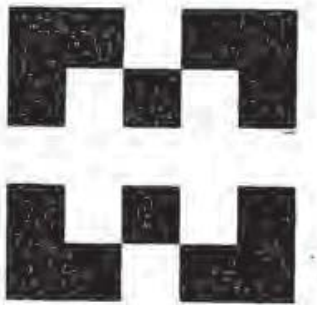
Harper College 1973/1974 Bulletin



William Rainey Harper College
1973-74 Bulletin

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June, 1973

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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 seven-member board of trustees. Harper serves high school districts 211 (Palatine and Schaumburg Townships), 214 (Elk Grove and Wheeling Townships), as well as Barrington High School District 224.

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

Harper College and Illinois Junior College District 512 reflect the purpose of the Illinois master plan for higher education, which is to have a system of community colleges with statewide coordination allowing a high degree of local district control.

The board of trustees of Harper College has a significant role in the governance of the college. In its briefest sense, the local board constitutes the local civic body through which the Illinois Junior College Board and the Board of Higher Education communicate with Harper College.

The board of trustees is comprised of seven elected individuals who represent the voters of the district. Members serve a term of three years. Board elections are held the second Saturday of April each year.

The board of trustees has no standing committees but appoints special committees when they are deemed necessary. These committees report recommendations to the board for appropriate action and are dissolved when the reports are complete and accepted by the board of trustees.

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.

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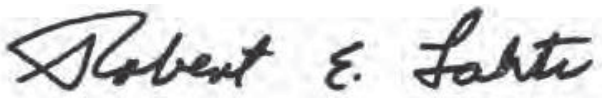
THE PRESIDENT'S MESSAGE

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, not yet past the first decade of existence. The absence of a long tradition frees us from the confines of education-as-usual that is 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 lifelong 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.



Robert E. Lahti

HISTORY OF THE COLLEGE

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

Late in 1964, while legislators in Springfield were adding the final revisions to the Illinois Junior 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 annexed to the district, and the boundaries of Harper's 200 square mile constituency were established to become Illinois Junior 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.

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, 1972, enrollment had topped 11,000.

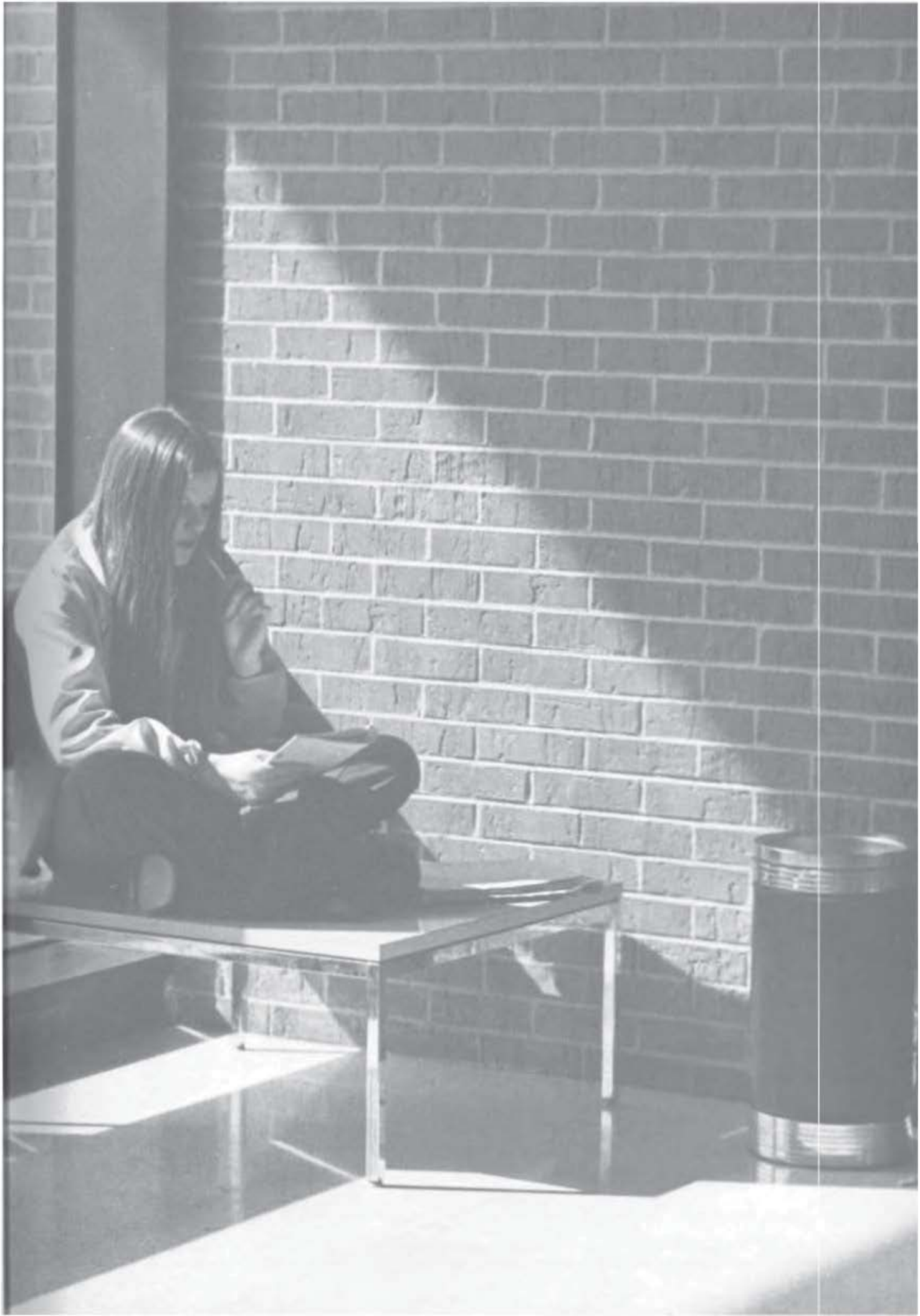
From the beginning, college supporters have been committed to the concept of an institution oriented to its community. Harper not only serves the degree or certificate bound student with transfer and career/vocational programs, but also offers a wide range of general interest non-credit continuing education courses. An added bonus has been the college and university extension courses offered on the Harper campus, enabling students to earn most of their credits toward some baccalaureate and master's degrees at their own two-year community college.

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 educational and community 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, and the college's long range plan.

Harper, as it moves into the mid-1970's, continues to evaluate itself as it plans for the next decade. Will anticipated building plans be adequate? Will a second campus be required by 1980? 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.




WILLIAM RAINEY HARPER
MARSHALL FIELD

Photo opposite: The college has inherited its spirit from the first president of the University of Chicago whose name is enshrined with other mid-America "greats" at Pioneer Court of Chicago's new Equitable Building, adjacent to the famous Tribune Tower on Michigan Avenue.

WILLIAM RAINEY HARPER

Father of the Community College

The spirit of Harper College is reflected in its name. William Rainey Harper, first president of the University of Chicago, was a scholar, teacher, writer, and administrator who devoted his life to the pursuit of excellence in education.

Dr. Harper accomplished so much in his lifetime that he is counted among the intellectuals giants of his day. A prodigy who enrolled in college at the age of ten, Harper received a bachelor of arts degree from Muskingum College in Ohio at 14 and a Ph.D. from Yale at 19, where he became a full professor of Semitic languages and biblical literature at the age of 29.

During Dr. Harper's 15-year presidency, the University of Chicago emerged as one of the leaders in the movement to reform higher education. The principle of academic freedom at this institution was clearly defined, the importance of both teaching and research was established, and the way was set for the flowering of this great American university.

A man of vision and an innovator, William Rainey Harper is recognized as the father of the two-year college idea which he initiated at the University of Chicago just before the turn of the century. In 1896, the university was divided into two major divisions — the academic college (later named junior college) for freshmen and sophomores, and the university college (later named senior college) for juniors and seniors.

Full-fledged emergence of Dr. Harper's concept came almost 70 years later, with the community college as we know it today. In Illinois alone there are some 48 public two-year colleges serving upwards of 218,000 citizens through a full range of transfer, career/vocational, and continuing education programs on both a daytime and an evening basis.

PHILOSOPHY OF HARPER COLLEGE

An outstanding program of higher education for the community it serves is both the promise and guiding philosophy of William Rainey Harper College. Created by a community responsive to the contemporary insistence on more education for more of its citizens, the college is determined to meet the particular 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 must recognize 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 realization of his 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 twin sober 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.

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.

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 modern society 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.

OBJECTIVES

Specific objectives of the college are:

A. 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.

B. To offer two-year programs in technical-vocational training, providing students with the knowledge and skills required in a specific field.

C. 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.

D. To offer opportunities for adults in the community to initiate or to continue a collegiate education.

E. 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.

F. To complement the educational programs with effective counseling services, including guidance and assistance to each individual student.

G. To encourage the use of its facilities and services for educational and cultural purposes by all citizens of the community.

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 him with information in particular subject fields but contributes toward an enlightened and integrated view of life. General education serves to complement the specialized training designed to prepare him for an occupation, whether it be 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 understanding and insights — and with the power to communicate them. Thus his efforts to assume his role as a citizen and to earn a livelihood are set in a perspective of values that give 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.

DEGREES

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

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

THE HARPER YEAR

The college follows the semester plan and also offers an eight-week summer session. Registration for the fall semester opens the second week of September, and classes begin the following week. Final exams are held the third week of January.

Spring semester registration is held the final week of January for classes beginning the following week. Final exams are held during the first week of June.

Summer session registration opens the second week of June for classes which begin the following week.

Day and evening classes are conducted throughout the college year.

EVENING AND CONTINUING EDUCATION

Harper College believes that education must be a continuing lifelong pursuit to keep abreast of the knowledge explosion in science and technology and the pervasive influence of social and cultural change.

To meet the educational demands of adults, Harper has developed a complete schedule of regular evening credit and non-credit courses. Also, graduate extension courses are offered at Harper by Illinois colleges and universities.

The office of evening and continuing education seeks to provide adults with a variety of opportunities for continuing their education in a formal or informal manner. Various seminars and other programs are conducted, which are designed to meet the special needs of community interest groups. For example, the needs of business and industry are met through management training and development seminars, short courses, and workshops. Also offered are special programs relating to women's changing roles and family life.

Harper seeks to extend its educational offerings to other community locations. Credit and non-credit extension courses are offered at off-campus locations such as high schools, industrial plants, libraries, apartment houses, Woodfield Mall, and local government offices.

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

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.

1. Instructional Services

Instructional services, located on the first floor of the learning resources center, is prepared to assist faculty and students in the selection, production, and utilization of educational media. Instructional services has an extensive television studio, photographic service, a graphics production area, and an audio-visual equipment and materials check-out service.

2. Library Services

The library is located on the second floor of the learning resources center. It contains more than 60,000 volumes, catalogued according to Library of Congress classification. Along with newspapers and periodicals, about 700 magazines are currently received. Also included are extensive microfilmed back issues of the Chicago *Tribune*, the New York *Times*, and about 25 periodicals. A Xerox machine is available for making copies of either book or micro-film materials. The library card catalog contains entries for all books and other instructional media housed in the learning resources center, including records, tapes, video-tapes, slides, films, and film strips.

3. Flexible Facilties 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 also available to support instruction.

HARPER'S CAMPUS

The completion of the first phase of Harper's exciting campus, which opened to 5,400 students in September, 1969, brought to the college district a complex of informal multi-level contemporary buildings nestled in the rolling terrain of 200 rural acres. On-time delivery of the building 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 wing; 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.

The hub of the campus, the college center, provides a natural meeting place for students and faculty — and includes a lounge, cafeteria, 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.

While suggesting strength, 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.

January, 1973 saw the completion of a 6,000 square foot building adjacent to the power plant to house career/vocational classrooms. This structure will become part of the central utility complex when the campus master plan is completed in 1980.

Currently under construction are an addition to the health-science complex and a music wing, a total of more than 50,000 square feet, to cost $3,186,589. Completion of these buildings in mid-1974 will bring the campus to 50.9 per cent of the campus master plan.

The Illinois Board of Higher Education, in February of this year, approved $3,887,000 in funds for the 1974 fiscal year for two additional classroom buildings, a lecture hall, and reimbursement for the vocational classroom building constructed with local funds. Campus construction is funded with 75 per cent state monies and 25 per cent local funds.

The Harper campus provides an exciting learning environment complete with the latest educational tools. Former students will recall it with a feeling of pleasure and pride. Community residents, too, are finding pride in a local campus which provides cultural and educational opportunities as well as a conference center for clubs and civic organizations.

ADMISSION

Eligibility

All high school graduates or the equivalent 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 of 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 be required to meet additional requirements as specified by that program and the Illinois Public Junior College Act.

High School Students

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

TYPES OF ADMISSION

Admission

Applicants may be admitted as regular students if they are high school graduates or the equivalent (GED) and are seeking admission as a full-time student. Students enrolling on a part-time basis (less than 12 semester hours) or students not interested in earning credits applicable toward a degree will be admitted as special students.

Regular and special students will be classified into one of three categories based on personal choice and qualifications.

1. Student at Large: This category is for those individuals who desire college course work for purposes of personal enrichment, or for those individuals who do not meet the established requirements for admission as a transfer student or as a student in a specific career program. Applications for admission to this category will be accepted at any time.

2. Transfer Student: This category is for those individuals who desire to pursue a program of study that will prepare them to transfer to institutions granting baccalaureate degrees. Applications for admission to this program will be accepted at any time. Students who meet established requirements will be admitted to the program. The student should consult the appropriate section of this catalog and a counselor for details.

3. Career Student: This category is for those individuals who desire to pursue a sequence of study that will prepare them for a particular career. Descriptions of established requirements for admission to specific career programs are available in the Admissions Office. Because of space limitations in some career programs, students seeking admission to a career sequence must follow the application procedure listed in this catalog.

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. 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 one semester 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 the vice president of student affairs.

APPLICATION PROCEDURES

Students seeking admission to transfer programs or students seeking admission as a student at large may apply at any time. However, because of severe space limitations in many of the career programs, students seeking admission as career students must make application in the following manner:

Applications for admission to career programs will be accepted on or after October 1 of the year preceding the fall term in which the student will first enroll in the program.

Applications received from in-district students on or after October 1, and prior to April 1 of the school year preceding admission into the program during the succeeding fall term, will be considered in the order of receipt. In-district students who satisfactorily meet established requirements of the specific program to which they desire admission will be admitted to that program on the basis of order of application until April 1 or until allocated spaces have been filled.

If, on a given day, the number of applications exceeds the remaining spaces, space will be allocated to those students from that day's applicants who present the highest qualifications with respect to established criteria.

After the April 1 date, all qualified applicants will be admitted to the remaining spaces on the basis of order of date of receipt of application.

Notification of acceptance or rejection will be made by May 1.

Regular 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 complete transcripts of all high school work and any college credits earned.

3. Take the college admissions battery. Any one of the following test batteries will meet this requirement: American College Test (ACT), Career Planning Profile (CPP), 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 will be given the opportunity prior to registration to take the ACT or CPP. 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.

Special 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.

Non-High School Graduate Admission

Students without a high school diploma or equivalent who wish to become regular or special students must follow the requirements for admission specified in that admissions classification. The academic program, the number of courses, and the course level will be determined by the student and the assigned counselor based on work experience, academic record, and test scores from the Career Planning Profile (CPP).

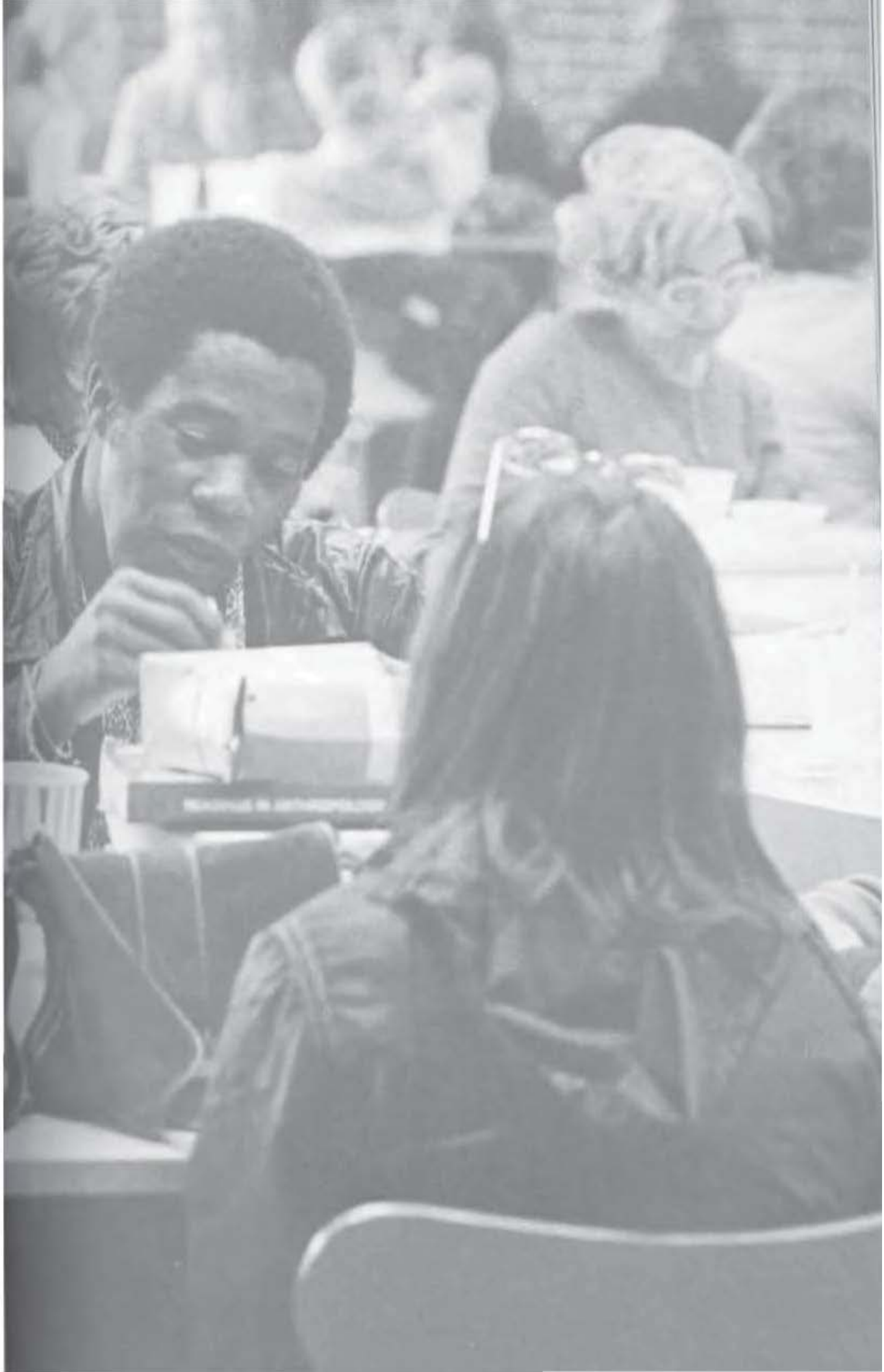
International Students

Students from other countries attending Harper College are termed "international" students, according to the following definition: A person who is a citizen of a country other than the United States who has a visa for educational purposes with an intent to return to his homeland upon completion of his educational program.

