I	6
CCA 214 Principles of Preschool Education	4	CCA 221 Workshop in Early Childhood Education	3
CCA 215 Children’s Laboratory	2	CCA 225 Mental Hygiene	3

COOKING

The Cooking certificate program is a one-year trade oriented course 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.

FALL

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

SPRING

FSM 096 Advanced Quantity	
Cooking	10
FSM 115 Menu Planning	2
Elective	<u>3</u>
	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 program coordinator approval. These courses must be taken at Harper College.

CRJ 101 Introduction to Law	
Enforcement and Criminal	
Justice	3
CRJ 102 Police Administration	
and Organization	3
CRJ 105 Criminal Courts	
of the U.S.	3
CRJ 110 Police Operations	3
CRJ 201 Criminal Law I	3
CRJ 202 Criminal Law II	3
CRJ 203 Law and Society	3
CRJ 205 Juvenile Delinquency	3

CRJ 207 Vice and Drug	
Control	3
CRJ 208 Police Supervision	3
CRJ 209 Police Public-Community	
Relations	3
CRJ 210 Introduction to	
Criminology	3
CRJ 211 Criminal Investigation ...	3
CRJ 212 Traffic Administration	3
CRJ 215 Alternatives to	
Confinement	3
CRJ 254 Interviewing and	
Case Preparation	3

DATA PROCESSING-CLERICAL

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

FIRST SEMESTER

ENG 101 Composition ¹	3
BUS 101 Accounting I	3
DPR 101 Introduction to Data Processing	3
DPR 103 Key Punching and Verifying ²	2
BUS 150 Business Math	<u>3</u>
	14

SECOND SEMESTER

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

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

ENG 101 Composition	3
BUS 111 Introduction to Business Organization	3
DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	2
DPR 135 Computer Operator (DOS)	<u>3</u>
	14

SECOND SEMESTER

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

¹Students not qualifying for ENG 101 may take ENG 099.

²Entry into DPR 103 requires successful completion of a typing course.

DATA PROCESSING–TECHNICAL

Data Processing–Technical 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 combination has counselor approval.

DPR 101 Introduction to Data Processing	3	DPR 150 Business FORTRAN	3
DPR 106 Computer Logic and Programming Technology	2	DPR 202 Programming Systems	3
DPR 108 Computer Programming–COBOL	5	DPR 203 Systems Analysis and Design	3
DPR 110 Computer Programming–Basic Assembler Language	5	DPR 204 Advanced Systems Analysis and Design	3
DPR 135 Computer Operator (DOS)	3	DPR 208 Computer Programming– Advanced COBOL	4
DPR 140 Report Program Generator (RPG Programming)	3	DPR 210 Computer Programming– Advanced Assembler Language	4
DPR 142 PL/I Programming Language	4	DPR 250 Data Processing Math and Computer Statistics	4

ELECTRONICS

Any combination of 16 credit hours may be selected from the courses listed below to obtain a certificate in Electronics, providing the combination has counselor approval.

ELT 101 Circuits I	4	ELT 206 Electronic Computers	4
ELT 102 Circuits II	4	ELT 207 UHF Communications	
ELT 103 Circuits III	4	and Reception	4
ELT 105 Electro-Mechanical		ELT 210 Computer	
Drafting	3	Programming	3
ELT 110 Introductory		ELT 211 Analog Simulation I	4
Electronics	2	ELT 212 Analog Simulation II	4
ELT 111 Electronics I	3	MTH 106 Mathematics I	5
ELT 203 Electronics II	4	MTH 107 Mathematics II	5
ELT 204 Electronics III	4	MTH 206 Mathematics III	5
ELT 205 Electronic			
Instrumentation	4		

FASHION DESIGN

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has program coordinator approval, to qualify for a certificate in Fashion Design.

FAS 101 Flat Pattern Design		FAS 201 Advanced Flat Pattern	
and Draping I	3	Design and Draping I	4
FAS 102 Flat Pattern Design		FAS 202 Advanced Flat Pattern	
and Draping II	4	Design and Draping II	4
FAS 103 Apparel Design and		FAS 203 Advanced Diversified	
Construction I	3	Apparel Design I	4
FAS 104 Apparel Design and		FAS 204 Advanced Diversified	
Construction II	4	Apparel Design II	4
FAS 105 Fashion Design		FAS 205 Tailoring	
Illustration I	1	Techniques I	2
FAS 106 Fashion Design		FAS 206 Tailoring	
Illustration II	1	Techniques II	2
FAS 107 Textiles I	2	FAS 209 Advanced Fashion	
FAS 108 Textiles II	2	Illustration I	1
FAS 109 Micro Environmental		FAS 210 Advanced Fashion	
Design I	2	Illustration II	1
FAS 110 Micro Environmental		FAS 212 Design	
Design II	2	Communication	2

FIRE SCIENCE TECHNOLOGY

The Fire Science 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.

Any 6 credit hours may be selected from the courses listed below.

ENG 099 Composition	3	ENG 103 Report Writing	3
ENG 101 Composition	3	SOC 101 Introduction to Sociology	3

Any 9 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

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

FOOD SERVICE MANAGEMENT

The Food Service Management 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 following courses:

FSM 111 Introduction to Food Service	2	FSM 212 Food Service Supervision	4
FSM 114 Food Standards and Sanitation	3	FSM 214 Cost Control	3
FSM 115 Menu Planning	2	FSM 215 Restaurant Layout and Equipment	3
FSM 211 Purchasing and Storage	3		

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, interested students must take a total of 15 credit hours at Harper College.

Nine (9) credit hours must include the following courses:

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

Six (6) credit hours are to be selected from the following options:

CRJ 110 Police Operations	3
CRJ 201 Criminal Law I	3
CRJ 202 Criminal Law II	3
CRJ 211 Criminal Investigation	3
CRJ 254 Interviewing and Case Preparation	3

INDUSTRIAL SALES MANAGEMENT AND DEVELOPMENT

The 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 certificate 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 compliment the student's industrial and education background, the selection of courses should be made in consultation with the program coordinator.

Group I: Any 6 credit hours may be selected from the courses listed below.

BUS 140 Salesmanship	3	BUS 240 Advanced Sales Skills ...	3
BUS 141 Sales Management	3	BUS 247 Consumer Buying Behavior	3

Group II: Any 9 credit hours may be selected from the courses listed below.

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

LEGAL SECRETARY

The Legal Secretary certificate 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	<u>3</u>
	14

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

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

¹Placement into courses contingent upon previous training. (See Course Descriptions.)

LEGAL TECHNOLOGY

The 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 and then a minimum of five other courses from those listed below, provided the combination has program coordinator or counselor approval.

LTE 101 Introduction to Legal Technology	3	RES 123 Real Estate Law	3
LTE 103 Litigation	3	RES 124 Real Estate Finance	3
LTE 105 Family Law	3	CRJ 105 Criminal Courts of the U.S.	3
LTE 200 Probate	3	CRJ 201 Criminal Law I	3
LTE 201 Tort and Insurance Law	3	CRJ 202 Criminal Law II	3
LTE 202 Estate Planning	3	BUS 211 Business Law I	3
LTE 203 Income Taxation I	3	BUS 212 Business Law II	3
LTE 204 Income Taxation II	3	IDS 290 Independent Study	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		

Certificate Specialties Available

Corporate Law	Criminal Law	Family Law	General Practice
LTE 101	LTE 101	LTE 101	LTE 101
LTE 204	CRJ 105	LTE 103	LTE 103
LTE 206	CRJ 201	LTE 105	LTE 200
LTE 210	CRJ 202	LTE 200	LTE 202
BUS 212	LTE 206	LTE 202	RES 123
Elective	Elective	Elective	Elective ¹
Litigation	Real Estate	Tax Law	
LTE 101	LTE 101	LTE 101	
LTE 103	RES 123	LTE 200	
LTE 105	RES 124	LTE 202	
LTE 201	BUS 211	LTE 203	
LTE 206	LTE 206	LTE 204	
Elective	Elective	Elective	

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

MACHINIST

The Machinist 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	<u>3-5</u>
	15-17

¹Technical electives may be chosen from any of the following: MET 106, MET 108, MET 202, MET 210.

MATERIAL MANAGEMENT

The Material Management 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
---------------------------------------------------	---

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 Transportation for Material Managers	3
MAT 124 Material Handling and Packaging	3
MAT 125 Purchasing	3

Electives: Group II (select one course)

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 Forecasting Material Requirements	3
MAT 228 Finance for Material Managers	3
MAT 259 Advanced Purchasing	3
MAT 280 Material Management Policy	3
MAT 225 Applied General Statistics	3
MAT 270 Principles of Management	3
MAT 203 Systems Analysis and Design I	3

MECHANICAL DRAFTING

The Mechanical Drafting 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 106 Mathematics I 5
Technical electives ¹ <u>4-6</u> 15-17

MECHANICAL TECHNICIAN

The Mechanical Technician certificate program, developed in conjunction with area industries, prepares students for employment as industrial technicians, lab technicians, shop technicians, or engineering assistants. The programs may be completed in one semester of day school or two semesters of evening school. Technical electives may be selected from the list shown below with the approval of the program coordinator.

MET 102 Technical Drafting 3
MET 105 Basic Machine Shop 3
MTH 106 Mathematics I 5
Technical electives ² <u>4-6</u> 15-17

¹Electives to be chosen from MET 103, MET 104, MET 105, and MET 201.
²Electives to be chosen from MET 110, MET 205, MET 209, NMC 101.

MEDICAL TRANSCRIPTIONIST

Medical Transcriptionist is a certificate program designed for persons interested in pursuing skills necessary to become medical transcriptionists. Upon the completion of the course, a certificate will be awarded.

FIRST SEMESTER

BIO 160 Human Anatomy	4
SEC 122 Intermediate Typing ¹	2
ENG 101 Composition	3
HSC 112 Medical Terminology ...	<u>2</u>
	11

SECOND SEMESTER

BIO 161 Human Physiology	4
SEC 221 Advanced Typing	2
SEC 240 Medical Transcription and Typing	3
PSY 101 Introduction to Psychology	<u>3</u>
	12

MUNICIPAL AND GOVERNMENTAL MANAGEMENT

The Municipal and Governmental Management certificate program is designed for people employed in government service who wish to upgrade their management skills or to assume more responsible positions.

To qualify for the certificate, the student must take a total of 15 credit hours at Harper College.

Six (6) hours must include the following courses:

MGT 201 Organization Theory	3
MGT 202 Organization Behavior	3

Nine (9) hours are to be selected from the following options:

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

¹The student will be placed into more advanced courses depending upon previous training and consent of the instructor.

NUMERICAL CONTROL TECHNICIAN

The Numerical Control Technician's 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.

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

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

Campus Map

- A College Center
- B Public Safety, Power Plant
- C Art & Architecture
- D Mathematics & Science
- E Lecture-Demonstration Center
- F Learning Resource Center
- G Vocational Technology Shops and Laboratories
- H Vocational Technology Shops and Laboratories
- I Business, Social Science, and Vocational Education
- P Music Building
- T Grounds Maintenance
- U Athletics, Maintenance Shop
- V Roads & Grounds, Park Management



OPERATING ROOM TECHNICIAN

The Operating Room Technician 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 they apply to the surgical patient before, during, and following surgery.

Upon completion of the program the students will be awarded a certificate and will be eligible to write the National Certification Examination of the Association of Operating Room Technicians.

FIRST SEMESTER

BIO 100 Human Biology I or	
BIO 160 Human Anatomy	4
ORT 101 Operating Room	
Techniques I	6
HSC 112 Medical	
Terminology	2
ORT 111 Clinical Hospital	
Practicum I	3
	<u>15</u>

SECOND SEMESTER

BIO 102 Human Biology II or	
BIO 161 Human Physiology	3-4
PSY 101 Introduction to	
Psychology	3
ORT 102 Operating Room	
Techniques II	6
ORT 112 Clinical Hospital	
Practicum II	4
	<u>16-17</u>

SUMMER SESSION

ORT 103 Operating Room	
Techniques III	2
ORT 113 Clinical Hospital	
Practicum III	5
	<u>7</u>

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 program coordinator approval.

PKM 100 Introduction to Park Management	1	PKM 210 Drainage and Irrigation	3
PKM 101 Ornamental Plants	4	PKM 212 Turfgrass Science	4
PKM 102 Plant Diseases and Pests	4	PKM 214 Principles of Park Design and Construction	5
PKM 110 Soil Science	4	PKM 220 Arboriculture	3
PKM 111 Basic Horticultural Skills	4	PKM 230 Contracts, Specifications, Estimating	3
PKM 121 Facilities Management	3	PKM 241 Management of Ice Rink Facilities	3
PKM 140 Ground Equipment and Shop Operation	3	PKM 242 Golf Course Management	4
		PKM 245 Management of Aquatic Facilities	4
		BIO 120 Botany	4

PRODUCTION ENGINEERING

The Production Engineering 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 prior approval of the program coordinator.

MTH 106 Mathematics I	5	NMC 201 Numerical Controlled	
MET 102 Technical Drafting	3	Machining	3
MET 105 Basic Machine Shop	3	NMC 215 Part Programming II	3
MET 108 Manufacturing Processes		NMC 220 Special Problems	3
and Materials	3	MAT 120 Production Control	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		

PRODUCTION WELDING

The Production Welding 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 may be chosen from MET 108, MET 205, MET 206.

