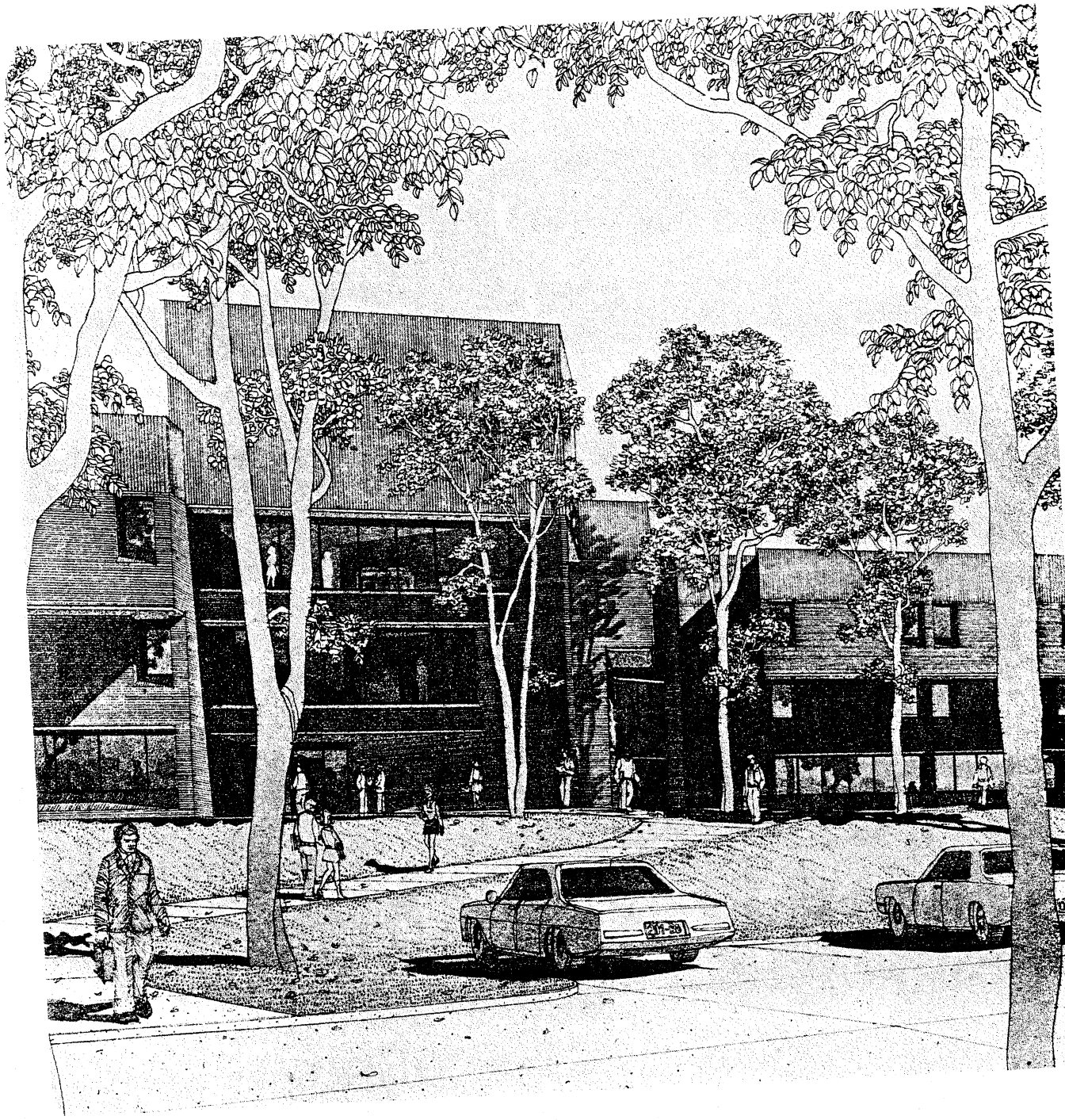


JOHNSON COUNTY COMMUNITY JUNIOR COLLEGE

111th & Quivira Road
Overland Park, Kansas 66210

Area Code 913, 888–8500

1972–73 Volume One,
Number Three

Recognized candidate
for accreditation status by
North Central Association of Colleges
and Secondary Schools

A publicly supported community college
serving residents of Johnson County in suburban Kansas City

All information herein including course offerings, times, instructors, fees, tuition and other charges are subject to change without further notice.

CONTENTS

This year marks the end of the beginning for the Johnson County Community College. With the move to the new campus during the summer of 1972, JCCC for the first time has facilities specifically designed for the instructional, recreational, cultural and social programs of the College.

Suddenly, or so it might seem to many, a 220-acre campus with six new buildings replaces a trailer, a remodeled house, a commercial garage, converted stores, old grade schools and church meeting rooms which served as a temporary campus during the first three years of classes.

A6

In reality the new campus has roots that reach back almost a decade ago, to 1963, when the Johnson County Board of Commissioners appointed a committee of residents to study the need for and feasibility of a community college. In a report published in 1966 the committee unanimously recommended that a comprehensive public two-year college be established in Johnson County.

Several interested groups in the county formed a citizen's action committee to implement the study committee's recommendation. This was followed by a petition requesting the formation of a community college district. In 1967 by nearly a three-to-one affirmative margin the residents voted to establish a community college. Later in the year a six-member Board of Trustees was elected from the district at large.

The charter Board undertook the task of writing an educational philosophy and goals for the College and appointed the president. Other administrative and instructional staff was appointed during 1968 and 1969 in order to plan the initial offerings of the College. Major activities during this period also included the development of a budget, an educational needs survey, the selection of an architectural firm and an option on the permanent campus site.

County residents were urged to "Vote yes, June 3" in 1969 on a $12,900,000 bond issue that would provide the money to purchase the campus site and provide for the construction and equipping of the buildings. In contrast to the nationwide trend of school bond failures, approval of the bond issue was by a 70 percent margin even though only a simple majority was required.

On September 4, 1969, the College opened its doors for the first time to approximately 1,400 students and instantly became the fourth largest of the 19 public community colleges in Kansas. A year later the enrollment had grown to almost 2,400 to make JCCC the largest two-year college in the State.

Last year the enrollment increased to over 3,000. In addition to being the largest educational institution of its type in the State it is also the third in size among all colleges and universities located in the Greater Kansas City area. Such rapid growth clearly substantiates the study committee report that a community college was "needed and feasible" in Johnson County.

A7

So in terms of physical facilities I do welcome you to the *new* Johnson County Community College. But as you can see it is also a college highly seasoned by almost a decade of dedicated determination to provide the very best educational experience possible for Johnson Countians.

Robert G. Harris

Robert G. Harris
President

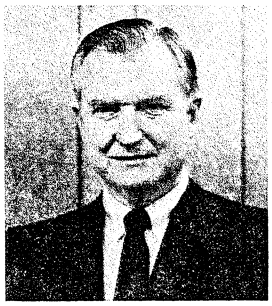
BOARD OF TRUSTEES

O. DALE SMITH, M.D.
Chairman
Terms: 1967-75

DR. JOHN R. PRICE
Vice-Chairman
Term: 1969-73

MR. JOHN H. ROBINSON
Treasurer
Terms: 1967-73

DR. JACK J. HOLDER, JR.
Clerk
Term: 1969-73



DR. WILBUR T. BILLINGTON
Trustee
Terms: 1967-75

DR. HUGH W. SPEER
Trustee
Terms: 1967-75

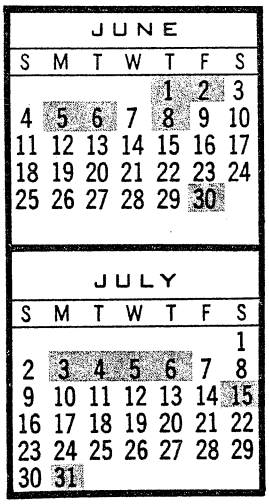
The six elected members serve four-year terms. Three trustees are elected every other year from the county-at-large.

PHILOSOPHY OF THE BOARD OF TRUSTEES AND STAFF

The Board of Trustees and the Staff of the Johnson County Community College firmly believe in the dignity and worth of every person by insuring an equal opportunity to all without regard to race, creed or sex. They also recognize that each individual is a part of a larger society, and that society has established a framework of laws, rules and regulations within which the individual lives and works. The Board and Staff wish to create a wholesome atmosphere for learning by keeping the rules and regulations in the educational community to a minimum and to seek the council of those who participate in the educational community in establishing these rules and regulations.

The Board of Trustees and the Staff believe that each individual should have the opportunity to reach a position in society that is commensurate with his ability, talents and desires. Every effort will be made throughout the College to help each individual meet his goals and aspirations.

JOHNSON COUNTY COMMUNITY COLLEGE 1972–73 CALENDAR



JUNE						
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JULY						
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A10

SUMMER SESSION 1972

June

1-2 Registration and payment of fees for first mini session and eight week regular session

5 Summer sessions begin

6 Registration or addition of courses after this date requires Dean's permission

6 Last day for schedule changes

8 Last day for withdrawal from a course or from the College and receive a refund for regular and first mini session

30 First mini session ends

SECOND MINI SESSION

June

30 Registration and payment of fees for second mini session

July

3 Second mini session begins

4 Independence Day Holiday. Classes not in session. All College offices closed

5 Registration or addition of courses after this date requires Dean's permission

5 Last day for schedule changes

6 Last day for withdrawal from a course or from the College and receive a refund for second mini session

31 Second mini session and eight week session ends

August

2 Grades due in Registrar's Office

FALL SEMESTER 1972

July

15 Early fall registration begins

August

17 Beginning of open registration

22 Last day of open registration

24 Classes begin

28 Adult Continuing Education registration begins

30 Registration or addition of courses after this date requires Dean's permission

Last day for withdrawal from a course or from the College and receive a refund

AUGUST						
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September

4 Labor Day Holiday. Classes not in session. College offices closed

14 Adult Continuing Education registration ends

18-21 Adult Continuing Education classes begin

SEPTEMBER						
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October

9 Columbus Day Holiday. Classes not in session. College offices closed

18 Low grade reports

23 Veteran's Day Holiday. Classes not in session. College offices closed

OCTOBER						
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31						

November

23-26 Thanksgiving Holiday. Classes not in session. College offices closed

December

20 Last day of classes
21 Christmas Holiday begins
22 Grades due in Registrar's Office
25 All College offices closed

SPRING SEMESTER 1973

December

13 Early spring registration begins

January

1 All College offices closed
4 Beginning of open registration
9 Last day of open registration
11 Classes begin
17 Registration or addition of courses after this date requires Dean's permission
Last day for withdrawal from a course or from the College and receive a refund
2-18 Adult Continuing Education registration
22-25 Adult Continuing Education classes begin

JANUARY						
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February

12 Lincoln's Birthday Holiday. Classes not in session. College offices closed

19 Washington's Birthday Holiday. Classes not in session. College offices closed

March

7 Low grade reports

25 Spring recess begins. Classes not in session. College offices open

April

2 Classes resume

May

12 Last day of classes

14 Grades due in Registrar's Office

16 Commencement

28 Memorial Day Holiday. All College offices closed

FEBRUARY

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JUNE						
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JULY						
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AUGUST						
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SUMMER SESSION

May 31 & June 1

Registration and payment of fees for first mini session and eight week regular session

June

4 Summer sessions begin

5 Registration or addition of courses after this date requires Dean's permission

7 Last day for withdrawal from a course or from the College and receive a refund for regular and first mini session

28 First mini session ends

SECOND MINI SESSION

June

29 Registration and payment of fees for second mini session

July

2 Second mini session begins

3 Last day for late registration without Dean's permission.

Last day for schedule changes

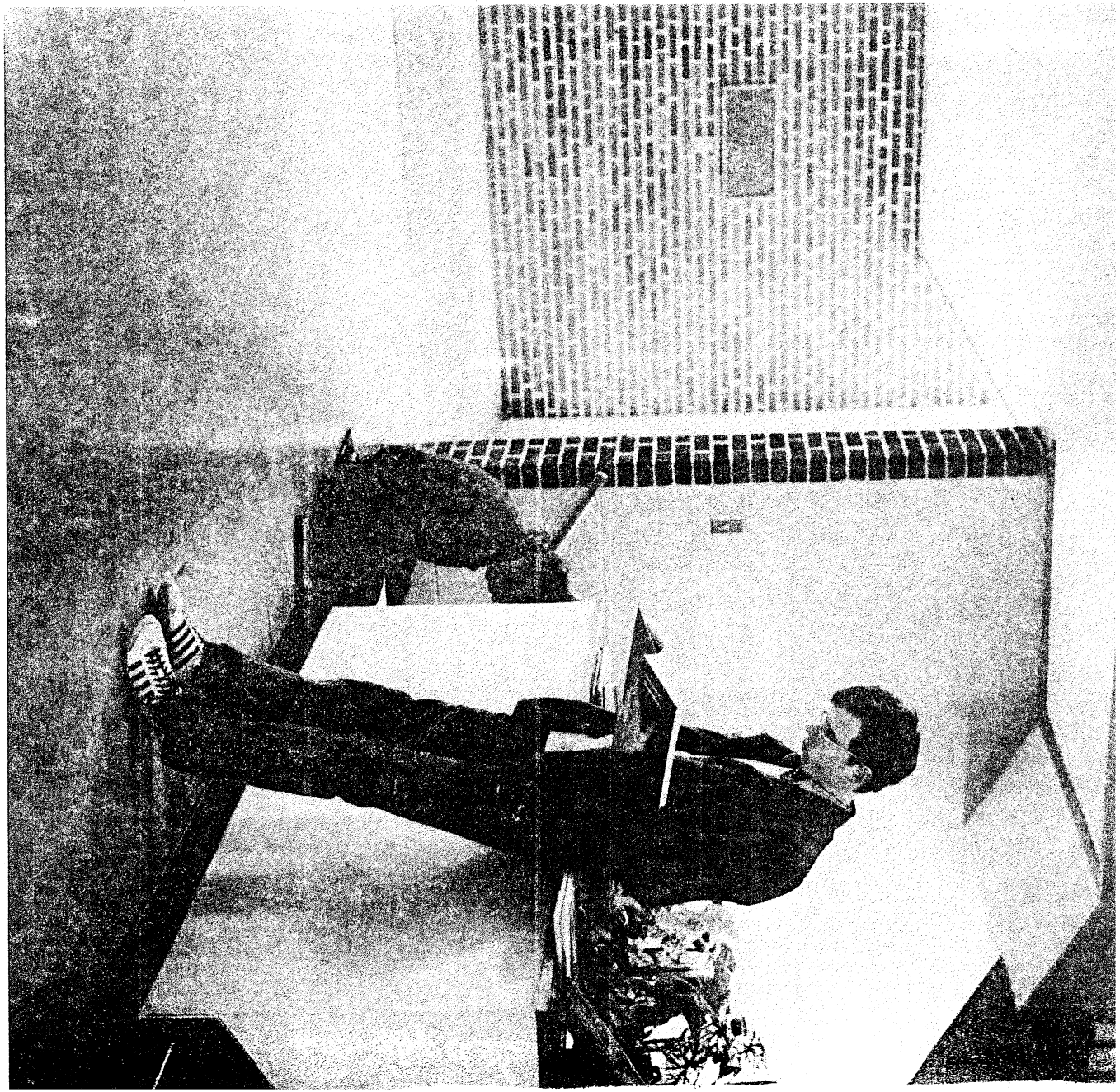
4 Independence Day Holiday. Classes not in session. All College offices closed

6 Last day for withdrawal from a course or from the College and receive a refund for second mini session

30 Second mini session and eight week session ends

August

1 Grades due in Registrar's Office



JOHNSON COUNTY COMMUNITY COLLEGE

GENERAL INFORMATION

GENERAL INFORMATION

FUNCTIONS

The purpose of the College is to serve the community as a whole. This is done in many ways -- through the instructional program that is offered during the day and evening; through adult continuing education which is generally offered in the evenings and located throughout the county; and through community services which are guided by cooperation with all elements of the community in meeting their needs through activities such as workshops and institutes.