International students must carry a minimum of twelve (12) semester hours. Because no scholarships or grants are available to newly-entering international students, it is essential that students from outside the United States have sufficient funds to cover their expenses while in this country.

International students who wish to become degree-seeking students at Harper College must submit the following to the Admissions Office before any action can be taken on their application.

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 score at the twenty-fifth percentile or above. Students scoring between the twenty-fifth and fiftieth percentile may be restricted to a remedial program.

4. Take the Career Planning Profile (CPP) of the American College Testing program prior to registration. The CPP can be taken by making an appointment with the Office of Testing Services. The results of the CPP will be used for placement of students into courses and programs.

5. Forward a personal medical history and physical examination form, completed by a licensed United States physician, to the Admissions Office.

Each student should contact the international counselor upon his arrival on campus. Also, for further information, write to the international student counselor at the college.

RESIDENCY

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

Resident

A student whose residence has been determined to be within the William Rainey Harper College District (Illinois Junior College District 512.)

Non-Resident

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

Out-of-State

A student whose residence is outside the State of Illinois.

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 his 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 bulletin "Proficiency Credit" available in the Office of Testing Services.

Armed Service 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.

College Level Examination Program

Credit through the College Level Examination Program (CLEP) is available to any student who feels he has 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 his scores be sent to the Office of Admissions. Students who would like information regarding the CLEP General Examinations may secure 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.

LEARNING LABORATORY

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

Any student enrolled at Harper can come to the learning laboratory for assistance. If the laboratory assistant cannot provide the necessary help, assistance will be given to locate a tutor. Information on study skills will also be available through the learning laboratory.

New students who have had difficulty in high school may be recommended 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 could consist of any combination of the following courses and would be supplemental to others the student may choose to take.

Courses presently offered through the learning laboratory include CMN 099, Language Skills; CMN 098, Vocabulary Development; CMN 097 Spelling Improvement; RDG 099, Developmental Reading; RDG 104, Reading Improvement; MTH 094, Arithmetic; MTH 095, Introductory Algebra; PSY 100A, Group Interaction; PSY 100B, Human Potential Seminar; and PSY 100C, Effective Decision Making.

TUITION AND FEES (subject to change without notice)

Tuition

Resident Tuition	$14.00 per semester hour
Non-Resident Tuition (see "Charge Back")	$33.83 per semester hour
Out-of-State Tuition	$51.33 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.

Application Fee

An 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 semester hours will pay a $10.00 activity fee for each semester; students enrolled for less than 12 hours will pay a $5.00 activity fee. For students enrolled only in non-credit or extension courses, no activity fee is charged. See section on "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.

Laboratory and Music Fees

Laboratory and music fees are indicated in the course descriptions.

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.

Extension Fee

An on-site registration fee of $5.00 will be assessed for Harper extension courses.

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.

2. A "W" grade will be assigned to a class dropped after the beginning of the fourth week and prior to the beginning of the fifteenth week.

3. A grade of "F" will be assigned to a class dropped after the beginning of the fifteenth week. If extenuating circumstances exist, students may petition for "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.

TUITION REFUND POLICY

Tuition refund requests should be made to 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

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

CHARGE BACK

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 junior 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.

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
X	Incomplete	.0
W	Withdrawal	.0
P	Pass	.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

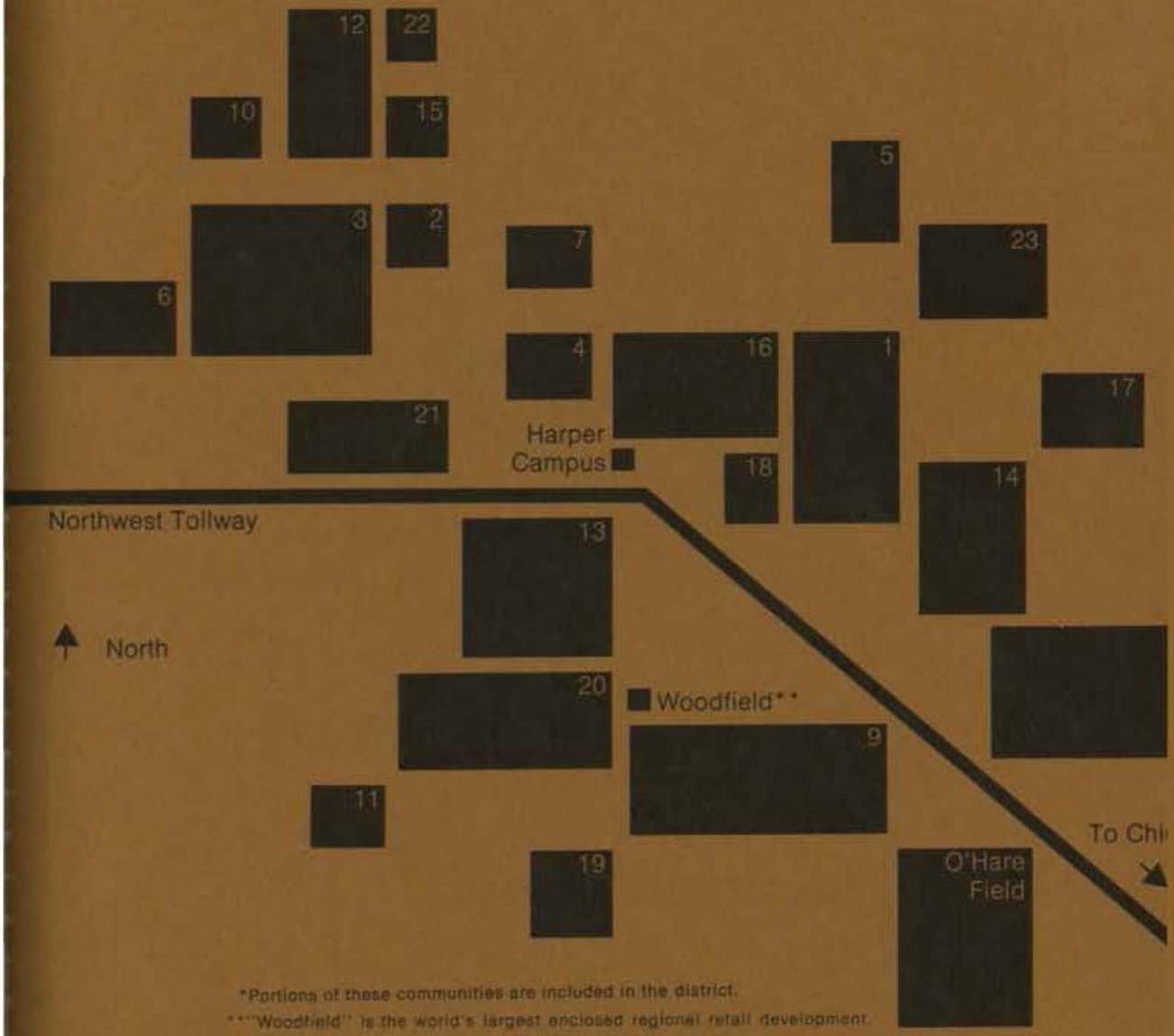
Students with a grade point average of 3.25 to 3.49 are given recognition on the Honors List.

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.

Communities served by
Harper College District No. 512

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



*Portions of these communities are included in the district.

**"Woodfield" is the world's largest enclosed regional retail development.

The unfinished work must be satisfactorily completed by the mid-term of the following semester or a grade of "F" will be assigned. An extension of time may be granted by the vice president of academic affairs for special cases (e.g., military service, extended illness).

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.

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 D's or F's 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.

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.

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, and the clinic operated by Harper's Dental Hygiene career program is accredited by the American Dental Association.

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 two transcripts without charge. A fee of $1.00 is charged for each additional copy.

TRANSFER TO A SENIOR INSTITUTION

Credits earned at Harper College (baccalaureate oriented) are transferable to other institutions of higher learning. Students intending to transfer to a senior college should plan their programs to assure smooth transfer. In Illinois alone there are twelve public and over forty private colleges and universities from which to choose. The selection of a senior college should be an individual decision based on the compatibility of a student and the academic programs, facilities, size, student body, location, philosophy, and cost of a senior college. The Illinois State Scholarship Commission provides tuition grants (no repayment) up to $1,200 for use in any of these Illinois colleges.

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.

FINANCIAL AID

Harper College has developed a financial aid program so comprehensive that virtually no student in this area needs to forego a college education due to a lack of funds.

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 $1,500.00 a year (interest free and no payments while the student is in college) can be oftained for students regardless of family income. 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 per cent) are receiving some form of assistance in programs administered by the Office of Placement and Student Aids.

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

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 Harper College financial aid application.

3. Furnish evidence of need by submitting either an American College Testing Program (ACT) "Family Financial Statement" or a College Scholarship Service (CSS) "Parent Confidential Statement." These are standard financial aid statements and are required by some financial aid programs, including College Work-Study, Nursing Scholarships, and Basic Opportunity Grants.

4. Veterans, widows of veterans, war orphans, and children of families receiving social security dependent allowances are eligible for special assistance. Information about applying for educational assistance under these programs may be obtained from the Harper Office of Placement and Student Aids.

PLACEMENT SERVICES

Harper College offers complete placement services to students seeking full-time and part-time employment. Graduates from two-year programs are assisted in preparing for interviews, including resume and application form preparation, and interviews are arranged with prospective employers. Former Harper graduates can also utilize the college placement services.

A bulletin listing part-time and full-time employment opportunities is published weekly and may be picked up by the student in the placement office as well as in the library and bookstore.

Periodic campus interviews are held for students seeking full-time and part-time employment. Questions concerning placement opportunities should be directed to the Office of Placement and Student Aids.

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 libarary describing thousands of vocations, film-strips and recordings on career information, 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 requiremements for transferring to these institutions.

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 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 motivation seminars (small student groups numbering six to ten) are provided through the counseling department. The seminars are designed to allow individuals to experience honest and positive interactions with one another as a means of promoting personal growth. Individual strengths, values, goals, and achievements are some of the concepts discussed during the eight-week session.

OFFICE OF 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.

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.

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 will be presented, and students will meet with their counselors for academic advisement.

STUDENT SENATE

The focal point for the involvement of students in the democratic process at Harper College is the Student Senate. It is the aim of the college to give student government true authority and responsibility for student affairs and to recognize it as the main vehicle through which students are involved in the decision-making processes of the college. Students are appointed to college committees which make policy directly affecting them, and they are asked to assume a major role in keeping the administration abreast of student thought.

CONDUCT

In the interest of guaranteeing the broadest range of freedom to each member of the college community and maintaining order on the campus, some rules have been laid down by the students and other members of the college community. All students are held to be informed of these rules, which are printed in the *Student Handbook*.

FOOD SERVICE

The college 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	7:15 a.m. — 8:00 p.m.
Friday	7:15 a.m. — 3:15 p.m.

Other Food Service facilities include a snack bar operating Monday through Friday from 9:00 a.m. to 1:15 p.m., and a faculty-staff/student 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 extensive "on campus" catering for breakfasts, luncheons, dinners, and special events.

STUDENT ACTIVITIES

A comprehensive activities program is available which includes a cultural arts series of lectures, concerts, art exhibits, films, and dramatic productions sponsored by a student-faculty Cultural Arts Committee; social programs of dances, concerts, and informal activities planned and executed by the student College Center Program Board; student publications including the college newspaper, *Harbinger,* and a literary publication, *Point of View*; a student radio station; speech activities; a student travel program; mini courses on special interest subjects; and opportunities for volunteer work in community organizations.

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 the Chess Club, Data Processing Management Association, Food Service Association, Electronics Club, Future Secretaries Association, Harper Association of Marketing Management Students, Harper's Bizarre (Fashion Design), Junior American Dental Hygiene Association, Nurses Club, Phi Theta Epsilon (Law Enforcement), Physical Education Majors, Practical Nurses Club, Psychology Club, Sociology Club, Sports Board, Ski Club, Talons (Lettermen), Veterans Club, and a number of religious organizations including the Seekers, Newman Community, and Christian Science Society.

The college center is an integral part of the Harper activity program. It is the setting for lectures, concerts, informal discussions, teach-ins, dances, 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.

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 provde 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 physician is available for medication, prescription, and consultation with the nurse. Students are encouraged to use health services facilities when ill or injured as well as for confidential counseling regarding personal health problems. A rest area is available for students, faculty, and staff.

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

ATHLETICS

Harper College is a member of the Skyway Community College Conference and the National Junior College Athletic Association. Colleges in the Skyway conference, in addition to Harper, are Amundsen, Elgin, Lake County, McHenry, Oakton, Triton, and Waubonsee. Harper participates in eight sports: football, cross country, golf, basketball, wrestling, baseball, tennis, and track.

An extensive intramural program has been developed by the athletic department. All students are encouraged to participate in these extra-curricular activities.

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 campus safety office in Building B registers vehicles and issues parking permits.

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 degree.

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 and associate in science.

5. Enrollment in Harper College during the semester in which graduation requirements are completed. Waiver of enrollment requirement may be made by the vice president of academic affairs where exceptional circumstances warrant.

6. Fulfillment of the degree 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.

DEGREE GROUP REQUIREMENTS

	Associate in Arts	Associate in Science	Associate in Applied Science
I. COMMUNICATION SKILLS English 101, 102	6 hrs.	6 hrs.	6 hrs.[1]
II. SOCIAL SCIENCES anthropology, economics, geography, history, political science, psychology, sociology	6 hrs.	6 hrs.	6 hrs.
III. SCIENCE OR MATHEMATICS biology, chemistry, engineering[3], geology, mathematics, physical science, physics	8 hrs.	20 hrs.	6 hrs.[2]
IV. HUMANITIES art, foreign language, humanities, literature, music, philosophy, fine arts	6 hrs.	6 hrs.	3 hrs.
V. Twelve hours to be taken in at least two of the following areas: communications, social sciences, science or mathematics, humanities	12 hrs.		
	38 hrs.	38 hrs.	21 hrs.

1 The following courses may be used to satisfy this requirement if a part of the approved career program. English 099, English 103, English 130, Journalism 131, Journalism 133

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

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

CAREER PROGRAMS

Harper College offers a considerable number of associate degree and certificate programs in the vocational area.

Associate degree programs currently being offered are:

Accounting Aide
Air Conditioning and Refrigeration
Architectural Technology
Chemical Technology
Child Development
Criminal Justice
Data Processing Technology
Dental Hygiene
Electronics Technology
Fashion Design
Fire Science Technology
Food Service Management
Interior Design
Journalism
Legal Technology
Marketing Mid-Management:
- General Marketing Option
- Supermarket Management Option

Mechanical Engineering Technology
Medical Laboratory Technician
Medical Office Assistant
Numerical Control Technology
Nursing
Secretarial Science:
- Executive Secretarial Development
- Legal Secretary

Supervisory & Administrative Management

Certificate programs are being offered in:

Accounting Aide
Air Conditioning and Refrigeration
Architectural Technology
Baking
Child Development
Cooking
Criminal Justice
Data Processing — Clerical
Data Processing — Technical

Electronics
Executive Secretarial Development
Fashion Design
Fire Science Technology
Food Service Management
General Office Assistant
Industrial and Retail Security
Legal Technology
Mechanical Drafting
Mechanical Technician
Medical Transcriptionist
Numerical Control Technician
Operating Room Technician
Practical Nursing
Real Estate
Supermarket Management
Supervisory and Administrative Management

Associate Degree Programs proposed for implementation during the 1973-74 school year:[1]

Banking, Finance and Credit
Dietetic Technician

Certificate Programs proposed for implementation during the 1973-74 school year:

Banking, Finance and Credit

Additional programs considered for a year or two hence include:

Auto Mechanics
Bilingual Secretary
Inhalation Therapy
Material Management
Noise Measurement and Control Technology
Park Management
Physician's Assistant

The programs offered for 1973-74 and their course requirements are described in the following pages.

1 Programs must be approved by the State Board before implementation. For current information on these programs, please check with the Director of Admissions.