REAL ESTATE

A certificate program of professional development for those presently engaged in the real estate business and an opportunity to explore the field for those who are not. A total of 17 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 120 Principles of Real Estate	2
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	<u>3</u>
	14

Electives: (Select one)

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

To obtain the various certificates, the students must successfully complete the following courses:

HEATING SERVICE

RAC 103 Heating Principles	3
RAC 105 Heating and Cooling Controls	<u>4</u>
	7

REFRIGERATION SERVICE

RAC 101 Refrigeration Fundamentals	3
RAC 102 Refrigeration Systems	4
RAC 105 Heating and Cooling Controls	<u>4</u>
	11

REFRIGERATION AND AIR CONDITIONING

Required:

MET 101 Elements of Drafting 3

And any combination of 14 credit hours from the courses listed below, providing the combination has coordinator’s 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

The Retail Merchandising certificate program is 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. To complete the certificate program, an individual would need to take 12-14 credit hours as outlined below.

Required:

BUS 106 Merchandising of Furnishings and Softline Goods (2)	
or	
BUS 250 Retailing (3)	2-3
BUS 251 Retail Merchandise Management	3
FAS 212 Design Communication	2

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

BUS 099 Business Recordkeeping	
or	
BUS 101 Accounting I	3
BUS 106 Merchandising of Furnishings and Softline Goods	2
BUS 111 Introduction to Business Organization	3
BUS 160 Principles of Supervision	3
BUS 245 Principles of Marketing	3
BUS 250 Retailing	3
BUS 225 Small Business Management	3

SECRETARIAL AND GENERAL OFFICE CERTIFICATES

The following certificate programs will allow an individual to receive training for specific jobs in an office.

These 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.

CLERICAL¹

- SEC 009 Typewriting Review (1) or
 - SEC 121 Elementary Typing (2) or
 - SEC 122 Intermediate Typing (2) . 1-2
 - SEC 131 Business Machines 2
 - SEC 132 Office Practice 2
- 5-6

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. (See Course Descriptions.)

GENERAL OFFICE ASSISTANT¹

A combination of 28 credit hours may be selected from the courses listed below with counselor or program coordinator approval.

SEC 099 Typewriting Review	1	BUS 150 Business Math	3
SEC 121 Elementary Typing	2	ECO 115 Consumer Economics . . .	3
SEC 122 Intermediate Typing	2	ECO 200 Introduction to	
SEC 131 Business Machines	2	Economics	3
SEC 132 Office Practice	2	DPR 101 Introduction to	
SEC 221 Advanced Typing	2	Data Processing	3
SEC 236 Secretarial		ENG 099 or ENG 101	
Procedures	3	Composition	3
BUS 099 Business		ENG 130 Business Writing	3
Recordkeeping	3	SPE 101 Fundamentals of Speech	
		Communication	3

SECRETARIAL¹

A combination of 15 credit hours (8 required hours and 7 hours of electives) are required for the Secretarial certificate with counselor or program coordinator approval.

Required:

SEC 221 Advanced Typing	2
SEC 225 Dictation and	
Transcription	3
SEC 236 Secretarial	
Procedures	3

Electives:

SEC 122 Intermediate Typing	2
SEC 126 Intermediate	
Shorthand	3
SEC 131 Business Machines	2
SEC 132 Office Practice	2
ENG 101 Composition	3
ENG 130 Business Writing	3

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	<u>3</u>
	8-10

¹Placement into courses contingent upon previous training. (See Course Descriptions.)

SUPERMARKET MANAGEMENT

The Supermarket Management certificate program has been designed by the college and representatives of the supermarket industry for those students with an interest in careers in the fast growing and important supermarket industry. Specifically, the program has been designed to provide training and experience that could lead to managerial positions in the industry.

Required:

BUS 109 The Retail Food	
Distribution Industry	2
BUS 215 Supermarket	
Operations	3
BUS 216 Supermarket	
Merchandising	3

A minimum of 9 credit hours may be selected from any of the following courses:

BUS 101 Accounting I	3	DPR 101 Introduction to	
BUS 102 Accounting II	3	Data Processing	3
BUS 111 Introduction to		ECO 115 Consumer Economics ...	3
Business Organization	3	ECO 200 Introduction to	
BUS 150 Business Math	3	Economics	3
BUS 211 Business Law I	3	ENG 130 Business Writing	3
BUS 270 Principles of		PSY 145 Psychology in	
Management	3	Business and Industry	3

SUPERVISORY AND ADMINISTRATIVE MANAGEMENT

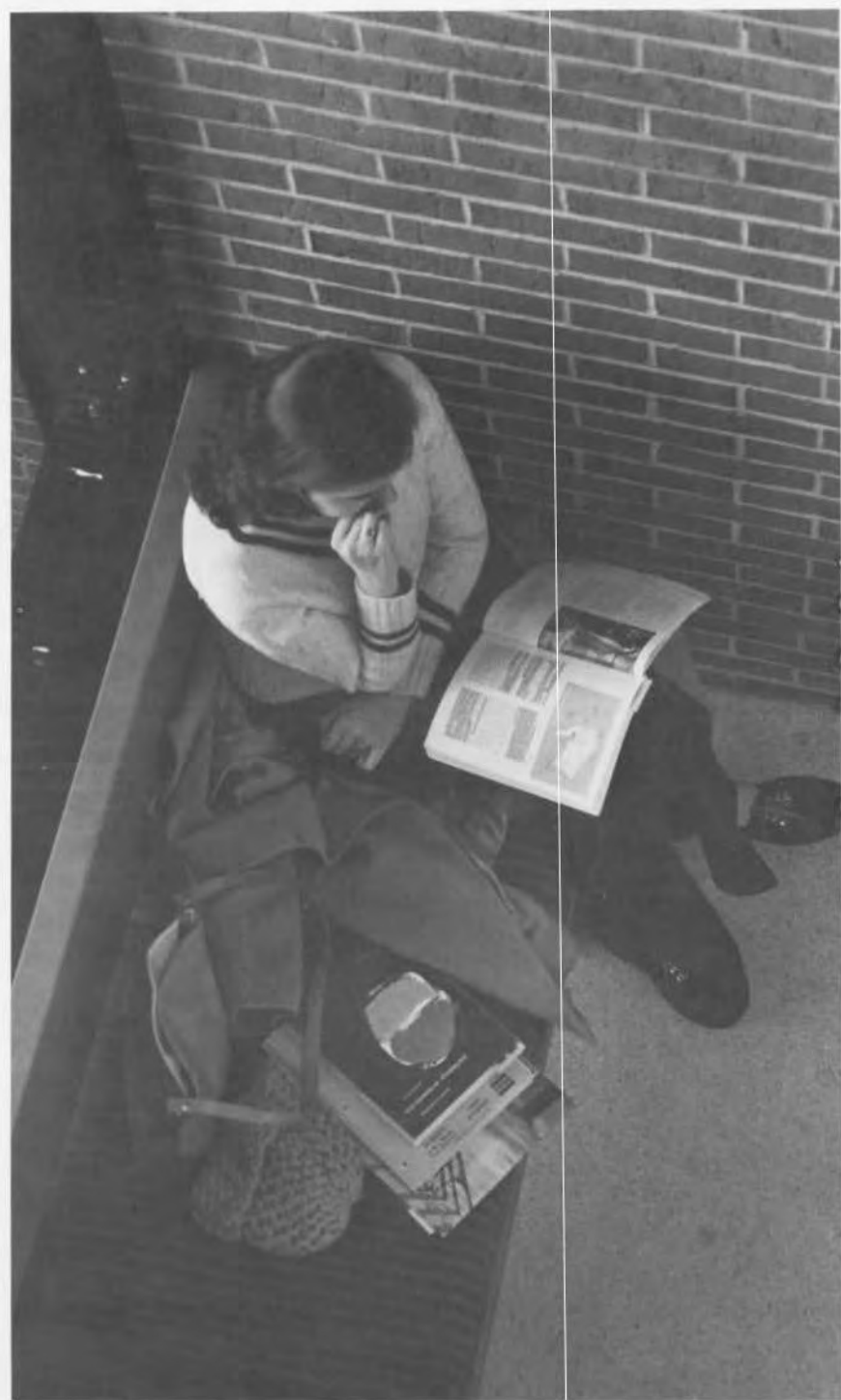
A certificate program requiring completion of 18 credit hours as follows:

Required:	Options:
BUS 160 Principles of Supervision 3	(6 credit hours from the following)
BUS 261 Management and Supervision 3	BUS 099 Business Recordkeeping 3
	BUS 101 Accounting I 3
	BUS 167 Records Management ... 3
Recommended:	BUS 255 Small Business Management 3
BUS 270 Principles of Management 3	BUS 265 Personnel Management . . 3
PSY 145 Psychology in Business and Industry <u>3</u>	BUS 267 Office and Administrative Management 3
12	BUS 274 Industrial Management 3
	BUS 275 Labor-Management Relations 3

TEACHER AIDE

This sequence of courses prepares the student for employment as a teacher aide in public schools. These courses provide all academic credit required for employment as a teacher aide in the State of Illinois. The program is designed for completion within two semesters of one academic year. Teacher Aide courses provide a unique opportunity for on-site instruction by curriculum specialists and supervision by master teachers. Students will practice teach in school buildings with children in learning situations.

FIRST SEMESTER	SECOND SEMESTER
CCA 260 Teacher Aide I 6	CCA 261 Teacher Aide II 6
CCA 220 Child Development Practicum Internship I 6	CCA 222 Child Development Practicum Internship II 6
Elective <u>3</u>	Elective <u>3</u>
15	15



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. and A.L.S. degrees, 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 counselor for clarification on the transferability of these courses.

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

Sample Course Listing

ANT	201	General Anthropology	(3-0)		3 hrs.
course prefix	course number	course title	hours of lecture per week	hours of lab per week	semester hours of credit

AIR CONDITIONING

See: Refrigeration and Air Conditioning

ANTHROPOLOGY**ANT 201 General Anthropology (3-0) 3 hrs.**

An introduction to the comparative study of mankind from the viewpoints offered in: human evolutionary biology, social organization, linguistics, kinship, magic and religion, ecology, archeology, and non-human primate behavior.

ANT 202 Comparative Study of Cultures (3-0) 3 hrs.

Methods used by anthropologists to gather and interpret cultural materials. Comparison of various cultures, understanding the culture concept, and examination of the relationship between culture and personality.

ANT 203 Native Americans (3-0) 3 hrs.

The course is designed to acquaint the student with his pre-Columbian heritage. It deals with the wealth and variety of life-ways that were practiced by pre-historic and historic American Indians and the ways that they defined and dealt with the problems of life, including the problems encountered by European colonization.

ANT 204 Introduction to Human Pre-History (3-0) 3 hrs.

This course is designed to acquaint the student with ninety-five percent of man's existence, through the framework of the fossil record, archeology, primate behavior, and laboratory analysis, in addition to the study of present-day populations.

ARCHITECTURE**ARC 101 Basic Design I (0-6) 3 hrs.**

Basic factors in two-dimensional and three-dimensional design.

ARC 102 Basic Design II (0-6) 3 hrs.

More complex systems of two-dimensional and three-dimensional design. Introduction to color theory.

Prerequisite: ARC 101.

ARC 201 Design I (0-8) 4 hrs.

Architectural design problems; emphasis on development and organization of space.

Prerequisite: ARC 102.

- ARC 202 Design II (0-8)** 4 hrs.
Architectural design problems; emphasis on structure.
Prerequisite: ARC 201.
- ARC 203 Building Construction I (2-2)** 3 hrs.
Wood and masonry construction and allied materials.
- ARC 204 Building Construction II (2-2)** 3 hrs.
Steel construction and allied materials.
Prerequisite: ARC 203.
- ARC 205 Architectural History I (3-0)** 3 hrs.
Introduction to the history of architecture and to architectural criticism. A cultural-historical oriented examination of architectural developments, stylistically, structurally, and symbolically, from prehistoric through medieval times.
- ARC 206 Architectural History II (3-0)** 3 hrs.
Continued cultural-historical examination of architectural developments, stylistically, structurally, and symbolically, from Renaissance to present.

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.
Prerequisite: ATE 101 or consent of instructor.
- 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, SYMAT 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 I (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.

Continuation of 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.

ART**ART 100 Art Seminar (1-0) 1 hr.**

A course dealing with problems relating to the artist and art student. Required of all art majors.

ART 105 Introduction to Arts (3-0) 3 hrs.

An 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 Studio I (0-6) 3 hrs.

A studio course emphasizing the design elements and principles as applied to visual imagery.

ART 111 Drawing Studio II (0-6) 3 hrs.

A studio course emphasizing the interaction between design abilities, image, and content.

Prerequisite: ART 110 or consent of instructor.

ART 121 Design Studio 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 Studio II (0-6) 3 hrs.

A 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.

A 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.

A 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 I (0-4) 2 hrs.

Pictorial composition in line, value, pattern, and color. Studio and lecture.

Prerequisite: ART 111 and ART 121.

ART 237 Composition II (0-4) 2 hrs.

Continuation of ART 236. Studio and lecture.

Prerequisite: ART 236.

ART 261 Painting Studio (0-4) 2 hrs.

A 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 291 Ceramics Studio (0-4) 2 hrs.