The Johnson County Community College is "need" oriented. It is first determined what the needs of the community are, both the community in general and the individuals within the community. Then, with available resources, programs are planned to meet these needs.

The College attracts a very diversified student body ranging from 18 to 80 years of age; people with varying backgrounds and with different motives and goals.

The Community College serves as a proving ground and self-finding agency for many of its students. Countless high school graduates are uncertain as to the direction their lives should take. The Community College provides programs, services, and personal counseling to students to assist them in making such decisions, in gaining maturity and self-confidence, and in strengthening the foundation for life-long direction.

The College offers a diversified program for late afternoon and evening students. Credit courses are offered by all divisions of the College.

The courses are designed to benefit those students who wish to obtain one or more of the following educational objectives:

- Attainment of a two-year Associate of Arts degree
- Improvement of present professional abilities
- Advancement in present occupational skills
- Achievement of personal satisfaction

Evening credit courses carry the same content, academic standards, and grading system as the day courses.

University Transfer

The Community College offers curriculums in liberal arts and sciences and in general pre-professional education comparable to those offered in the first and second years of four-year colleges and universities. Successful completion of these curriculums qualifies students for transfer with advanced standing to other institutions of higher education. Program options and course descriptions are provided in Section C.

Careers

The Community College recognizes its obligation to provide, within its capabilities and the needs of the community, education and training toward developing, maintaining and improving competence in the fields of industry, business, science, agriculture, service technology and skilled trades. These objectives may be achieved through specific curriculums, series of courses, and single courses which are usually related to the employment needs of the community served. Career programs and courses are fully described in Section C.

General Studies

Individuals having an interest in broadening their knowledge base for personal satisfaction or to become a more understanding and useful citizen in our society, or to

continue their education as a method of exploring a variety of fields in search of a career may plan a series of learning experiences from the total college offerings that will fulfill their expressed interests and desires.

Adult Continuing Education Program

The Adult Continuing Education Division is concerned with meeting the needs, interests, and requirements of adults for general or specialized education on a non–credit basis. It is the product of an educational philosophy which asserts that the Johnson County Community College shall serve not only the youth of the area, but that it shall provide a variety of educational opportunities for its adult members as well.

Adult Continuing Education is one of the most rapidly growing areas of the American educational enterprise. Changing technology has accelerated the need for our citizenry to develop and improve occupational and social skills. As an integral part of the College, the Adult Continuing Education Division endeavors to provide educational services needed by adults to provide them with the means for economic improvement and cultural development, to enrich their personal and family lives and stimulate civic consciousness and the exercise of effective citizenship responsibilities.

The Adult Continuing Education program is community-centered and coordinated with business, industry, school districts and other interested agencies in the area.

More specific information on the Adult Continuing Education program is provided on pages B41-43.

Community Services Program

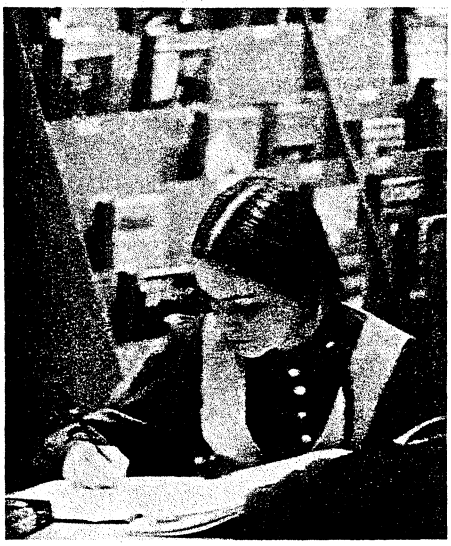
The major purposes of the College are reflected in the commitment to comprehensive educational programs, including education for transfer, education for employment, general college exploratory experience, and continuing education for adults. Yet, the emphasis on Adult Continuing Education may legitimately be viewed as only part of the broader relationship in which the College becomes an integral part of the community. It

is the intent of the College to utilize the resources, talents, and opportunities in the community to the greatest possible extent, and in turn, offer to the community its facilities, faculty and stimulus. The program encompasses academic, social, cultural and recreational activities.

Summer Sessions

Summer sessions are offered by the College to provide an opportunity for:

- Students who wish to accelerate their progress.
- Students who carry only a partial course load during the regular semester.
- Students who have academic deficiencies they wish to correct.
- June high school graduates who wish to get an advanced start in their college studies.
- Adults who wish to continue their education for personal satisfaction, change in job status, or improvement of present occupational skills.



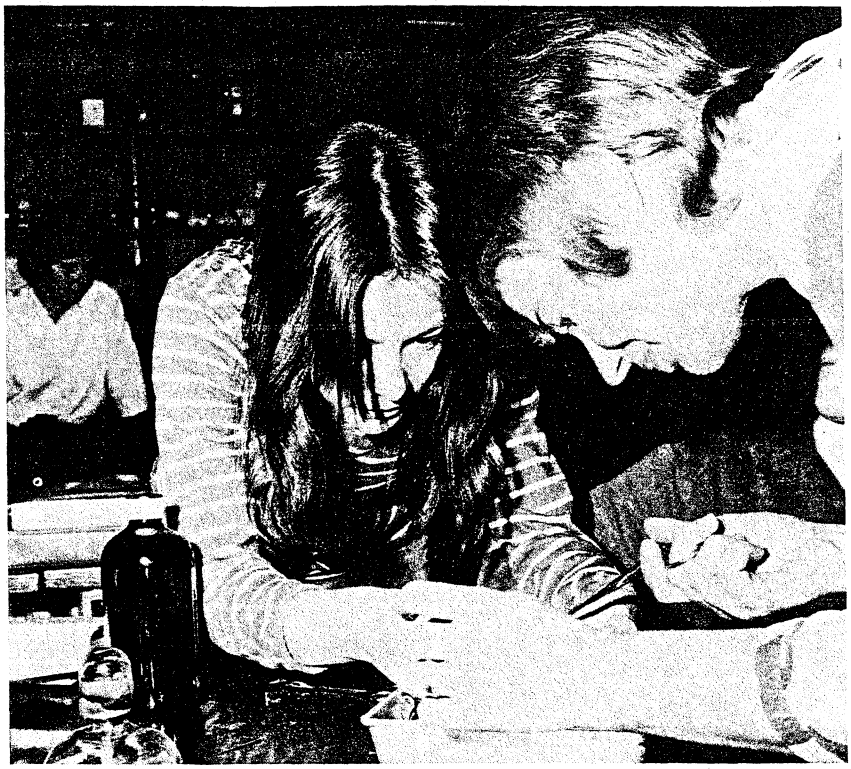
OBJECTIVES

With the philosophy and functions of the College in mind, the College faculty can best serve students through sound scholarship and training policies and:

- Contribute to good citizenship by helping students to understand democratic processes.
- Prepare the student to make a contribution to the economic life of his community.
- Expose the student to our cultural, social, scientific and spiritual heritage out of which he may construct a satisfying and consistent world view by which to guide his life.
- Foster self-reliance on the part of the student by encouraging him to think critically in solving problems.
- Encourage the student to participate in some form of satisfying creative activity and in appreciating the creativity of others.
- Develop within the student increased understanding of the political and socio-economic problems confronting our nation and the world by contributing to a sense of social responsiblity.
- Help the student to understand his relationship to his biological and physical environment so that he may better adjust to and improve the environment.
- Develop within the student an attitude of "openness" toward contributions afforded by other ideas, races and religions.
- Develop within the student skills in writing, speaking, reading and listening which lead to improved self-expression and communication.

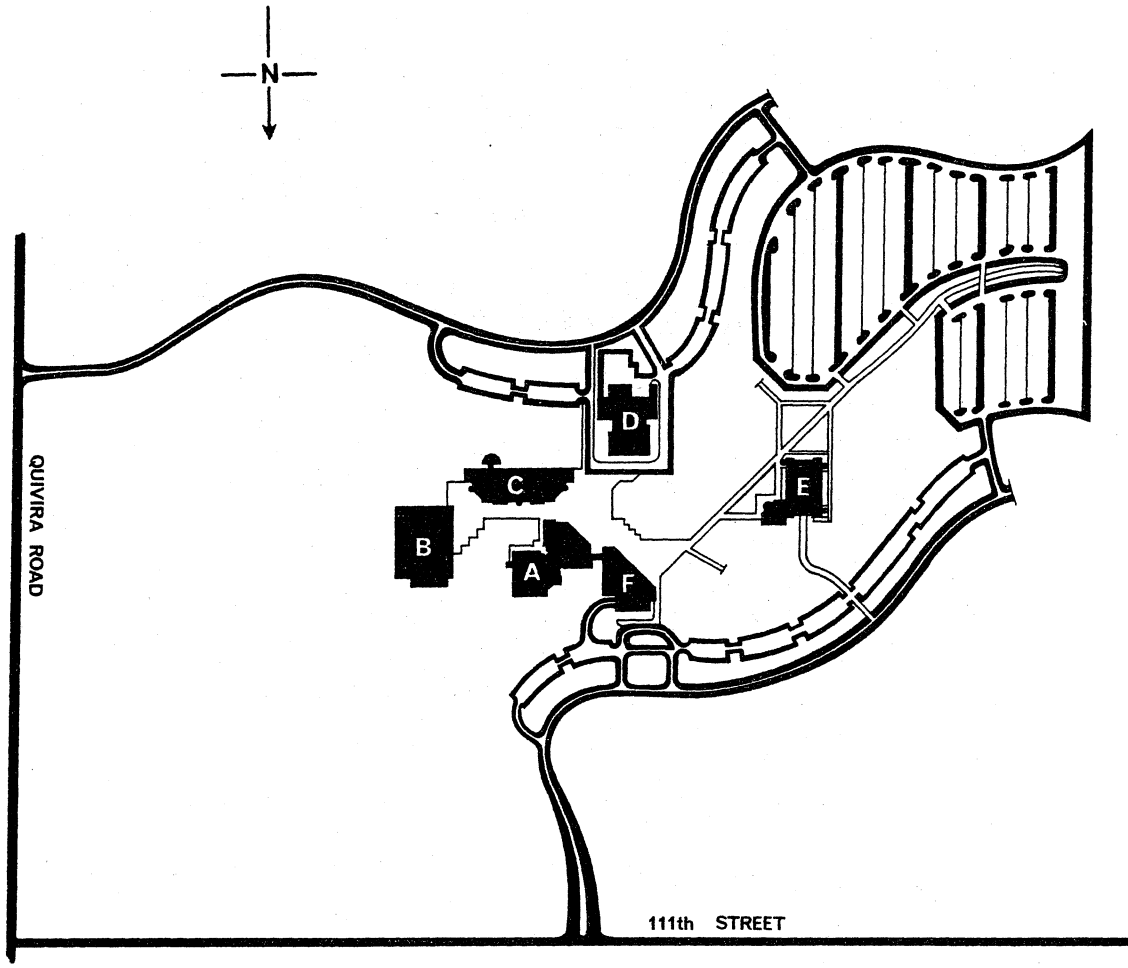
Accreditation

The Johnson County Community College was granted Correspondent status by the North Central Association of Colleges and Secondary Schools in March, 1969. The College was granted Recognized Candidacy status in March, 1972, and is on schedule in the accreditation process for new institutions. The College cooperates with neighboring colleges to insure transferability of credits to these and other institutions.



CAMPUS MAP

111th and Quivira Road



B8

A

GENERAL EDUCATION BUILDING: Instructional and administrative offices; a 300–seat lecture hall–little theater; general classrooms and specialized rooms; data processing, business management labs; seminar rooms on all floors.

B

EDUCATIONAL MEDIA CENTER: Storage and distribution of library materials; production of media, slides, tapes, motion pictures and printed matter; production of all written material distributed by the College; general classrooms; drafting and electronics, learning center, and a portion of the art program.

C

SCIENCE AND TECHNOLOGY BUILDING: Two 75–seat lecture halls and two 100–seat lecture halls; physics room, nursing lab, life science labs, chemistry labs and audio-visual-tutorial labs; dental hygiene labs with dental facilities for patients.

D

CAMPUS SERVICES BUILDING: Mechanical room to house air conditioning chillers and electrical switch gear; administrative offices, communication center, central warehouse; maintenance shop and vehicle repair area; instructional space for art and manufacturing technology programs.

E

GYMNASIUM: Varsity basketball court and physical education facilities; three cross-court gyms can be converted to a 2,300–seat full-size gym; weight room, wrestling room, classrooms; staff offices and minor first aid care for campus; play fields and athletic fields located adjacent to building.

F

COLLEGE COMMONS: Bookstore, eating and recreational facilities; student activities offices and lounge space; College Commons administrative offices and meeting rooms.

PARKING: 1800 parking spaces for students, staff and visitors.

SITE: 220 acres

MATRICULATION

ADMISSION REQUIREMENTS

Any resident of Johnson County who is either a high school graduate or has attained eighteen years of age may enroll as a student. Students with legal residence outside of Johnson County will be accepted only if the demands of resident students can be met.

Full-time Students

All full-time students will be required to provide a high school transcript unless they have been out of high school for at least two years. College transcripts must be provided from each institution of higher learning the student has attended.

Part-time Students

A part-time student must provide a transcript from each institution of higher learning he has attended.

High school students who have approval of their high school principal may enroll in selected College courses. (Students may not use the same credit to apply to both high school graduation and to advanced standing in college.)