ACCOUNTING AIDE

Accounting Aide is a two-year 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		SECOND SEMESTER	
English[1]	3	ENG 130 Business Writing[1]	3
Mathematics[2]	3	SPE 101 Fundamentals of Speech	3
BUS 101 Accounting I	3	DPR 101 Introduction to Data Processing	3
BUS 111 Introduction to Business Organization	3	BUS 102 Accounting II	3
SEC 131 Business Machines	2	ECO 200 Introduction to Economics	3
	14		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BUS 098 Tax & Payroll Accounting	4	PSY 145 Psychology in Business & Industry	3
BUS 211 Business Law I	3	BUS 202 Intermediate Accounting II	3
BUS 201 Intermediate Accounting I	3	BUS 203 Cost Accounting	3
PSY 101 Introduction to Psychology	3	BUS 270 Principles of Management	3
Humanities elective	3	BUS 218 Introduction to Finance	3
	16		15

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

2 Students 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.

AIR CONDITIONING AND REFRIGERATION

Air Conditioning and Refrigeration 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 Year

FIRST SEMESTER		SECOND SEMESTER	
ACR 101 Air Conditioning Principles I	4	ACR 102 Air Conditioning Principles II	4
ACR 103 Air Conditioning & Refrigeration Science	3	ACR 104 Basic Heating Principles	3
ELT 110 Introductory Electronics[1]	2	ACR 106 Electrical Systems	3
English elective[2]	3	English elective[2]	3
PSY 101 Introduction to Psychology	3	PSY 145 Psychology in Business & Industry	3
	15		16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ACR 201 Commercial Refrigeration I	4	ACR 202 Commercial Refrigeration II	4
ACR 203 Advanced Air Conditioning I	4	ACR 204 Advanced Air Conditioning II	4
MET 101 Elements of Drafting	3	ACR 208 Pneumatic Control Systems	2
Humanities elective	3	Electives[3]	5
	14		15

1 Students will enroll in laboratory sections of ELT 110 designed especially for ACR students.
2 Students may take English 099 or English 101 for the first semester depending upon their test scores and the advice of their counselor. English 102, 103, or 130 are suggested second semester electives.
3 BUS 111, 140, 160, 255, CHM 100, ENG 103; MTH 101, 102.

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a two-year technical 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		SECOND SEMESTER	
ATE 101 Introduction to Architectural Tech. I	4	ATE 102 Introduction to Architectural Tech. II	4
ATE 103 Building Materials Technologies I	4	ATE 104 Building Materials Technologies II	4
ATE 105 Computer Math for Architectural Tech. I[2]	3	ATE 106 Computer Math for Architectural Tech. II[2]	3
ENG 101 Composition[1]	3	ENG 102 Composition[1]	3
Social Science elective	3	Social Science elective	3
	17		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ATE 201 Comprehensive Building Project I	4	ATE 202 Comprehensive Building Project II	4
ATE 203 Construction Problems I	4	ATE 204 Construction Problems II	4
ATE 205 Computer Graphics & Optimization	3	ATE 206 Computer Applications in Architecture	3
ATE 207 Behavior of Arch. Materials I	3	ATE 208 Behavior of Arch. Materials II	3
Humanities elective	3	Technical elective	3
	17		17

English 099, 103, or 130 may be used, under certain conditions, to satisfy this requirement.
Students in this program may count this course toward fulfillment of their mathematics requirement.

CHEMICAL TECHNOLOGY

Chemical Technology is a two-year program leading to an associate in applied science degree. The program is designed to combine chemical, physical, and mathematical theories with procedural and technical skills for application in the chemical and allied industries.

Graduates will find employment in such positions as research technician, production technician, product analyst, pilot-plant operator, and product or equipment salesman.

First Year

FIRST SEMESTER		SECOND SEMESTER	
CHM 121 General Chemistry I	4	CHM 122 General Chemistry II	4
MTH 101 Fundamentals of Mathematics I	3	MTH 102 Fundamentals of Mathematics II	3
ENG 101 Composition	3	ENG 103 Report Writing	3
PHY 101 Technical Physics I	4	PHY 102 Technical Physics II	4
CHM 110 Chemical Technology Seminar	1	PED 201 First Aid	2
	15		16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
CHM 204 Organic Chemistry	5	Humanities elective	3
ECO 201 Principles of Economics	3	Social Science elective	3
CHM 240 Unit Operations I	4	CHM 241 Unit Operations II	4
CHM 210 Quantitative & Instrumental Analysis I	5	CHM 211 Quantitative & Instrumental Analysis II	5
	17		15

CHILD DEVELOPMENT

Child Development is a two-year 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 pre-school 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 099 Composition or ENG 101 Composition	3	ENG 101 Composition or ENG 102 Composition	3
CCA 101 Introduction to Child Development	3	SOC 101 Introduction to Sociology	3
PSY 101 Introduction to Psychology	3	EDU 201 Introduction to Education	3
Mathematics elective	3	PSY 216 Child Psychology	3
Humanities elective	3	PSY 217 Adolescent Psychology	3
	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 the Exceptional Child	3
CCA 214 Principles of Pre-School Education[1] or CCA 218 Assisting the Severely Handicapped	4	CCA 220 Practicum Internship	6
CCA 215 Laboratory	2	Elective[2]	3
	15		17

1 Pre-School teachers will take CCA 214, Principles of Pre-School Education. Workers with the handicapped will take CCA 218, Assisting the Severely Handicapped.

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

CCA electives: CCA 221, Workship in Early Childhood Education
CCA 225, Mental Hygiene

CRIMINAL JUSTICE

Criminal Justice is a two-year 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 (Law Enforcement) and 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 & Criminal Justice	3	PSC 201 American Government Organization Powers & Functions	3
CRJ elective	3	CRJ 102 Police Administration & Organization	3
	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	3	CRJ 105 Criminal Courts of the U.S.	3
	15		15

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

2 CRJ electives must be taken from the following Criminal Justice offerings:
CRJ 110 Police Operations
CRJ 203 Law and Society
CRJ 205 Juvenile Delinquency
CRJ 207 Problems of Drug Addiction and Vice Control
CRJ 208 Police Supervision
CRJ 209 Police Public-Community Relations
CRJ 212 Traffic Administration
CRJ 254 Interviewing and Case Preparation

Industrial and Retail Security options:
CRJ 250 Industrial Security Administration
CRJ 252 Industrial Fire Protection, Disaster Control
CRJ 253 Safety Management

DATA PROCESSING TECHNOLOGY

The Data Processing 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 will find employment as computer programmers, systems analysts, and computer and unit record equipment operators.

First Year

FIRST SEMESTER		SECOND SEMESTER	
DPR 101 Introduction to Data Processing	3	DPR 108 Computer Programming — COBOL	5
DPR 106 Computer Logic & Programming Technology	2	DPR 203 Systems Analysis & Design I	3
ENG 101 Composition	3	BUS 101 Accounting I	3
Social Science elective	3	BUS 111 Introduction to Busincess Organization	3
MTH 102 Fundamentals of Mathematics II	3	ENG 103 Report Writing	3
	14		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
DPR 110 Computer Programming — Basic Assembler	5	ECO 200 Introduction to Economics	3
BUS 102 Accounting II	3	DPR 208 Computer Programming — Advanced COBOL or	
DPR 204 Advanced Systems Analysis & Design	3	DPR 210 Computer Programming — Advanced Assembler	4
Humanities Elective	3	DPR 202 Systems Programming	3
	14	DPR 230 Internship/Field Project and/or Case Study	3
		Data Processing elective[1]	3-4
			16-17

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

DENTAL HYGIENE

Dental Hygiene is a two-year 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 aptitute 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 the dental office, hospitals, health agencies, government and armed services.

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101 Composition	3	ENG 102 Composition	3
SOC 101 Introduction to Sociology	3	BIO 180 Histology & Embryology	3
BIO 160 Human Anatomy	4	BIO 161 Human Physiology	4
CHM 100 Introductory Chemistry	4	CHM 101 Biochemistry	4
DHY 100 Pre-Clinic & Orientation	2	DHY 111 Dental Radiology	1
DHY 161 Dental Anatomy	3	DHY 101 Pre-Clinic	2
	19	DHY 130 Nutrition	1
			18

SUMMER SESSION

ART 105 Art Appreciation	3
BIO 130 Microbiology	4
DHY 150 Clinic & Radiology	2
	9

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SPE 101 Fundamentals of Speech	3	PSY 101 Introduction to Psychology	3
BIO 190 Pathology	3	Humanities elective	3
DHY 230 Periodentology	2	DHY 201 Seminar	2
DHY 240 Dental Pharmacology & Anesthesia	1	DHY 221 Community Dentistry	3
DHY 220 Community Dentistry	3	DHY 251 Clinic	4
DHY 250 Clinic	4	DHY 291 Dental Assisting	2
DHY 280 Dental Materials & Assisting	3		17
	19		

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 will 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 English	3	Humanities elective[1]	3
	17		18

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ELT 203 Electronics II, Pulse	4	ELT 204 Electronics III	4
ELT 103 Circuits III, Networks	4	Electronics Tech. 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

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

Technical electives:

ELT 205 Electronic Instrumentation		ELT 211 Analog Simulation I	4
ELT 206 Electronic Computers	4	ELT 212 Analog Simulation II	4
ELT 207 UHF Communications and Reception	4		

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

3 The Social Science requirement can be completed by taking six hours from the following courses:

ANT 201 General Anthropology	3	HST 141 History of Western Civilization	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 History of the American People to 1877	3	PSY 145 Psychology in Business & Industry	3
HST 112 History of the American People from 1877	3	SOC 101 Introduction to Sociology	3

EXECUTIVE SECRETARIAL DEVELOPMENT

Executive Secretarial Development is a two-year 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	3
SEC 121 Elementary Typing[1]	2	SEC 126 Intermediate Shorthand[1,2]	3
BUS 111 Introduction to Business Organization	3	SEC 122 Intermediate Typing[1]	2
SEC 131 Business Machines	2	SEC 132 Office Practice	3
Mathematic elective[3]	3	PSY 101 Introduction to Psychology	3
SEC 125 Elementary Shorthand[1,2] or SEC 140 Elementary Machine Shorthand	4	SEC 236 Secretarial Procedures[4]	2
	17		16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BUS 101 Accounting I or BUS 099 Business Record Keeping	3	BUS 211 Business Law	3
SEC 221 Advanced Typing[1]	2	ECO 200 Introduction to Economics	3
SEC 225 Dictation & Transcription[1,2]	3	Humanities elective	3
SPE 101 Fundamentals of Speech	3	DPR 101 Introduction to Data Processing	3
SEC 237 Secretarial Seminar & Internship I[5]	3	SEC 238 Secretarial Seminar & Internship II[5]	3
	14		15

1 Placement into SEC 098, SEC 099, SEC 121, SEC 122, SEC 221, SEC 125, SEC 126, and SEC 225 contingent upon previous training and consent of Instructor. (5ee Course Description.)
2 Students will take English 101 concurrently with their first shorthand course.
3 While students may take any mathematics course offered depending upon their test scores and the advice of their counselor, Business Mathematics (BUS 150) is recommended.
4 SEC 236 must be taken the semester prior to entering SEC 237.
5 Enrollment restricted to students in the second year of the program with the consent of the Instructor.

FASHION DESIGN

Fashion Design is a two-year 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. A survey of History of Costume, as an inspiration for contemporary design, and an analysis of current fashion trends are included. Facilities will simulate the professional atmosphere of the fashion industry.

Graduates will find employment as couture fashion designers, mass production fashion designers, flat pattern makers, fashion illustrators and fashion coordinators. Other areas of employment in the fashion industry include: fashion advertising, fashion promotion, fashion journalism, retailing, buying, window displaying, and other related careers.

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

First Year

FIRST SEMESTER		SECOND SEMESTER	
FAS 101 Flat Pattern Design and Draping I	3	FAS 102 Flat Pattern Design and Draping II	4
FAS 103 Apparel Design and Construction I	3	FAS 104 Apparel Design and Construction II	4
FAS 105 Fashion Design Illustration I	1	FAS 106 Fashion Design Illustration II	1
FAS 107 Textiles I	2	FAS 108 Textiles II	2
FAS 109 Micro Environmental Design I	2	FAS 110 Micro Environmental Design II	2
ENG 101 Composition[1]	3	ENG 102 Composition[1]	3
Social Science elective	3		16
	17		

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

Second Year

FIRST SEMESTER

FAS 201 Advanced Flat Pattern Design & 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 & Soft Goods 2
Social Science elective..... 3
16

SECOND SEMESTER

FAS 202 Advanced Flat Pattern Design & 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..... 3
16

FIRE SCIENCE TECHNOLOGY

The Fire Science Technology 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 & Extinguishing Systems	3	SPE 101 Fundamentals of Speech	3
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science elective[2]	3	FIS 245 Fire Causes & 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	3	Humanities elective[2]	3
	16		15

1 Students may elect any mathematics course offered depending upon their test scores & advice of their vocational counselor; however, only MTH 095 or higher will satisfy this requirement.
2 Electives must be selected upon the advice of counselors and program coordinator.
3 If 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 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 division of business. 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 in Baking.

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 099 or 101 Composition	3	ENG 101 or 102 Composition	3
FSM 111 Introduction to Food Service	2	BUS 111 Introduction to Business Organization	3
FSM 114 Standards & Sanitation	3	FSM 115 Menu Planning	2
FSM 112 Quantity Food Production or FSM 113 Quantity Food Service	4	FSM 112 Quantity Food Production or FSM 113 Quantity Food Service	4
BUS 150 Business Math	3	BUS 099 Business Recordkeeping or BUS 101 Accounting I	3
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
PSY 101 Introduction to Psychology	3	Humanities elective	3
Social Science elective	3	SPE 101 Fundamentals of Speech	3
ENG 130 Business Writing	3	FSM 214 Cost Control	3
FSM 211 Purchasing & Storage	3	FSM 215 Restaurant Layout & Equipment	3
FSM 212 Food Service Supervision	4	FSM 213 Seminar & Internship	4
	16		16

INTERIOR DESIGN

Interior Design is a two-year 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		SECOND SEMESTER	
English[1]	3	ENG 130 Business Writing	3
PSY 101 Introduction to Psychology	3	BUS 140 Salesmanship	3
ART 121 Design Studio I	3	SPE 101 Fundamentals of Speech	3
FNA 111 History of Art I	3	FNA 112 History of Art II	3
IND 101 Basic Interior Design I	5	IND 102 Basic Interior Design II	5
	17		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
IND 201 Advanced Interior Design I	6	IND 202 Advanced Interior Design II	6
JNM 133 Feature Writing (3) or		SOC 101 Introduction to Sociology	3
JNM 134 Media Adjuncts (4)	3-4	Business elective	3
BUS 111 Introduction to Business Organization or		Humanities elective	3
Business elective	3		15
	12-13		

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

JOURNALISM

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

First Year

FIRST SEMESTER[1]		SECOND SEMESTER	
JNM 130 Fundamentals of Journalism	3	JNM 131 News Reporting and Writing	3
ENG 101 Composition	3	JNM 133 Feature Writing	3
HST 111 History of the American People to 1877	3	JNM 134 Media Adjuncts	4
PHS 101 General Physical Science	3	HST 112 History of the American People from 1877	3
ECO 200 Introduction to Economics or ECO 201 Principles of Economics	3	PSC 201 American Government	3
	15		16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
JNM 234 Mass Communication	3	JNM 237 Externship Study	5
JNM 235 Copy Reading & Editing	4	HST 142 History of Western Civilization since 1815	4
JNM 236 Radio & T.V. News.	4	PHI 105 Introduction to Philosophy	3
HST 141 History of Western Civilization to 1815	4	SOC 101 Introduction to Sociology	3
	15		15

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

LEGAL SECRETARY

A two-year 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		SECOND SEMESTER	
ENG 101 Composition	3	ENG 130 Business Writing	3
SEC 122 Intermediate Typing[1]	2	SEC 221 Advanced Typing[1]	2
SEC 126 Intermediate Shorthand (Manual or Machine)[1]	3	SEC 225 Dictation & Transcription (Manual or Machine)[1]	3
BUS 101 Accounting I	3	SEC 132 Office Practice	3
Elective	3	BUS 211 Business Law I	3
	14	SEC 236 Secretarial Procedures	2
			16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SEC 234 Legal Office Procedures	3	PSC 201 American Government	3
SEC 235 Legal Dictation & Transcription	3	SPE 101 Fundamentals of Speech	3
BUS 212 Business Law II	3	SEC 238 Secretarial Seminar & Internship II	3
ECO 200 Introduction to Economics	3	RES 123 Real Estate Law or	
SEC 237 Secretarial Seminar & Internship I	3	Other approved elective	3
	15	Humanities elective	3
			15

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

LEGAL TECHNOLOGY

Legal Technology is a two-year 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 American Government	3
LTE 103 Litigation	3	LTE 105 Family Law	3
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
LTE 202 Estate Planning and Probate	3	LTE 206 Conference Course in Legal Technology	3
LTE 203 Income Taxation I	3	LTE 206 Seminar	3
BUS 211 Business Law I	3	BUS 212 Business Law II	3
RES 123 Real Estate Law	3	Legal Technology elective[1]	3
Elective[1]	3	Elective	3
	15	Humanities elective	3
			15

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

MARKETING MID-MANAGEMENT (GENERAL MARKETING OPTION)

A two-year 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		SECOND SEMESTER	
English elective	3	PSY 145 Psychology in Business & Industry	3
PSY 101 Introduction to Psychology	3	ENG 130 Business Writing	3
BUS 111 Introduction to Business Organization	3	BUS 245 Principles of Marketing or other Marketing elective	2-3
BUS 140 Principles of Salesmanship or other Marketing elective	2-3	BUS 270 Principles of Management	3
BUS 150 Business Math	3	DPR 101 Introduction to Data Processing	3
	14-15		14-15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SPE 101 Fundamentals of of Speech	3	Humanities elective	3
ECO 200 Introduction to Economics	3	BUS 102 Accounting II or Marketing elective	3
BUS 101 Principles of Accounting I	3	BUS 211 Business Law I	3
BUS 281 Marketing Internship	3	Business elective	3
Marketing elective	3	BUS 282 Marketing Internship II	3
	15		15
		Summer Options[1]	6

Marketing Mid-Management Electives

BUS 106 Merchandising of Furnishings and Soft-line goods	3	BUS 216 Supermarket Merchandising	3
BUS 109 The Retail Food Distribution Industry	2	BUS 217 Advertising	3
BUS 140 Salesmanship	3	BUS 245 Principles of Marketing	3
BUS 215 Supermarket Operation	3	BUS 249 Purchasing	3
		BUS 250 Retailing	3

1 The 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 (SUPERMARKET MANAGEMENT OPTION)

Supermarket Management is a two-year occupational curriculum consisting of 64 semester hours of credit and leads to the award of an AAS 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.