A 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.

A 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.

BANKING, FINANCE AND CREDIT**BFC 101 Principles of Bank Operations (3-0)****3 hrs.**

A broad view of the internal operations of a typical bank. Emphasis is on those general principles of bank operations which are applicable to all banks regardless of size. The course provides a sound foundation for newcomers to banking, regardless of sex, age, or prior academic experience, as banking is increasingly dependent upon personnel possessing the broad perspective necessary for career advancement.

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 117 Bank Public Relations and Marketing (3-0)**3 hrs.**

Provides for all bankers an overview of what everyone in banking should know about the essentials of bank public relations and marketing. Areas covered include the goals, development, implementation, and evaluation of internal and external public relations and marketing plans.

BFC 211 Bank Accounting Systems (3-0)**3 hrs.**

Basic accounting procedures, techniques, and systems used in small and medium sized banks for the preparation and analysis of the statement of condition.

Prerequisite: BUS 102. (BFC 216 and BFC 217 or BUS 212 are recommended.)

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.

Prerequisite: None. (BUS 211 is recommended.)

BFC 213 Trust Functions and Services (3-0)**3 hrs.**

An 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 statement 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: BUS 102. (BUS 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: BUS 101. (BUS 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: BUS 211.

BFC 218 Credit Administration (3-0) 3 hrs.

Emphasis is on 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 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 a 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. (BUS 160 and BUS 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. (BUS 211 is recommended.)

BIOLOGY**BIO 100 Human Biology I (4-0)****4 hrs.**

A survey of the human body, with emphasis on basic physical and chemical concepts, anatomy, physiology, and embryology. This course is designed to meet the needs of students in the allied health career programs.

BIO 101 Biology Survey (3-0)**3 hrs.**

Survey of science of biology, emphasizing chemical and physical properties of living things; over-view of plant and animal kingdoms; systems of control; growth; differentiation; reproduction; genetics; ecology and evolution.

BIO 102 Human Biology II (3-0)**3 hrs.**

An introduction to the nature of human diseases, with emphasis on the functional disturbances within the body systems. This course is designed to meet the needs of students in the allied health career programs.

Prerequisite: BIO 100.

BIO 103 Man and Environment (3-0)**3 hrs.**

Survey and analysis of 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.**

Emphasis is placed upon 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.**

Survey of 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.**

Introductory analysis of 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.**

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 140 General Zoology (3-3)**4 hrs.**

Survey of 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 160 Human Anatomy (3-2)**4 hrs.**

Anatomy of the human body with the following systems being studied in order given: skeletal, muscular, nervous, circulatory, integumentary, digestive, urinary, respiratory, and reproductive. Basic biochemistry, fluid balance, cellular ultra-structure, and histology are also included. In this course, special application will be made to meet the needs of students in health careers, biology, and physical education.

Prerequisite: Consent of instructor.

BIO 161 Human Physiology (3-2)**4 hrs.**

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.

BIO 180 Histology and Embryology (2-2)**3 hrs.**

Minute structure and development of tissue of body with particular reference to teeth and supporting tissues.

Prerequisite: BIO 161.

BIO 190 General Pathology (2-2)**3 hrs.**

Introduction to general pathology; common diseases affecting the human body. Diseases of oral cavity emphasized. (NOTE: Offered in second year of Dental Hygiene program.)

Prerequisite: BIO 180.

BUSINESS**BUS 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.

BUS 101 Accounting I (3-0)**3 hrs.**

Basic accounting and business concepts, principles of recording transactions, special ledgers and statements, end-of-period adjustments, and financial statement preparation.

BUS 102 Accounting II (3-0)**3 hrs.**

Continuation of BUS 101. Emphasis on partnerships, corporations, branches, and departments. Interpretation of financial statements, basic valuation and cost concepts, and reporting of manufacturing costs.

Prerequisite: BUS 101.

BUS 106 Merchandising of Furnishings and Softline Goods (2-0)**2 hrs.**

Focuses upon aspects of retailing pertinent to furnishings, apparel, and other softline merchandise, including the role and qualifications of the buyer of these goods. The influence of consumer preference on such goods is studied. Introduces budgeting by dollars and assortment, pricing strategy, managing assortments, the selection and promotion of merchandise, and the coordination of merchandising functions and processes.

BUS 109 The Retail Food Distribution Industry (2-0)**2 hrs.**

The study of the mass retail food distribution industry with major emphasis on the supermarket. Topics to be included are history and economic development of retail food distribution, problems and practices in supermarket organization and management, current issues confronting the industry, and the future role of the retail food distribution industry.

BUS 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.

BUS 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.

BUS 141 Sales Management (3-0)**3 hrs.**

This course 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: BUS 140 or consent of program coordinator.

BUS 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.

BUS 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: BUS 111 or consent of instructor.

BUS 155 Tax and Payroll Accounting (4-0)**4 hrs.**

An 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.

BUS 160 Principles of Supervision (3-0)**3 hrs.**

An introductory course dealing with 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.

BUS 167 Records Management (3-0)**3 hrs.**

Records Management consists of 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.

BUS 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.

BUS 201 Intermediate Accounting I (3-0) 3 hrs.

Problem-solving course in accounting principles begun in BUS 101 and BUS 102. Accounting and reporting process, accounting theory, inventories, tangible and intangible fixed assets.

Prerequisite: BUS 102.

BUS 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: BUS 201.

BUS 203 Introductory Cost Accounting (3-0) 3 hrs.

Use of costs for control and decision making, with emphasis on determining and reporting overhead variance, product costs (process, job order, and standard cost), by-product costs, joint-product costs, and direct and variable costing.

Prerequisite: BUS 102.

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

A general history of the sources of the law, an outline of the judicial system, followed by the basic principles of business law including contracts, agency and employment, and property.

BUS 212 Business Law II (3-0) 3 hrs.

Continuation of BUS 211. Basic principles of business law including the uniform commercial code, business organizations and creditor's rights.

Prerequisite: BUS 211.

BUS 215 Supermarket Operations (3-0) 3 hrs.

Operational aspects of the supermarket, including planning, organizing, and controlling the use of capital, personnel, equipment and facilities, work methods, departmental operations, store security, housekeeping, supply control, sanitation safety, scheduling, front-end management, cash control, and customer service.

Prerequisite: (BUS 109 recommended.)

BUS 216 Supermarket Merchandising (3-0) 3 hrs.

Merchandising techniques as applied to the supermarket, including the store manager's merchandising responsibilities, analysis of profit centers, customer motivation, consumer dynamics, product information, space management in store sales, promotion and displays, inventory control, pricing, advertising, brand management, creative merchandising in specific departments, and increasing departmental as well as store sales and profits.

Prerequisite: (BUS 109 recommended.)

BUS 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: BUS 245 or consent of instructor.

BUS 218 Introduction to Finance (3-0)**3 hrs.**

Methods of financing business enterprises and their relationships to personal and company investment policies.

Prerequisite: BUS 101 and BUS 111.

BUS 225 Applied General Statistics (3-0)**3 hrs.**

An introduction to 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: Any mathematics course numbered 100 or above or consent of instructor.

BUS 240 Advanced Sales Skills (3-0)**3 hrs.**

This course is designed to further develop and refine 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: BUS 140 or consent of program coordinator.

BUS 245 Principles of Marketing (3-0)**3 hrs.**

Principles and 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: BUS 111. Prior or concurrent enrollment in ECO 201 recommended.

BUS 246 Industrial Marketing (3-0)**3 hrs.**

This course is designed to provide 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: BUS 245 or consent of program coordinator.

BUS 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: BUS 245 or consent of program coordinator.

BUS 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: BUS 245 or consent of program coordinator.

BUS 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: BUS 106 or BUS 250.

BUS 261 Problems in Management and Supervision (3-0)**3 hrs.**

A course designed to provide 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 will be utilized.

Prerequisite: BUS 160, BUS 270, or consent of instructor. (Prior or concurrent enrollment in ECO 201 recommended.)

BUS 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: BUS 270 or consent of instructor.

BUS 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: BUS 270 or consent of instructor.

BUS 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: BUS 111 or BUS 160.

BUS 274 Industrial Management (3-0) 3 hrs.

An 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: BUS 270 or consent of instructor.

BUS 275 Labor-Management Relations (3-0) 3 hrs.

A course dealing 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: BUS 270 or consent of instructor. (Prior or concurrent enrollment in ECO 201 recommended.)

BUS 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: Completion of six credit hours in marketing courses and consent of program coordinator.

BUS 281 Marketing Management Seminar and Internship I (1-15) 3 hrs.

Principles, practices, and areas of decision making relative to price, product, promotion, and distribution policies of various types of marketing organizations. Restricted to students in marketing management occupational programs. Part of the credit given for participation in supervised cooperative work experience in a college approved training station. One lecture hour per week for seminar.

BUS 282 Marketing Management Seminar and Internship II (1-15) 3 hrs.

Continuation of BUS 281.

Prerequisite: BUS 281 or consent of program coordinator.

BUS 283 Marketing Management Seminar and Internship III (1-15) 3 hrs.

Continuation of BUS 281 and BUS 282.

Prerequisite: BUS 282 or consent of program coordinator.

CHEMISTRY**CHM 100 Introductory Chemistry (3-3)****4 hrs.**

Introduction to fundamental concepts of inorganic, organic, and biochemistry: matter, solutions, properties of organic compounds, and chemical reactions. For students with no credit in high school chemistry. Meets prerequisite for Nursing Program.

CHM 101 Survey of Organic and Biological Chemistry (3-3)**4 hrs.**

A brief study of the principles of organic chemistry as related to body functions: acid-base balance, digestion, absorption, and metabolism of proteins, lipids, and carbohydrates; enzymes; nucleic acids; and blood. Laboratory exercises include a study of the major classes of organic compounds, the blood, urine, and saliva. Primarily for Dental Hygiene Program.

Prerequisite: CHM 100.

CHM 121 General Chemistry I (3-3)**4 hrs.**

Principles of atomic structure, bonding, stoichiometry states of matter, and kinetic theory. Laboratories devoted to volumetric, gravimetric, and gas analytical methods of molecular weight determinations. Some prior knowledge of chemistry desirable.

Prerequisite: A "100" series mathematics course or equivalent.

CHM 122 General Chemistry II (3-3)**4 hrs.**

Continuation of CHM 121. Principles of chemical kinetics, equilibria, thermochemistry, 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.**

Principles and theories of chemistry including molecular, atomic, nuclear, and electronic theories of matter and their relations to the periodic table. Oxidation-reduction, chemical thermodynamics, bonding, behavior of gases, kinetics, equilibrium, solutions, etc. are treated quantitatively. Laboratory emphasis upon the interpretation of data. Primarily for students in chemistry, chemical engineering, or physical science curricula.

Prerequisite: One year of high school chemistry with at least a "B" average and credit or registration in MTH 103.

CHM 132 College Chemistry II (3-6)**5 hrs.**

Continuation of CHM 131. Primarily for students in 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 and consent of instructor.

CHM 205 Organic Chemistry II (3-6)**5 hrs.**

Continuation of CHM 204.

Prerequisite: CHM 204.

CHM 210 Quantitative and Instrumental Analysis I (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.

CHM 211 Quantitative and Instrumental Analysis II (3-6)**5 hrs.**

Continuation of CHM 210. Emphasis on instrumental methods of performing analyses. Applications, limitations, and treatment of errors stressed.

Prerequisite: CHM 210.

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 conception through pre-school 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.**

Continuation of CCA 102. Theory and research related to careers in human development, school years through adulthood. Schools and community programs for children, adolescents, and youth. Human adjustment, human maladjustments, and intervention programs for behavioral change.

CCA 209 Language Arts for the Young Child (3-0)**3 hrs.**

Techniques and methods for development of language skills in the young child. Included are techniques of 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.

CCA 210 Creative Activities for Young Children (3-0)**3 hrs.**

The course acquaints the student with the variety of creative art materials and methods appropriate for use in programs for young children. The course includes first-hand 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.

CCA 214 Principles of Preschool Education (4-0)**4 hrs.**

Theory and practices of early childhood education in nursery school, day care center, 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.

Corequisite: CCA 215.

CCA 215 Children's Laboratory (1-3)**2 hrs.**

Intensive observation taken in conjunction with CCA 214. Student will observe children three hours a week in a professional child services center. The student will fulfill class assignments while observing.

Prerequisite: Third semester standing.

Corequisite: CCA 214 or CCA 218.

CCA 218 Assisting the Severely Handicapped (3-2)**4 hrs.**

This course is designed to acquaint the child development career worker with growth and development of the severely handicapped child. Varieties of handicaps will be observed and defined. Lecture and actual participation in training methods. The child's needs in the community will be taught.

Prerequisite: PSY 101 or concurrent enrollment in PSY 101. .

Corequisite: CCA 215.

CCA 219 Psychology of Exceptional Children (3-0) 3 hrs.

This course is designed for parents and for teachers responsible for programming for exceptional children individually and in groups. Classification of exceptional children. The course reviews special needs and specialized educational approaches for exceptional children.

Prerequisite: PSY 101.

CCA 220 Child Development Practicum Internship I (3-15) 6 hrs.

This course 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: Fourth semester standing or consent of coordinator.

CCA 221 Workshop in Early Childhood Education (3-0) 3 hrs.