B10

ADMISSION

Students who have not previously been enrolled in Johnson County Community College are required to complete the following when making application for admission:

- Complete and file an application form with the Office of Admissions. The complete social security number must be listed on the form.
- File an official transcript of high school work and a transcript from each college attended if transfering from another institution. Transcripts should be sent directly from the school to the Office of Admissions.
- Students having legal residence in another Kansas community junior college district

will be required to present a letter of permission from the chief executive officer of that community junior college district.

It is recommended but not required that each student filing an application for admission provide an American College Testing (ACT) test score. Students are advised to take the ACT test as early as possible on one of the national dates and to list the Johnson County Community College as one of the three colleges to receive the test information.

All records must be complete and on file in advance of the registration date. Deadlines may be established two weeks in advance of the registration date to facilitate completion of forms for registration.

REGISTRATION PROCEDURES

Registration takes place during the dates specified in the College Calendar. Certain procedures are established for registration of students:

- Acceptance for admission to the College does not assure entrance into all courses or curricula. If a student lacks requirements for the program of his choice, he may become eligible by satisfactorily completing specified courses.
- Registration must be preceded by a conference with a College counselor for the purpose of selecting curriculum and courses.

Veteran's Eligibility (G.I.Bill)

The Veterans Administration fully approves the Johnson County Community College for veterans who wish to secure educational benefits under the G.I. Bill of Rights.

Prospective students who are eligible for veteran's benefits should follow the procedure below:

- Establish their eligibility through the Veterans Administration prior to registration. (Johnson County veterans may contact Kansas Veterans Commission, Huron Building, Kansas City, Kansas.)

- After processing the veteran's application, t issue a Certificate of Eligibility. The certifica and only for the objective indicated.
- The prospective student should bring the E-1993) to the Admissions Office at the time

Financial benefits to veterans are based on the fc

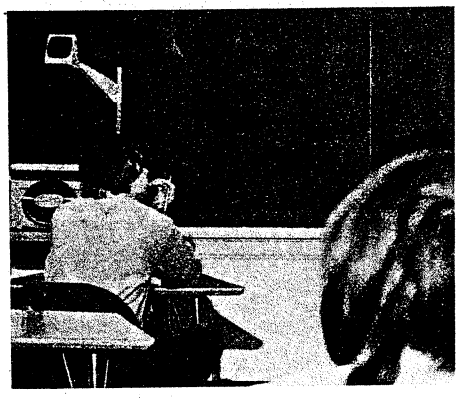
14 or more semester hours - full time	7 to
10 to 13 semester hours - 3/4 time	1 to

ORIENTATION

To acquaint the new student with the College, i policies, and organizations.

To assist him in taking full advantage of the opp

To help him in developing effective approaches by the beginning college students.



The College has established regulations in regard to the work taken at the Johnson County Community College. These requirements undergo re-examination at regular intervals in relationship to the philosophy stated by the Board of Trustees.

In general, the evaluation, enforcement and interpretation of student regulations is a function of the Office of College Services. Petitions for exceptions must be submitted through a counselor to the Office of Dean of College Services.

GRADING SYSTEM

Grades measure the student's performance in terms of the goals and objectives of a course. Grades reflect the degree or extent to which the student has mastered the content, skills and methods relevant to the course objectives. Grades are earned in each course and are recorded on the student's permanent record. The College uses two grading systems, the regular grading system and the optional grading system.

Regular Grading System

The regular grading system uses the traditional symbols of evaluation understood and accepted by the general public and the business and educational communities. This system provides a range of grade levels indicating the student's achievement of the objectives established for a course. The regular grading system is as follows:

A – *Excellent* or outstanding achievement of the educational objectives.

B – *Superior* achievement of the educational objectives.

C – *Satisfactory* achievement of the educational objectives.

D – *Acceptable* achievement of the educational objectives.

W – *Withdrawal* without academic assessment. (A student may withdraw any time during the semester)

I – The student will receive an *Incomplete* if he has not yet satisfactorily achieved the objectives of the course within the semester or the prescribed period. For good and sufficient reason, the student may be permitted to complete the requirements of the course without repeating the course. Generally, however, the student must

repeat the course and achieve a grade of D or better to remove the I from his record.

Optional Grading System

A student in the university transfer program should use the regular grading system in all courses that satisfy the normal freshmen-sophomore requirements in the four-year college or university he plans to attend. He may select the optional grading system in all other courses.

A student in the career program may use the optional grading system in any course that is not directly related to the major objectives of his program.

A student desiring to audit a course, generally for review purposes, is encouraged to select the optional grading system.

In all cases, the student must receive the approval of his counselor before he is allowed to select the optional grading system for any course. Generally, a student will be permitted to select the optional grading system for no more than one course per semester.

The student will have the opportunity to elect the optional grading system any time up to the Add-Drop date. Grades received under this grading system are not used in computing the student's grade point average. This option can be used for courses required for the Associate of Arts Degree and Certificate requirements.

The optional grading system is as follows: S – Credit earned; W – Withdrawal; and I – Incomplete.

Grade Point Average

Semester grades are assigned grade points as follows:

A – 4 grade points per semester credit hour earned.

B – 3 grade points per semester credit hour earned.

C – 2 grade points per semester credit hour earned.

D – 1 grade point per semester credit hour earned.

The total grade points accumulated by a student are divided by the total semester credit hours successfully completed, excluding the semester credit hours for which a "S", "W", or an "I" were assigned. The result is the student's accumulated grade point average.

Whenever a student repeats a course only the credit and grades earned in the repeated course will be recorded and used in computing the student's grade point average.

Honors

The names of students who complete a minimum of twelve (12) hours of credit and who earn an overall grade point average of 3.0 or higher during any semester are published on the Dean's list at the end of the semester.

EXTERNAL CREDIT

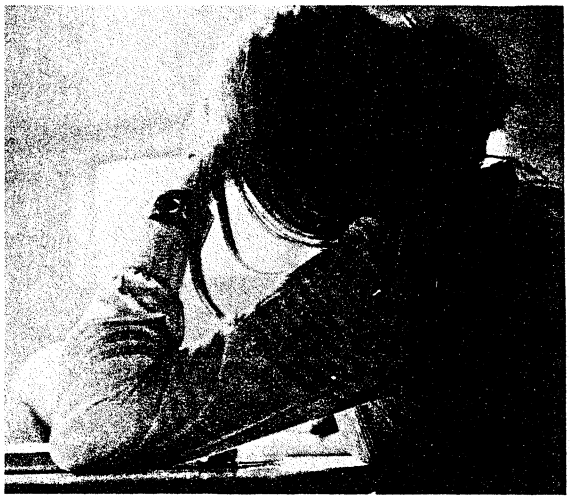
Many students will enroll in Johnson County Community College who have received credits in other colleges. Others who enroll will have, through various types of experiences, attained competencies which would be equivalent to those resulting from formal courses offered by the college.

Credit Transferred from Other Colleges

The Johnson County Community College may accept appropriate credits earned from a college of recognized standing and may permit up to forty-five (45) semester hours of transferred course work towards an Associate of Arts Degree.

Credit by Examination

In courses where a comprehensive examination is available, credit may be granted if a satisfactory level of achievement is demonstrated on the comprehensive examination. Permission to take such an examination may be granted upon petition by letter to the Director of Admissions with approval of the Dean of Instruction. A fee of $5.00 will be charged for all comprehensive course examinations.



Advanced Standing

Advanced standing implies that credit will be granted for specific courses for which a comprehensive course examination has been satisfactorily completed.

Advanced standing credit will be granted for students presenting scores of 3, 4, or 5 on The College Entrance Examination Board Advanced Placement tests.

Advanced standing credit not to exceed thirty (30) semester hours will be granted to students for performance of the 25th percentile or above on The College Level Examination Program (C.L.E.P. exams).

Advanced Placement

Advanced placement means that specific courses may be by-passed but without credit.

Advanced placement (without credit) may be granted for students presenting scores of 1 or 2 on The College Entrance Examination Board Advanced Placement tests.

Credit for Experiences in the Armed Services

College-level credit may be granted for military service and for specialized training as recommended in a publication by the Commission on Accreditation of Service Experiences of The American Council on Education. On-the-job experiences will be evaluated and college credit may be granted.

CLASSIFICATION OF STUDENTS

Freshmen: Students with fewer than twenty-six (26) semester credit hours.

Sophomores: Students with twenty-six (26) or more semester credit hours.

Post Graduates: Students who have completed all graduation requirements and are enrolled for further study.

Full-time Students: Students carrying twelve (12) or more semester hours of credit. (see "Graduation Requirements").

GRADUATION REQUIREMENTS

Associate of Arts Degree

Requirements for the Associate of Arts degree include the successful completion of a minimum of sixty (60) semester credit hours in an approved program with a cumulative grade point average of 2.0. A cumulative grade point average is based upon all successfully completed course work at this College or another institution. A student must earn a minimum of fifteen (15) semester credit hours with a 2.0 average at Johnson County Community College and be enrolled during the semester in which he receives the degree.

Honors

An Associate of Arts degree will be granted "With Honors" if the recipient earns an overall grade point average of 3.5 in all courses applicable to the degree.

Intent to Graduate

A Notice of Intent to Graduate must be filed by each student who wishes to receive the Associate of Arts Degree from Johnson County Community College.

Graduation Exercises

Requirements for graduation may be completed during any semester, but the degree will not be conferred until the ceremony which is held at the close of each spring semester.

Certificate of Graduation

Requirements for a Certificate will include the successful completion of the designated program and enrollment during the semester in which the student receives the Certificate of Graduation.

Honors

The Certificate will be granted "With Honors" if the recipient earns an overall grade point average of 3.5 in all courses applicable to the Certificate.

Intent to Graduate

A Notice of Intent to Graduate must be filed by each student who wishes to receive a Certificate from Johnson County Community College.

Graduation Exercises

Requirements for graduation may be completed during any semester, but the Certificate will not be conferred until the graduation ceremony which is held at the close of each spring semester.

Evaluation of Credits

If a student has received previous credit and wishes to complete either an Associate of Arts degree or a Certificate of Graduation, the credits will be evaluated by the Director of Admissions and a copy of their acceptance will be given the student and a copy kept on file.

Approved Programs

An approved program is that program designed to meet the requirements for graduation which is developed by the individual with the approval of his counselor.

The student is an individual at Johnson County Community College. Each is seeking, through education, to fulfill his potential and to become a truly educated, mature, and contributing member of his community . . . each is seeking the educational and vocational key to his future.

The function of Student Personnel Services is to help each student utilize, to the best possible advantage, the educational opportunities offered by Johnson County Community College. The program is designed to supplement the instructional program by providing specialized services, including counseling, testing, advisement, placement, financial assistance and student activities; all of which directly affect a student's progress in college and progress toward a successful and meaningful life.

Following admission, each full-time student has an individual conference with a member of the counseling staff to help plan his program at the College. Careful consideration is given to high school background, test results, interests, aptitudes and goals. A student who experiences difficulty or dissatisfaction with the curriculum he has selected is encouraged to discuss his situation with a counselor.

Students are encouraged to use the Education and Career Information Files which are maintained by the counseling office. The counselors are readily available to assist students in career and educational planning.

COUNSELING

Johnson County Community College provides a staff of professional counselors to assist students in career planning, in selecting a program of academic studies and in solving problems of a personal or social nature.

Emphasis is placed on the student for conducting his own life and making the most of it. Counselors do not make decisions for a student nor do they "solve" his problems for him. Students do find themselves better able to handle their situation in a mature and responsible fashion by coming to know more about themselves through a counseling experience. Students needing more intensive services will be referred.

REASSESSMENT OF STUDENT PROGRESS

If a student does not have a cumulative grade point average of C (2.0) at the end of any semester, he needs to reassess the program or courses he has chosen.

At this time, with the assistance of his counselor, the student must re-evaluate his goals and aspirations in light of his talents, achievements and desires.

If a student has not been successful at the Johnson County Community College or another college, the student must work very closely with his counselor and instructors to achieve at least a C (2.0) average in a mutually agreed upon length of time.

REPETITION OF COURSES

Any student with good and sufficient reason may apply to his counselor to repeat a course. If the student repeats a course, the highest credit and grade earned will be recorded on the student's permanent record.

DROPPING A COURSE

A student may drop a course(s) without academic penalty at any time before the final day of the semester and receive a "W" grade. A student wishing to drop a course(s) after the final day of the semester will receive a grade other than a "W"
A student dropping a course must consult with a counselor if he is to receive a "W" grade before the drop date in a semester.

ATTENDANCE

Regular attendance in all classes is expected. No absence is "excused' in the sense that the student is excused from the work he has missed. It is the student's responsibility to fulfill all of the requirements of a course.

SUSPENSION

Academic

If satisfactory progress toward a student's goals is not being made, the student must

reassess his program, motives, interests and aptitudes with a counselor. If satisfactory progress is not made after this reassessment the student may be suspended.

Guidelines for grade point averages regarding dismissal from the College for a full-time student are:

End of Semester	Minimum Grade Point Average
1	1.25
2	1.65
3	1.75

Behavioral

Students and faculty of Johnson County Community College constitute a special community engaged in the processes of education. The College assumes that its students will demonstrate a code of personal honor which is based upon courtesy, integrity, common sense and respect for others both within and outside the classroom.

The College reserves the right to dismiss a student for conduct which is detrimental to the proper conduct of the College's educational endeavors.

The following types of acts will be considered violations of the College standards for student conduct and could result in serious disciplinary action or permanent suspension:

- Threatening the life or physical safety of others.
- Preventing or attempting to prevent any student, College staff member or official College visitor from carrying out his responsibility to the College.
- Intentionally impeding normal pedestrian or vehicular traffic on the campus.
- Inflicting damage to College equipment or facilities.
- Violating any conditions of probation.
- Academic dishonesty.
- Unauthorized actions undertaken in the name of the College.

WITHDRAWAL

A student who wishes to withdraw from the College before the final day of the semester without academic penalty may do so and receive a "W" on his official record.

A student who wishes to withdraw after the final day of the semester will receive a grade other than a "W" for the official record.

The student must consult with a counselor if he is to effect an orderly withdrawal.

Refund of Tuition and Fees

The total amount of tuition and fees will be refunded from the time of registration through the Add-Drop dates for both the fall and spring semester as well as the summer sessions. After the Add-Drop date no refund will be made unless the student can successfully present a hardship case, such as hospitalization or required military service. Such cases must be presented within the two weeks following the Add-Drop date. In all cases requests for refunds must be initiated by the student through a College counselor.

READMISSION

A student who has been suspended from the Johnson County Community College, or who has been similarily dismissed from any other college or university, may apply for readmission or admission the semester following suspension.

Applications for admission after having been suspended must be reviewed by the College Committee on Admissions. The Director of Admissions will act as chairman of the Committee but will not be a voting member. The chairman of the Committee will call all meetings and will be responsible for keeping records of the proceedings.