School Semester	Curriculum Patterns	
	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 Work[1]

Course work taken under the Supermarket Management Option is comparable to that taken under the General Marketing Option described on 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

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

MECHANICAL ENGINEERING TECHNOLOGY

Mechanical Engineering is a two-year technical program leading to an associate in applied science degree. The program is designed to train students in the field of mechanical design and drafting. The curriculum includes courses in mechanical design and drafting, mathematics, physics, and general education.

Graduates will be employed in such positions as mechanical desigers, mechanical draftsmen, machine designers, tool and die designers, mechanical engineering technicians, and technical salesmen.

First Year

FIRST SEMESTER		SECOND SEMESTER	
EGR 100 Introduction to Engineering & Technology	1	MET 103 Descriptive Geometry	3
MET 102 Technical Drafting[1]	3	MET 104 Statics	2
MET 105 Basic Machine Shop	3	MET 108 Manufacturing Processes & Materials	3
MTH 106 Mathematics I	5	MTH 107 Mathematics II	5
ENG 101 or 099 Composition	3	ENG 103 Report Writing	3
	15		16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
MET 201 Mechanisms	4	MET 206 Metallurgy & Heat Treatment	3
MET 204 Strength of Materials	3	MET 207 Machine Design	4
MET 205 Fluid Power & Systems Control	4	PHY 102 Technical Physics II	4
PHY 101 Technical Physics I	4	Social Science electives (2)	6
Humanities elective	3		17
	18		

1 Students who have not completed a high school drafting course will be required to take MET 101 as a prerequisite for MET 102.

MEDICAL LABORATORY TECHNICIAN

Medical Laboratory Technician is a two-year program (including one summer session) leading to an associate in applied science degree and requirements for eligibility to take the written examination given by the Board of Registry of the American Society of Clinical Pathologists, the satisfactory completion of which will assure certification as a Medical Laboratory Technician (ASCP).

The student will learn to understand the functions of the clinical laboratory and its relations with the physician, patient, and other medical personnel. The student will be prepared to function as a medical laboratory technician, working under the supervision of a medical technologist (ASCP) and/or a pathologist.

Prerequisites: High school biology, chemistry, and mathematics.

First Year

FIRST SEMESTER		SECOND SEMESTER	
BIO 160 Human Anatomy	4	BIO 161 Physiology	4
CHM 121 General Chemistry I	4	ELT 110 Introductory Electronics	2
CHM 101 Survey of Organic & Biological Chemistry	4	MTH 165 Statistics	3
ENG 101 Composition	3	ENG 102 Composition	3
MLT 101 Medical Technology I	3	MLT 102 Medical Technology II	3
	18		15

Summer Session

BIO 130 Microbiology	4
MLT 103 Medical Technology III	5
	9

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Humanities elective	3	Social Science elective	3
Social Science elective	3	MLT 202 Medical Technology V	10
MLT 201 Medical Technology IV	8		13
	14		

Participation in MLT 099, Pre-Clinical Orientation (two weeks prior to the fall semester) is recommended. No credit.

MEDICAL OFFICE ASSISTANT

Medical Office Assistant is a two-year 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		SECOND SEMESTER	
ENG 101 Composition	3	BIO 161 Human Physiology	4
SEC 122 Intermediate Typing	2	SEC 221 Advanced Typing	2
SEC 126 Intermediate Shorthand or		SEC 240 Medical Transcription & Typing	3
SEC 225 Dictation & Transcription	3	ENG 130 Business English or	
BIO 160 Human Anatomy	4	ENG 103 Report Writing	3
PED 201 First Aid	2	PSY 101 Introduction to Psychology	3
HSC 112 Medical Terminology	2		
	16		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SEC 241 Medical Office Procedures	4	SEC 237 & SEC 238 Secretarial Seminar & Internship	6
MLT 101 Medical Technology I	3	HSC 212 Clinical Procedures	3
Social Science elective	3	Humanities elective	3
BUS 099 Business Recordkeeping	3	DPR 101 Introduction to Data Processing	3
BUS 267 Office & Administrative Management	3		15
	16		

NUMERICAL CONTROL TECHNOLOGY

Numerical Control Technology is a two-year technical program leading to an associate in applied science degree. Numerical Control is the application of coded information to and the performance functions of machining and drafting. The program is designed to train students for the field of numerical control — machine tools and drafting. The curriculum offers courses in numerical control, mathematics, and general education.

Graduates of the program will find employment in such positions as numerical control parts programmer, numerical control coordinator, numerical control computer programmer, and numerical control salesman.

First Year

FIRST SEMESTER		SECOND SEMESTER	
MET 102 Technical Drafting[1]	3	ENG 101 or ENG 099 Composition	3
MET 105 Basic Machine Shop	3	MET 103 Descriptive Geometry	3
MET 108 Manufacturing Processes & Materials I	3	MET 109 Manufacturing Processes & Materials II	3
MTH 106 Mathematics I[2]	5	MTH 107 Mathematics II[2]	5
NMC 101 Philosophy of Numerical Control and Industrial Cybernetics	2	NMC 105 Part Programming I	3
	16		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 103 Report Writing	3	ELT 210 Computer Programming	3
NMC 201 Numerical Controlled Machining	3	NMC 216 Part Programming III	3
Technical elective[3]	3	NMC 220 Special Problems	3
NMC 215 Part Programming II	3	Humanities elective	3
Social Science elective	3	Social Science elective	3
	15		15

1 Students who have not completed a high school drafting course will be required to take MET 101 as a prerequisite for MET 102

2 Students may elect MTH 104 and 105, dependent upon meeting the prerequisite of MTH 103 or high school equivalent and advice of the counselor

3 Technical elective may be chosen from NMC 214, Graphical Display Systems, or an appropriate ATE, ELT, MET, or EGR course

NURSING: ASSOCIATE DEGREE

This two-year nursing program, leading to an associate in applied science degree, is designed to prepare students to become Registered Nurse practitioners.

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"; satisfactory completion of high school algebra, biology, and chemistry; good health; and a personal interview. If chemistry has been completed more than three years prior to intended entrance into the program, it must be repeated. It is possible to pursue the curriculum over a period of three or more years.

Graduates, after passing the licensure examination, are qualified for staff nurse positions in hospitals and various specialized care settings.

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101 Composition	3	ENG 102 Composition	3
BIO 160 Human Anatomy[1]	4	BIO 161 Human Physiology[1]	4
PSY 101 Introduction to Psychology	3	SOC 101 Introduction to Sociology	3
NUR 101 Foundations of Nursing[1]	5	NUR 102 Foundations of Nursing[1]	5
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Humanities elective	3	Elective	3
PSY 216 Child Psychology or PSY 217 Adolescent Psychology	3	SOC 215 Group Dynamics[1]	3
NUR 201 Physical & Mental Illness I[1]	10	NUR 202 Physical & Mental Illness II[1]	10
	16		16

1 These courses comprise the core of the sequence of nursing courses and must be taken in sequence as indicated

SECRETARIAL CAREER

See: Executive Secretarial Development
Legal Secretary
Medical Office Assistant

SUPERVISORY AND ADMINISTRATIVE MANAGEMENT

A two-year associate degree program designed to assist students in a wide variety of business occupations. The 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		SECOND SEMESTER	
BUS 101 Accounting I	3	BUS 102 Accounting II	3
BUS 111 Introduction to Business Organization	3	ENG elective	3
ENG 101 Composition	3	BUS elective[1]	3
DPR 101 Introduction to Data Processing	3	BUS 270 Principles of Management	3
PSY 101 Introduction to Psychology	3	PSY 145 Psychology in Business and Industry	3
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BUS 245 Principles of Marketing	3	Humanities elective	3
ECO 200 Introduction to Economics	3	Social Science elective	3
BUS 211 Business Law I	3	BUS 218 Introduction to Finance	3
BUS electives[1]	6	BUS electives[1]	6
	15		15

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1 Electives 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 26 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.

While completion of a certificate program may be the primary goal for some adults, for others it may represent their first step 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 098 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 Cost Accounting ... 3
19

AIR CONDITIONING AND REFRIGERATION

The Air Conditioning and Refrigeration certificate program is designed to prepare the student for servicing refrigeration and heating systems or selling environmental equipment to servicemen.

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

ACR 101 Air Conditioning Principles I 4
ACR 102 Air Conditioning Principles II 4
ACR 103 Air Conditioning & Refrigeration Science..... 3
ACR 104 Basic Heating Principles 3
ACR 106 Electrical Systems... 3
ACR 201 Commercial Refrigeration I 4
ACR 202 Commercial Refrigeration II 4
ACR 203 Advanced Air Conditioning I..... 4
ACR 204 Advanced Air Conditioning II 4
ACR 208 Pneumatic Control Systems 2

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a technical program leading to a certificate upon completion of any of the following course offerings totaling fifteen 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 102 Introduction to Architectural Tech. II 4
ATE 103 Building Materials I . 4
ATE 104 Building Materials II 4
ATE 105 Computer Math for Architectural Tech. I..... 3
ATE 106 Computer Math for Architectural Tech. II 3
ATE 201 Comprehensive Building Project I..... 4
ATE 202 Comprehensive Building Project II..... 4
ATE 203 Construction Problems I 4
ATE 204 Construction Problems II 4
ATE 205 Computer Graphic & Optimization..... 3
ATE 206 Computer Applications..... 3
ATE 207 Behaviour of Arch. Materials I 3
ATE 208 Behaviour 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	10	FSM 091 Advanced Quantity Baking	10
FSM 111 Introduction to Food Service	2	FSM 115 Menu Planning	2
FSM 114 Food Standards & Sanitation	3	Elective	3
	15		15

CHILD DEVELOPMENT

A certificate program totaling 15 semester hours emphasizing 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.

Required:

PSY 101 Introduction to Psychology	3
PSY 216 Child Psychology	3

and any nine (9) hours from among the following:

CCA 101 Introduction to Child Development	3	CCA 218 Assisting the Severely Handicapped	4
CCA 209 Language Arts for the Young	3	CCA 219 The Exceptional Child	3
CCA 210 Creative Activities for Young Children	3	CCA 220 Child Development Practicum Internship	6
CCA 214 Principles of Pre-School Education	4	CCA 221 Workshop in Early Childhood Education	3
CCA 215 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..... 3
15

SPRING

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

CRIMINAL JUSTICE

This certificate program is designed to provide specialized education for those currently employed 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 Criminal Justice career coordinator approval. These courses must be taken at Harper.

CRJ 101 Introduction to Law Enforcement & Criminal Justice 3
CRJ 102 Police Administration & 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 Problems of Drug Addiction & Vice 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 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 will find employment as key punch operators, verifier operators, or other clerical positions in data processing installations in business, industry, and government.

FIRST SEMESTER		SECOND SEMESTER	
ENG 101 Composition[1]	3	SOC 101 Introduction to Sociology	3
BUS 101 Accounting I	3	SEC 131 Business Machines	2
DPR 101 Introduction to Data Processing	3	Business or Data Processing elective	3-5
DPR 103 Key Punching & Verifying[2]	2	ENG 130 Business Writing	3
BUS 150 Business Math	3	Elective	2-3
	14		13-16

Students not qualifying for ENG 101 may take ENG 099 or RDG 095
Entry into DPR 103 requires successful completion of a typing course.

DATA PROCESSING — TECHNICAL

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

ELECTRONICS

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

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

EXECUTIVE SECRETARIAL DEVELOPMENT PROGRAM

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

SEC 121 Beginning Typing[1]... 2
SEC 122 Intermediate Typing 2
SEC 221 Advanced Typing ... 2
SEC 131 Business Machines .. 2
SEC 125 Elementary Shorthand[2] 4
or
SEC 140 Elementary Machine Shorthand..... 4
SEC 126 Intermediate Shorthand[2] 3
SEC 225 Dictation & Transcription 3

1 Students for whom advanced placement is recommended should substitute SEC 131
2 Students for whom advanced placement is recommended should substitute BUS 150.
Students who can substitute previous training for both SEC 125 and SEC 126 should substitute BUS 150 and SEC 132.

FASHION DESIGN

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

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

FIS 101 Municipal Fire Administration I 3
FIS 112 Fire Alarm & Extinguishing Systems 3
FIS 122 Fire Inspection Principles 3
FIS 132 Hazardous Materials I 3
FIS 133 Hazardous Materials II 3
FIS 201 Municipal Fire Administration II 3
FIS 222 Fire Inspection Applications 3
FIS 242 Fire Hydraulics 3
FIS 245 Fire Causes & Investigations 3
FIS 252 Automatic Sprinkler Systems 3
FIS 262 Water Supply Analysis 3

1 Emergency Medical Technician Training Option:
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 114 Food Standards and Sanitation	3
FSM 115 Menu Planning	2
FSM 211 Food Purchasing and Storage	3
FSM 212 Food Service Supervision	4
FSM 214 Cost Control Systems	3
FSM 215 Restaurant Layout and Equipment	3

GENERAL OFFICE ASSISTANT

The General Office Assistant program is a certificate program for persons interested in obtaining basic skills for office or other types of administrative clerical positions.

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

SEC 099 Review Typing	1
SEC 121 Elementary Typing	2
SEC 122 Intermediate Typing	2
SEC 131 Business Machines	2
SEC 132 Office Practice	3
SEC 221 Advanced Typing	2
SEC 236 Secretarial Procedures	2
BUS 099 Business Recordkeeping	3
BUS 111 Introduction to Business Organization	3
BUS 150 Business Math	3
ECO 115 Consumer Economics	3
ECO 200 Introduction to Economics	3
DPR 101 Introduction to Data Processing	3
ENG 099 or ENG 101 Composition	3
ENG 130 Business Writing	3
SPE 101 Fundamentals of Speech	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 semester credit hours at Harper College.

Nine (9) hours must include the following courses:

CRJ 103 Industrial Security Administration	3
CRJ 252 Industrial Fire Protection Control	3
CRJ 253 Safety Management	3

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

CRJ 201 Criminal Law I	3
CRJ 202 Criminal Law II	3
CRJ 210 Police Operations	3
CRJ 211 Criminal Investigation	3
CRJ 254 Interviewing and Case Preparation	3

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 four other courses from those listed below, provided the combination has program coordinator or counselor approval.

LTE 101 Introduction to Legal Technology 3
LTE 103 Litigation 3
LTE 105 Family Law 3
LTE 201 Tort and Insurance Law 3
LTE 202 Estate Planning and Probate 3
LTE 203 Income Taxation I .. 3
LTE 204 Income Taxation II .. 3
LTE 206 Seminar 3
RES 123 Real Estate Law 3
RES 124 Real Estate Finance . 3
CRJ 105 Criminal Courts of the U.S. 3
CRJ 201 Criminal Law I 3
CRJ 202 Criminal Law II 3
BUS 211 Business Law I 3
BUS 212 Business Law II 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 202
BUS 212	CRJ 202	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 202
LTE 105	RES 124	LTE 203
LTE 201	BUS 211	LTE 204
Elective	Elective	Elective

1 Consider the following:
CRJ 201
LTE 201
BUS 212

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 101 Elements of Drafting	3
MET 102 Technical Drafting	3
MTH 106 Mathematics I	5
MET 201 Mechanisms	4
	15

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.

MET 101 Elements of Drafting	3
MTH 106 Mathematics I	5
PHY 101 Technical Physics I	4
Technical elective[1]	3-5
	15-17

1 Elective to be chosen from the following courses:

MET 102 Technical Drafting	3
MET 108 Mechanical Processes	3
MET 201 Mechanisms	4
MTH 107 Mathematics II	5

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		SECOND SEMESTER	
BIO 160 Human Anatomy	4	BIO 161 Human Physiology	4
SEC 122 Intermediate Typing[1]	2	SEC 221 Advanced Typing	2
ENG 101 Composition	3	SEC 240 Medical Transcription & Typing	3
HSC 112 Medical Terminology	2	PSY 101 Introduction to Psychology	3
	11		12

1 The 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.

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

NMC 093 Numerical Control Drafting	2	NMC 201 Numerical Controlled Machining	3
NMC 097 ADAPT & APT Part Programming	2	NMC 214 Graphic Display Systems	3
NMC 101 Philosophy of Numerical Control & Industrial Cybernetics	2	NMC 215 Part Programming II	3
NMC 105 Part Programming I	3	NMC 216 Part Programming III	3
		NMC 220 Special Problems	3
		ELT 210 Computer Programming	3

NURSING: (PRACTICAL)

The Practical Nursing certificate program is one full year in length — two semesters and a 10 week summer session — and is designed to prepare students to become licensed practical nurses. The curriculum includes theory in the fundamentals of nursing, basic science concepts, vocational relationships, and practical experiences in selected health care agencies.

After passing the state board examination for licensure, LPN's take their place in the medical team, working under the direction of a doctor or registered nurse, giving patient care in hospitals, nursing homes, and other health care settings.

FIRST SEMESTER		SECOND SEMESTER	
PNR 060 Practical Nursing I	10	PNR 070 Practical Nursing II	10
BIO 160 Human Anatomy	4	BIO 161 Human Physiology	4
HSC 112 Medical Terminology	2	PED 201 First Aid	2
	16		16

SUMMER SESSION	
PNR 080 Practical Nursing III	8
PSY 101 Introduction to Psychology	3
	11

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 a member of the surgical team, under the supervision of qualified professional nurses concerned with the principles and practice of surgical asepsis as they apply to the surgical patient before, during, and following surgery.

This program meets the standards of the Association of Operating Room Nurses, Inc., and upon completion of the program the students will be awarded a certificate and will be prepared to take the Operating Room Technician qualifying examination offered by the A.O.R.N., Inc.