Suggestions for experiences suitable for the preschool and early primary child. The course will be directed to new media, construction of teacher-made activities, and trends and issues in preschool education.

CCA 222 Child Development Practicum Internship II (3-15) 6 hrs.

Continuation of CCA 220.

Prerequisite: Consent of instructor.

CCA 225 Mental Hygiene (3-0) 3 hrs.

An examination of social and emotional adjustment; study of normal personality integration, feelings of inferiority, adjustment mechanisms, classroom therapy, behavior disorders in children, and introduction to methods of child study and provisions for emotionally disturbed children.

Prerequisite: PSY 101.

CCA 230 Movement and Rhythms for the Young Child (3-0) 3 hrs.

Essential movement experiences 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.

CCA 260 Teacher Aide I (4-6) 6 hrs.

The student teacher aide will gain experience by being placed in a public school under the direction of a certified teacher, school principal, and supervising instructor. A weekly seminar will present additional knowledge to the student in academic content areas.

Prerequisite: Consent of instructor.

Recommended corequisite: CCA 220.

CCA 261 Teacher Aide II (3-6) 6 hrs.

Continuation of CCA 260.

Prerequisite: Consent of instructor.

Recommended corequisite: CCA 222.

CRIMINAL JUSTICE**CRJ 101 Introduction to Law Enforcement and
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 102 Police Administration and Organization (3-0)**3 hrs.**

Principles of police administration and organization, functions and activities, records, communications, public relations, personnel and training, policy formation, planning, research, inspection, and control.

CRJ 104 Introduction to Corrections (3-0)**3 hrs.**

Introduction to Corrections 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 and community-based programs plus parole programs.

CRJ 105 Criminal Courts of the U.S. (3-0)**3 hrs.**

Criminal Courts of the U.S. 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 110 Police Operations (3-0)**3 hrs.**

Administration of police line operations, including patrol, as basic operation of the police function, including investigation, traffic, juvenile, intelligence, and other special operational units. Manpower distribution, analysis of operations, enforcement policy, and operations during civil disorders and disasters.

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, finger printing, 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.

Continuation of 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 at 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.

Law and Society 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 208 Police Supervision (3-0) 3 hrs.

Police Supervision 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 and CRJ 102, or consent of coordinator.

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.

The nature and extent of crime in American society, theories of crime causation, methods of crime control, and treatment of offenders.

Prerequisite: SOC 205.

- CRJ 211 Criminal Investigation (3-0)** **3 hrs.**
Conduct at crime scenes, collection and preservation of physical evidence, methods used in police science laboratory, fingerprints, ballistics, documents, photography, and related forensic sciences.
Prerequisite: CRJ 201 or consent of coordinator.
- 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 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 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 254 Interviewing and Case Preparation (3-0)** **3 hrs.**
Interview and questioning of complaints, witnesses, victims, suspects, and informants; statements, mechanical means for the detection of deception, and case preparation.

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: Fourth semester standing or consent of instructor.

DATA PROCESSING**DPR 101 Introduction to Data Processing (3-0) 3 hrs.**

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.

DPR 103 Key Punching and Verifying (1-4) 3 hrs.

Development of high level of skill in programming and operating the IBM 029 key punch and 059 verifier, including speed and accuracy in key punching and verifying. Operating the IBM 129 key punch is also included to introduce the student to newer techniques in key punching.

Prerequisite: Requires successful completion of a typing course.

DPR 106 Computer Logic and Programming Technology (1-2) 2 hrs.

Intended to familiarize the student with the necessary tools to efficiently design the steps in a computer program. Included are problem analysis, flow charting, decision tables, basic logical programming routines, table utilization, and file maintenance. Extensive use of sample cases.

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 applications.

Prerequisite: DPR 101 and DPR 106 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 applications.

Prerequisite: DPR 108 or consent of instructor.

DPR 135 Computer Operator (DOS) (1-4) 3 hrs.

This course will cover actual computer operations, giving the student experience in handling and setting up disk and tape file runs. He will also learn card reader and printer operations.

Prerequisite: Concurrent registration 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 program 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 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 problems of both a business and a non-business nature.

Prerequisite: DPR 101 and DPR 106 or consent of instructor.

DPR 150 Business FORTRAN (2-2) 3 hrs.

This course is designed to introduce FORTRAN IV as it is applied to industrial applications. Case studies will include the finance, marketing, and accounting uses of FORTRAN. Stress will be placed on FORTRAN's advantages over other compiler languages in the above programming environments.

Prerequisite: DPR 101, DPR 106, and MTH 102, or consent of instructor.

DPR 202 Programming Systems (3-2) 3 hrs.

Purpose and function of various programming systems. Program compilers, micro- and macro-generators, utility programs, sort/mergers, and job control languages.

Prerequisite: MTH 103 or DPR 150 and either concurrent registration in or completion of DPR 210, or consent of instructor.

DPR 203 Systems Analysis and Design (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 and concurrent registration in BUS 101, or consent of instructor.

DPR 204 Advanced Systems Analysis and Design (3-0) 3 hrs.

Continuation of 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.

DPR 208 Computer Programming--Advanced COBOL (3-2) 4 hrs.

Continuation of DPR 108. Course is intended to familiarize the student with COBOL programming for magnetic tape and magnetic disk using sequential, direct access and 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 101, DPR 106 and DPR 108.

DPR 210 Computer Programming--Advanced Assembler Language (3-4) 4 hrs.

Continuation of DPR 110. Programming magnetic tape, random storage devices, and remote terminal systems. Includes use of IOCS for input-output devices.

Prerequisite: DPR 110.

DPR 212 Programming for the Minicomputer (2-2) 3 hrs.

The objective of this course is to familiarize 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 using the concepts on a Motorola MDP-2000.

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 250 Data Processing Math 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 (1-3) 2 hrs.**

Introduction, history, and organization of both the dental and dental hygiene professions. A development of professional attitudes, aims, and objectives of the members of the dental health team. Familiarization with dental terminology.

DHY 101 Pre-Clinical Dental Hygiene (1-3) 2 hrs.

Operative procedures consist of instruction and practical work on manikin heads in technique of instrumentation and polishing. Proper manipulation of instruments for removal of calcific deposits and their indications. Required for admittance to clinical practice.

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.

DHY 130 Nutrition (1-0) 1 hr.

The principles of nutrition in relation to good health with special emphasis on dental implications. The food needs of normal individuals of different ages and the selection of food for the maintenance of maximum health are stressed as well as the study of the basic nutrients and their oral relevance. Emphasis is placed on applied nutrition in dental practice—dietary counseling and analysis in relationship to dental caries and periodontal diseases.

Prerequisite: CHM 100.

DHY 150 Clinical Dental Hygiene and Radiology I (0-6) 2 hrs.

Clinical practice on patients in dental hygiene clinic. Recording of patient histories, charting, X-ray, prophylaxis, topical medicinal applications, and dental health education.

DHY 161 Dental Anatomy (2-3) 3 hrs.

Human dentition and supporting tissues. Penetrating study of oral anatomical structures. Recognize, describe, and reproduce all natural tooth forms.

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.

DHY 220 Community Dentistry I (3-0) 3 hrs.

Preventive dentistry, dental health education, and public health. Emphasis on dental health education, including diet and nutrition, health habits, oral prophylaxis, etiology of caries, dental stains, deposits, and periodontal health. Theories of preventive dentistry, including diseases, their etiology, prevention, and cure through public health measures.

DHY 221 Community Dentistry II (2-2) 3 hrs.

Continuation of DHY 220 with field experience in student classroom teaching in district elementary schools. Pursuit of field studies in public health.

DHY 230 Periodontology (2-0) **2 hrs.**
 Study of the gingival and periodontal tissues, in health and with disease. Special emphasis is placed on the disease status.

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.

DHY 250 Clinical Dental Hygiene and Radiology II (0-12) **4 hrs.**
 Continuation of DHY 150.

DHY 251 Clinical Dental Hygiene and Radiology III (0-12) **4 hrs.**
 Continuation of DHY 250.

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.

DHY 291 Dental Assisting (1-6) **2 hrs.**
 Incorporates guest lecture series covering theory and demonstrations in operative dentistry, orthodontics, prosthodontics, oral surgery, endodontics, military dentistry, public health, and allied health services. Field experience through observation and participation in local dental offices, clinics, and military installations.

DIETETIC TECHNICIAN

DIT 100 Dietetic Practicum I (0-3) **1 hr.**
 Field experience in an assigned, approved acute medical care hospital dietary department providing an orientation to the setting where nutritional care is provided to patients. Student progress is monitored by the chief clinical registered dietitian and the clinical instructor. Observation with limited practice.
 Prerequisite: DIT 101 or concurrent enrollment.

DIT 101 Basic Nutrition (2-2) **3 hrs.**
 An introduction to the basic concepts of nutrition applicable to healthy people throughout their life cycle. Study of nutrients, their function and food sources. Food habits and food misinformation related to socio-economic factors. Applying nutrition education to aid alleviating community and world health problems. A tasting and demonstration laboratory provides a review of food purchasing and preparation for satisfying meals.

DIT 102 Advanced Nutrition (2-2)**3 hrs.**

Application of the principles given in DIT 101, by studying nutritional care of the individual with a health problem. The chief therapeutic modifications of a normal diet to meet pathological conditions are explored. Techniques of effective interaction with the patient are presented. Sample meal trays prepared in the tasting and demonstration laboratory reinforce preparation for patient instruction and writing modified menus.

Prerequisite: DIT 101.

DIT 110 Principles of Food Preparation (1-4)**3 hrs.**

Introduction to the scientific principles of food preparation; menu planning; marketing; meal preparation for individuals and families of varying economic and cultural backgrounds; use of available equipment in the home; age and health of meal planner. Attractive meal service included.

Prerequisite: FSM 114.

DIT 150 Dietetic Practicum II (0-6)**3 hrs.**

Field experience in assigned, approved acute medical care hospital. Under the direct supervision of the therapeutic or clinical dietitian, the student rotates through the various job responsibilities of the technician: in the dietetic office, directly with patients, and with nutrition education.

Prerequisite: DIT 100 and consent of instructor.

DIT 200 Dietetic Practicum III (0-12)**4 hrs.**

Field experience in assigned areas of the community dealing with the nutritional care of people. Rotation through agencies or experiences in public health, day care centers, schools, colleges, and homes for the aged.

Prerequisite: DIT 150 and consent of instructor.

DIT 201 Nutrition Care (3-0)**3 hrs.**

Nutrition education principles and techniques for individual, family, and small group instruction in normal and preventative nutrition care. Health care delivery systems are studied. Consideration is given to community nutrition-related problems. Agency and institutional nutritional care from the very young to the aged is explored.

Prerequisite: DIT 102.

DIT 202 Nutrition Care Seminar (2-0)**2 hrs.**

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.**

Identification and discussion of the employment opportunities in the nutritional care field, roles of the dietetic technician, responsibilities of allied health professionals, and professional organizations.

Prerequisite: DIT 201.

DIT 250 Dietetic Practicum IV (0-12)**4 hrs.**

Field experience in selected or assigned approved health care facility under the direct or general supervision of a registered dietitian. Skills are broadened and deepened in the area of normal and modified diet nutrition care. The student becomes increasingly independent in his practice, with the opportunity to function as a dietetic technician as a member of the "health care team." Prerequisite: DIT 200 and consent of instructor.

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.**

A 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.**

Continuation of 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, government 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 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) 4 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.

R-C and R-L single time constant circuits. Basic switching, circuitry, circuits with square-wave and step voltages as sources, and sinusoidal voltages as sources.

Prerequisite: ELT 101 or consent of instructor.

ELT 103 Circuits III, Networks (3-4) 4 hrs.

Networks that will not reduce to simple single time constant circuits. Only steady-state solutions considered, enabling use of S-plane in circuit analysis.

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 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 203 Electronics II, Pulse (3-4) 4 hrs.

Electronic circuits in which electronic devices are operated in a switching mode. Practical circuits such as clippers, clammers, pulse formers, multivibrators, blocking oscillators, logic circuits, and sweep circuits are involved. Prerequisite: ELT 103, ELT 111, or consent of instructor.

ELT 204 Electronics III, Advanced Electronics (3-4) 4 hrs.

Electronic circuits in which vacuum tubes and transistors are operated in the linear region of their volt-ampere characteristic such that linear equivalent circuits can be applied in the analysis. Power supplies, amplifiers, feedback circuits, oscillators, modulation systems, and detectors. Prerequisite: ELT 103 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) 4 hrs.

Principles of digital and analog computers. Operating techniques of digital and analog computers. Prerequisite: ELT 203 or consent of instructor.

ELT 207 UHF Communications and Reception (3-4) 4 hrs.

Design techniques in UHF circuits, field theory wave equations, and antennas. Prerequisite: ELT 203 or consent of instructor.

ELT 210 Computer Programming (3-0) 3 hrs.

Electronic technology involves the use of the computer as a special tool. This course introduces the basic necessary special tool. This course introduces the basics necessary to utilize three computer languages: Basic, WATFIV and ECAP. Prerequisite: MTH 106 or consent of instructor.

ELT 211 Analog Simulation I (3-4) 4 hrs.

Analog computer for technologies. Problem preparation and representative solutions of physical problems. Prerequisite: MTH 206 or consent of instructor.

ELT 212 Analog Simulation II (3-4) 4 hrs.