COSTS

Student Activity Fee

No student activity fee is accessed at Johnson County Community College. Most of the costs of such student activities as social events, intramural activities, and the intercollegiate athletic program are supported by expenditures from the College general fund.

Tuition

The tuition for either full-time or part-time students attending the Johnson County Community College is twelve dollars ($12) per semester credit hour. The cost of tuition is subject to change from year to year by action of the College Board of Trustees.

Transcript Fee

All transcripts are free during the time a student is enrolled at the College and for the two semesters immediately following the last semester he was enrolled. After that time, a fee of one dollar ($1) will be charged for each transcript.

Textbooks

Textbooks are purchased by the student. The estimated cost of textbooks is from $25 to $40 per semester. A bookstore, operated under contract with the College, is located on the campus in the College Commons.

Parking Permits

No parking fee is accessed at Johnson County Community College, however, all vehicles must be registered with the College. (Refer to "Student Parking" in the Student Handbook for complete information.) Ample parking space is provided on campus for students, staff and College guests.

Laboratory and/or Course Fees

Laboratory and/or course fees to defray the cost of breakage, the replacement of expendable supplies, and/or special course expenses are charged in some courses. A schedule of fees is available at the time of registration for courses.

FINANCIAL AIDS

Johnson County Community College recognizes that financial assistance is a necessary adjunct to its educational program. Consistent with this philosophy, it has developed a program of assistance for students who meet the general requirements for eligibility.

The function of the Office of Financial Aids is to provide assistance in the formulation of realistic student financial plans. A number of grants, scholarships, long-term and short-term loans are available to prospective or present students who have demonstrated academic proficiency and have financial need. Part-time employment opportunities are open to all students, but are dependent upon the availability of jobs.

Financial aids available at the College, other than scholarships, are generally based on the extent of the student's need and the funds available.

DETERMINING FINANCIAL NEED

Most financial aid is awarded to students who show financial need. In determining this need, consideration is given to the amount of money the student should contribute to his own education, the amount of money the student's family should be able to contribute, and the cost of attending the College. The student's parents are expected to contribute to his education to the extent possible based on their income and assets.

The College is utilizing the Student Need Analysis Service of the American College Testing Program. This service provides a fair, objective assessment of a student's needs using a simplified form called Family Financial Statement. Students making application for financial aid, based on need, must submit a copy of this completed form and the required fee directly to the office designated on the form. Family Financial Statements are available at the College Office of Financial Aids.

A student who is financially independent of his parents would follow the same procedure as other students but would not be required to provide parents financial information. Instead, he would provide the College with a notarized statement indicating that during the twelve months previous to the application, he (1) has received no

financial support from either parent, (2) has not been claimed by either parent as a deduction for income tax purposes, and (3) has not resided with either parent. These statement forms are available at the College.

LOANS

Federally Insured Loans

Federally Insured Loans are obtained from any local participating lending agency and are underwritten by the Federal government. The education of young people from middle or upper income groups frequently places a financial burden on their families. In many cases, the student from the higher income brackets may not show enough need to qualify for other loans or grants. To help these young people and their families, the Federal government authorized the Insured Loan Program.

Students may borrow as much as $1,500 per year. A student from a family with an adjusted income of less than $15,000 a year pays no interest while he is attending an eligible college or school. Repayment of principal and interest begins on a date between nine and twelve months after the student has ceased his course of study. A student from a family with an adjusted income higher than $15,000 a year pays the entire interest on the loan, but he may borrow under the program at the current rate of interest. Students may pick up applications from the Office of Financial Aids and must receive verification of their enrollment from the College.

Obtain applications ("Student Application for Federally Insured Loan" OE Form 1154) from participating banks, savings and loan associates, credit unions, colleges, vocational schools or by writing to:

Director, Higher Education, Region VI
Office of Education, DHEW
601 East 12th Street
Kansas City, Missouri 64106

The student should, upon receiving the application:

- Complete Part A.
- Submit to Johnson County Community College for completion of Part B.
- Complete Part C (with family, as applicable).
- Submit completed application to participating lending institutions for their approval.
- Please note that under this program, loans are made or denied at the discretion of the participating lender.

National Defense Student Loan

Johnson County Community College is a participating member of the National Defense Student Loan Program as is outlined in the National Defense Education Act of 1958, Title II. High School seniors who have been accepted for admission to the College and currently enrolled students who are U.S. citizens are eligible to apply for one of these loans.

Repayment of loans must be fulfilled within the period of 10 years plus a 9 month period of grace. Payments are to be made at least quarterly during the repayment period. This period may be interrupted and deferred for the following reasons: (1) when the borrower is pursuing at least a half–time course of study at an institution of higher education, or (2) not in excess of three years, during which the borrower is a member of the Armed Forces of the United States, Peace Corps or VISTA. Repayments of principal are not required during such periods, and no interest on the loan accrues. Interest is computed at 3% simple interest on the unpaid balance of the principal. The borrower who becomes a full–time teacher in public or private non–profit elementary and secondary schools and in institutions of higher education need not repay 10% of their loan, plus interest, for each academic year of teaching service up to 50% (five years) of the loan.

Short-Term

The College has established a short-term, non-interest loan fund which is available to students for emergency needs. As long as funds are available, students may borrow any amount from $5 to $30 during a semester. Students may not borrow from this fund to pay for tuition. All loans must be repaid before the end of the semester in which the

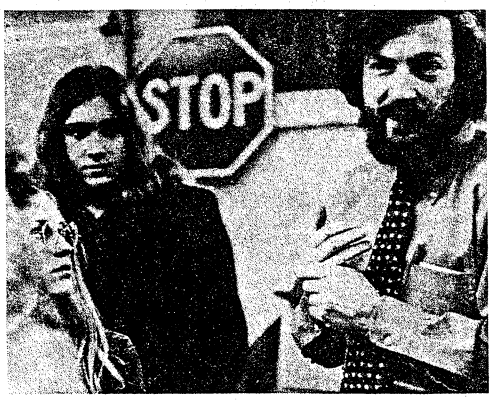
loan was made. Applicants should be carrying a full load (12 hours or more) and be regular in attendance. Repayment may be made in monthly installments or in lump sum. Students desiring a short-term loan should contact the College Office of Financial Aids.

Optimist Club of the Central Industrial District

This club contributed $500 to assist worthy students on a short-term basis, with the amount of any individual loan left to the discretion of the Office of Financial Aids. The recipient must be a full-time student or be making satisfactory progress in an approved program.

Law Enforcement Education Program Loans

This loan program which is authorized by the Omnibus Crime Control and Safe Streets Act of 1968, makes available ten-year, low-interest bearing loans of up to $1,800 per academic year to full-time students enrolled in undergraduate programs leading to degrees in areas directly related to law inforcement. The loans can be cancelled at the rate of 25% for each year of full-time employment in a public, state, local or Federal law enforcement agency. Applications may be obtained from the Office of Financial Aids and from most law enforcement agencies.



GRANTS

Board of Trustee Grants

The Johnson County Board of Trustees has provided grants which will remit all tuition for the first semester. They are renewable for each of three consecutive semesters as long as the student's academic record is at or above the minimum level required to remain in good standing at the College. Grants are available to three groups of students: (a) those who have need, (b) those who have demonstrated superior academic achievement, and (c) those who have special talents and abilities. Applications may be obtained from the College Office of Financial Aids.

Law Enforcement Education Program Grants

Also authorized by the Omnibus Crime Control and Safe Streets Act of 1968 is a grant program which provides for payment of tuition and fees not exceeding $300 per semester for full-time or part-time enrollment in an undergraduate program leading to a degree or certificate in law enforcement. Recipients must be full-time employees of a publicly funded law enforcement agency and must agree to remain in the service of the employing agency for a period of two years following completion of any course of study funded by a grant. Applications may be obtained from the College Office of Financial Aids and from most law enforcement agencies.

Endowment Grants

A limited number of grants are available to full-time students through the Financial Aids Office. These grants are provided by interested service organizations and individuals.

Most grants are renewable by application if the student maintains his eligibility and funds are available. Grants are awarded on the basis of (a) need for financial assistance, (b) academic achievement, and (c) special abilities. Applications are available at the College Office of Financial Aids.

SCHOLARSHIPS

Preferred Business Service Corporation Scholarships

This corporation offers an annual $250 scholarship for a student at Johnson County Community College who is capable of or making satisfactory progress toward a degree in Secretarial Science and is in need of financial assistance. Recipients are selected through the Office of Financial Aids.

State of Kansas Scholarships

Johnson County high school students who are planning to attend Johnson County Community College are eligible to apply for a State of Kansas Scholarship. The applicant's parents must be legal residents of Kansas and the applicant must receive a recommendation from his high school administrator. Recipients receive $500 annually or

cost of tuition and regular fees, which ever is less. Applications may be obtained from high school counselors.

STUDENT WORK PROGRAMS

College Work-Study Programs

Johnson County Community College participates in the College Work-Study Program as established under the Economic Opportunity Act of 1964. This program enables a full-time student (12 or more hours) to pursue degree requirements while holding a part-time job. This employment may be located on or off-campus and may take place during the academic year (including vacation periods) or during the summer months. The student is permitted to work a maximum average of fifteen (15) hours per seven day week when classes are in session and full-time (40 hours per week) when classes are not in session, i.e., recesses and vacations. Eligibility for this program is based primarily on need. The student must remain in good academic standing at the College and be a citizen of the United States. Applications are available at the College Office of Financial Aids.

Employment Opportunities

In addition to various jobs on campus such as: office assistants, library assitants, laboratory assistants, etc., the College will assist worthy and needy students in finding work in the community if they so desire. The student work-study program is under the direction of the Financial Aids Director.

APPLICATION FOR FINANCIAL AIDS

How to Apply

Students desiring financial aid should obtain an application for admission and complete all admission requirements prior to making any application for financial aid. Students should obtain the appropriate application form for the type of financial aid they are seeking from the Office of Financial Aids at the College.

Notification of Awards

Every student will be notified by mail of the decision of his application as soon as possible. Students who have been approved for financial aid will receive further directions relative to their award.

PLACEMENT

Assistance in placement is available to students of Johnson County Community College. The Placement Center not only specializes in locating positions for students who are graduates of the career programs of the College but also assists students in locating part-time employment.

STUDENT ACTIVITIES

The College encourages the student to participate in those activities which supplement the instructional program by providing experiences which will add to the student's enjoyment of life and stimulate his personal growth and social development. Opportunities for development of constructive leadership, cooperative planning, and special interest will be fostered through participation in the various student activities.

STUDENT ACTIVITIES

Student-interest organizations, clubs, and activities have been created at the College to provide these opportunities and experiences. Typical activities include Student Government, Intramural Athletics, Clubs, Publications, Intercollegiate Athletics and Organizations.

STUDENT GOVERNMENT

The College encouraged the students to form a governing agency with the objective of formulating policies and regulations, with the cooperation of the College staff and Board of Trustees, concerning such areas as orientation, student rights and responsibilities, conduct and discipline, student publications and the calendaring of student events.

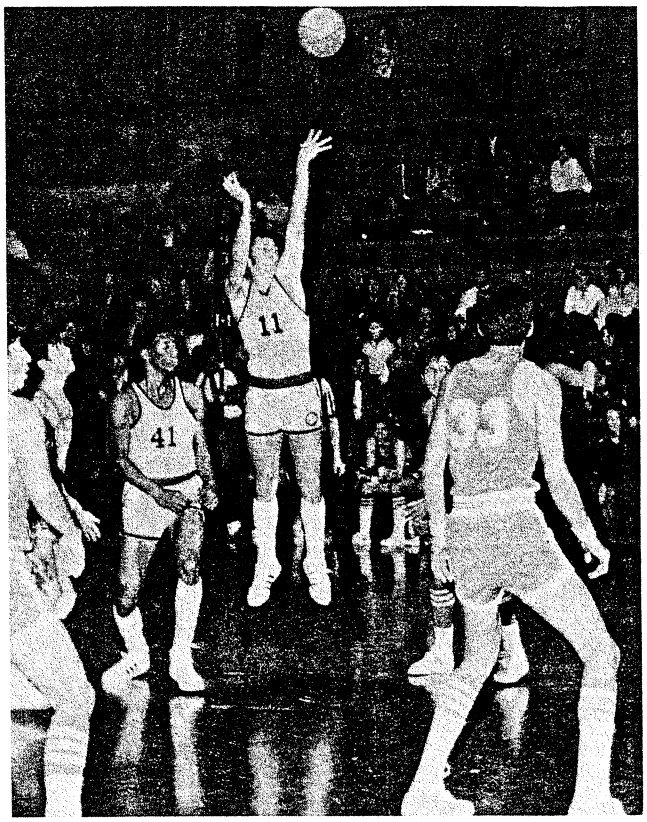
The College will also continue to encourage students to suggest by appropriate means to the College staff, and Board of Trustees, amendments pertaining to curriculum, college facilities, financial aids, community relations, library and educational resources, admission, placement, campus security and the quality of educational instruction.

The student government has representation by both full-time and part-time students carrying college work for credit.

INTERCOLLEGIATE ATHLETICS

The Johnson County Community College participates in the basketball program of the Kansas Junior College Jayhawk Conference, as well as in golf, track and tennis programs. The College will participate in other intercollegiate athletics as approved by the College Board of Trustees.

All athletes participating in intercollegiate athletics must have a physical examination.



INTRAMURAL ACTIVITIES

The College will provide extracurricular activities to complement and supplement the instructional programs. The purpose of the intramural program is to develop skills, encourage friendships and provide for enjoyable and healthy use of leisure time.

STUDENT HEALTH

The College does not provide medical services, nor does the College assume responsibility for injuries incurred by students when taking part in any College activity. Medical services are readily available at local clinics and hospitals.

Medical Examination

A medical examination may be required for certain courses and/or activities. When possible this requirement will be designated in the College catalog, otherwise the instructor or activity sponsor will indicate a medical examination requirement at the first meeting.

When a medical examination is required a satisfactory medical report must be provided by the student to the instructor or activity sponsor prior to the physical participation in the course or activity.

Participation in Activities

The College will review the medical examination forms and may advise students not to participate in physical activities.

Health and Accident Insurance

The College will provide an opportunity for students to obtain Health and Accident Insurance through a private agency. All student claims will be handled directly with the agency.

CIVIL RIGHTS

The Johnson County Community College will comply with the requirements of Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all the requirements imposed by or pursuant to the Regulations of the Department of Health, Education and Welfare (45

CFR Part 181) issued pursuant to the title, to the end that no person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be otherwise subjected to discrimination under any program or activity at the College.

HOUSING

Students attending the College will be responsible for locating housing. The College will not maintain an approved housing list nor assume any responsibility for student behavior off-campus.