FIRST SEMESTER

BIO 160 Human Anatomy ... 4
ORT 101 Operating Room Techniques I 6
HSC 112 Medical Terminology 2
ORT 111 Clinical Hospital Practicum I 3
15

SECOND SEMESTER

BIO 161 Human Physiology .. 4
PSY 101 Introduction to Psychology 3
ORT 102 Operating Room Techniques II 6
ORT 112 Clinical Hospital Practicum II 4
17

SUMMER SESSION

ORT 103 Operating Room Techniques III 2
ORT 113 Clinical Hospital Practicum III 5
7

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 18 semester 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	3
RES 121 Real Estate Marketing & Brokerage	3
RES 122 Real Estate Appraisals I	3
RES 123 Real Estate Law	3
RES 124 Real Estate Finance	3
	15

Electives: (Select one)

ATE 209 Building Construction Principles of Realtors	3
RES 230 Property Management Methods	3
RES 231 Income Properties	3
RES 232 Real Estate Appraisals II	3
RES 233 Real Estate Problems Seminar	3
	3

SECRETARIAL SCIENCE

See: Executive Secretarial Development
Legal Secretary
Medical Office Assistant

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.

The following courses are required:

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

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

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

SUPERVISORY & ADMINISTRATIVE MANAGEMENT

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

Required:

BUS 160 Principles of Supervision..... 3
BUS 261 Management & Supervision..... 3

Recommended:

BUS 270 Principles of Management 3
PSY 145 Psychology in Business & Industry 3
12

Options:

(6 semester hours from the following)
BUS 274 Industrial Management 3
BUS 255 Small Business Management 3
BUS 267 Office & Administrative Management..... 3
BUS 265 Personnel Management 3
BUS 275 Labor-Management Relations..... 3
BUS 099 Business Recordkeeping..... 3
BUS 101 Principles of Accounting I 3
6

TRANSFER PROGRAMS

Harper College offers the first two years of most four-year 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

Accounting
Advertising
Business Administration
Commerce
Finance
Marketing
Retailing
Transportation

Education

Business Education
Education
Library Science
Personnel and Guidance
Physical Education
Special Education

Engineering

Architecture
Chemical Engineering
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering

Humanities

Art
English
Foreign Languages
Journalism
Law
Liberal Arts
Literature

Humanities (con't.)

Music
Philosophy
Speech
Theology

Medicine

Dentistry
Medicine
Nursing
Optometry
Pharmacy
Veterinary Medicine

Natural Sciences and Mathematics

Biology
Botany
Chemistry
Geology
Mathematics
Physics
Zoology

Social Sciences

Anthropology
Economics
Geography
History
Political Science
Psychology
Social Work
Sociology

The following transfer programs are designed principally for students desiring to meet the requirements for an associate degree in arts or in science. These programs will, in general, meet transfer requirements to most colleges and universities, but it is important for the student to know that requirements in institutions granting baccalaureate degrees will vary. When the student can inform his counselor exactly which area he wishes to pursue and the institution at which he wishes to complete his work, a program can be arranged to suit his individual needs. In the preparation of his program at Harper College, the student should consult the catalog of the college which he will attend later. Students who have not yet selected the college at which they will complete their work will find the suggested programs good general guides to follow.

Students who enter the University of Illinois without college credit in algebra are required to take the Mathematics Placement Test before registering in the College of Commerce. The student who does not pass the test must take college algebra without credit. The student who has had college algebra or passes the placement test may proceed directly to courses required by the college for graduation.

Students enrolling in engineering transfer programs are advised to develop a program at Harper by consulting with the Dean of Admissions of the school to which they anticipate transferring. This would assure the student maximum transfer of credits based on good grades.

Foreign Language Requirement. Two years of one foreign language taken in high school is acceptable at the Univeristy of Illinois. The foreign language deficiency can be removed by passing an entrance examination or completing one year of foreign language in college without credit.

ARCHITECTURAL DESIGN

First Year

FIRST SEMESTER		SECOND SEMESTER	
ARC 101	3	ARC 102	3
ART 110	3	ART 111	3
ENG 101	3	ENG 102	3
MTH 105	4	MTH 201	5
ATE 105	3	SOC 101	3
	16		17

Summer Session

Social Science 6

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ARC 201	4	ARC 202	4
ARC 203	3	RC 204	3
ARC 205	3	ARC 206	3
FNA 111	3	FNA 112	3
PHY 121	5	PHY 122	5
	18		18

ART

The art curriculum is designed to provide the 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 by non art major students by permission of the instructor for humanities elective credit. Courses without prerequisites are open to enrollment by all students.

First Year

FIRST SEMESTER		SECOND SEMESTER	
ART 110	3	ART 111	3
ART 121	3	ART 122	3
ART 105	3	FNA 111	3
ART 100[1]	1	ART 100[1]	1
Math or Science elective	4	Math or Science elective	4
ENG 101	3	ENG 102	3
	17		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
FNA 112	3	FNA 113	3
Studio Electives	6-8	Studio Electives	9-11
Social Science Elective	3	Social Science Elective	3
Elective[2]	3		15-17
	15-17		

1 ART 100 may be repeated to 2 credits.
2 First semester elective. Communications, Science, Math, or Social Science

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	3	ENG 102	3
BUS 111	3	BUS 101	3
Science	3-4	Science	3-4
Math Elective[1]	3	DPR 101	3
SPE 101	3	Math Elective[1]	3-4
	15-16		15-17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
ECO 201	3	ECO 202	3
BUS 211	3	BUS 225	3
BUS 102	3	BUS 203	3
HUM Elective	3	BUS 212 or	
Social Science Elective	3	Social Science elective[2]	3
	15	HUM Elective	3
			15

1 Math Elective to be selected from MTH 103, MTH 124, or MTH 134.
2 BUS 212 specifically recommended for accounting majors. Social Science electives should be selected from PSY 101, SOC 101, or PSY 145.

ENGINEERING

A student completing the following engineering program at Harper College would be eligible, on a subject matter basis, for junior standing in any engineering school in Illinois to which he was admitted. The student would receive credit toward graduation in these subject matter areas and would be expected to complete graduation requirements within two to 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		SECOND SEMESTER	
EGR 100	1	ENG 102	3
ENG 101	3	CHM 122[1]	4
CHM 121[1]	4	EGR 121	3
EGR 120	3	MTH 201	5
MTH 105	4	EGR 150	2
Social Science	3		17
	18		

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	MTH 212	3
MTH 202	5	PHY 202	5
PHY 201	5	EGR 211	3
Humanities elective	3	Humanities elective	3
	16	Technical elective[2]	3
			17

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

2 Technical elective selected from following: EGR 212, EGR 215, EGR 216, MET 201, MET 205, MET 206, MTH 165, MTH 203, MTH 208, MTH 215, and PHY 210.

LIBERAL ARTS

The Liberal Arts transfer curriculum lays the foundation of 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	3	ENG 102	3
Social Science	3	Social Science	3
Laboratory Science[1]	4	Laboratory Science[1]	4
Math or elective	3	Math or elective	3
Foreign Language	4	Foreign Language	4
	17		17

Second Year

FIRST AND SECOND SEMESTER	
English[2]	6
Social Science	6
Humanities[3]	6
Foreign Language[4]	6-8
Additional electives[5]	6-8
	30-34

1 Physical or biological science or physics, chemistry, botany, or other lab science.
2 Advanced English or Literature, or Speech.
3 Humanities 201-202 are recommended, 3 credit hours each. Other humanities areas include art, music, literature, and philosophy.
4 Consult your counselor for specific foreign language requirements of the university to which you plan to transfer.
5 Another 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.

MUSIC[1]

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
Science or Math elective	3-5	Science or Math elective	3-5
MUS 111	3	MUS 112	3
MUS 115	1	MUS 116	1
Group Performance[2]	1	Group Performance[2]	1
Applied Music elective[3]	2-4	Applied Music elective[3]	2-4
	13-17		13-17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	Social Science	3
MUS 211	3	MUS 212	3
MUS 215	1	MUS 216	1
Instrumental or Vocal Tech.	2	Instrumental or Vocal Tech.	2
MUS 120	3	MUS 223 or 224	3
Group Performance[2]	1	Group Performance[2]	1
Applied Music elective[3]	2-4	Applied Music elective[3]	2-4
Liberal Arts elective	2	Liberal Arts elective	2
	17-19		17-19

All majors in music must demonstrate minimum proficiency on the piano
To be elected from MUS 130, 136, 140, 145, and 150.
To be elected from courses numbered MUS 180-199 and MUS 280-299.

PHYSICAL EDUCATION

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
SPE 101	3	BIO 140	4
BIO 110	4	MTH	3
PED 200	2	PED 203	2
PED 204	2	PED 226	2
P.E. Activity	1	P.E. Activity	1
	15		15

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BIO 160	4	BIO 161	4
Soc. Science elective	3	HST 112	3
Humanities elective	3	Humanities elective	3
PED 201	2	PED 220	2
PED 210	2	PED 228	2
PED 222	2	PED 224	2
	16		16

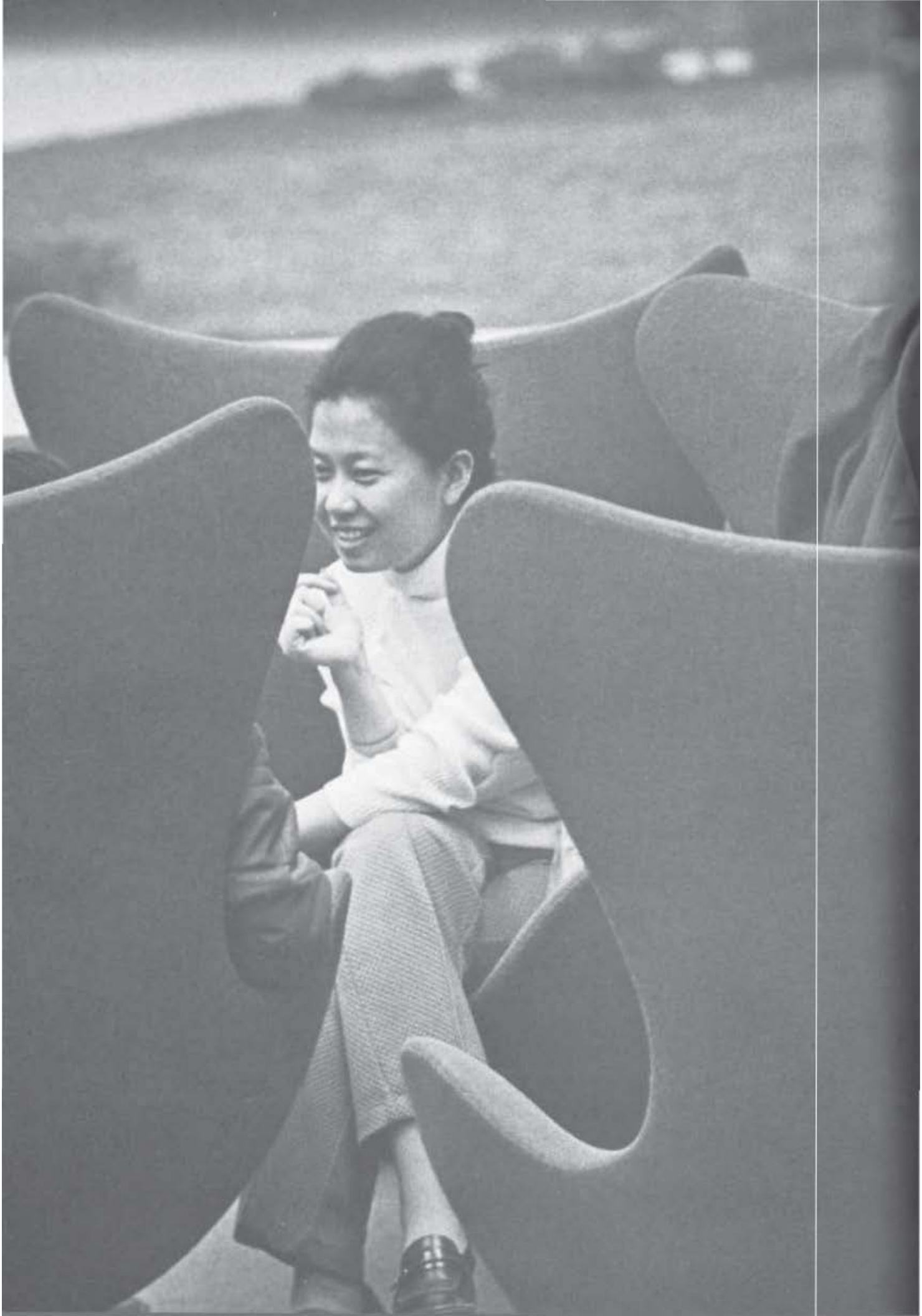
SCIENCE AND MATHEMATICS

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
Foreign Language	4	Foreign Language	4
Mathematics	3-5	Mathematics	3-5
Laboratory Science	4-5	Laboratory Science	4-5
	14-17		14-17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	Social Science	3
Mathematics	3-5	Mathematics	4-5
Laboratory Science	4-5	Laboratory Science	4-5
Elective	3-4	Elective	3-4
	13-17		14-17



COURSE NUMBERING SYSTEM

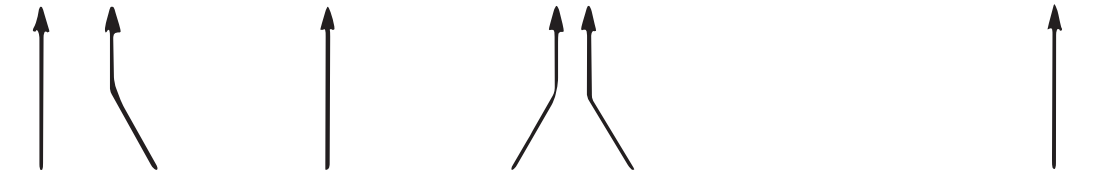
In general, courses numbered below 100 are not intended for transfer credit. These courses may be counted toward the A.A.S. degree but not the A.A. or A.S. degrees.

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

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

Sample Course Listing

ANT 102 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 AND REFRIGERATION

ACR 101 Air Conditioning Principles I (3-3) 4 hrs.
Basic terms used in refrigeration, heating, and air conditioning. The fundamental laws of energy conversions and gas behavior and their applications. Description of domestic and commercial refrigeration systems. ($7.50 lab fee.)

ACR 102 Air Conditioning Principles II (3-3) 4 hrs.
Continuation of ACR 101 with attention given to heating. Characteristics of matter used for convecting heat. Description of home and small industrial heating systems. ($7.50 lab fee.)
Prerequisite: ACR 101.

ACR 103 Air Conditioning and Refrigeration Science (2-3) 3 hrs.
Description and functions of equipment used in refrigeration. Methods of piping and piping connections. Diagnosing malfunctions and proper replacement of components. ($5.00 lab fee.)
Prerequisite: Concurrent enrollment in ACR 101.

ACR 104 Basic Heating Principles (2-3) 3 hrs.
Descriptions of heating and cooling equipment used in residential and small commercial systems. Adjusting and testing of various components and proper replacement of defective parts. ($12.50 lab fee.)
Prerequisite: Concurrent enrollment in ACR 102.

ACR 106 Electrical Systems (2-3) 3 hrs.
Description of operation and function of electrical equipment and the control of the equipment. Adjusting and testing the equipment and controls and proper replacement of defective components. Troubleshooting system malfunctions. ($5.00 lab fee.)
Prerequisite: ACR 104.

ACR 201 Commercial Refrigeration I (3-3) 4 hrs.
Factors considered in selection of refrigeration components and piping. The refrigeration effect and factors affecting refrigeration systems design. ($5.00 lab fee.)
Prerequisite: ACR 102.

ACR 202 Commercial Refrigeration II (3-3) 4 hrs.
Properties of air and psychorometrics. Computing heat gains and heat losses. Selection of equipment for residential and light commercial systems. ($5.00 lab fee.)
Prerequisite: ACR 201.

ACR 203 Advanced Air Conditioning I (3-3) 4 hrs.
Description of design systems. Construction of student design system and testing it. Seminars and discussion of new components. ($7.50 lab fee.)
Prerequisite: Concurrent enrollment in ACR 201.

ACR 204 Advanced Air Conditioning II (3-3) 4 hrs.
Use of psychrometer and other air movement test equipment. Preparing heating and cooling estimates and making recommendations. Design systems for various environmental conditions. ($7.50 lab fee.)
Prerequisite: Concurrent enrollment in ACR 202.

ACR 208 Pneumatic Control Systems (1-3) 2 hrs.
Description of the construction and function of controls, diagnosis of malfunctions, and the correction of defects.

ANTHROPOLOGY

ANT 201 General Anthropology (3-0) 3 hrs.
Human origins and early man, race and racism, archeology, and the beginning of early civilization.

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.
Prerequisite: ANT 201.

ARCHITECTURE

ARC 101 Basic Design I (0-6) 3 hrs.
Basic factors in two-dimensional and three-dimensional design. ($10.00 lab fee.)

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. ($10.00 lab fee.)

ARC 201 Design I (0-8) 4 hrs.
Architectural design problems; emphasis on development and organization of space.
Prerequisite: ARC 102. ($10.00 lab fee.)

ARC 202 Design II (0-8) 4 hrs.
Architectural design problems; emphasis on structure.
Prerequisite: ARC 201 and ARC 104. ($10.00 lab fee.)

ARC 203 Building Construction I (2-2) 3 hrs.
Wood and masonry construction and allied materials. ($7.50 lab fee.)

ARC 204 Building Construction II (2-2) **3 hrs.**
Steel construction and allied materials.
Prerequisite: ARC 203. ($7.50 lab fee.)

ARC 205 Architectural History I (3-0) **3 hrs.**
Introduction to methodology of art and architectural history and criticism. A cultural-historical oriented examination of architecture and art from antiquity through medieval times.