Continuation of Analog Simulation I. Prerequisite: ELT 211 or consent of instructor.

ELT 215 Electrical Controls and Motors (3-4) 4 hrs.

This course is 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. This course may serve as a technical elective of ELT, MET, and RAC.

Prerequisite: ELT 110 or consent of instructor.

ENGINEERING**EGR 100 Introduction to Engineering and Technology (0-3) 1 hr.**

A 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. Corequisite: Concurrent enrollment in EGR 100 or consent of instructor.

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.

EGR 216 Surveying II (2-3) 3 hrs.

Route surveying, circular and parabolic curves, spirals, stadia surveying, U.S. Public Land Surveys, elementary land surveying, and fundamentals of engineering astronomy used in surveying.

Prerequisite: EGR 215.

ENGLISH**CMN 097 Spelling Improvement (1-0) 1 hr.**

An 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.

An 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.

An individualized program for the student who needs assistance in developing language skills. Carries no transfer credit.

ENG 099 Composition (3-0) 3 hrs.

A course designed to meet the English requirement of some career programs and to prepare students for ENG 101. Emphasis is on development of basic composition skills. Carries no transfer credit.

ENG 101 Composition (3-0) 3 hrs.

A course in 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 099.

ENG 102 Composition (3-0) 3 hrs.

Continuation of ENG 101 in the reading and writing of various types of prose. Introduces methods used in writing investigative papers.

Prerequisite: ENG 101 or consent of division chairperson.

ENG 103 Report Writing (3-0) 3 hrs.

Fundamentals of semantics, syntax, and rhetoric as applied to business, industrial, and governmental report writing.

Prerequisite: ENG 101 or consent of division chairperson 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.

Guided practice in various types of creative writing, emphasizing skills common to creative expression, description, narration, and verse.

Prerequisite: ENG 102 or consent of division chairperson.

ENGLISH AS A SECOND LANGUAGE**ESL 098 English as a Second Language (2-0) 2 hrs.**

An individualized course in English as a Second Language for people with foreign language backgrounds who want to improve their ability to understand and speak the English language in preparation for regular college courses. Carries no transfer credit.

ESL 099 English as a Second Language (2-0) 2 hrs.

An individualized course in English as a Second Language for people with foreign language backgrounds who want to improve their ability to read and write the English language in preparation for regular college courses. Carries no transfer credit.

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 program 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 program 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 program 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 program 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 program coordinator.

FAS 107 Textiles I (0-2) 2 hrs.

Basic design and color principles in development of creative fabrics. General analysis and identification of fabrics. Study of various methods such as weaving, printing, and dyeing.

Prerequisite: Consent of program coordinator.

FAS 108 Textiles II (0-2) 2 hrs.

Continuation of FAS 107. Contemporary fabrics analyzed and studied.

Prerequisite: FAS 107.

FAS 109 Micro Environmental Design I (0-2) 2 hrs.

Theory and principles of design for fashion and interior. The elements of design and color are covered. Developing the perception and awareness to judge good design and to analyze potential trends. The influence of present day cultural trends on the field of design.

Prerequisite: Consent of program coordinator.

FAS 110 Micro Environmental Design II (2-0) 2 hrs.

The elements of design and color in historical perspective. A survey of historical periods of design focusing on costume, interiors, and home furnishings. The influences on these periods of social, political, and economic forces. Patterns of change in design.

Prerequisite: FAS 109 or consent of program coordinator.

FAS 201 Advanced Flat Pattern Design and Draping I (2-4) 4 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.

FAS 202 Advanced Flat Pattern Design and Draping II (2-4) 4 hrs.

Continuation of FAS 201.
Prerequisite: FAS 201.

FAS 203 Advanced Diversified Apparel Design I (2-4) 4 hrs.

Development of patterns for the translation of original designs into completed garments. Visits to manufacturers, and speakers from industry.
Prerequisite: FAS 104.

FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.

Continuation of FAS 203.
Prerequisite: FAS 203.

FAS 205 Tailoring Techniques I (0-4) 2 hrs.

Professional assembling procedures, details, and finishes. Particular emphasis on coats and suits.
Prerequisite: Consent of program coordinator.

FAS 206 Tailoring Techniques II (0-4) 2 hrs.

Continuation of FAS 205. Tailoring of original garments.
Prerequisite: FAS 205.

FAS 209 Advanced Fashion Illustration I (0-2) 1 hr.

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 210 Advanced Fashion Illustration II (0-2) 1 hr.

Continuation of FAS 209. Preparation of professional portfolio.
Prerequisite: FAS 209.

FAS 212 Design Communication (2-0) 2 hrs.

Communication 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 program coordinator.

FAS 229 Promotion of Fashion (3-0)**3 hrs.**

The 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 program coordinator.

FAS 230 Contemporary Living (3-0)**3 hrs.**

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 program coordinator.

FAS 233 Fashion Seminar and Internship (1-15)**3 hrs.**

Cooperative work-study program to provide the student with on-the-job training in the merchandising, promotion, and design fields as arranged with cooperating firms. Prerequisite: FAS 102 or consent of program coordinator.

FAS 240 Communication (3-0)**3 hrs.**

Practice in various forms of business communication, both written and oral, to develop skills needed in presenting material related to fashion. Included will be exercises in learning how to speak effectively on a one-to-one basis, to groups and to salespeople; how to write concise material for advertising copy; how to prepare press releases, business letters, memos and reports; how to prepare fashion show commentary; how to prepare a job resume and to deal with interviewing techniques. This course will also cover grooming, poise and etiquette as further aids to communication. Role playing and other participative projects will be used, including producing of fashion shows illustrative of the talent of the students from the design classes. Prerequisite: FAS 229.

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.

A 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.

A 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.

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, underwriters' 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.

A 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.

A 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.

FSM 091 Advanced Quantity Baking (0-20) 10 hrs.

A continuation of FSM 090 with emphasis on more advanced techniques of baking including cake decorating, hotel pastry, and display pieces. Some time will be spent in the kitchens to orient student to cooking.

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.

FSM 096 Advanced Quantity Cooking (0-20) 10 hrs.

A continuation of FSM 095 with emphasis on more advanced techniques of food preparation including culinary art and buffet work. Exposure to bake shop operations will be integrated into the course.

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 (0-10) 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 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.**

A study of the theory and techniques of supervision as related to the food service industry.

FSM 213 Seminar and Internship (2-15)**4 hrs.**

Cooperative work experience in the food service industry. Enrollment is restricted to sophomores in the Food Service Management curriculum. 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. Work experience will be shared in a two-hour weekly seminar.

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. This course is designed for students with no previous experience in French.

FRN 102 Elementary French II (4-0)**4 hrs.**

Continuation of 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.**

Continuation of FRN 201, plus accuracy and speed in reading, study of 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.

Prerequisite: FRN 202 or equivalent, or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

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 discussion.

Prerequisite: FRN 202 or equivalent, or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

GEOGRAPHY**GEG 101 World Geography (3-0)****3 hrs.**

The 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 100, 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. This course is designed for students with no previous experience in German.

GER 102 Elementary German II (4-0)**4 hrs.**

Continuation of 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.**

Continuation of GER 201, plus 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.

Prerequisite: GER 202 or equivalent, or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

GER 210 Introduction to Modern German 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. Writings based on readings and class discussions.
 Prerequisite: GER 202 or equivalent, or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

HEALTH SCIENCE CURRICULUM

HSC 110 Emergency Medical Technician Training (4-2) 5 hrs.
 The course, 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. The course 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.
 Prerequisite: Consent of instructor.

HSC 112 Medical Terminology (2-0) 2 hrs.
 This course 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 (2-4) 3 hrs.
 An introduction to examination and treatment room procedures for the Medical Office Assistant. The course will include sterilization techniques, principles of medication, and assisting the physician with examinations and minor surgical procedures. Emphasis will be placed on demonstration of clinical office skills.
 Prerequisite: Consent of instructor.

HSC 212 Clinical Procedures II (1-6) 3 hrs.
 This course is 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.
 This course will acquaint the Medical Office Assistant with the legal and ethical responsibilities of the physician, patient, and medical office assistant in medical practice. Emphasis will be given to professional attitudes and behavior in the medical office assistant-patient-physician relationship.

HISTORY
HST 111 The American Experience to 1877 (3-0) 3 hrs.

A 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.

The 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 113 Conference Course (1-0) 1 hr.

Designed to meet interests and needs of qualified majors in history. Must be taken concurrently with HST 111 or HST 112. Specific topics will vary from semester to semester.

Prerequisite: Consent of instructor.

HST 141 History of Western Civilization to 1815 (4-0) 4 hrs.

Political, social, cultural, economic, and technological developments from prehistoric times to advent of 1789 French Revolution.

HST 142 History of Western Civilization since 1815 (4-0) 4 hrs.

Continuation of HST 141. Political, social, cultural, economic, and technological developments with emphasis on such socio-political-economic concepts as nationalism and social-Darwinism.

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 243 The Far East in the Modern World (3-0) 3 hrs.

The history of East Asia since 1800. The traditional cultures of China and Japan, the western impact, and the Asian response will be covered.

HUMANITIES AND FINE ARTS
FNA 111 History of Art I (3-0) 3 hrs.

The 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 appreciation.

FNA 112 History of Art II (3-0) 3 hrs.

The 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.

Prerequisite: None. (FNA 111 recommended.)

FNA 113 History of Art III (3-0) 3 hrs.

The 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.

Prerequisite: None. (FNA 112 recommended.)

FNA 212 Theatre Arts: Motion Pictures, Drama, Ballet, Opera, and Music (3-0) 3 hrs.

Interrelationships and synthesis in the arts as exhibited in motion pictures, theatre, ballet, opera, and music for the theatre. Process of bringing together various artistic media such as literary elements, musical devices, and visual effects to produce these art forms.

HUM 101 The Creative Nature of Man I (3-0) 3 hrs.

Creative personality in 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.

Prerequisite: None. (HUM 101 recommended.)

HUM 110 Women and Creativity (3-0) 3 hrs.

An exploration of 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.

INDEPENDENT STUDY

IDS 290 Independent Study

1-4 hrs.

Independent study is designed to permit the students to pursue a course of study not typically available under traditional course structure. The course may be repeated to a maximum of four hours credit. The student will contract with the appropriate supervisor for the objectives to be accomplished in the course. Prerequisite: Sophomore standing, "C" average, or consent of instructor.

INTERIOR DESIGN

IND 101 Basic Interior Design I (2-6)

5 hrs.

Profile of today's customer, elements of design, functional planning, visual sales presentation techniques, color, pattern, texture, window treatments, product sources, and applied principles of planning.

Prerequisite: Consent of coordinator.

IND 102 Basic Interior Design II (2-6)

5 hrs.

Furniture history, period furniture and treatments, contemporary classics, continued study and application of color and planning, functional room analysis, introduction to wall and floor covering, and lighting.

Prerequisite: IND 101.

IND 201 Advanced Interior Design I (3-6)

6 hrs.

Furniture construction, blueprint reading, material specifications of fabrics, flooring, and wallcoverings. Detailed analysis of complete planning and specifications for job portfolio. Practical application of interior and sales presentations. Introduction to home furnishings manufacturing field.

Prerequisite: IND 102.

IND 202 Advanced Interior Design II (3-6)

6 hrs.

Lighting layouts, budget studies, accessories and display techniques, continued market research and advanced portfolio preparation, with professional critiques.

Prerequisite: IND 201.

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.

Specialized news writing stressing human element in the news. Techniques, story approaches for individualistic treatment. Newspaper and magazine procedures are stressed.

Prerequisite: JNM 130 or consent of coordinator.

JNM 134 Media Adjuncts (2-4) 4 hrs.

Planning and production work in advertising, public relations, and publications—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 settings international, national, regional, and local.

JNM 235 Copy Reading and News Editing (2-4) 4 hrs.

Preparing copy for newspaper publication. Headline writing, copy editing, treatment of story placement, and effective display of typographically pleasing makeups. A newspaper is prepared by the class.

JNM 236 Radio and Television News (3-2) 4 hrs.

Reporting and writing for broadcast news. Emphasis on broadcast style in all phases of newswriting and editing. A monthly radio newscast and a television newscast are prepared.

JNM 237 Externship Study (0-10) 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 the 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: Consent of coordinator.

LTE 103 Litigation (3-0) 3 hrs.

Analysis of civil procedure and instruction in preparation of documents used in law suits, covering pre- and post-trial matters, evidentiary problems, and assistance during trials.

Prerequisite: LTE 101 or consent of coordinator or instructor.

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 or instructor.

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: Consent of coordinator or instructor.

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: LTE 101 or consent of coordinator or instructor.

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: Consent of coordinator or instructor.

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: 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.

LIBERAL STUDIES
ALS 101 Business and Society (3-0) 1-3 hrs.

The liberal studies seminar in business is designed to provide maximum learning procedure flexibility to students in the form of an individualized study approach to the functional areas of business or a traditional approach in studying the role and function of business in contemporary society. Presentation of this course may be by lecture, seminar or individualized study.

Prerequisite: Consent of instructor.

ALS 103 Human Communication (3-0) 1-3 hrs.

A Liberal Arts Division course to meet the requirements for the institutional associate in liberal studies degree. As part of the ALS contract, the student will contract with one or more division members for 1-3 hours of credit in the area of communications. Although the choice may be from among the division's current offerings, it is more likely that the student will create a unique educational environment. Presentation of this course may be by lecture, seminar, or individualized study.