SMOKING, GAMBLING, ALCOHOL AND DRUG ABUSE

Smoking is permitted only in designated areas on the campus grounds. Gambling, alcohol, narcotics and hallucinogenic-type drugs in any form are prohibited at all times on College property.

PERSONAL APPEARANCE

The College recognizes that a wide variety of personal styles concerning appearance and clothing are generally accepted in the local community. It is not the intention of the College to detail what is or is not acceptable. Students should be guided in their personal appearance by their plans for part-time jobs while at the College or for full-time employment upon leaving the College.

EDUCATIONAL MEDIA CENTER

Library services in the College are the responsibility of the Educational Media Center. The EMC however is not just a library; it is a service division organized to provide comprehensive media services to the students and staff of the College. The EMC has three sections: the Media Production Section, the Word Production Section, and the Library. The Media Production Section produces audio and visual materials for use throughout the College. Once material has been produced it becomes the responsibility of the Library to make provisions for its use. The Word Production Section provides stenographic, printing, and duplicating services to the College staff.

Library Collection

The library maintains a collection of all media – books, periodicals, films, slides, tapes, microforms, etc. – and provides a highly trained staff of librarians, media specialists, and media aides to assist patrons in locating, using, and producing the media needed in the College. Over 15,000 books, 450 current periodicals, over 40,000 documents on microfiche, plus hundreds of slides, video and audio recordings, and other media are available to support instruction and independent study in the College.

A catalog of these materials is maintained by computer. Printing the catalog in book form rather than on cards enables the EMC to distribute copies of it among the various buildings occupied by the College. There is no card catalog. Materials are organized according to the Library of Congress classification.

The EMC produces many slides, tapes, films, etc. for use in instruction. Frequently these materials are made available to students to use independently, supplementing classroom instruction with time spent viewing and listening on the equipment provided in the Library as well as at other locations on the campus.

Services

In addition to assiting students and staff in locating and using media, the librarians select media for inclusion in the collection, frequently upon the recommendation of staff or students. They also compile bibliographies for instructors. Other staff members arrange for film showings, video and audio recordings, and other such activities. When the library does not have needed materials, the staff will secure books and photocopies of magazine articles from other libraries for students and staff.

Schedule of Classes

A separate schedule, giving the time, day, fees and location of classes is printed and made available prior to each term.

Participants

Any person 18 years of age or older may enroll in Adult Continuing Education classes by filling out the registration form and paying the class fee. As a general rule, these students are enrolled as special students and are not required to complete the regular admission procedure of the College. All adults may enroll in any listed class regardless of class location or student residence. Adults who have not completed four years of high school are invited to register. Some courses will require a degree of experience or skill as noted in the course description.

Credits and Grading

Classes are not for college credit and the work and progress of the student are not graded.

Counseling

Student personnel services are available to those enrolled in the Adult Continuing Education program. The counseling service offers assistance to the individual by helping him plan a program, select courses, and work toward the fulfillment of educational and occupational goals. For information concerning work in a specific subject, students may consult the instructor of the class in which they may be interested.

Certificates

When requested by the student, and approved by the instructor, a Certificate of Completion will be awarded to those who meet minimum attendance requirements.

Instructors

The Adult Continuing Education staff includes instructors from the College, from nearby colleges and schools, persons from business, industry, and other areas of specialization.

Branches and Extension Centers

Classes may be offered anywhere in Johnson County provided that there is sufficient interest and arrangements can be made for suitable facilities and a competent instructor.

Fees

The Adult Continuing Education program is largely self-supporting. Fees will be as low as operational costs will allow.

Day or Evening Classes

Courses are offered at times best suited for presentation. These hours are dependent upon available facilities and when feasible are established to best serve the student or for the convenience of a particular group.

Short–Term Classes and Special Programs

In addition to regularly scheduled classes, the Adult Continuing Education Division offers special activities for adults on a short–term basis. Any club, organization, business, or group of individuals desiring educational services should contact the Adult Continuing Education Division and make their needs known. The Director of Adult Continuing Education will make arrangements to work with groups in the development of specific programs or courses.

Adding New Courses

The Adult Continuing Education Division will organize and administer any socially acceptable course for which a competent instructor, equipment, and room can be secured. Inquiries concerning new courses or programs should be directed to the Director of Adult Continuing Education. If a reasonable number of persons is interested, a class can begin at any time during the school year.

Courses

The following are representative of the various categories of Adult Continuing Education:

Business and Finance	Homemaking Education
Office Skills	High School Completion
Physical Education	GED Preparation
Creative Arts & Crafts	Adult Basic Education
Foreign Languages	Industrial Education
Health and Safety	Cultural Affairs
Language Arts	Discussion Groups
Leisure Skills	Special Interests

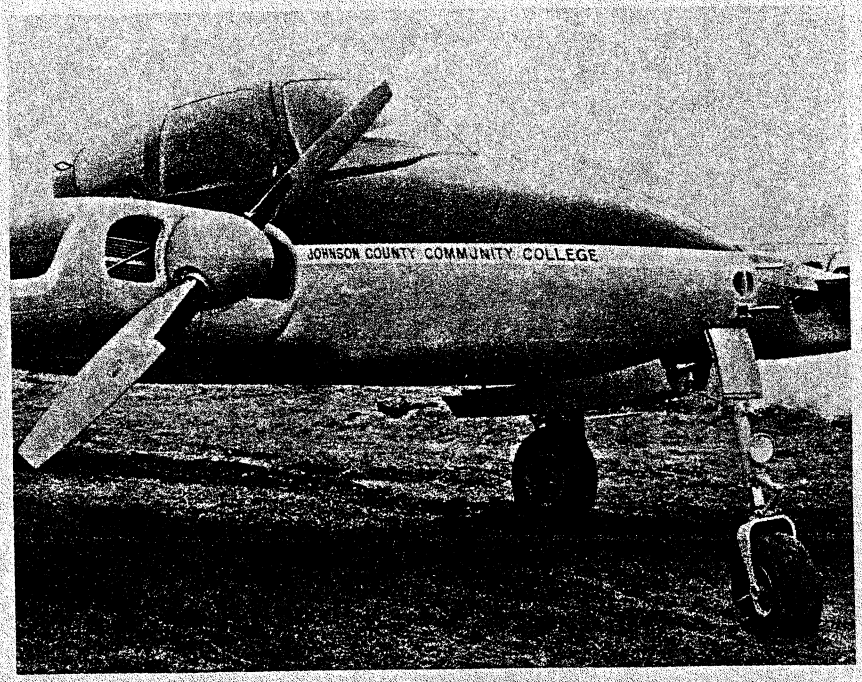
JOHNSON COUNTY COMMUNITY COLLEGE

PROGRAMS

PROGRAM OBJECTIVES

Basic to the philosophy of the Johnson County Community College is the recognition that each individual has unique abilities, interests and goals; consequently a unique instructional program should be designed for each individual that best serves his needs in meeting these objectives.

The following programs in the various instructional areas are suggested as guidelines for each individual in tailoring his program to meet his specific needs. In consultation with his counselor, a student may develop a program of instruction for general improvement or preparation for a career of his choice. Depending upon the student's chosen career, it may require his continuation at a four-year college or university, or the requirements may be satisfied at Johnson County Community College in two years or less.



AVIATION FLIGHT PROGRAM

The Aviation Flight Program develops proficiency in the art of flying both single and multi-engine aircraft. All flight operations are conducted at the Johnson County Airport in College-owned aircraft. Students perform specific flight maneuvers; become proficient in theoretical matters pertaining to cross-country, airport approach, and weather. After successfully completing the program, the student is eligible to take the FAA examination for private pilot and commercial licenses; and the instrument and multi-engine ratings. Applicants must pass the required FAA physical examination before flight training begins.

1st SEMESTER

AV 101	Private Pilot	1
AV 105	Private Pilot Ground School	3
AV 110	Introduction to Aviation	3
MATH 101	Technical Math	3
	Electives	5
	Total Credit Hours	15

2nd SEMESTER

AV 102	Commercial Pilot I	1
AV 106	Commercial Ground School	3
	Electives	11
	Total Credit Hours	15

3rd SEMESTER

AV 201	Commercial Pilot II	4
AV 115	Avionics	3
AV 219	Ground Instruction Techniques	3
	Electives	3
	Total Credit Hours	13

4th SEMESTER

AV 202	Instrument Pilot	3
AV 203	Multi-Engine Pilot	2
	Electives	9
	Total Credit Hours	14

SUMMER

AV 206	Instructor Pilot	3

BUSINESS ADMINISTRATION PROGRAM

This is suggested as a general guideline for those planning to transfer to four-year colleges or universities. Each student seeking a baccalaureate degree should check entrance requirements of the college of his choice. Those primarily interested in earning an Associate of Arts degree while preparing for a business career should plan their program with the member of the counseling staff most familiar with his area of specialization.

1st SEMESTER

BUS 101	Accounting I	3
BUS 111	Introduction to Business	3
SS 101	Sociology	3
COM 101	Communications I	3
	Electives	3
	Total Credit Hours	15

2nd SEMESTER

BUS 102	Accounting II	3
BUS 132	Business Data Processing	2
COM 102	Communications II	3
SS 103	Psychology	3
	Electives	4
	Total Credit Hours	15

3rd SEMESTER

BUS 201	Economics I	3
**BUS 215	Managerial Accounting	3
*BUS 211	Intermediate Accounting	3
MATH 116	College Algebra	3
	Electives	3
	Total Credit Hours	15

4th SEMESTER

MATH 110	Statistics	3
BUS 202	Economics II	3
*BUS 210	Cost Accounting	3
	Electives	6
	Total Credit Hours	15

*Accounting majors

**Non-accounting majors

DATA PROCESSING PROGRAM

The Data Processing Program develops the student's understanding of the concepts, principles, and techniques in the electronic processing of data for use in business, scientific, or other organizations in the community. Work experience in the data processing field is available to interested students on an optional basis.

1st SEMESTER

BUS 132	Business Data Processing	2
BUS 131	Programming Fundamentals	3
BUS 101	Accounting I	3
MATH 106	Algebra	3
	Elective	4
	Total Credit Hours	15

2nd SEMESTER

BUS 133	COBOL I	3
BUS 247	Computing Systems	3
BUS 102	Accounting II	3
MATH 110	Statistics	3
	Elective	3
	Total Credit Hours	15

3rd SEMESTER

BUS 243	Assembler Language	3
BUS	Data Processing Elective	2-3
BUS 144	FORTRAN	2
	Electives	8
	Total Credit Hours	15-16

4th SEMESTER

BUS 246	COBOL II	3
BUS	Data Processing Electives	6
	Electives	6
	Total Credit Hours	15

DENTAL ASSISTANT PROGRAM

The Dental Assistant Program is in affiliation with Penn Valley Community College, Kansas City, Mo., and is approved by the American Dental Association and Council on Dental Education. Clinical and dental assisting courses are taken at Penn Valley Community College and the supportive sciences and related courses are taken at Johnson County Community College. Techniques and manipulative skills of chairside assisting as related to operative dentistry and dental specialties are emphasized. Upon successful completion of the course sequence, students are eligible to sit for examination as a Certified Dental Assistant. *Applicants must be admitted through Penn Valley Community College.*

1st SEMESTER

COM 101	Communications I	3
SS 103	Psychology	3
DENA 151	Fundamentals of Dentistry	5
NS 105	Introduction to Health Occupations	2
	Elective	3
	Total Credit Hours	16

2nd SEMESTER

NS 116	Anatomy & Physiology	5
DENA 152	Fundamentals of Dentistry	5
SS 101	Sociology	3
	Elective	3
	Total Credit Hours	16

3rd SEMESTER

BUS 101	Accounting I	3
NS 115	Microbiology	5
DENA 153	Fundamentals of Dentistry	5
DENA 161	Clinical Practice	3
	Total Credit Hours	16

4th SEMESTER

NS 244	Nutrition and Diet Analysis	3
DENA 154	Fundamentals of Dentistry	3
DENA 162	Clinical Practice	5
COM 114	Speech	3
	Elective	2
	Total Credit Hours	16

DENTAL HYGIENE PROGRAM

The Dental Hygiene Program provides supervised clinical experience based upon theoretical knowledge and skills obtained in formal dental hygiene courses and in related biological and behavioral sciences. Upon successful completion of the program, students will be eligible to take the National and State Board Examinations for licensure. Each applicant must be a high school graduate or equivalent. The application process must be completed by May 1. Successful candidates will be notified prior to the fall semester.

1st SEMESTER

NS 116	Human Anatomy & Physiology	5
NS 125	Principles of Chemistry	5
NS 141	Dental Morphology & Occlusion	2
NS 143	Clinical Dental Hygiene I	3
COM 101	Communications I	3
	Total Credit Hours	18

2nd SEMESTER

NS 115	Microbiology	5
NS 147	Head & Neck Anatomy	2
NS 145	Dental Procedures I	2
NS 144	Clinical Dental Hygiene II	3
SS 103	Psychology	3
	Total Credit Hours	15

SUMMER

NS 241	Clinical Dental Hygiene III	5

3rd SEMESTER

NS 244	Nutrition & Diet Analysis	3
NS 245	Dental Procedures II	2
NS 242	Clinical Dental Hygiene IV	5
NS 249	Community Dental Health	3
NS 248	Pathology and Periodontology	3
	Total Credit Hours	16

4th SEMESTER

COM 114	Speech	3
SS 101	Sociology	3
NS 243	Clinical Dental Hygiene V	5
NS 246	Dental Procedures III	2
	Total Credit Hours	13

DRAFTING TECHNOLOGY PROGRAM

The Drafting Technology Program is based on standards established by the industry in the metropolitan area. Students have an opportunity to acquire "on the board" skills and related course work in preparation for entering the job market. Technical training includes principles and practices, engineering standards and conventions, familiarization with the application of design, and a knowledge of the graphical solutions to varied engineering problems.