ARC 206 Architectural History II (3-0) **3 hrs.**
Continuation of ARC 205. Cultural-historical examination of architecture from renaissance to present.
Prerequisite: ARC 205.

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; computer relationships. ($10.00 lab fee.)

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. ($10.00 lab fee.)

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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; building optimization in estimating.
Prerequisite: ATE 102. ($10.00 lab fee.)

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 estimate; contingency provisions; general condition; architect-engineer-contractor fee schedule.
Prerequisite: ATE 201. ($10.00 lab fee.)

ATE 203 Construction Problems I (2-4) 4 hrs.
Detailing; investigation and analysis of fire resistivity of materials; construction type; Underwriters Laboratories hourly ratings; fire-proofing; sprinkling; insurance requirements.
Prerequisite: ATE 104. ($7.50 lab fee.)

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, marble.
Prerequisite: ATE 203. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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 text 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. ($7.50 lab fee.)

ART 111 Drawing Studio II (0-6) 3 hrs.
A studio course emphasizing the interaction between design abilities, image and content. ($7.50 lab fee.)
Prerequisite: ART 110

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)
Prerequisite: ART 121

ART 201 Drawing Studio (0-6) **3 hrs.**
A studio course emphasizing drawing as visual idea. May be repeated up to 6 hours credit. ($7.50 lab fee.)
Prerequisites: ART 110, ART 111, or permission of instructor.

ART 206 Printmaking Studio (0-4) **2 hrs.**
Emphasis on traditional and contemporary methods of graphic reproduction of visual ideas as pertains to the fine arts. May be repeated up to 4 hours credit. ($15.00 lab fee.)
Prerequisites: ART 121, ART 111, ART 110, or permission 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 6 hours credit. ($7.50 lab fee.)
Prerequisites: ART 110 and ART 111, or permission of instructor.

ART 236 Composition I (0-4) **2 hrs.**
Pictorial composition in line, value, pattern and color. Studio and lecture. ($7.50 lab fee.)
Prerequisite: ART 111, ART 121.

ART 237 Composition II (0-4) **2 hrs.**
Continuation of ART 236. Studio and lecture. ($7.50 lab fee.)
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. ($7.50 lab fee.)
Prerequisites: ART 110, ART 111, ART 121, or permission 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 6 hours credit. ($15.00 lab fee.)
Prerequisites: ART 122 or permission 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 6 hours credit.
Prerequisites: ART 122 or permission of instructor.

BIOLOGY

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 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, or BIO 101, or consent of instructor. ($5.00 lab fee.)

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, or BIO 101, or consent of instructor. ($5.00 lab fee.)

BIO 122 Heredity, Evolution and Culture (3-0) 3 hrs.
Introductory analysis of life and the evolutionary record with an 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 (3-3) 4 hrs.
Characteristics and importance of microorganisms; emphasis on identification, anatomy and physiology, control, relationship to health and disease, and economic importance.
Prerequisite: High School biology with C or better, or BIO 101, or consent of instructor. ($5.00 lab fee.)

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, or BIO 101, or consent of instructor. ($5.00 lab fee.)

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 ultrastructure, 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: Students in health careers or physical education or consent on instructor. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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. ($5.00 lab fee.)

BIO 190 General Pathology (3-0) 3 hrs.
Introduction to general pathology; common diseases affecting human body. Diseases of oral cavity emphasized (NOTE: Offered in second year of dental hygiene program.)
Prerequisite: BIO 180. ($5.00 lab fee.)

BUSINESS

BUS 098 Tax and Payroll Accounting (4-0) 4 hrs.
An explanation of the Federal tax structure and instruction in the application of the tax principles to specific problems. Also, the preparation of payroll records including tax returns for old-age benefits and employment insurance.

BUS 099 Business Recordkeeping (3-0) 3 hrs.
Standard bookeeping procedures for small firms, both business and professional. Journalizing, posting, and preparing trail balances and financial statements. Procedures for handling petty cash and bank deposits and withdrawals. Formerly BUS 103.

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 with 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 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 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 graphs and charts design.

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 201 Intermediate Accounting I (3-0) 3 hrs.
Problem solving course in accounting principles begun in BUS 101 and 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 102.

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.
Part II of the 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: Recommended BUS 109.

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: Recommended BUS 109.

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 processes.
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 111 and BUS 101.

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; time series.
Prerequisite: Any mathematics course numbered 100 or above or consent of instructor.

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 249 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: BUS 245 and sophomore standing. Sophomore standing may be waived upon consent of instructor.

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 255 Small Business Management (3-0) 3 hrs.
Organization and operation of 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 261 Problems in Management & 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 the instructor. Recommend prior or concurrent enrollment in ECO 201.

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 characteristic 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 the 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 the instructor. Recommend prior or concurrent enrollment in ECO 201.

BUS 281 Marketing Management Seminar & 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 & Internship II (1-15) 3 hrs.
Continuation of BUS 281.
Prerequisite: BUS 281 or consent of program coordinator.

BUS 283 Marketing Management Seminar & 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 Harper Nursing Program. ($7.50 lab fee.)

CHM 101 Survey of Organic & Biological Chemistry (3-3) 4 hrs.
A brief study of the principle of organic chemistry as related to body functions: acid-base balance, digestion, absorption, and metabolism of proteins, lipids, and carbohydrates; enzymes; nucleic acids; and the 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. ($7.50 lab fee.)

CHM 110 Chemical Technology Seminar (1-0) 1 hr.
Orientation for chemical technology students, including objectives of program, occupational and professional employment, and career opportunities. Panel discussions, reports, visitation to industrial laboratories, and guest speakers.

CHM 121 General Chemistry I (3-3) 4 hrs.
Fundamentals of chemistry including chemical calculations. For students with no credit in high school chemistry.
Prerequisite: At least one year of high school algebra with a grade of C or better or MTH 095 with a grade of C or better. ($7.50 lab fee.)

CHM 122 General Chemistry II (3-3) 4 hrs.
Continuation of CHM 121. Fundamentals and theory, descriptive chemistry metals and non-metals, introduction to theory and practice of quantitative analysis, and an introduction to organic chemistry.
Prerequisite: CHM 121. ($7.50 lab fee.)

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. ($7.50 lab fee.)

CHM 132 College Chemistry II (3-6) 5 hrs.
Primarily for students in chemistry, chemical engineering, or physical science curricula. Continuation of CHM 131. Lab includes qualitative analysis.
Prerequisite: CHM 131 ($7.50 lab fee.)

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. ($7.50 lab fee.)
Prerequisite: CHM 132 or CHM 122 and consent of instructor.

CHM 205 Organic Chemistry II (3-6) 5 hrs.
Continuation of CHM 204.
Prerequisite: CHM 204. ($7.50 lab fee.)

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. ($7.50 lab fee.)

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. ($7.50 lab fee.)

CHM 240 Unit Operations I (2-4) 4 hrs.
Fundamental theories of chemical engineering. Fluid flow, flow measurement, fluid transportation, heat flow.
Prerequisite: CHM 122 and enrollment in Chemical Technology program. ($7.50 lab fee.)

CHM 241 Unit Operations II (2-4) 4 hrs.
Continuation of CHM 240. Evaporation, distillation, filtration, separations, solid handling and conveying.
Prerequisite: CHM 240. ($7.50 lab fee.)

CHILD DEVELOPMENT

CCA 101 Introduction to Child Development (3-0) 3 hrs.
Introduction to fundamentals of Child Development and application of child care principles. Visits to a variety of child care centers.

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 the prose and verse for children is included, and techniques of story telling. 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 Pre-School 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.

CCA 215 Children's Laboratory (1-3) 2 hrs.
Intensive observation taken in conjunction with Child Care 214, Principles of Pre-School Education. 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 and registration in CCA 214.

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.

CCA 219 Psychology of Exceptional Children (3-0) 3 hrs.
Gifted, retarded, socially maladjusted, emotionally disturbed, slow learners, hypersensitive, and physically handicapped child. Designed for parents of children with these problems and teachers of special education classes in elementary schools.
Prerequisite: PSY 101.

CCA 220 Child Development Practicum Internship (2-12) 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, report 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 pre-school and early primary child. The course will be directed to new media, construction of teacher-made activities; trends and issues in pre-school education.

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.

CRIMINAL JUSTICE (Law Enforcement)

CRJ 101 Introduction to Law Enforcement & Criminal Justice (3-0) 3 hrs.
History, role, development, and constitutional aspects of law enforcement and public safety. Review of agencies and their 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 the field of 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.
Courts of the U.S. provide the student with a broad body of knowledge concerning the court structures of the U.S. 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 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, investigation, traffic, juvenile, intelligence and other special operational units. Manpower distribution, analysis of operations, enforcement policy, and operations during civil disorders and disasters.

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. Principlas 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 Criminal Justice 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 towards 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 to 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 and equating sound principals 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, principals of communications, professional ethics, and the decision-making process.
Prerequisite: CRJ 101 and CRJ 102, or consent of the Criminal Justice career program coordinator.

CRJ 209 Police Public-Community Relations (3-0) 3 hrs.
Examines current issues in relationships between the police and the community, emphasis upon 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.
Crimes and criminals including criminal behavior, explanation of crime, types of crimes, and criminals.

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 210 or consent of Criminal Justice career 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 Illinois Vehicle Code.

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, witness, victims, suspects, and informants; statements, mechanical means for the detection of deception, and case preparation.

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) 2 hrs.
Development of high level of skill in programming and operating the IBM 029 key punch and 059 verifier, including speed and accurancy in key punching and verifying. ($5.00 lab fee.)

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 or consent of instructor. ($5.00 lab fee.)

DPR 110 Computer Programming—Basic Assembler Language (4-4) 5 hrs.
Program writing, testing, debugging, and docomentation using an IBM assembler 5/360 assembler language. Extensive laboratory experience in planning, writing, and testing programs for typical business applications.
Prerequisite: DPR 101 and DPR 108 or consent of instructor. ($5.00 lab fee.)

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. ($5.00 lab fee.)

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. ($5.00 lab fee.)

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. ($5.00 lab fee.)

DPR 150 Business FORTRAN 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. ($5.00 lab fee.)

DPR 203 Systems Analysis and Design I (3-0) 3 hrs.
Functions and techniques of systems analysis, design, and development. Analysis of information flow, developing, organizing and using management data, establishing system specifications and equipment needs, and implementation of management information systems. Stresses methods and tools used in systems analysis and design.
Prerequisite: DPR 101 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 and is intended to familiarize the student with COBOL programming for magnetic tape and magnetic disk using Sequential, Direct-Access and Indexed Sequential Access Methods under DOS. Overlay techniques and Report Writer will also be covered.
Prerequisite: DPR 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. ($5.00 lab fee.)

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 & 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. ($5.00 lab fee.)

DHY 111 Dental Radiology (1-0) **1 hr.**
Theory of X-ray radiation and dangers, exposure, and protection are introduced in this sequence. Film placement, exposure times, processing, mounting, and film interpretation are covered.

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.
Prerequisites: CHM 121 and CHM 140.

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. Improved techniques, skill, and speed emphasized in DHY 251-252. ($7.50 lab fee.)

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. ($5.00 lab fee.)

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 hygienst; 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. Preventive aspects of dentistry; emphasis on dental health education, including diet and nutrition, health habits, oral prophylaxis, etiology of caries, dental stains, deposits, and periodontal health. Theriories of preventive dentistry, including diseases, their etiology, prevention and cure through public health measures. ($5.00 lab fee.)

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. ($5.00 lab fee.)

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

DHY 240 Dental Pharmacology and Anaesthesia (1-0) **1 hrs.**
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. ($10.00 lab fee.)

DHY 251 Clinical Dental Hygiene and Radiology III (0-12) **4 hrs.**
Continuation of DHY 250. ($10.00 lab fee.)

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, their manipulation and application in dentistry. Product introduction and orientation. ($3.00 lab fee.)

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. ($5.00 lab fee.)

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 topic matter covers 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, 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.

EDUCATION

EDU 201 Introduction to Education (3-0) **3 hrs.**
Organization, structure and operation of schools in 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. Classroom observation required.
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. ($5.00 lab fee.)

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. ($7.50 lab fee.)

ELT 103 Circuits III, Network (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. ($10.00 lab fee.)

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. ($5.00 lab fee.)

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. ($5.00 lab fee.)

ELT 111 Electronics I, Resistive (2-3) 3 hrs.
Resistive circuits involving electronic devices. Volt-ampere characteristics and physics of diodes, transistors, multielement vacuum tubes, and practical resistive circuits using these devices.
Prerequisite: ELT 110 or consent of instructor. ($7.50 lab fee.)

ELT 203 Electronics II, Pulse (3-4) 4 hrs.
Electronic circuits in which electronic devices are operated in a switching mode. Practical circuits are involved, such as clippers, clampers, pulse formers, multivibrators, blocking oscillators, logic circuits, and sweep circuits.
Prerequisite: ELT 103, 111 or consent of instructor. ($10.00 lab fee.)

ELT 204 Electronics III, Advanced Electonics (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. ($10.00 lab fee.)

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. ($10.00 lab fee.)

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. ($10.00 lab fee.)

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. ($10.00 lab fee.)

ELT 210 Computer Programming (3-0) 3 hrs.
FORTRAN programming. Solution of electronic and technical problems using IBM 360 series computer.
Prerequisite: MTH 106 or consent of instructor. ($5.00 lab fee.)

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. ($5.00 lab fee.)

ELT 212 Analog Simulation II (3-4) 4 hrs.
Continuation of Analog Simulation I.
Prerequisite: ELT 211 or consent of instructor. ($5.00 lab fee.)

ELT 215 Electrical Controls and Motors (3-4) 4 hrs.
This course is designed to cover topics in the following areas: motor controls; switches, i.e. 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 ACR, ELT, MET and NMC.
Prerequisite: ELT 110 or consent of instructor. ($10.00 lab fee.)

ENGINEERING

EGR 100 Introduction to Engineering & 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. ($5.00 lab fee.)

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. ($5.00 lab fee.)

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. ($5.00 lab fee.)

EGR 150 Analytical Mechanics (Statics) (2-0) 2 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 accleration, 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; 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. ($5.00 lab fee.)

EGR 216 Surveying II (2-3). 3 hrs.
Route serveying, 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. ($5.00 lab fee.)

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 English 101. Emphasis is on development of basic composition skills. This course offers no college 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 chairman.

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 chairman.

ENG 130 Business Writing I (3-0) 3 hrs.

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 (bodies, skirts, sleeves, etc.) developed. Accurancy and professional standards stressed. Patterns tested in muslin for fit. ($5.00 lab fee.)
Prerequisite: Consent of program coordinator.

FAS 102 Flat Pattern Design and Draping II (2-4) 4 hrs.
Further development of basic sloper set. Pattern tested in muslin for fit.
Prerequisite: FAS 101 or consent of program coordinator. ($5.00 lab fee.)

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. ($5.00 lab fee.)
Prerequisite: Consent of program coordinator.

FAS 104 Apparel Design and Construction II (2-4) 4 hrs.
Development of basic sloper set into patterns. Actual construction of finished garments. Emphasis on styling, fit and professional finishing. ($5.00 lab fee.)
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. ($5.00 lab fee.)

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. ($5.00 lab fee.)
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. ($5.00 lab fee.)

FAS 108 Textiles II (0-2) 2 hrs.
Continuation of FAS 107. Contemporary fabrics analyzed and studied.
Prerequisite: FAS 107 ($5.00 lab fee.)

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 & 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 accurancy. Prerequisite: FAS 101, FAS 102 ($5.00 lab fee.)

FAS 202 Advanced Flat Pattern Design & Draping II (2-4) 4 hrs.
Continuation of FAS 201.
Prerequisite: FAS 201 ($5.00 lab fee.)

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 103, FAS 104 ($5.00 lab fee.)

FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.
Continuation of FAS 203.
Prerequisite: FAS 103, FAS 104, FAS 203 ($5.00 lab fee.)

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. ($5.00 lab fee.)

FAS 206 Tailoring Techniques II (0-4) 2 hrs.
Continuation of FAS 205. Tailoring of original garments.
Prerequisite: FAS 205 ($5.00 lab fee.)

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 105, FAS 106 ($5.00 lab fee.)

FAS 210 Advanced Fashion Illustration II (0-2) 1 hr.
Continuation of FAS 209. Preparation of professional portfolio.
Prerequisite: FAS 209 ($5.00 lab fee.)

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 109, FAS 110, FAS 211, or consent of program coordinator.

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 & Extinguishing Systems (3-0) 3 hrs.
The function, classification, and operating principles of fixed extinguishing systems, detection systems, alarm systems, signalling systems and portable extinguishing equipment installed for fire protection and fire prevention purposes.

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 & 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 services 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 "anylyse 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 (2-3) **4 hrs.**
Materials, structure, and sculpture of the earth's surface. One-day field trip required. ($10.00 lab fee — includes field trip cost.)

GEO 102 Historical Geology (2-3) **4 hrs.**
Geological history of the earth including principles employed to reconstruct this history. One-day field trip required. ($10.00 lab fee — includes field trip cost.)
Prerequisite: GEO 101, high school earth science, or consent of instructor.

GEO 201 Rocks and Minerals (2-3) **4 hrs.**
Physical description of minerals and rocks. Introduction to crystallography, economic minerals, natural resources. Field trip required. ($10.00 lab fee — includes field trip cost.)
Prerequisite: GEO 101 or CHM 121, or consent of instructor.

GEO 202 Paleontology (2-3) **4 hrs.**
Fossil record of life, principles of evolution and ecology. One-day field trip required. ($10.00 lab fee — includes field trip cost.)
Prerequisite: GEO 102 or 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 or 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 or 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 or three years of high school German, or consent of instructor.

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 direction. 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.

HSC 112 Medical Terminology (2-0) 2 hrs.
This course will emphasize the basic structure of medical words and include 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 212 Clinical Procedures (2-5) 3 hrs.
An introduction to professional conduct, medical ethics, diagnostic tests and procedures, examination and treatment room procedures, and taking patient histories.