Prerequisite: Consent of instructor.

ALS 105 Engineering and Technology (3-0) 1-3 hrs.

A seminar in which the student is introduced to the engineering and technological areas of the college, and some of the techniques used in these areas. Presentation of this course may be by lecture, seminar, or individualized study.

Prerequisite: Consent of instructor.

HARPER COLLEGE OFF-CAMPUS COURSE LOCATIONS

Alexian Brothers Medical Center
800 West Biesterfield Road
Elk Grove Village

Arlington High School
502 West Euclid Avenue
Arlington Heights

Arlington Park Towers Hotel
Euclid Avenue and
Rohlwing Road
Arlington Heights

Barrington High School
616 West Main Street
Barrington

Barrington Middle School
215 Eastern Avenue
Barrington

Birchwood
Palatine Park District
435 West Illinois
Palatine

Conant High School
700 East Cougar Trail
Hoffman Estates

Eisenhower Junior High School
800 West Hassell Road
Hoffman Estates

Elk Grove High School
500 Elk Grove Boulevard
Elk Grove Village

Forest View High School
2121 South Goebbert Road
Arlington Heights

Fremd High School
1000 South Quentin Road
Palatine

Hersey High School
1900 East Thomas Avenue
Arlington Heights

Hoffman Estates Bowling Alley
Higgins Road
Hoffman Estates

Hoffman Estates High School
1100 West Higgins Road
Hoffman Estates

Holy Family Hospital
100 North River Road
Des Plaines

Mt. Prospect Country Club
600 See-Gwun Avenue
Mt. Prospect

Northwest Community Hospital
800 West Central Road
Arlington Heights

Palatine High School
150 East Wood
Palatine

Palatine Public Library
149 North Brockway
Palatine

Plum Grove School
Old Plum Grove and
Meacham Roads
Palatine

Prospect High School
800 West Kensington Avenue
Mt. Prospect

Rolling Meadows High School
2901 Central Road
Rolling Meadows

Schaumburg High School
1100 West Schaumburg Road
Schaumburg

Schaumburg Township Public Library
32 West Library Lane
Schaumburg

Sherman Hospital
934 Center Street
Elgin

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

St. Joseph's Home for the Elderly
80 West Northwest Highway
Palatine

St. Viator High School
1213 Oakton Street
Arlington Heights

Villa Olivia Country Club
Route 20
Bartlett

Wheeling High School
900 South Elmhurst Road
Wheeling

Wheeling Public Library
850 Jenkins Court
Wheeling

Willow Park Center
Palatine Road and
Milwaukee Avenue
Willow Park Plaza Shopping
Center
Wheeling

Woodfield Racquet Club
Golf Road
Schaumburg

ALS 107 Humanities and Art (3-0)**1-3 hrs.**

A Fine Arts and Design Division course to meet the requirements for the institutional associate in liberal studies degree. The course may serve (1) as collateral to the HUM 101 or HUM 102 survey, or (2) as a contractual independent study program under the direction of one or more ALS advisors. Presentation of this course may be by lecture, seminar, or individualized study.

Prerequisite: Consent of instructor.

ALS 109 Environment Seminar (3-0)**1-3 hrs.**

Option 1: An analysis of man's role as an environmental modifier. Scientific, social, cultural, economic, and political influences on environment can be considered. The historical and current pollution problems, and other environmental disruptions can be analyzed and evaluated. Possible remedial courses of action can be discussed and evaluated. Presentation of this course may be by lecture, seminar, or individualized study.

Option 2: Individualized laboratory research.

Prerequisite: Consent of instructor.

ALS 111 Energy and Society (3-0)**1-3 hrs.**

An interdisciplinary approach to the nature of energy as perceived by man through the sciences. Investigation into the utilization of energy and its effects of life patterns. Presentation of this course may be by lecture, seminar, or individualized study.

Prerequisite: Consent of instructor.

ALS 113 American Character (3-0)**1-3 hrs.**

The liberal studies seminar is designed to meet the needs of interested students who desire to expand their comprehension of man in American society. The approach will be topically integrated through the disciplines of the social sciences. The material to be presented will be mutually agreed upon by the faculty and students. Specific topics will vary each semester. The method of evaluation will be based upon the presentation of oral and written reports, subject to criticism by the participating faculty and students. Presentation of this course may be by lecture, seminar, or individualized study.

Prerequisite: Consent of instructor.

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 or 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.**
 Continuation of LIT 206. Selected works of universal significance contributed by peoples and civilizations from 1800 to the present.
- 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 American Literature (3-0) 3 hrs.**
 A 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 of English literature to 1780. Reading and interpretation of writers such as Chaucer, Malory, Jonson, Donne, Milton, Dryden, Congreve, Swift, Pope, Johnson, and Boswell.
- 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 Wordsworth, Keats, Byron, Austen, Tennyson, Browning, Dickens, Hardy, Conrad, and Shaw.
- LIT 241 20th Century British and American Literature (3-0) 3 hrs.**
 Survey of important writers and writings in British and American literature since the first world war.

MATERIAL MANAGEMENT

MAT 101 Fundamentals of Material Management (3-0) 3 hrs.

A survey course designed to provide 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.

A course devoted to describing 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.

A business course concerned with the movements of goods from production to delivery to distribution 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 Management (3-0) 3 hrs.

An 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 Transportation for Material Managers (3-0) 3 hrs.

Overview of transportation systems and the impact on cost, service, and inventory that each system can develop. Brief exposure to the methods of calculating costs in various modes and routings. Operational aspects of the transportation function are offered to enable the material manager to better understand and evaluate the alternatives available to him.

Prerequisite: MAT 101 or consent of coordinator.

MAT 124 Material Handling and Packaging (3-0) 3 hrs.

A course designed to present 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.**

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 BUS 245.

MAT 220 Advanced Production Control (3-0)**3 hrs.**

An advanced course building upon the concepts developed in 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.**

An advanced course building upon the concepts developed in 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.**

An examination of 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.

Prerequisite: MAT 123 recommended.

MAT 224 Advanced Material Handling and Warehousing (3-0)**3 hrs.**

A continuation of MAT 124. Material handling ramifications for warehousing, shipping, and receiving operations are considered. Plant 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.**

A course describing the history and practices of regulatory agencies impacting upon the transportation field. The structuring of rates and tariffs is also considered.

Prerequisite: MAT 123 recommended.

MAT 226 Forecasting Material Requirements (3-0)**3 hrs.**

A course describing the nature and purpose of efforts directed toward forecasting material requirements. Content includes statistical and other forecasting techniques; simulation; linear programming; modeling; and mathematical techniques.

Prerequisite: BUS 225 or equivalent.

MAT 228 Finance for Material Managers (3-0)**3 hrs.**

A course blending 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: BUS 102.

MAT 259 Advanced Purchasing (3-0)**3 hrs.**

A continuation of 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.**

A seminar-type course designed to integrate material management concepts developed throughout the MAT 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 MAT majors.

Prerequisite: 11 credit hours in MAT course work or consent of coordinator.

MATHEMATICS**MTH 094 Arithmetic (3-0)****3 hrs.**

Review of standard arithmetic symbols and operations to establish meaningful recall of the number relationships. Includes study of the decimal system as well as theory and drill in addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimal fractions. Percent, measurement, and problem solving may be included. Offered through the Learning Laboratory. Not recommended for students with previous algebra courses.

MTH 095 Elementary Algebra (3-0)**3 hrs.**

Signs, symbols, and operations needed for other courses in mathematics and science are introduced. Basic topics include: introduction to sets, signed numbers, linear equations, exponents, polynomials, factoring, graphing, and quadratic equations. Equivalent to first year high school algebra. May be offered through the Learning Laboratory. Not recommended for those who have passed high school algebra within the past five years.

MTH 096 Geometry (3-0)**3 hrs.**

Concepts of Euclidean geometry, including lines, angles, polygons, and circles. Offered through the Learning Laboratory.

Prerequisite: One year of high school algebra with passing grade or MTH 095 with a passing grade.

MTH 101 Fundamentals of Mathematics (3-0) 3 hrs.

Sets, logic, number bases, probability, and review of selected topics in algebra and geometry. A general education course in mathematics.

Prerequisite: MTH 095 or equivalent with grade of "C" or better.

MTH 102 Intermediate Algebra (3-0) 3 hrs.

Nature of roots or quadratic equations, complex numbers, rational exponents, radicals, logarithms, inequalities, and binomial theorem.

Prerequisite: MTH 095 or high school elementary algebra with a grade of "C" or better.

MTH 103 College Algebra (3-0) 3 hrs.

Review of graphs, logic, and set theory. Relations and functions, quadratic equations, determinants, sequences, progressions, probabilities, and an introduction to the theory of equations and modern algebra.

Prerequisite: Elementary and intermediate high school algebra and one year of plane geometry, or MTH 102 with grade of "C" or better.

MTH 104 Plane Trigonometry (3-0) 3 hrs.

Trigonometric functions and relations, solutions of triangles, logarithms, identities, equations, and applications.

Prerequisite: MTH 096 and MTH 102 or equivalent with grade of "C" or better.

MTH 105 Analytic Geometry (4-0) 4 hrs.

Rectangular and polar coordinates, the straight line, conic sections, coordinate transformations, vectors, the dot and cross product, vector geometry of lines and planes, sequences and tangents, transcendental and parametric equations.

Prerequisite: MTH 103 and MTH 104 or equivalent with grade of "C" or better.

MTH 106 Mathematics I (5-0) 5 hrs.

Topics in algebra, vectors, trigonometry, vector algebra, and problem solving by computer (FORTRAN IV). For students in Electronics Technology, Mechanical Engineering Technology, and Numerical Control Technician.

Prerequisite: Two years of high school mathematics or consent of instructor.

MTH 107 Mathematics II (5-0) 5 hrs.

Continuation of MTH 106. Topics in trigonometry, analytic geometry, logarithms, differential and integral calculus introduced.

Prerequisite: MTH 106 with grade of "C" or better or consent of instructor.

MTH 110 Laboratory Mathematics (3-0) 3 hrs.

Techniques of mathematics and their application to practical problems which arise in chemistry, life science, and the clinical laboratory.

MTH 124 Finite Mathematics (3-0)**3 hrs.**

Topics of discrete mathematics pertaining to simple mathematical models in the behavioral, social, and management sciences. Selections from: symbolic logic, set theory, vectors and matrices, linear programming, combinatorics, probability spaces, Markov chains, game theory, and computer applications.

Prerequisites: MTH 101, two and one-half years of high school mathematics, or consent of instructor.

MTH 134 Calculus for Social Scientists (4-0)**4 hrs.**

Intuitive introduction of the concepts of differential and integral calculus. Applications to problems in social, behavioral, and management sciences. Not for physical science or mathematics majors.

Prerequisite: MTH 102, three years of high school mathematics, or consent of instructor.

MTH 165 Statistics (3-0)**3 hrs.**

Tabular and graphic representation; normal distribution, dispersion, statistical inference, sampling, distribution of means, regression and correlation analysis, probability—including finite probability by use of set theory. Applications in education, business, natural and social science.

Prerequisite: MTH 101 with grade of "C" or better, or consent of instructor.

MTH 201 Calculus I (5-0)**5 hrs.**

Differentiation of elementary functions with applications to geometry, physics, and other sciences. Differential, approximation formula of integration, and introduction to the definite integral.

Prerequisite: MTH 105 or MTH 112 with grade of "C" or better.

MTH 202 Calculus II (5-0)**5 hrs.**

Continuation of MTH 201 with emphasis on the definite integral. Applications to geometry, mechanics, and physics. Hyperbolic functions, techniques of integration, vectors, parametric equations, partial differentiation, multiple integration, and series.

Prerequisite: MTH 201 with grade of "C" or better.

MTH 203 Linear Algebra (3-0)**3 hrs.**

Systems of linear equations, vector spaces, linear dependence, bases, matrices, determinants, and transformations with geometric and physical applications.

Prerequisite: MTH 103 and MTH 104 or equivalent, or consent of instructor.

MTH 206 Mathematics III (3-0)**3 hrs.**

For students in Electronics Technology. Continuation of MTH 107 with introduction to differential equations and Laplace transforms.

Prerequisite: MTH 107 with grade of "C" or better, or consent of instructor.

MTH 207 Mathematics IV (3-0)**3 hrs.**

Differentiation of transcendental functions, methods of integration, expansion of functions in series, Fourier series, differential equations, and applications.

Prerequisite: MTH 206 with grade of "C" or better.

MTH 208 FORTRAN Computer Programming (3-0) 3 hrs.

Computer programming using the language of FORTRAN.

Prerequisite: MTH 103 or MTH 107 with grade of "C" or better, or consent of instructor.

MTH 212 Differential Equations and Orthogonal Functions (3-0) 3 hrs.

Solutions of first order differential equations, linear differential equations, special second order equations, and series solutions. 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 Automatic Digital Computing (3-0) 3 hrs.

Topics in machine organization, problem formulation, automatic programming, and applications to computers.

Prerequisite: MTH 103 or MTH 107 with grade of "C" or better, or consent of instructor.

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.

MET 102 Technical Drafting (1-5) 3 hrs.