1st SEMESTER

ENGR 101	Drafting I	7
MATH 101	Technical Mathematics I	3
	Electives	5
	Total Credit Hours	15

2nd SEMESTER

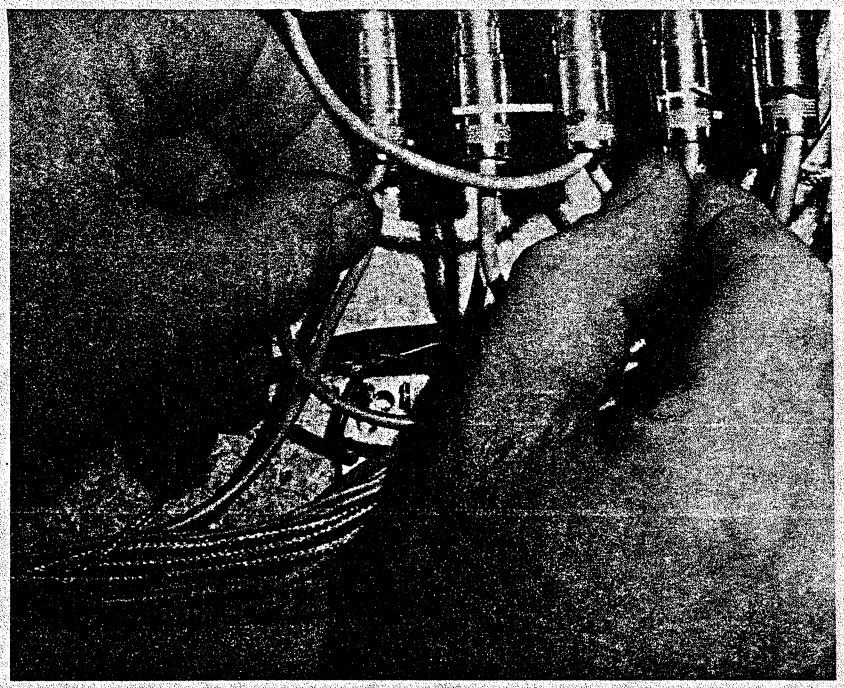
ENGR 102	Drafting II	7
MATH 102	Technical Mathematics II	3
	Electives	5
	Total Credit Hours	15

3rd SEMESTER

ENGR 201	Drafting III	7
ENGR 128	Industrial Science I	3
	Electives	5
	Total Credit Hours	15

4th SEMESTER

ENGR 202	Drafting IV	7
ENGR 128	Industrial Science II	3
	Electives	5
	Total Credit Hours	15



ELECTRICAL-ELECTRONICS ENGINEERING TECHNOLOGY PROGRAM

The Electrical-Electronics Engineering Technology Program is an Associate of Arts degree program which provides comprehensive theoretical and practical training in electronic technology. Actual servicing problems are given to students as part of their course of study. Most of the electronics laboratory is diagnostic and instruments used are of professional quality and in most instances are the same as those used in industry. *Students are strongly urged to complete two years of high school mathematics and one year of high school physics.*

1st SEMESTER

MATH 101	Technical Mathematics I	3
ENGR 140	Introductory Electronics	3
ENGR 150	Resistive Circuits	3
ENGR 128	Industrial Science I	3
	Elective	3
	Total Credit Hours	15

2nd SEMESTER

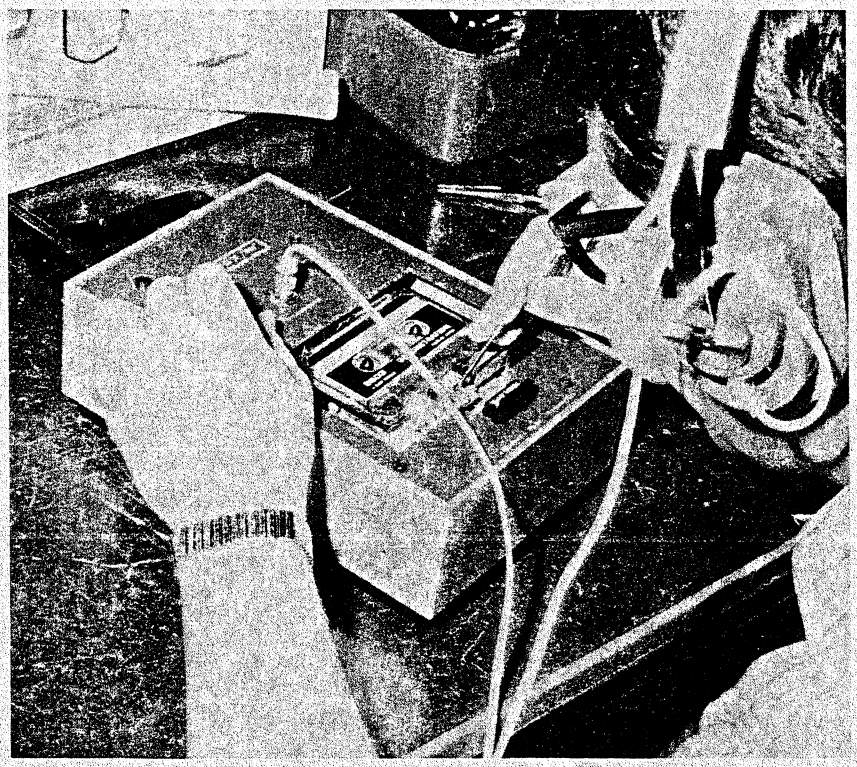
MATH 102	Technical Mathematics II	3
ENGR 141	Resistive Electronics	3
ENGR 151	Single-Time Constant Circuits	3
	Technical Elective	3
	Elective	3
	Total Credit Hours	15

3rd SEMESTER

ENGR 250	Network Analysis	3
ENGR 240	Pulse Circuits	3
ENGR 241	Linear Electronics Circuits	3
	Technical Elective	3
	Elective	3
	Total Credit Hours	15

4th SEMESTER

Technical Electives	9
Electives	6
Total Credit Hours	15



ELECTRICAL-ELECTRONICS SERVICE TECHNOLOGY PROGRAM

The Electrical-Electronics Service Technology program is a non-math, non-science approach to electrical-electronics technology which stresses practical applied methods. The program provides considerable flexibility to permit the student to meet his individual needs. Graduates receive a Certificate of Proficiency in their area of specialization.

1st SEMESTER

ENGR 140	*Introductory Electronics	3

2nd SEMESTER

ENGR 143	Basic Communications	3
ENGR 148	Digital Electronics	3
ENGR 142	*Micro-Precision Electronics	3
	Total Credit Hours	9

3rd SEMESTER

ENGR 145	Alignment Techniques	3
ENGR 147	Communication Systems	3
	Total Credit Hours	6

COMMUNICATIONS OPTION: The program outlined above prepares the student to service electronic equipment, such as electronic communications or home entertainment systems.

*INDUSTRIAL CONTROL OPTION: A basic two-course program (ENGR 140, 142) to prepare the student to service electronic control equipment used in industry.

ENGINEERING PROGRAM

The Engineering Program provides an opportunity for the student to complete the first two years of a baccalaureate program in engineering. Judicious selection of courses in consultation with his counselor permits the student to prepare for transfer to the baccalaureate program in the engineering field of his choice.

1st SEMESTER

MATH 121	Analytical Geometry-Calculus I	5
ENGR 105	Engineering Graphics I	3
NS 120	General Chemistry I	5
	Electives	3
	Total Credit Hours	16

2nd SEMESTER

MATH 122	Analytical Geometry-Calculus II	5
ENGR 106	Engineering Graphics II	3
	Electives	6
	Total Credit Hours	14

3rd SEMESTER

MATH 223	Analytical Geometry-Calculus III	5
NS 250	Engineering Physics I	5
ENGR 210	Statics	3
	Electives	3
	Total Credit Hours	16

4th SEMESTER

MATH 224	Differential Equations	3
NS 251	Engineering Physics II	5
ENGR 211	Dynamics	3
	Electives	3
	Total Credit Hours	14

Chemistry requirements vary from five to ten credit hours in the various Engineering programs. It is recommended that General Chemistry 121 be taken by those students needing additional chemistry credits.

FASHION MERCHANDISING PROGRAM

The Fashion Merchandising Program offers a career opportunity for men and women having imagination and interest in promoting new fashion ideas and products. Theoretical course work is reinforced through on-the-job experience at approved retailing establishments in the community. *Students may be required to be bonded.*

1st SEMESTER

BUS 177	Salesmanship	3
BUS 178	Fashion Fundamentals	3
*BUS 185.1	Fashion Field Study	3
	Electives	6
	Total Credit Hours	15

2nd SEMESTER

BUS 176	Retailing	3
BUS 180	Retail Advertising & Display	3
BUS 181	Textiles	2
*BUS 185.2	Fashion Field Study	3
	Electives	4
	Total Credit Hours	15

SUMMER

*BUS 185.3	Fashion Field Study	3

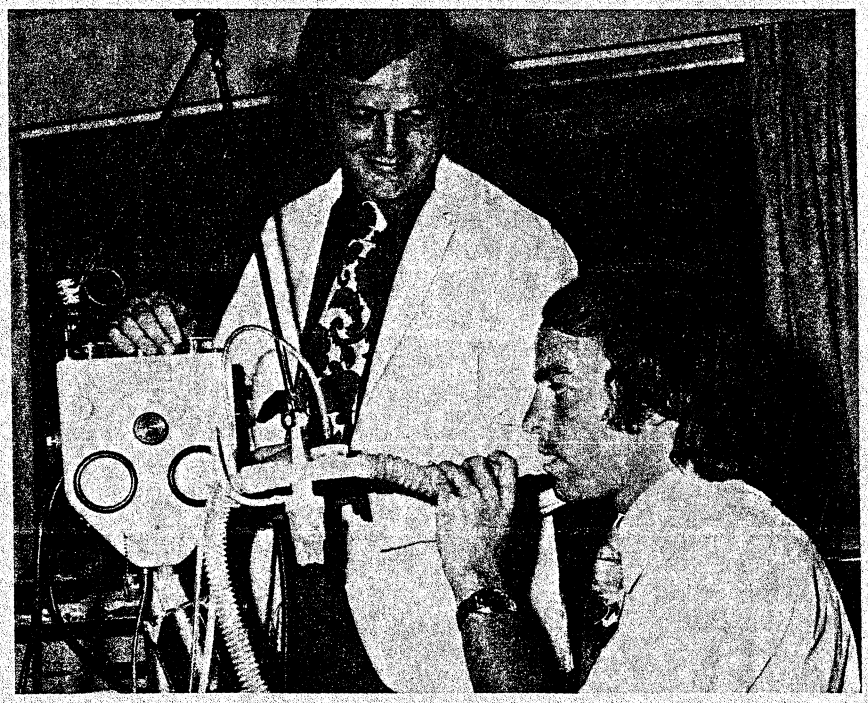
3rd SEMESTER

BUS 214	Marketing	3
BUS 179	Fashion Fundamentals	3
*BUS 185.4	Fashion Field Study	3
	Electives	6
	Total Credit Hours	15

4th SEMESTER

BUS 279	Socio-Economic Aspects of Clothing	3
*BUS 185.5	Fashion Field Study	3
	Electives	9
	Total Credit Hours	15

*Students must complete from 9 to 15 credits of field study by arrangement with program coordinator.



INHALATION THERAPY PROGRAM

The Inhalation Therapy Program is scheduled over twenty-two months to include pre-clinical work at Johnson County Community College and theory and practice in clinics and affiliated hospitals. Emphasis is placed on function and design of inhalation therapy equipment, principles and methods of gas supply, equipment maintenance and application. Completion of course work and practicum enables the student to sit for examination as a Registered Therapist (ARIT). *Students must be jointly accepted by the College and Hospital School.*

1st SEMESTER

NS 102	Physical Science	4
COM 101	Communications I	3
NS 125	Principles of Chemistry	5
SS 103	Psychology	3
	Total Credit Hours	15

2nd SEMESTER

NS 116	Anatomy and Physiology	5
NS 115	Microbiology	5
COM 114	Speech	3
SS 101	Sociology	3
	Total Credit Hours	16

SUMMER

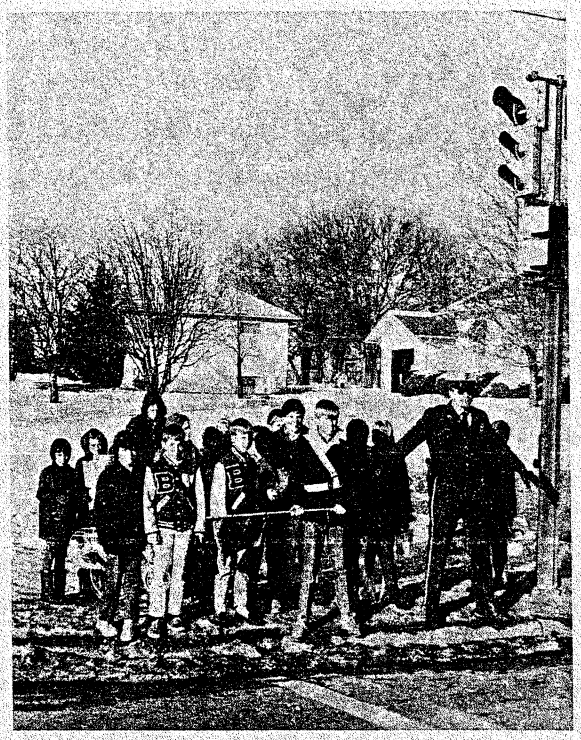
NS 051	Inhalation Therapy	3

3rd SEMESTER

NS 052	Inhalation Therapy	5
NS 053	Inhalation Therapy	4
NS 054	Inhalation Therapy	3
	Elective	3
	Total Credit Hours	16

4th SEMESTER

NS 055	Inhalation Therapy	5
NS 056	Inhalation Therapy	1
NS 057	Inhalation Therapy	2
NS 058	Inhalation Therapy	2
	Elective	3
	Total Credit Hours	13



LAW ENFORCEMENT PROGRAM

The Law Enforcement Program is designed for pre-service and in-service personnel to fulfill the needs of metropolitan Kansas law enforcement agencies and to satisfy minimum training requirements specified by law. Courses listed are for the non-police student. Those presently working in the field are afforded other options; short courses, workshops and seminars. *General qualifications for law enforcement personnel include a minimum - maximum height and weight requirement, 20/30 vision in each eye correctable to 20/20, no criminal record, and United States citizenship.*

1st SEMESTER

SS 151	Intro to Law Enforcement	3
SS 154	Study of Criminal Justice System	3
SS 159	Police and the Public	3
COM 101	Communications I	3
SS 222	American National Government	3
	Total Credit Hours	15

2nd SEMESTER

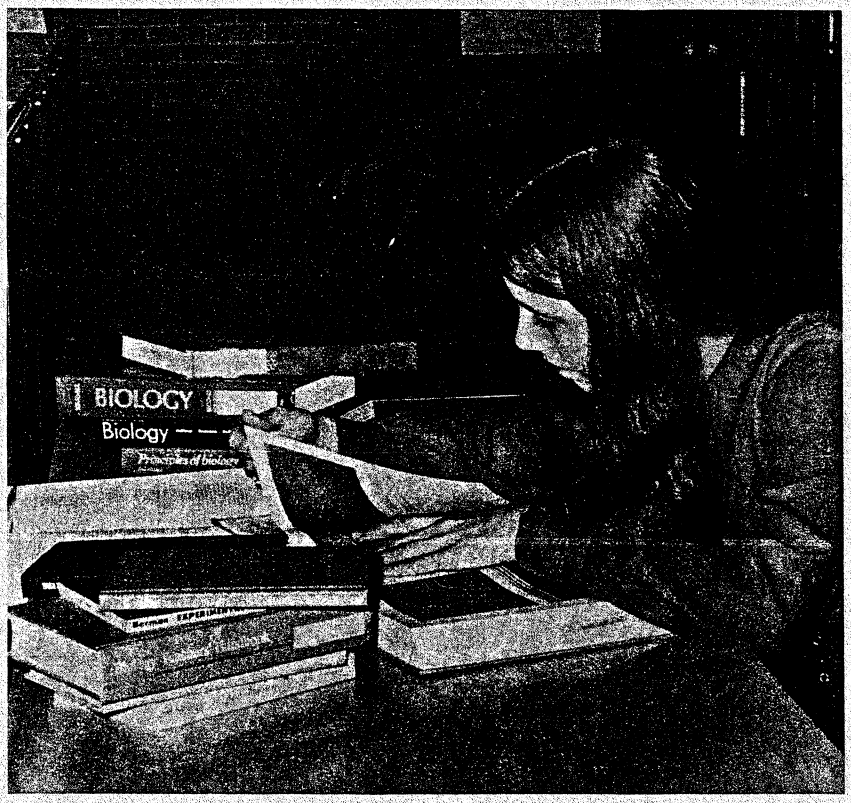
SS 155	Criminal Law	3
SS 153	Juvenile Code & Procedures	3
SS 255	Accident Investigation	3
COM 114	Speech	3
	Elective	3
	Total Credit Hours	15

3rd SEMESTER

SS 250	Motor Vehicle Law	3
SS 257	Patrol Procedure A	3
SS 156	Criminal Investigation	3
SS 258	Patrol Procedure B	3
	Elective	3
	Total Credit Hours	15

4th SEMESTER

SS 256	Constitutional Case Law	3
SS 251	Introduction to Criminalistics	3
	Electives	9
	Total Credit Hours	15



LIBERAL ARTS PROGRAM

The Associate Degree program in Liberal Arts provides the opportunity for the student to complete the first two years of a baccalaureate program in the Liberal Arts. Proper planning in consultation with his counselor permits the student to transfer to a baccalaureate program in the discipline of his choice.