HISTORY

HST 141 History of Western Civilization to 1815 (4-0) 4 hrs.
Political, social, cultural, economic, and technological developments from pre-historic times to advent of 1789 French Revolution.

HST 142 History of Western Civilization Since 1815 (4-0) 4 hrs.
Continuation of History 141. Political, social, cultural, economic, and technological developments with emphasis on such socio-political-economic concepts as nationalism and social-Darwinism.

HST 214 Afro-American History (3-0) 3 hrs.
In-depth study of American Negro from African slave trade through slavery, Reconstruction, years of neglect, Civil Rights Revolution in the United States, and 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 the 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.
Prerequisites: 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.
Prerequisites: 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.

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 presenations. Introduction to home furnishings manufacturing field.
Prerequisites: IND 101, 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.
Prerequisites: IND 101, 102, and 201.

JOURNALISM

JNM 130 Fundamentals of Journalism (3-0) 3 hrs.
History and current role of the newspaper, emphaiszing 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 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 make-up. 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; instruction in legal research and writing upon a review of the sources and works of law.

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, evidenciary 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 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 & Probate (3-0) 3 hrs.
Examination of common forms of wills and trusts; survey of principles of law applicable to each; the organization and functions of the probate court, administration of estates, and instruction in preparation of requisite documents.
Prerequisite: LTE 101 or 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.

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 Speech 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, social and historical novels. Established criteria for judging American literary output.

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 & American Literature (3-0) **3 hrs.**
Survey of important writers and writings in British and American literature since the first world war.

MATHEMATICS

MTH 094 Arithmetics (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 studlents 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 schooll algebra. May be offered through the Learning Laboratory. Not recommended for those who have passed high school albegra within the past five years.

MTH 096 Geometry (3-0) **3 hrs.**
Concepts of Euclidean geometry, including lines, angles, polygons, and circles. May be 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, review of selected topics in algebra and geometry. A general education course in mathematics.
Prerequisite: MTH 095 or equivalent with a 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, 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 a 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 102 and MTH 096 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 Electronic Technology, Mechanical Design Technology and Numerical Control Technology.
Prerequisite: Two years of high school mathematics or permission from the counselor of the Engineering Division.

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 111 Pre-Calculus Mathematics I (5-0) 5 hrs.
Unifying concepts of functional representation in algebra, trigonometry, and analytic geometry. Axiomatic approach to real and complex number systems. Equivalent to two hours of MTH 103, two hours of MTH 104, and one hour of MTH 105.
Prerequisite: B or better in MTH 102 or consent of instructor.

MTH 112 Pre-Calculus Mathematics II (5-0) 5 hrs.
Continuation of MTH 111 extending the concept of functional representation of exponential, logarithmic, implicit quadratic functions of two or more variables, and graphical analyses of functions in polar and parametric representations. Introduction to differentiation and integration. Equivalent to one hour of college algebra, one hour of trigonometry, and three hours of analytic geometry.
Prerequisite: MTH 111 with a grade of "C" or better.

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, computer applications.
Prerequisites: MTH 101 or 2½ years of high school math, 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 or 3 years of high school math, or consent of instructor.

MTH 165 Statistics (3-0) 3 hrs.
Tabular and graphic representation; normal distribution, dispersion, statistical inference, sampling, distribution of means, regressional 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. Hyberbolic functions, techniques of integration, vectors, parametric equations, partial differentiation, multiple integration, and series.
Prerequisite: MTH 201 with a grade of "C" or better.

MTH 203 Linear Algebra (3-0) **3 hrs.**
Systems of linear equations, vector spaces, linear dependence, bases, matrices, determinants, 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 a grade of "C" or better or consent of instructor.

MTH 207 Mathematics IV (3-0) **3 hrs.**
For students in electrical technology. Differentiation of transcendental functions; methods of integration; expansion of functions in series; Fourier series; differential equations; applications.
Prerequisite: MTH 206 with a 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 a 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, applications of matrix algebra.
Prerequisite: MTH 202 with a 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 a 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. ($5.00 lab fee.)

MET 102 Technical Drafting (0-6) **3 hrs.**
Orthographic considerations of mechanical and structural systems; limit and tolerance dimensioning; sketching; product illustration; schematic and topographic problems; gears and cams; graphical vectors.
Prerequisite: MET 101, equivalent high school drafting, or consent of instructor. ($5.00 lab fee.)

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. ($5.00 lab fee.)

MET 104 Statics (2-0) **2 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. ($10.00 lab fee.)

MET 108 Manufacturing Processes & Materials I (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 and production and facilities planning.
Prerequisite: Concurrent enrollment in MTH 106 or consent of instructor.

MET 109 Manufacturing Processes & Materials II (0-6) **3 hrs.**
Continuation of MET 108. Emphasis on actual practice in such areas as machining, numerical control, welding and heat treating.
Prerequisite: MET 108. ($10.00 lab fee.)

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. ($5.00 lab fee.)

MET 204 Strength of Materials (2-3) 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; influence of properties of materials.
Prerequisite: MTH 107, MET 104 or consent of instructor.

MET 205 Fluid Power and Systems Control (2-6) 4 hrs.
Technology of the transmission, control and storage of energy by means of pressurized fluids in closed systems, other applications of parallel control technologies.
Prerequisite: MTH 107, PHY 102 or consent of instructor. ($5.00 lab fee.)

MET 206 Metallurgy and Heat Treatment (2-3) 3 hrs.
Selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals.
Prerequisite: MET 108 or consent of instructor. ($7.50 lab fee.)

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, 204, 205; concurrent enrollment in MET 206. ($10.00 lab fee.)

MEDICAL LABORATORY TECHNICIAN

MLT 099 Pre-Clinical Orientation No Credit
Introduction to the hospital and medical laboratories including tours and explanation of the physical layout, line of authority in the hospital and medical laboratory, and admission to this program; introduction to administrators and hospital personnel, explanation of hospital policies, medical ethics medical terminology, venipuncture techniques and the status of the medical laboratory technician in relation to other members of the staff.
This pre-clinical orientation begins two weeks prior to the fall semester. Meets for 4 hours every day.

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 to the 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.
Prereq u is i te: MLT 101.

MLT 103 Medical Technology III (2-18) 5 hrs.
Students are moved to the hospital laboratory where advanced techniques in blood banking, serology, and clinical microscopy are covered, "at the bench" under close supervision. Laboratory mathematics and quality control methods are introduced.
Prerequisite: MLT 102.

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 103 and BIO 130.

MLT 202 Medical Technology V (3-36) 10 hrs.
Clinical microbiology completed with studies of parasites and fungi. 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.
Prerequisite: MLT 201.

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, and 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 hrs.
Practice in melodic, harmonic, and rhythmic dictation, sight singing, and practice at keyboard.
Corequisite: MUS 111. ($3.00 lab fee.)

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 ($3.00 lab fee.)

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.
Prerequisite: Consent of instructor. Maximum of four credit hours.

MUS 136 Community Chorus (0-3) 1 hr.
Variety of choral experience including larger choral works such as oratorios and cantatas, and selections 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.
Prerequisite: Consent of instructor. Maximum of four credit hours.

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.
Prerequisite: Consent of instructor. Maximum of four credit hours.

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.
Prerequisite: Consent of instructor. Maximum of four credit hours.

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 on 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.
Flute & Piccolo, 180; Oboe & English Horn, 181; Clarinets, 182; Bassoons & Contra Bassoons, 183; Saxophones, 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; Classical Guitar, 199. ($56.00 lab fee.)

MUS 211 Theory of Music II (3-0) 3 hrs.
Harmony, counterpoint, and analysis.
Prerequisite: MUS 112. Corequisite: MUS 215.

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. ($3.00 lab fee.)

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. ($3.00 lab fee.)

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 keyboard 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 (2-0) 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.
Flute & Piccolo, 280; Oboe & English Horn, 281; Clarinets, 282; Bassoons & Contra Bassoons, 283; Saxophones, 284; French Horn, 285; Trumpet, 286; Trombone, 287; Baritone, 288; Tuba, 289; Percussion, 290; Violin, 291; Viola, 292; Piano, 296; Organ, 297; Voice, 298; Classical Guitar, 299.
Prerequisite: Successful audition. ($112.00 lab fee.)

NUMERICAL CONTROL

NMC 093 Numerical Control Drafting (0-4) 2 hrs.
Programming of numerically controlled drafting machines with and without aid of computer. Applies to problems in manufacturing type industries. Selected problems to be accomplished on Numerical Control Drafting Equipment. Primarily for adults. ($5.00 lab fee.)

NMC 097 ADAPT and APT Part Programming (0-4) 2 hrs.
Principles and application of APT and ADAPT Numerical Control programming language. Selected problems to be written, run on computer and verified on Numerical Control machines. Primarily for adults. ($10.00 lab fee.)

NMC 101 Philosophy of Numerical Control and Industrial Cybernetics (2-0) 2 hrs.
Application and advantages of Numerical Control. Tapes, tape coding, tape readers and formats. Control system theory and standard axis designations in relation to the cartesian and system of dimensioning. Basic understanding of manual and computer programming for numerically controlled machines.

NMC 105 Part Programming I (1-3) 3 hrs.
Manual programming of point-to-point and contouring systems. Discussion and practice in programming of various manufacturers' equipment including the running of programs on lathe and mill. Introduction to computer processing of complex programs.
Prerequisite: MTH 106. ($7.50 lab fee.)

NMC 201 Numerical Controlled Machining (1-4) 3 hrs.
Numerical Control machines, emphasis to be placed upon their application, maintenance and their justification. Practices in process planning, tooling and fixturing techniques will be discussed and applied.
Prerequisite: MTH 106 and MET 105. ($7.50 lab fee.)

NMC 214 Graphic Display Systems (1-4) 3 hrs.
Numerical Controlled Drafting machine with aid of computer used to develop various phases of working drawings. Emphasis on phases of working drawings more efficiently done by Graphic Display equipment.
Prerequisite: MET 102, MTH 106 and NMC 210. ($5.00 lab fee.)

NMC 215 Part Programming II (1-3) 3 hrs.
Computer Part Programming Language AD-APT and AUTOSPOT. Basic geometric definitions and contouring problems will be stressed. Students will use the following advanced features: MACRO, LOOP, PATTERN, COPY. Application of these features will be to two and three axis machines.
Prerequisite: NMC 105. ($10.00 lab fee.)

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. ($10.00 lab fee.)

NMC 220 Special Problems (0-6) 3 hrs.
Special project required of all sophomores in this curriculum.
Prerequisite: Must be taken during semester for graduation. ($5.00 lab fee.)

NURSING

NUR 101 Foundations of Nursing I (3-7) 5 hrs.
Knowledge and skill necessary for giving basic care, including the provision and maintenance of patient comfort and safety within a therapeutic regimen. Clinical experience includes the practice of learned skills as well as the care of patients during the maternity cycle. ($5.00 lab fee.)

NUR 102 Foundations of Nursing II (3-7) 5 hrs.
Continuation of NUR 101, with increasing complexity of knowledge and nursing skills necessary for giving basic care. Clinical experience includes the care of infants, children, and young and aging adults.
Prerequisite: NUR 101. ($5.00 lab fee.)

NUR 201 Nursing in Physical and Mental Illness I (5-15) 10 hrs.
Advanced knowledge and skill necessary for giving care to individuals with specific physical and emotional disorders. Clinical experience includes the application of individualized nursing skills.
Prerequisite: NUR 102. ($5.00 lab fee.)

NUR 202 Nursing in Physical and Mental Illness II (5-15) 10 hrs.
Continuation of NUR 201 and content and skills related to the graduate nurse role. Included also are discussions of moral, legal, and educational issues. Clinical experience includes an emphasis on comprehensive nursing care of persons of all ages.
Prerequisite: NUR 201. ($5.00 lab fee.)

OPERATING ROOM TECHNICIAN

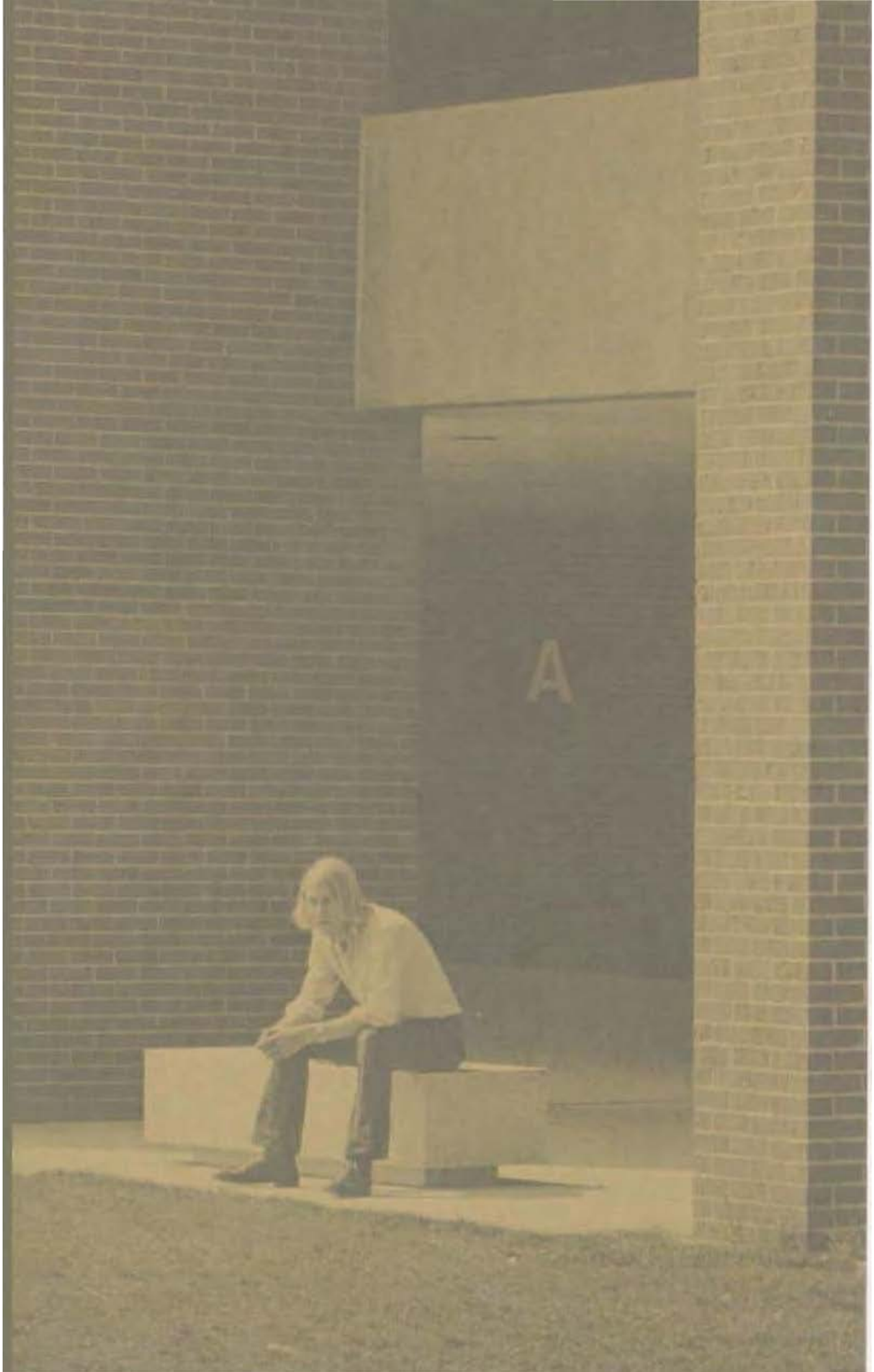
ORT 101 Operating Room Techniques I (6-0) 6 hrs.
A study of the fundamentals of Operating Room Techniques involving the principles of sterile technique in relation to the pre-operative, operative and post-operative care of the surgical patient. Introductory principles of microbiology are included in relation to surgical asepsis.
Prerequisite: Admission into the Operating Room Technician program. ($5.00 lab fee.)

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 160. ($5.00 lab fee.)

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 101, ORT 102, ORT 111, ORT 112, HSC 112, BIO 160, BIO 161, and PSY 101. ($5.00 lab fee.)

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 Department for the observation of out-patient care.
Prerequisite: ORT 101, ORT 111, HSC 112, and BIO 160.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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 101, ORT 102, ORT 111, ORT 112, BIO 160, BIO 161, HSC 112, and PSY 101.

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, religious belief.

PHI 110 Logic (3-0) 3 hrs.
Formal reasoning, including language and meaning, deduction and induction, evidence, and the detection of fallacies. Traditional as well as modern modes of analysis.

PHI 115 Ethics (3-0) 3 hrs.
Consideration of problems of value and conduct, including the question of the "good life" or happiness, and contemporary moral issues such as war, violence, drugs, racism, crime and punishment.
Prerequisite: PHI 105 or sophomore standing or consent of instructor.

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.
Prerequisite: One of the following: PHI 105, HUM 101, LIT 115, sophomore standing, or consent of instructor.

PHYSICAL EDUCATION

Physical Education Courses — Men

Developmental Activities:

PED 100 Basic Self Concept in Physical Education (0-2) 1 hr.
A lecture-lab course designed to increase personal 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. ($1.75 lab fee.)

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.
Prerequisite: PED 100 or transfer equivalent.

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 and ice skating. ($8.00 lab fee for skating only. Other activities $1.50 lab fee.)

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. ($1.75 lab fee.)

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. ($1.75 lab fee.)

Physical Education Courses — Co-Ed

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. ($6.00 lab fee.)

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. Intramural competition afforded.

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. ($1.75 lab fee.)

Physical Education Courses — Women

Developmental Activities:

PED 170 Conditioning (0-2) **1 hr.**
A lecture course designed to increase personal 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, and ice skating. Each activity will be taught for a minimum of nine weeks. ($8.00 lab fee for skating only. Other activities $1.50.)