Lettering, orthographic projection, size and location, dimensioning, surface finishes, auxiliary views, sketching, diazo printing techniques.

Corequisite: Concurrent enrollment in EGR 100 or consent of instructor.

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 nomography. 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 principle 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.

Corequisite: Concurrent enrollment in MTH 106 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, MET 209 and concurrent enrollment in MET 206.

MET 209 Applied Digital Control (2-3)**3 hrs.**

A study of the 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.

MEDICAL LABORATORY TECHNICIAN**MLT 101 Medical Technology I (1-6)****3 hrs.**

An introduction to the scope of hospital laboratory procedures. Instruments, such as the binocular microscope, analytical balance, and refractometer, are used in the study of blood and urine. Lectures and laboratory stress proper use of instruments in basic techniques.

Prerequisite: Admission into the Medical Laboratory Technician Program.

MLT 102 Medical Technology II (1-6)**3 hrs.**

Basic techniques are expanded into the fields of clinical chemistry, serology, blood banking techniques, parasitology, and simple blood coagulation studies. Proper use and care of specialized glassware and organization of work are emphasized. Use of standards and controls are introduced.

Prerequisite: MLT 101.

MLT 104 Principles of Clinical Microbiology (3-0)**3 hrs.**

A course in basic principles of clinical microbiology in which a survey of pathogenic bacteria, medical parasitism, and virology by site of infection and/or invasion will be covered. General schema for isolation and identification will be included.

Prerequisite: BIO 130.

MLT 200 Medical Technology III (0-4)**2 hrs.**

An on-campus practice laboratory dealing with the application of principles of instrumental analysis.

Prerequisite: MLT 102 with "C" average minimum.

MLT 201 Medical Technology IV (3-30)**8 hrs.**

The methods of microbiology used in clinical medicine are stressed in lectures and "at the bench." Advanced techniques and automation in hematology and clinical chemistry are introduced.

Prerequisites: MLT 200 and BIO 130.

MLT 202 Medical Technology V (3-33)**9 hrs.**

Continuation of MLT 201, including studies of parasites, fungi, and viruses. Special techniques in clinical chemistry and blood coagulation are demonstrated. Basic techniques in histology are introduced. Review of all major subjects in preparation for the Medical Laboratory Technician registry examination.

Prerequisite: MLT 201.

MUNICIPAL AND GOVERNMENTAL MANAGEMENT
MGT 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. Identifies the processes by which the ends of government are achieved.

MGT 201 Organization Theory (3-0) 3 hrs.

Fundamentals of organization and management applying to any enterprise, involving sizable groups of people. Studies the manager's job in setting objectives and goals and utilizing resources, both human and material, to achieve them. Emphasis is on contemporary forms of organization, structure and processes and the language of the manager.

MGT 202 Organization Behavior (3-0) 3 hrs.

Analysis and interpretation of human behavior in organizational settings and how they influence decisions, goal setting, motivation, leadership, communications and conflict resolution. Emphasis is placed on small groups and informal organizations within the formal setting.

Prerequisite: MGT 201 and PSY 101.

MGT 203 Management Processes (3-0) 3 hrs.

A study of policy formulation and the problems of decision-making. Uses a case study approach to integrate organization theory and behavior and creates a problem solving atmosphere through exploration of administrative problems. Emphasis on leadership style, decision theory, change theory, centralization versus decentralization.

Prerequisite: MGT 202.

MGT 210 Public Finance and Budget Process (3-0) 3 hrs.

Sources of public revenue and history of budgeting. Examines the budget process, procedures and methods. Purposes and procedures of contemporary budgeting systems are examined closely. Student is encouraged to make detailed examination of budgeting system most appropriate to his anticipated needs.

MGT 212 Personnel Management (3-0) 3 hrs.

The roles and processes of personnel administration in government agencies. Examines traditional personnel functioning; outlines implementing procedures for recent federal and state employment laws and policy, human resource and career development programs, productivity and evaluation methods.

MGT 214 Planning in the Public Agency (3-0) 3 hrs.

Planning as a process and function of the manager. Examines planning decision theory and application of planning concepts as well as local program development resource acquisition and evaluation methods. Emphasis on methods and techniques of problem identification, program development, resource acquisition, and evaluation tools.

MGT 215 Government Bureaucracies (3-0) 3 hrs.

Study of bureaucracy as applied to management of public business. Examines the purposes served by bureaucratic processes and principles along with the resulting problems. Course is designed to amplify the source of conflict occurring both within and outside an organization as a result of bureaucracy.

MGT 220 Management Problems (3-0)**3 hrs.**

A practicum for advanced students to examine and analyze selected local problems. A seminar approach is used for students and faculty to explore cases in public management to define the problem and possible solution. Maximum of six credit hours.

MGT 222 Research Methods (3-0)**3 hrs.**

Examines methods and styles of social research and fundamentals of analysis. Project required.

MUSIC**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.**

For non-music majors. Music from primitive to modern times through listening to outstanding examples of various periods, with explanations of content and structure. Vocal and instrumental works, examples of folk music, church music, and symphonic forms.

MUS 111 Theory of Music I (3-0)**3-5 hrs.**

Intensive training in fundamentals of musicianship, principally with mechanical aspects of music—clefs, notation, scales, intervals, meters, rhythms, etc. Daily practice in sight singing, melodic, harmonic, and rhythmic dictation. Practice at keyboard.

Prerequisite: Successful performance on examination. MUS 101 or equivalent.
Corequisite: MUS 115.

MUS 112 Theory of Music II (3-0)**3 hrs.**

Harmony, counterpoint, and analysis, with emphasis on eighteenth and nineteenth-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 Ear Training, Sight Singing, and Keyboard Harmony I (0-2)**1 hr.**

Practice in melodic, harmonic, and rhythmic dictation; sight singing; and practice at keyboard.

Corequisite: MUS 111.

MUS 116 Ear Training, Sight Singing, and Keyboard Harmony II (0-2) 1 hr.
Practice in melodic, harmonic, and rhythmic dictation; sight singing; and practice at keyboard.
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. Maximum of four 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. Maximum of four 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. Maximum of four 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. Maximum of four credit hours.
Prerequisite: Consent of instructor.

MUS 150 Orchestra (0-3) 1 hr.
Open to all students proficient in playing of orchestral instruments. Orchestral music of various types and styles. Sight reading and musicianship stressed. Maximum of four 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. Maximum of four 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. Maximum of four credit hours.

MUS 163 Percussion Instrument Class (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. Maximum of four credit hours.

MUS 165 Class Piano (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 (1-2) 2 hrs.

Continuation of 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. Maximum of four 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. Maximum of four credit hours.

MUS 169 Class Voice (1-2) 2 hrs.

For students who have no refined skills in vocal technic 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 eight 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.

Harmony, counterpoint, and analysis.

Prerequisite: MUS 112.

Corequisite: MUS 215.

MUS 212 Theory of Music IV (3-0) 3 hrs.

Harmony, counterpoint, and analysis.

Prerequisite: MUS 211.

Corequisite: MUS 216.

MUS 215 Ear Training, Sight Singing, and Keyboard Harmony III (0-2) 1 hr.

Practice in melodic, harmonic, and rhythmic dictation; sight singing; and practice at keyboard.

Corequisite: MUS 211.

MUS 216 Ear Training, Sight Singing, and Keyboard Harmony IV (0-2) 1 hr.

Practice in melodic, harmonic, and rhythmic dictation; sight singing; and practice at keyboard.

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.

A survey of music literature available for performance by musical instruments and voice, including opera.

MUS 265 Class Piano (1-2) 2 hrs.

Continued development of skills begun in MUS 165-166. Greater emphasis on keyboard harmony, ensemble playing, and jazz improvisation.

Prerequisite: Two semesters of class piano or proficiency examination.

MUS 266 Class Piano (1-2) 2 hrs.

Continuation of MUS 265.

Prerequisite: Three semesters of class piano or proficiency examination.

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 sixteen credit hours.

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.

Prerequisite: Successful audition.

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: MTH 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: MTH 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 (1-3) 3 hrs.

Continuation of 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 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 skill in a simulated setting will precede application of that skill in the clinical setting.

NUR 102 Introduction to Care of Patients With Health**Interferences (4-15)****9 hrs.**

Previously learned skills and principles are applied to the care of patients of all age levels with common physical health problems and emotional needs. Consideration will be given to the patient as an individual and as a member of a family and the effect of his health problem on his basic needs and the needs of his family. Study shall include the common health problems that affect physiological and psycho-social processes and the nursing measures utilized to prevent and/or alleviate those problems. Concurrent practicum will include care of the obstetric patient as well as patients of all age levels with common physical health problems and emotional needs.

Prerequisite: NUR 101, PSY 101, and BIO 100 or BIO 160.

NUR 103 Nursing Survey I (1-0)**1 hr.**

A survey of nursing roles including consideration of the following: evaluation of nursing; patterns of health care delivery; members of the nursing team; 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.**

The 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 skill 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 102 or BIO 161, and PSY 216.

NUR 201 Advanced Nursing I (4-9)**7 hrs.**

Emphasis is on the nursing process as it is utilized to assist individuals with physical and psychological problems to optimum wellness. Focus is on the assessment of needs and the rendering of care based on those needs. Concurrent practicum will provide opportunity for direct patient care, the exercise of nursing judgment, and participation in the physician's therapeutic plan. Prerequisite: NUR 102, PSY 216, and BIO 161.

NUR 202 Advanced Nursing II (4-9)**7 hrs.**

Focus is on the utilization of the nursing process and advanced nursing skills to provide care to individual and groups of patients with complex and/or a variety of health problems. Content also includes the functions of a nurse in a disaster and as a member of a nursing care team. Provision of episodic care to patients in the home and the resources necessary to provide that care shall be considered. Concurrent practicum will provide opportunity for giving direct care to groups of patients with a variety and/or complexity of health problems.

Prerequisite: NUR 201.

NUR 203 Nursing Survey II (1-0)**1 hr.**

A survey of 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; and the responsibility of the nurse as an educated member of a community.

OPERATING ROOM TECHNICIAN**ORT 101 Operating Room Techniques I (6-0)****6 hrs.**

A study of the 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 microbiology 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.**

Continuation of 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 100 or BIO 160.

ORT 103 Operating Room Techniques III (4-0) 2 hrs.

Continuation of 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, cardio-vascular, and neuro surgery. An introduction to nursing procedures related to care of the surgical patient is also provided.

Prerequisite: ORT 102, ORT 112, BIO 102 or BIO 161, and PSY 101.

ORT 111 Clinical Hospital Practicum I (0-15) 3 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 O.R.T. 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) 4 hrs.

Continuation of 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 100 or BIO 160.

ORT 113 Clinical Hospital Practicum III (0-20) 5 hrs.

Continuation of 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, cardio-vascular, and neuro surgery. Supervised experience in performing certain basic nursing skills related to the surgical patient is provided.

Prerequisite: ORT 102, ORT 112, BIO 102 or BIO 161, and PSY 101.

PARK AND GROUNDS OPERATION MANAGEMENT**PKM 100 Introduction to Park Management (1-0) 1 hr.**

A survey course intended to introduce 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 110 Soil Science (3-3)**4 hrs.**

A study of 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.**

An introductory course designed to develop specialized skills in ornamental horticulture. Major emphasis on balling and burlapping trees and shrubs, bare root planting, use of container-grown stock; propagation of plants by seed, layerage, budding and grafting; and discussion of plant disorders, care and use in parks.

Prerequisite: BIO 120.

PKM 121 Facilities Management (2-3)**3 hrs.**

The management of park facilities, including buildings, swimming pools, play equipment, ice rinks, athletic fields, and all surfaced areas within the jurisdiction of the park district. Basic principles of landscape design; studies in form, space, color, texture, scale, balance, unity, contrast; materials used in landscape and park developments; site analysis, design problems, use of plants; and location and function of landscape and park structures in the plan.

PKM 140 Grounds Equipment and Shop Operation (1-6)**3 hrs.**

A study of the operation, maintenance, selection, and care of equipment used in park management. Practical experience in the repair, adjustment and troubleshooting of engines and other specialized equipment.

PKM 150 Park Management Internship (0-35)**5 hrs.**

An 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, aerification, 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 Park Design and Construction (3-6) 5 hrs.

The fundamentals of construction as applied to landscape projects; the use of materials in landscape construction; installation techniques; tools; equipment; structures; plumbing; masonry; electricity; surveying; and grading used in landscape construction.

PKM 220 Arboriculture (2-3) 3 hrs.

The care and management of ornamental trees. Techniques and demonstration of planting, staking, pruning, spraying, fertilizing and general care of shade and specimen trees. Instruction on 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.

The fundamental principles of landscape and park design, drafting, and mapping. Special emphasis on planting design, grading plans, construction drawings, specifications, cost estimates, and client relationships. Additional topics covering land use, land acquisition, park planning, and the legal aspects relating to park and landscape contracting.

PKM 241 Management of Ice Rink Facilities (2-4) 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.

The planning, design, construction, operation and maintenance of golf courses, both public and private.

Prerequisite: PKM 121.

PKM 245 Management of Aquatic Facilities (3-3) 4 hrs.

The management and practical experience involved in the operation of swimming pools, ponds, lakes and similar bodies of water utilized in the recreation and park industry.

Prerequisite: PKM 121.