1st SEMESTER

COM 101	Communications I	3
NS 101	Natural Science or	
SS 101	Sociology	3
	Electives	9
	Total Credit Hours	15

2nd SEMESTER

COM 102	Communications II	3
NS 102	Natural Science or	
SS 102	Political Science	3
	Electives	9
	Total Credit Hours	15

3rd SEMESTER

SS 103	Psychology	3
HUM 101	Humanities	3
	Electives	9
	Total Credit Hours	15

4th SEMESTER

HUM 102	Humanities	3
	Electives	12
	Total Credit Hours	15

The above allows individualized programs to be designed for students selecting the following types of options: English, Fine Arts, Foreign Language, Law, Philosophy, Political Science, and Teacher Education.

NURSING PROGRAM

The Associate Degree Nursing Program provides supervised clinical experience based upon theoretical knowledge and skills obtained in formal nursing courses and in related biological and behavioral sciences. Upon successful completion of this program, students are eligible to take State Board examinations for licensure in the State as a Registered Nurse. Applicants must be a high school graduate or have successfully completed the General Educational Development (GED) test, or have completed 30 hours of satisfactory college work. Each applicant must pass a physical examination. Admission to the program is by selection only. The application process must be completed by May 1. Successful candidates will be notified prior to the fall semester.

1st SEMESTER

COM 101	Communications I	3
SS 103	Psychology	3
NS 117	Human Anatomy	4
NS 131	Nursing Care of the Individual	6
	Total Credit Hours	16

2nd SEMESTER

SS 210	Child Development	3
NS 118	Human Physiology	4
NS 132	Individual: Adaptation to Change	6
	Electives	3
	Total Credit Hours	16

3rd SEMESTER

NS 115	Microbiology	5
NS 231	The Individual and His Illness	10
	Total Credit Hours	15

4th SEMESTER

SS 101	Sociology	3
NS 232	Individual: Adaptation to Illness	10
	Total Credit Hours	13

RETAIL MARKETING MANAGEMENT PROGRAM

The Retail Marketing Management Program prepares the student for a career in retail merchandising, store management, and related areas. Through selected courses and on-the-job experience at an approved retail establishment in the community, the student is provided an opportunity to apply theoretical training to everyday problems of practical business operations.

C34

1st SEMESTER

BUS 101	Accounting I	3
BUS 177	Salesmanship	3
*BUS 170.1	Retail Field Study	3
BUS 111	Intro to Business	3
	Electives	3
	Total Credit Hours	15

2nd SEMESTER

BUS 176	Retailing	3
BUS 132	Business Data Processing	2
BUS 180	Retail Advertising & Display	3
*BUS 170.2	Retail Field Study	3
	Electives	4
	Total Credit Hours	15

SUMMER

*BUS 170.3	Retail Field Study	3

(Note: Requires full-time employment)

3rd SEMESTER

BUS 214	Marketing	3
BUS 201	Economics I	3
BUS 212	Business Law	3
*BUS 170.4	Retail Field Study	3
	Electives	3
	Total Credit Hours	15

4th SEMESTER

BUS 251	Principles of Management	3
BUS 200	Personnel Management	3
*BUS 170.5	Retail Field Study	4
	Electives	5
	Total Credit Hours	15

*Students must complete from 9 to 15 credit hours of field study by arrangement with program coordinator.

SCIENCE PROGRAM

The Associate Degree program in Science provides the opportunity for the student to complete the first two years of a baccalaureate program in science. Judicious selection of courses in consultation with his counselor presents the student with options in several areas of pure and applied science.

1st SEMESTER

COM 101	Communications I	3
HUM 101	Humanities	3
SS 101	Sociology	3
	Electives	6
	Total Credit Hours	15

2nd SEMESTER

COM 102	Communications II	3
HUM 102	Humanities	3
SS 102	Political Science	3
	Electives	6
	Total Credit Hours	15

3rd SEMESTER

SS 103	Psychology	3
	Electives	12
	Total Credit Hours	15

4th SEMESTER

	Electives	15
	Total Credit Hours	15

The above allows individualized programs to be designed for students selecting the following types of options:

BIOLOGY OPTION: Biology students should take: Biology of Animals 110; Biology of Plants 111; General Chemistry 120, 121; Organic Chemistry 220, 221; and College Algebra 116.

CHEMISTRY OPTION: Chemistry students should take: General Chemistry 120, 121; Organic Chemistry 220, 221; and Analytical Geometry-Calculus 121, 122, 223.

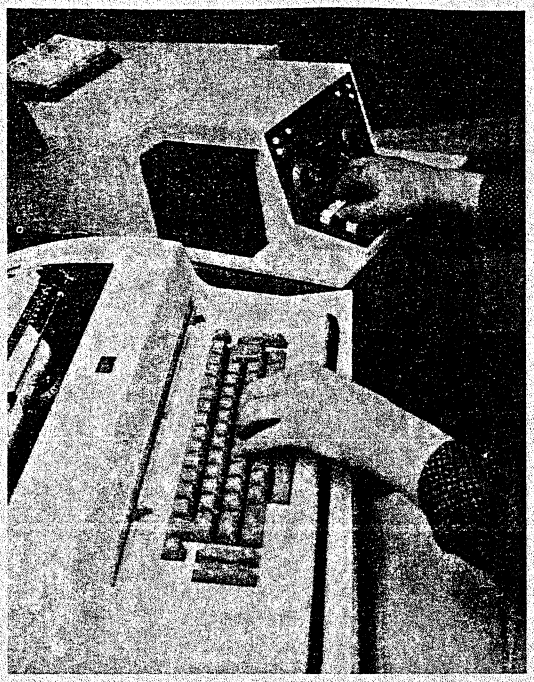
DENTAL OPTION: Pre-dental students should take: Biology of Animals 110; General Chemistry 120, 121; Principles of Organic Chemistry 225; General Physics 150, 151; Human Anatomy-Physiology 116; and Introduction to Health Occupations 105.

MEDICAL OPTION: Pre-medical students should take: Biology of Animals 110; General Chemistry 120, 121; Organic Chemistry 220, 221; Trigonometry 117; General Physics 150, 151; Human Anatomy 116, 117; Human Physiology 118; and Medical Terminology 105, 106.

PHARMACY OPTION: Pre-pharmacy students should take: Biology of Animals 110; Biology of Plants 111; General Chemistry 120, 121; Trigonometry 117; General Physics 150, 151; and Medical Terminology 106.

PHYSICS OPTION: Physics students should take: Analytical Geometry-Calculus 121, 122, 223; Differential Equations 224; and Engineering Physics 250, 251.

VETERINARY OPTION: Pre-veterinary students should take: Biology of Animals 110; General Chemistry 120, 121; Organic Chemistry 220, 221; College Algebra 116, 117; General Physics 150, 151; Human Anatomy 117; Human Physiology 118; and Medical Terminology 106.



SECRETARIAL CAREERS PROGRAM

The Secretarial Careers Program provides skill and theory for immediate job entry in general office and secretarial positions. Legal and medical options may be pursued through more specialized curriculums and supervised work experience in approved offices throughout the community. Early counseling will enable the student to satisfy both course selection and work experience requirements in preparing for the Certified Professional Secretary examinations (CPS) or for the more concentrated college certificate program.

1st SEMESTER

BUS 151	Shorthand	3
BUS 156	Intermediate Typing	3
BUS 161	Records Management	2
	Electives	7
	Total Credit Hours	15

2nd SEMESTER

BUS 152	Dictation & Transcription	3
BUS 157	Production Typing	3
	Electives	9
	Total Credit Hours	15

SUMMER

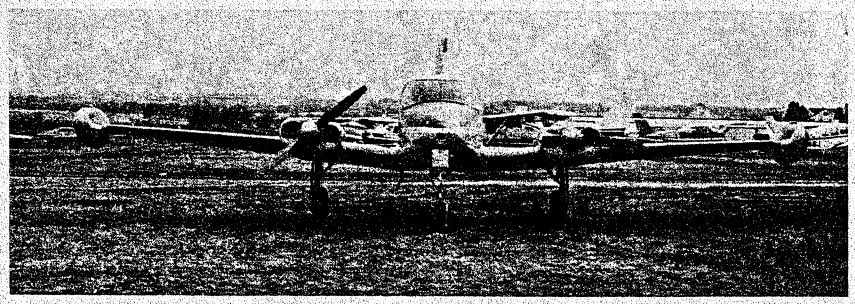
BUS 166.1	Secretarial Field Study	3

3rd SEMESTER

BUS 262	Secretarial Procedures	3
BUS 266.2	Secretarial Field Study	3
	Electives	9
	Total Credit Hours	15

4th SEMESTER

BUS 263	Secretarial Procedures	3
BUS 266.3	Secretarial Field Study	3
	Electives	9
	Total Credit Hours	15



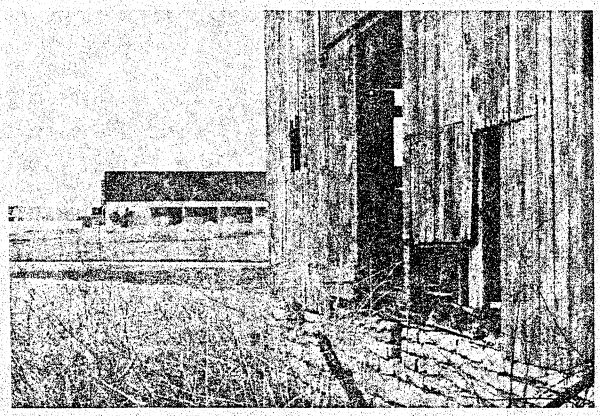
AIR TRAFFIC CONTROL MANAGEMENT

An Air Traffic Control Management program has been developed to train candidates for employment as air traffic controllers by the Federal Aviation Administration. In view of the limitations on employment of new controllers by the FAA the College has suspended the offering of this program to civilian students. Therefore the following courses listed in the previous College catalog are not included in the Course Descriptions section: (AV 230) Flight Services; (AV 231) Terminal Air Traffic Control; (AV 232) Enroute Air Traffic Control; (AV 233) Air Traffic Control Internship.

U. S. AIR FORCE PROGRAM

However, the College in cooperation with the U.S. Air Force will offer an Air Traffic Control Management program which leads to an Associate of Arts degree for military personnel who wish to increase their overall performance as traffic controllers and to up-grade their managerial capability. This program is conducted on a cooperative basis with skills being taught by the Military; technical and general education courses provided by the College. A minimum of one semester of campus instruction includes courses in aviation management, aviation technology, psychology, and communicative skills.

In general, this program is designed for non-commissioned officers having approximately four to eight years of Air Force service and who are experienced as controllers. Interested military personnel are advised to contact the College Admission's Office or Military Education Officer.



AGRI–MARKETING AND MANAGEMENT

The Agri–Marketing and Management curriculum is designed to develop student knowledge and understanding in the broad perspective of agriculture. Rapid technological changes in agriculture, business, and industry have pointed up the need for more technically trained people to assist in the management and economic problems involved in production, marketing, and distribution services of agriculture. Many responsible positions in agriculture businesses and industries require technical training not available in high schools or in four–year colleges.

The increased urbanization of greater areas of the country through construction of private and public buildings, parks, and parkways has created a need for trained personnel in all fields of agriculture. Fields include occupations related to the production and sale of plants and products, as well as the ornamental use of plants for landscaping and floral work. In the projected programs students will have the option of specializing in such fields as: landscaping, nursery management, turf management, retail floriculture, and agricultural sales.

Each student is given an opportunity to apply the knowledge and skills taught on campus to practical business situations through on–the–job experiences.