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. ($1.75 lab fee.)

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; principles and practices; immediate and temporary treatment in case of accident or sudden illness before physician arrives. Official certification to 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, 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. ($1.50 lab fee.)

PED 210 Sports Officiating (2-0) **2 hrs.**
Comprehensive instruction on rules and officiating techniques in inter-scholastic 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, life-saving 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. ($1.75 lab fee.)

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 fufilling laboratory science requirements. ($5.00 lab fee.)

PHS 112 Physical Science II (3-2) 4 hrs.
Continuation of PHS 111 considering basic chemistry, materials of the earth, earth forms and history, sun and stars, the universe.
Prerequisite: PHS 111. ($5.00 lab fee.)

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. ($5.00 lab fee.)

PHY 102 Technical Physics II — Electricty and Magnetism, Light (3-2) 4 hrs.
Electricity and magnetism: fields, induction, capacitance, direct and alternating current theory and circuits, elements of electronics. Light: reflection, interference, resonance, lenses, diffraction, polarization and Doppler Effect. Primarily for students in Career Programs.
Prerequisite: PHY 101. ($5.00 lab fee.)

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.
Prerequisite: Trigonometry. ($5.00 lab fee.)

PHY 122 Introductory Physics II (4-3) 5 hrs.
Electricity, magnetism, and light. Continuation of PHY 121.
Prerequisite: PHY 121. ($5.00 lab fee.)

PHY 201 General Physics I — Mechanics, Heat, and Sound (3-5) 5 hrs.
Foundations of statics, dynamics, hydraulics, thermodynamics, wave motion. For science, engineering, architecture, and university transfers.
Prerequisite: MTH 201 or concurrent enrollment. ($7.50 lab fee.)

PHY 202 General Physics II — Electricity and Magnetism, Light (3-5) 5 hrs.
Electric and magnetic fields, potentials, geometrical and physical optics.
Prerequisite: PHY 201, MTH 202. ($7.50 lab fee.)

PHY 210 Introduction to Modern Physics (3-0) 3 hrs.
Wave-particle duality, "old" and "new" quantum theory, scattering elementary particles.
Prerequisite: PHY 202.

POLITICAL SCIENCE

PSC 201 American Government: Organization, Powers and Functions (3-0) 3 hrs.
Institutional structure and organization of main parts of national, state (Illinois) and local government in modern America.

PSC 205 Comparative Government (3-0) 3 hrs.
Important governments of Europe, such as France, Germany, Italy, Russia, and England. Essential features of parliamentary and presidential systems as in England and United States. Broad understanding and appreciation of the common governmental problems of the world.

PSC 206 International Relations (3-0) 3 hrs.
Critical analysis of international problems of our day — power, role of American foreign policy, and proposals for substitute for war. Emphasis on principles underlying international relations and on locating reliable sources for making informed opinions.

PRACTICAL NURSING

PNR 060 Practical Nursing I (15-13) 10 hrs.
Designed to acquaint the student with the nursing theory and to develop nursing skills necessary for giving simple nursing care. Includes basic concepts of human development, nutrition, personal and community health and an introduction to patient care. Identification of the role of the student practical nurse and other members of the health team, as well as standards of conduct in vocational nursing are explored. ($5.00 lab fee.)

PNR 070 Practical Nursing II (12-16) 10 hrs.
This course stresses application of scientific principles learned in PNR 060 with progressive complexity of vocational nursing skills and function. In accordance with specified objectives, students are given selected patient care experiences in the nursing home and hospital setting. ($5.00 lab fee.)

PNT 080 Practical Nursing III (10-20) 8 hrs.
Provides content in the area of maternal and child health. Classroom instruction and clinical experience in care of the mother before, during, and after delivery is included. Theory and practice in the care of the newborn and an introduction to health deviations in children comprise part of this course. Also, the legal aspects of practical nursing are examined, practical nursing organizations identified, and career opportunities are presented. ($5.00 lab fee.)

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 (3-0) 3 hrs.
Direct experience in examination by the student of his own values, attitudes, goals, strengths, and beliefs. Emphasis on the application of these characteristics to conflict resolution and life style planning. Not to be taken concurrently with PSY 112.

PSY 112 Interpersonal Effectiveness Lab (1-0) 1 hr.
A course in group interaction which provides each student the opportunity to examine himself and the quality of his relationships with others. This course may not be taken concurrently with PSY 110.

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 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.
Prequisite: PSY 101.

PSY 217 Adolescent Psychology (3-0) 3 hrs.
Continuation of development of the human through adolescence into middle and later life. Emphasis on continual adjustment required to master new developmental tasks. Importance of fixated behavior stressed where personality growth is arrested. Emphasis on manifested behavior in attempt to understand fellowman in our complex society.
Prerequisite: PSY 101.

READING

RDG 099 Developmental Reading (2-0) 2 hrs.
Individualized work towards 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 120 Principles of Real Estate (3-0) 3 hrs.
Fundamental principles of real estate for: the real estate practitioner; those seeking to qualify for real estate market — the buyer, seller, or owner of real estate; the person who has contact with the business in his 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 Real Estate Marketing and Brokerage (3-0) 3 hrs.
Marketing communications as applied to the real estate business including sales, advertising and other promotional techniques. Sales strategy, obtaining and qualifying prospects, securing listings, showing properties, and motivating factors are considered. Procedural matters pertaining to the brokerage business such as office location, staffing, and office systems are discussed.
Prerequisite: RES 120 or consent.

RES 122 Real Estate Appraisal I (3-0) 3 hrs.
A course covering the functions and purposes of appraisal, designed to examine the nature of real property value, the various functions and methods of estimating values with emphasis on residential market.
Prerequisite: RES 120 or consent.

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.

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.

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.

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 semester hours of real estate or consent.

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 semester hours of Real Estate certificate curriculum course work.

SECRETARIAL SCIENCE

SEC 098 Review Shorthand (0-4) 2 hrs.
Designed for students with limited knowledge of theory of Gregg Shorthand, DJS, and/or insufficient skill in its application to enroll in SEC 126 (Intermediate Shorthand).
Prerequisite: Consent of instructor or program coordinator.

SEC 099 Typewriting Review (2-0) 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. ($3.00 lab fee.)

SEC 121 Elementary Typing (4-0) 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. ($5.00 lab fee.)

SEC 122 Intermediate Typing (4-0) 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. ($5.00 lab fee.)

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. ($3.00 lab fee.)

SEC 126 Intermediate Shorthand (4-0) 3 hrs.
Continued development of skill and speed dictation with emphasis on vocabulary development, mechanics of English, and transcription techniques. ($3.00 lab fee.)
Prerequisite: SEC 125 or equivalent, SEC 121 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 (2-0) 2 hrs.
Development of skill necessary to operate the 10-key adding machines, rotary calculator, printing calculator, and the electronic calculator. ($5.00 lab fee.)

SEC 132 Office Practice (2-3) 3 hrs.
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; keypunch; transcribing machine; switchboard (PBX); copy machines; and knowledge of records management.
Prerequisite: SEC 121 or equivalent. ($5.00 lab fee.)

SEC 140 Elementary Machine Shorthand (3-2) 4 hrs.
Theory leading to the development of skill in reading and fluency of writing machine shorthand.
Prerequisite: Prior or concurrent enrollment in ENG 101 and Typing.

SEC 221 Advanced Typing (4-0) 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. ($5.00 lab fee.)

SEC 225 Dictation and Transcription (4-0) 3 hrs.
Strengthening of the dictation speed and developing competence in transcribing mailable letters.
Prerequisite: SEC 126 and SEC 122 or proficiency test with instructor and ENG 101. ($3.00 lab fee.)

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. ($3.00 lab fee.)

SEC 236 Secretarial Procedures (2-0) 2 hrs.
Secretarial responsibilities in the office, grooming, human relations, office ethics and business etiquette, exploring job opportunities, and interviewing.
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.
Prerequisites: 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, and written communications; billing; medical law; insurance.
Prerequisite: Consent of instructor.

SOCIOLOGY

SOC 101 Introduction to Sociology (3-0) 3 hrs.
Introductory analysis and description of 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, 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: 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, an adult, 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, two years of high school Spanish, or consent of 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 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.
Prerequisite: SPE 111 or consent of instructor.

HARPER COLLEGE ACADEMIC CALENDAR 1973-74

First Semester

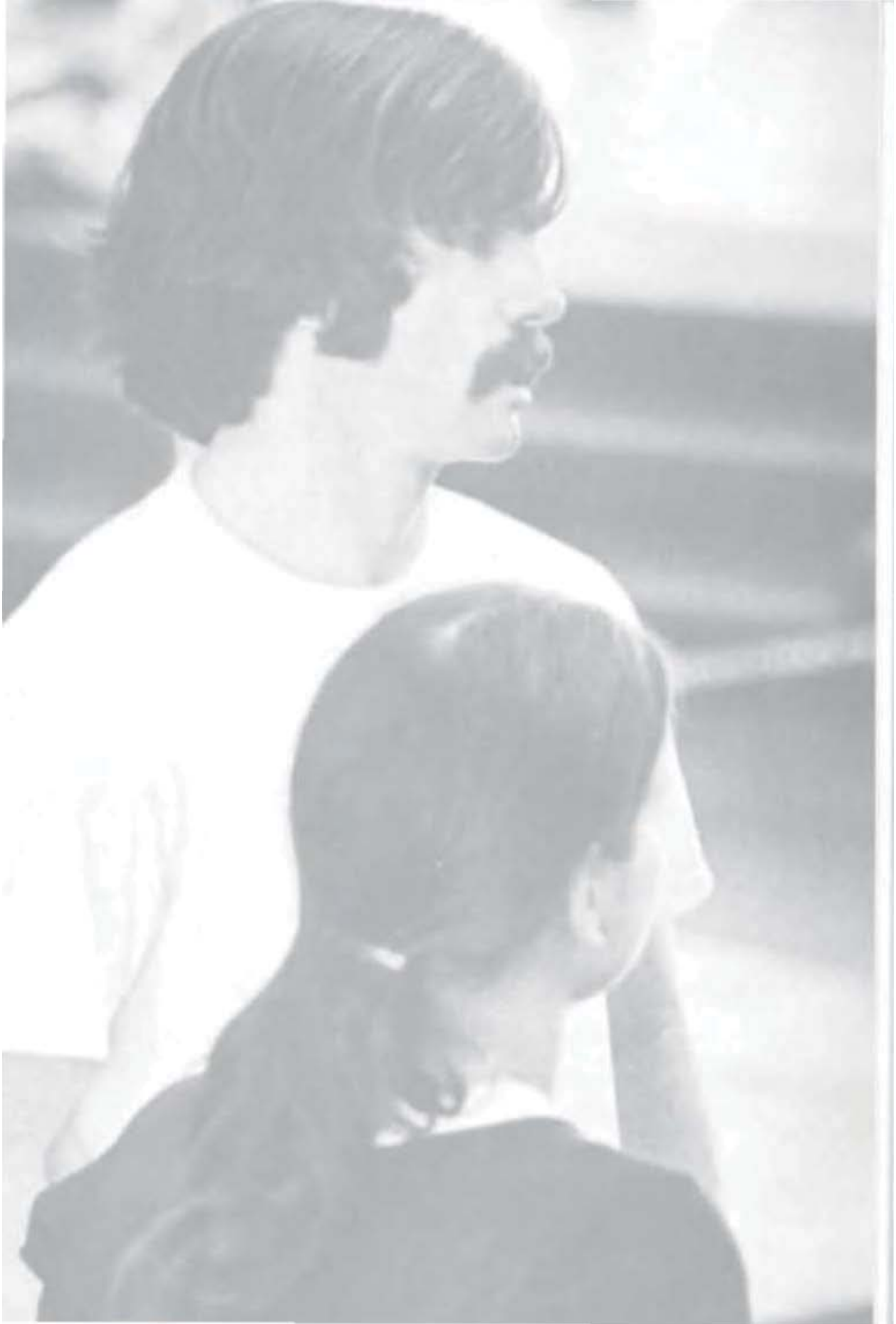
Labor Day	September 3
Faculty Report	September 4
Registration	September 6-7-8
Classes Begin	September 10
Last Day for Late Registration	September 14
Last Day for Adding Classes	September 14
Last Day for Refunds	October 5
Columbus Day	October 8
Veteran's Day	October 22
Mid-Term	November 2
Thanksgiving	November 22-25
Classes Resume	November 26
Last Day for Withdrawals	December 14
Christmas Vacation Begins	December 15 at noon
Classes Resume	January 2
Final Exams	January 14-18

Second Semester

Registration	January 24-25-26
Classes Begin	January 28
Last Day for Registration	February 1
Last Day for Adding Classes	February 1
President's Day	February 11
Last Day for Refunds	February 22
Mid-Term	March 23
Good Friday	April 12
Easter	April 14
Spring Vacation	April 15-19
Classes Resume	April 22
Last Day for Withdrawals	May 10
Memorial Day	May 27
Final Exams	May 28-June 1
Graduation	June 2

Summer Session (8 Weeks)

Registration	June 6-7
Classes Begin	June 10
Last Day for Late Registration	June 12
Last Day for Refunds	June 21
Independence Day	July 4
Classes Resume	July 5
Mid-Term	July 5
Last Day for Withdrawals	July 26
Final Examinations	August 1-2



ADMINISTRATION

Robert E. Lahti	President
Clarence H. Schauer	Vice President of Academic Affairs
William J. Mann	Vice President of Business Affairs
Guerin A. Fischer	Vice President of Student Affairs
Robert B. Cormack	Dean of Career Programs
Jack W. Fuller	Dean of Evening and Continuing Education
William E. Nelson	Dean of Guidance
George H. Voegel	Dean of Learning Resources
Gary E. Rankin	Dean of Student Services
John R. Birkholz	Dean of Transfer Programs
Charles F. Falk	Chairman of Business Division
John Franklin White	Chairman of Communications Division
Charles Kelly Barton	Chairman of Engineering and Related Technologies Division
Urban A. Thobe	Chairman of Humanities and Fine Arts Division
David L. Williams	Chairman of Life and Health Sciences Division
George C. Dorner	Chairman of Mathematics and Physical Sciences Division
C. Patrick Lewis	Chairman of Social Sciences Division
Robert W. Wyman	Director of Accounting Systems
Donn B. Stansbury	Director of Admissions and Registrar
John A. Gelch	Director of Athletics
Walter D. Klingenberg	Director of Bookstore
Donald M. Misic	Director of Business Services
Ronald E. Keener	Director of Community Relations
Maryann E. Miller	Director of Community Services
Robert W. Chantry, Jr.	Director of Data Processing
John C. Morrow	Director of Development
Elizabeth McKay	Director of Environmental Health Director of Evening Services
Anton A. Dolejs	Director of Finance
John Januszko	Director of Food Service
Calvin L. Stockman	Director of Resources Service
Frank A. Christensen	Director of Learning Laboratory and Developmental Education
Ambrose Easterly	Director of Processing Service
Wilfred E. Von Mayr	Director of Personnel
Robert J. Hughes	Director of Physical Plant
Fred A. Vaisvil	Director of Placement and Student Aids
John A. Lucas	Director of Planning and Research
Marc A. Savard	Director of Special Services
Frank L. Borelli	Director of Student Activities

Robert A. Johnston	Assistant Director of Admissions and Registrar
Anthony J. Franchi	Assistant Director of Food Service
Suzanne Herron	Catering Manager
Alfred A. Dunikoski	Graphic Design Coordinator
Frank A. Vandever	Supervising Dentist, Dental Hygiene Program
Peter P. Vander Haeghen	TV Producer/Director

ASSOCIATES

Thomas J. Althoff	Placement Assistant
Elizabeth Blake	Counselor Aide
Dorothy Cassie	Psychometrist Counselor Aide
Audrey Inbody	Counselor Aide
Verla Longhurst	Programming Laboratory Technician
Hope Spruance	Student Activities Advisor
Gary Thompson	Social Therapist
Margaret Weber	Teaching Assistant, Learning Laboratory
Sharon A. Weihman	Clinical Hygienist, Dental Hygiene

STAFF

Institutional Services

Fred F. Inden	Buyer
George Curry	Chief Storekeeper
Henry J. Kurowski	Superintendent of Operations (Physical Plant)
Nancy Fitch	Supervisor of Campus Services
Jefferson B. Covey	Supervisor of Computer Services
Robert Mendenhall	Supervisor of Custodians
Polly Brandt	Supervisor of Key Punch
Richard W. Klug	Supervisor of Maintenance
Joseph Mandarino	Supervisor of Public Safety
William Schurak	Supervisor of Roads and Grounds
Alvin Templin	Supervisor of Utilities

FULL-TIME FACULTY

ALTER, SHARON, Assistant Professor
History
B.A., University of Illinois
M.A., University of Illinois

ARNESEN, JAMES F., Assistant Professor
Biology
B.S., Northern Illinois University
M.S., Northern Illinois University
Ph.D., University of Iowa

BARTON, CHARLES KELLY, Associate Professor
Chairman, Engineering and Related Technologies Division
B.S., University of Tulsa
M.S., Case Institute

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Ph.B., DePaul University
M.Ed., DePaul University
M.A., Northwestern University

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B.S., Loyola University
M.S., Loyola University

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M.S., Southern Illinois University

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M.S.E.E., University of Illinois
Ph.D., Illinois Institute of Technology

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M.S., Illinois State University

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M.S.L.S., University of Illinois

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M.S., Northern Illinois University
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M.A.T., Northwestern University

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M.S., Eastern Illinois University

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M.S. Ed., Southern Illinois University

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M.Ed., University of Hawaii

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B.A., Emory University
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A.M., University of Chicago

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C.P.A., State of Illinois

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A.A.G.O., American Guild of Organists

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M.A., University of Oklahoma

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Ph.D., University of Illinois

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M.S., Southern Illinois University

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Ph.D., Baylor University

LAHTI, ROBERT E., Professor
President
B.S., Black Hills State College
M.A., University of Wyoming
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