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 107 Philosophy of Social Justice (3-0) 3 hrs.

Basic course in social/political/legal philosophy dealing with the conceptual and historical analysis of justice, law, order, freedom, authority, rights, power, dictatorship, and democracy.

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 205 Religions of the World (3-0) 3 hrs.

Study of selected major religions: Buddhism, Hinduism, Judaism, Islam, and Christianity; their teachings and histories.

PHYSICAL EDUCATION**PED 100 Basic Self-Concept in Physical Education (0-2) 1 hr.**

A lecture-lab course designed to increase self-awareness within the student. This is done through a lecture series describing the various self-concepts in physical education such as physical fitness, skill learning, weight control, body mechanics, physiology of exercise, and others.

PED 104 Weight Training-Weight Lifting (0-2) 1 hr.

Weight Training-program of activities for the overweight or underweight leading to the development of strength and maintenance of physical fitness. Weight Lifting-skills, knowledge, and safety standards are taught in accordance with A.A.U. weight lifting rules.

PED 120 Team Sports (0-2) 1 hr.

Experience in team sports, fundamental skills, offensive tactics of play, strategy, rules, terms, and practice in class competition in two of the following sports: touch football, soccer, softball, volleyball, and basketball.

PED 130 Individual Sports (0-2) 1 hr.

Experience in individual sports, fundamental skills, offensive and defensive tactics of play, strategy, rules, terms, and practice in one or two of the following activities: tumbling and apparatus, track and field, handball, fencing, paddleball, ice skating and snow skiing.

PED 136 Wrestling–Personal Defense (0-2) 1 hr.

Development of basic skills, knowledge, attitudes, and conditions of wrestling; offensive and defensive maneuvers, pinning combinations, and rules.

PED 149 Restricted Activities (0-2) 1 hr.

For students restricted by health limitations. Individual programs adapted to meet specific requirements. Available to students with medical problems.

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.

PED 152 Golf–Archery (0-2) 1 hr.

Golf–fundamentals of grip, stance, and swing using irons and woods; terminology, etiquette, scoring, and safety standards.
Archery–maintenance of archery tackle; establishing and adjusting point of aim; shooting at 50, 40, and 20 yards; instinctive shooting; and field archery fundamentals. Intramural competition afforded.

PED 154 Swimming (0-2) 1 hr.

All-levels class with beginners grouped separately for special attention. Red Cross standards of achievement are followed.

PED 156 Badminton (0-2) 1 hr.

Recreational and conditioning activity. Singles and doubles play, strategy, serving, rules, and interclass competition.

PED 158 Tennis (0-2) 1 hr.

Theory and practice, rules and scoring, development of serve, forehand drive, backhand drive, lob, volley, and footwork. Singles and doubles play and interclass competition.

PED 160 Modern Dance I (0-2) 1 hr.

Opportunity to explore movement potential, increase technical proficiency, broaden rhythm background; skills in technique and composition stressed.

PED 170 Basic Self-Concepts in Physical Education (0-2) 1 hr.

A lecture course designed to increase self-awareness within the student. This is done through a lecture series describing the various self-concepts in physical education. Concepts include physical fitness, skill learning, weight control, body mechanics, physiology of exercise, and others.

PED 180 Team Sports (0-2)**1 hr.**

Experience in team sports, fundamental skills, offensive tactics of play, strategy, rules, terms, and practice through class competition in the following sports: field hockey, basketball, volleyball, softball, soccer. Instruction will be given in each activity taught for at least nine weeks.

PED 190 Individual Sports (0-2)**1 hr.**

Fundamental skills, rules, game and sport strategy, terms, and practice in sports for women—gymnastics, free exercise, fencing, track and field, ice skating and snow skiing.

PED 199 Restricted Activities (0-2)**1 hr.**

Physical education activities for students restricted by health limitations, adapted to specific requirements of students with medical problems.

Physical Education Courses—Theory—for Major and Minor Students**PED 200 Introduction to Physical Education (2-0)****2 hrs.**

Orientation and history of physical education from ancient times to present day. Objectives and aims of physical education and their applications.

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 Methods of Teaching Physical Education Activities (0-4)**2 hrs.**

Methods used in teaching individual and team sports, with opportunity for practical application. Analysis of technique, planning of drills, and planning units for tennis, softball, swimming, weight training, and volleyball, with emphasis on teaching methods for elementary and secondary schools.

PED 205 Drugs in Our Culture (2-0)**2 hrs.**

A course that will deal 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.**

A course designed to acquaint 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.
Comprehensive instruction on rules and officiating techniques in interscholastic sports; practical experience required in the college intramural program.

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.
Introduction to skills and safety standards involved in swimming, lifesaving, and survival in water; study of the recreational value of water sports. Certification in Red Cross Lifesaving programs may be attained.
Prerequisite: Ability to swim 100 yards.

PHYSICAL SCIENCE

PHS 101 Physical Science Survey (3-0) 3 hrs.
A course designed to give the non-science major an understanding and appreciation of the universe, earth, energy, and matter.

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.
Continuation of PHS 111 considering basic chemistry, materials of the earth, earth forms and history, the sun, stars, and the universe.
Prerequisite: PHS 111.

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. All others: 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. Others see PHY 201.

PHY 122 Introductory Physics II (4-3) 5 hrs.
Electricity, magnetism, and light. Continuation of PHY 121.
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.

POLITICAL SCIENCE

PSC 201 Contemporary American Politics (3-0) 3 hrs.
Emphasis on critical problems and various proposed reforms relating to elections, campaigns, political parties, courts, congress, and the presidency. Utilizes political figures as guest speakers and offers opportunities for personal political involvement, especially in election years.

PSC 202 Suburban, Urban, and State Politics (3-0) 3 hrs.

Critical evaluation of the relationships between political structures and citizen demands and needs. Emphasis on Illinois and the Chicago metropolitan area. Delves into machine politics, busing, housing problems, taxes, and regional planning. Prominent political figures as guest speakers and opportunities for involvement in community politics provide practical political knowledge and experience.

PSC 205 Comparative Government: Developed and Developing Nations (3-0) 3 hrs.

Comparative analysis of modern political systems and problems in selected countries of Europe, Asia, Latin America, Africa and the Middle East. Touches on political instability and revolution in emerging nations as well as alternative patterns of democracy and communism.

PSC 206 Global Politics (3-0) 3 hrs.

Surveys human problems of global dimensions—population, food, environment, war. Evaluates existing organizations, and transnational institutions. Utilizing simulations, it examines decision-making in the international arena and instruments of foreign policy including diplomacy, propaganda, and guerrilla warfare.

PSYCHOLOGY**PSY 099 Learning and Adjustment to College (3-0) 3 hrs.**

Designed for developmental students; covers topics essential to successful college adjustment—study techniques, educational and vocational planning, social adjustment, and general aspects of college life.

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 102 Conference Course (1-0) 1 hr.

Designed to meet interests and needs of qualified majors in psychology. Must be taken concurrently with PSY 101. Specific topics will vary from semester to semester.

Prerequisite: Consent of instructor.

PSY 110 Human Potential Seminar (1-0) 1 hr.

Direct experience in examination, by the students, of their own values, attitudes, goals, strengths, and beliefs. Emphasis on the application of these characteristics to conflict resolution and life style planning.

PSY 111 Career Planning and Development (0-2) 1 hr.

The course is one of 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 or consent of instructor.

PSY 210 Introduction to Research in Psychology (3-0) 3 hrs.

An 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.

The 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.

READING**RDG 099 Developmental Reading (2-0) 2 hrs.**

Individualized work toward improvement of comprehension and rate in reading through practice materials, timed essays, films, and mechanical aids.

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.

REAL ESTATE**RES 108 Brokers Licensure Preparation I (2-0)****2 hrs.**

This course is 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 such 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.**

A course covering the functions and purposes of appraisal which 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.**

Examination of 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.**

A course covering 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: Nine 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, leasehold 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 nine credit hours of Real Estate course work.

REFRIGERATION AND AIR CONDITIONING**RAC 101 Refrigeration Fundamentals (2-3) 3 hrs.**

Basic terms used in the refrigeration trades, 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.

Continuation of 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.

Continuation of RAC 103 with 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.

Continuation of 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 psychrometrics. 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 Controls (2-3)**3 hrs.**

Description of construction and function of controls, diagnosis of malfunctions, and correction of defects.

RAC 290 Independent Study (3-0)**3 hrs.**

Course 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**SEC 098 Review Shorthand (0-4)****2 hrs.**

Designed for students with some knowledge 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 program coordinator.

SEC 099 Typewriting Review (0-2)**1 hr.**

Designed for those with limited skill at the keyboard. Work will help correct deficiencies in speed, accuracy, or manipulative skills on the electric typewriter.

Prerequisite: Limited knowledge of typewriting.

SEC 121 Elementary Typing (1-3)**2 hrs.**

Operation, use, and care of the typewriter. Typing by the touch system, emphasizing basic typing problems. Drills for 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 a grade of "C" or one year of high school typing.
Minimum speed of 40 net words per minute.

SEC 125 Elementary Shorthand (3-2)**4 hrs.**

Theory leading to development of skill in reading and fluency in writing Gregg shorthand.

Prerequisite: Prior or concurrent enrollment in ENG 101 and typing.

SEC 126 Intermediate Shorthand (2-2)**3 hrs.**

Continued development of skill and speed dictation with emphasis on vocabulary development, mechanics of English, and transcription techniques.

Prerequisite: SEC 121 or equivalent, SEC 125 or equivalent, and ENG 101, with a grade of "C". If advanced placement is given in shorthand, prior or concurrent enrollment in ENG 101 is required.

SEC 131 Business Machines (0-4)**2 hrs.**

Development of skill necessary to operate the ten-key adding machine, rotary calculator, printing calculator, and the electronic calculator.

SEC 132 Office Practice (0-4)**2 hrs.**

An individualized course designed to acquaint the student with those duties usually given to new office workers, such as the preparation of stencils and the operation of duplicating machines; use of the executive typewriter and transcribing machines.

Prerequisite: SEC 121 or equivalent.

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 221 Advanced Typing (1-3)**2 hrs.**

Development of high speed and proficiency in typing from rough drafts, tabulations, and statistics.

Prerequisite: SEC 122 with a 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 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 a grade of "C" or higher. Shorthand speed of at least 100 words per minute and typing speed of at least 60 words per minute.

SEC 236 Secretarial Procedures (3-0)**3 hrs.**

Secretarial responsibilities in the office, exploring job opportunities, interviewing, grooming, human relations, telephone techniques, office organization, mail handling, travel arrangements, meetings and conferences, and knowledge of records management.

Prerequisite: Consent of instructor.

SEC 237 Secretarial Seminar and Internship I (1-15) 3 hrs.

Cooperative work experience in secretarial science. Enrollment in this course is restricted to students in the Secretarial Science Program. Part of the credit for this course will be given for participation in supervised cooperative work experience programs wherein an organized training plan will be followed in a college-approved training station. One lecture hour per week for seminar.

Prerequisite: Consent of instructor.

SEC 238 Secretarial Seminar and Internship II (1-15) 3 hrs.

Continuation of SEC 237.

Prerequisite: Consent of instructor.

SEC 240 Medical Transcription and Typing (2-2) 3 hrs.

Development of speed and accuracy in the transcription of medical reports using a transcription machine. Also familiarization in the typing of various medical and insurance forms.

Prerequisite: SEC 122 with a grade of "C", or proficiency test with instructor, and HSC 112.

SEC 241 Medical Office Procedures (4-0) 4 hrs.

Patient reception, appointment scheduling, proper telephone techniques, handling mail, medical records, written communications, billing, medical law, and insurance.

Prerequisite: Consent of instructor.

SOCIOLOGY**SOC 101 Introduction to Sociology (3-0) 3 hrs.**

Introductory 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 102 Conference Course (1-0) 1 hr.

Designed to meet interests and needs of qualified majors in Sociology. Must be taken concurrently with SOC 101. Specific topics will vary from semester to semester.

Prerequisite: Consent of instructor.

SOC 120 Social Patterns of Courtship and Marriage (3-0) 3 hrs.

Courtship, marriage, rearing the family, and various factors contributing to changes in family organization or disorganization.

Prerequisite: SOC 101 or consent of instructor.



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 institution on the society.

Prerequisite: SOC 101 and sophomore standing.

SOC 215 Group Dynamics (3-0)**3 hrs.**

An investigation of the social and psychological processes which motivate individuals to behave in predictable ways, depending on their positions in social structures, organizations, and groups. Focus is on those processes which reveal the reciprocal relationship between man's behavior and society.

Prerequisite: Sophomore standing, SOC 101, PSY 101, or by special permission.

SPANISH**SPA 101 Elementary Spanish I (4-0)****4 hrs.**

Beginning course in the language skills of listening, understanding, speaking, reading, and writing. This course is designed for students with no previous experience in Spanish.

SPA 102 Elementary Spanish II (4-0)**4 hrs.**

Continuation of 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 101, two years of high school Spanish, or consent of instructor.

SPA 202 Intermediate Spanish (4-0)**4 hrs.**

Continuation of 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. Prerequisite: SPA 202 or equivalent or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

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.

Prerequisite: SPA 202 or equivalent or consent of instructor. This course is designed to help students bridge the gap between the intermediate and advanced levels.

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.

A 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.

A course focusing 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.



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