CAREERS AND SERVICES FOR THE HEARING IMPAIRED

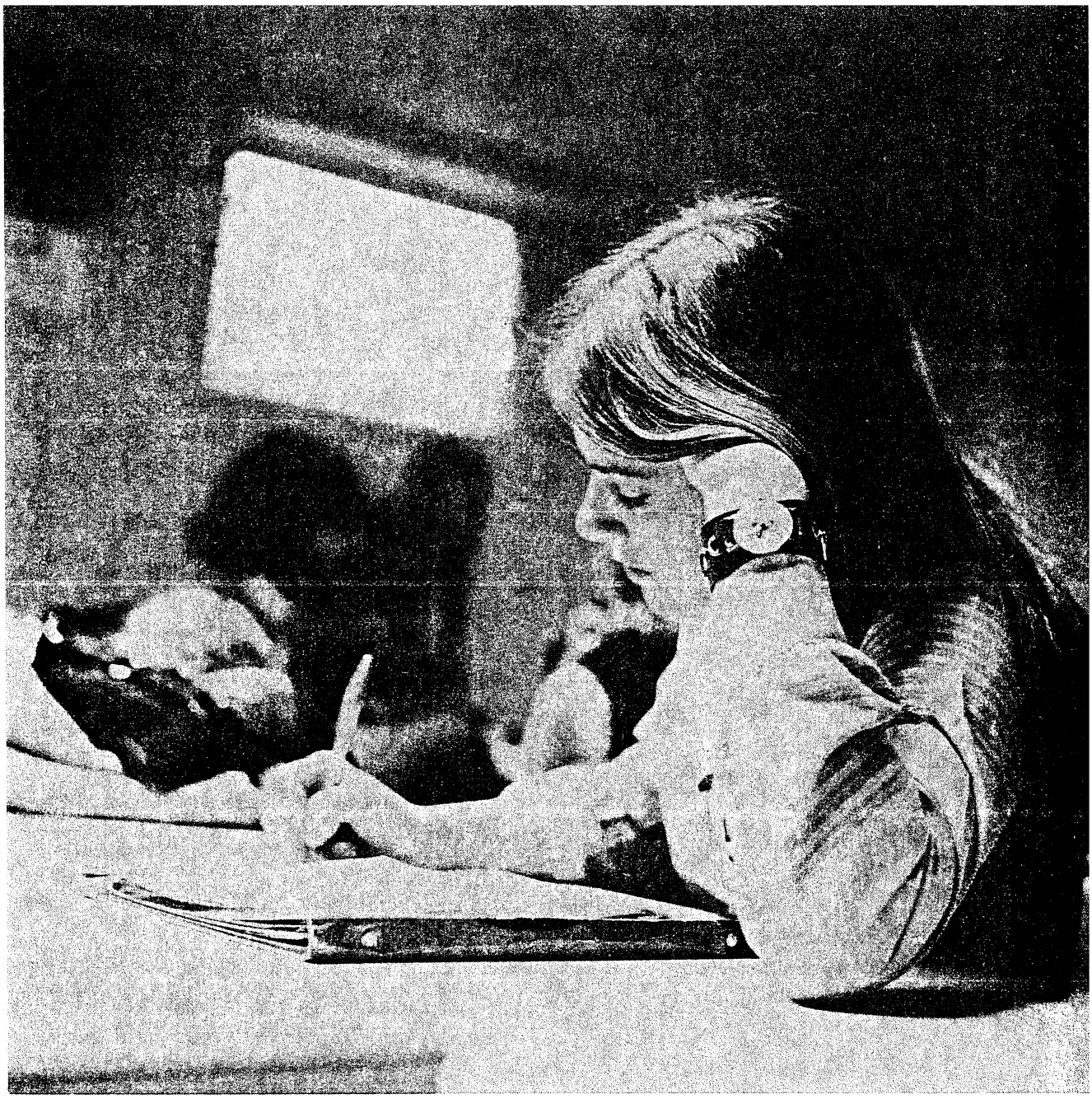
Comprehensive programs for individuals with varying degrees of hearing losses have been developed with the concept that the hearing impaired and deaf should be educated in essentially the same environment as the hearing.

With the advice of selected leaders in occupations related to business, industry, government, and the professions, selected career programs will be made available to students enrolled in this program. Tentative options include areas in drafting, electronics, para-medical and office careers.

To reinforce basic skills, ease the adjustment to a mixed classroom, and provide appropriate orientation to college life, these services have been established to support the instructional programs:

- Interpreters will be available for classroom and general campus functions and will also be available to the individual student to the extent made possible by the program resources.
- Tutors will be provided as required on a one–to–one basis, and group tutoring sessions will be organized.
- At the recommendation of the instructor, students will be provided with notetakers to record in outline form the essential elements of the classroom instruction.
- The College Learning Center provides supportive classroom help in academic areas.
- A counselor for students with special needs will work specifically with both the deaf and the hearing impaired students and provide academic, vocational, and personal counseling. A variety of interest, aptitude, and ability tests are available to provide a complete testing service. A referral service is provided for those students needing intense or prolonged help with personal or social problems.
- Where necessary special equipment may be made available.

As a general qualification for admission into this program, students must show evidence of prior special educational programming on the basis of deafness.



JOHNSON COUNTY COMMUNITY COLLEGE

COURSE DESCRIPTIONS

AVIATION

(AV 101) PRIVATE PILOT — **1 Credit**

Prerequisite: FAA third-class medical certificate

A basic flight course providing flight instruction to prepare the student to qualify for the FAA private pilot rating. A total of 38 dual and solo flying hours will be provided. Flight hours by arrangement.

(AV 102) COMMERCIAL PILOT I — **1 Credit**

Prerequisites: AV 101 and FAA second-class medical certificate

The first of two phases of flight training in preparation for the FAA commercial pilot's rating. Emphasis will be on the procedures and maneuvers required for the commercial rating. A total of 60 hours of dual and solo flying hours will be provided. Flight hours by arrangement.

(AV 105) PRIVATE PILOT GROUND SCHOOL — **3 Credits**

The study of meteorology, navigation, theory of flight, radio communication and rules and regulations necessary to meet the training requirements for the FAA private pilot written examination. Class meets three hours per week.

(AV 106) COMMERCIAL GROUND SCHOOL — **3 Credits**

Prerequisite: AV 105 or an FAA private pilot rating

In-depth study of meteorology, radio navigation, instruments, flight information publications, charts, aircraft performance characteristics, rules and regulations, aircraft and engine operations, and cross-country flight planning necessary to prepare for the FAA commercial pilot written examination. Class meets three hours per week.

(AV 110) INTRODUCTION TO AVIATION **3 Credits**

Introductory course covering the development of aviation and its importance in the American economy. Special emphasis on the history of aviation, the airlines, general aviation and the aviation industry. Class meets three hours per week.

(AV 112) INTRODUCTION TO POWERPLANTS **3 Credits**

Introduction to the fundamental principles of aircraft engines, operation, basic construction, induction, ignition and lubrication systems. Designed to give pilots a better understanding of the powerplant. Class meets three hours per week.

(AV 113) INTRODUCTION TO AIRFRAMES **3 Credits**

An examination of methods and materials used in the construction of airframes. Emphasis is placed on safety and inspection techniques. Class meets three hours per week.

(AV 115) AVIONICS **3 Credits**

Introductory course designed to give pilots an understanding of aircraft electrical systems and airborne avionics equipment. Class meets three hours per week.

(AV 201) COMMERCIAL PILOT II **4 Credits**

Prerequisite: AV 102

Continuation of Commercial Pilot 102. The second half of the two phase flight and ground training necessary to complete the requirements for the FAA commercial pilot's rating. Hours by arrangement.

(AV 202) INSTRUMENT PILOT **3 Credits**

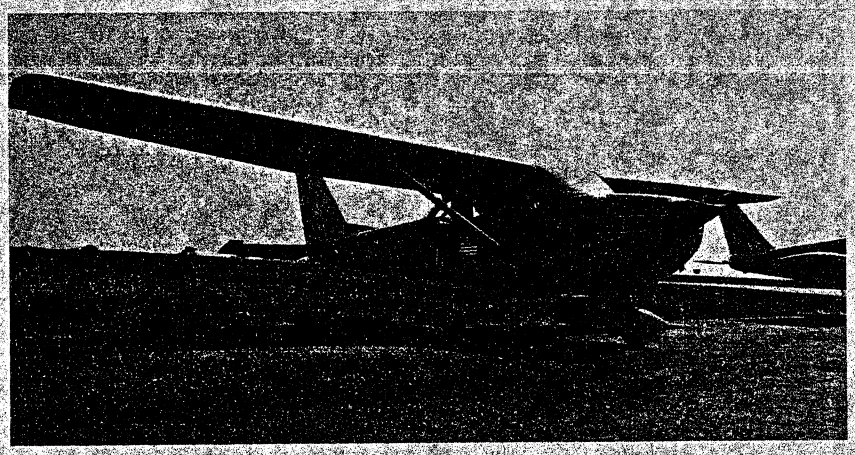
Prerequisite: AV 101 or AV 201

This course of flight training leads to the FAA instrument rating. Actual instrument practice is given on holding patterns, time-distance problems, ADF and VOR tracking procedures, enroute and terminal navigation procedures. All flight time is with a certified flight instructor. Hours by arrangement.

(AV 203) MULTI-ENGINE PILOT **2 Credits**

Prerequisite: AV 101 or AV 201

This course leads to the FAA multi-engine pilot rating. All flight training is given in a modern twin-engine aircraft and is designed to provide the advanced pilot a greater depth of aircraft experiences. Hours by arrangement.



(AV 206) INSTRUCTOR PILOT **3 Credits**

Prerequisite: AV 201

This course prepares the student with teaching and practical experiences that are necessary to qualify for the FAA certified instructor rating. Hours by arrangement.

(AV 215) AIRPORT MANAGEMENT **3 Credits**

A survey and study of the major functions of airport management. Special attention is given to the areas of organization, zoning, financing, planning, safety, and the social-economic effect on the community or region. Class meets three hours per week.

(AV 216) AVIATION SEMINAR **3 Credits**

Prerequisite: AV 201 or by permission

A survey of the "state of the arts" in aviation. Group discussion and reports on equipment, airport development, air traffic control, and other current topics in the field of aviation. Tours and field trips include FAA facilities, manufacturing plants, and airports. Lectures by aviation experts and papers on pilot techniques are also used as bases for class instruction. Class meets three hours per week.

(AV 217) AIR TRANSPORTATION **3 Credits**

The development and present status of air transportation. The organization and function of the Federal Aviation Agency and the Civil Aeronautics Board are studied. Class meets three hours per week.

(AV 219) GROUND INSTRUCTION TECHNIQUES **3 Credits**

Investigation of teaching techniques and supervised practice in the teaching of ground school aviation subjects. Class meets three hours per week.

(BUS 101) ACCOUNTING I **3 Credits**

Introduction to accounting fundamentals. Emphasis on the recording and analysis of transactions, use of journals, ledgers, and financial statements. Practice set normally required of students. Class meets three hours per week.

(BUS 102) ACCOUNTING II **3 Credits**

Prerequisite: BUS 101 or by permission.

Continuation of Accounting 101 with increased emphasis on interpretation and use of accounting data by management. Continuation of accounting theory application for partnerships and corporations including preparation and use of financial statements. Class meets three hours per week.

(BUS 103) PRINCIPLES OF JOURNALISM **3 Credits**

A study of journalism, its role in our society, and the social responsibility of the press. Emphasis is placed on the various types of news and feature stories and the elements of style. Class meets three hours per week.

(BUS 104) NEWS GATHERING AND NEWS WRITING **3 Credits**

An evaluation of news and how news is gathered, written and published. Practical experience includes interview techniques and in-depth writing. Class meets five hours per week.

(BUS 105) FUNDAMENTALS OF ADVERTISING **3 Credits**

The role of advertising in today's business world. A study of the various forms of advertising and the media involved. Class meets five hours per week.

(BUS 106) ADVERTISING COPY WRITING **3 Credits**

Prerequisite: BUS 105 or by permission

Principles of advertising copy writing with practice in developing copy for a variety of products, both tangible and intangible. Each class member will execute an advertising campaign. Class meets four hours per week.

(BUS 111) INTRODUCTION TO BUSINESS **3 Credits**

Course acquaints beginning students with modern business enterprise. Functional areas such as marketing, personnel, accounting, production, etc., are emphasized as well as an examination of the relationship of business to its environment. Classroom activities include discussion groups, lectures and case discussion. Class meets three hours per week.

(BUS 114) PERSONAL FINANCE **3 Credits**

Course designed for non-business majors as well as for business majors. Emphasis on values, establishing and maintaining credit controlling expenditures through use of a budget, and the safeguarding and investment of savings. Class meets three hours per week.

(BUS 131) PROGRAMMING FUNDAMENTALS **3 Credits**

Study of each step required in flowcharting, writing and documenting a computer program. The student writes several programs in BASIC utilizing the remote terminal in the laboratory. Course also covers input/output coding, systems, computer components and their interrelationships, and numbering systems. Two hours of class and four hours of laboratory per week.

(BUS 132) BUSINESS DATA PROCESSING **2 Credits**

Study of punch-card, unit-record, and digital computer concepts for use in studying typical business applications. Key-punch, unit-record equipment and a conversational remote terminal utilized in the lab. Class meets two hours per week.

(BUS 133) COBOL I **3 Credits**

Prerequisites: BUS 131 and concurrent enrollment in BUS 101

Emphasis is placed upon development of a complete understanding of the function and use of statements in the four major divisions of ANS COBOL. Integrated applications of this knowledge in programming several typical problems using COBOL and the data processing facilities also stressed. Class meets three hours per week.

(BUS 144) FORTRAN **2 Credits**

Prerequisites: BUS 131 and MATH 106 or MATH 116 and concurrent enrollment in MATH 110

Study of the vocabulary and grammar of the ANS FORTRAN programming language. Integrated application of this knowledge in programming several typical problems using FORTRAN and the data processing laboratory facilities also stressed. Class meets two hours per week.

(BUS 151) SHORTHAND **3 Credits**

Prerequisite: BUS 155 or concurrent enrollment or by permission

Theory of Gregg (Diamond Jubilee Series) shorthand, word building and phrasing, with emphasis on dictation through the use of tapes and programmed materials. Individualized instruction with a minimum of five hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 152) DICTATION AND TRANSCRIPTION **3 Credits**

Prerequisites: BUS 151 and BUS 155 or by permission

Includes a review of shorthand theory by using drills on speed, efficient transcription techniques, spelling, punctuation and grammar through the use of tapes and programmed materials. Individualized instruction with a minimum of five hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 155) BEGINNING TYPING **3 Credits**

Mastery of the keyboard and machine techniques. Instruction in personal and business letters, outlines, manuscripts, tabulation and centering. Individualized instruction with a minimum of five hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 156) INTERMEDIATE TYPING **3 Credits**

Prerequisite: BUS 155 or by permission

Emphasis on speed and accuracy in typing business letters, manuscripts, memoranda, tabulated reports, and financial reports. Periodic production and performance tests. Individualized instruction with a minimum of five hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 157) PRODUCTION TYPING **3 Credits**

Prerequisite: BUS 156 or equivalent

Development of high degree of proficiency in production typing. This course includes instruction on automatic typewriters and transcription equipment. Individualized instruction with a minimum of five hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 158) LEGAL SECRETARIES I **2 Credits**

Provides legal secretaries and potential legal secretaries professional knowledge concerning various phases of the law office. Course includes topics recommended by the National Association of Legal Secretaries. Students wishing to prepare for the PLS examination should consult with the instructor prior to enrollment. This class is designed as a general overview of the field of law as it applies to a legal secretary. Also of interest and value to students considering law as a career. Class meets two hours per week.

(BUS 159) LEGAL SECRETARIES II **2 Credits**

Prerequisite: BUS 158 or 1 year's experience as legal secretary.

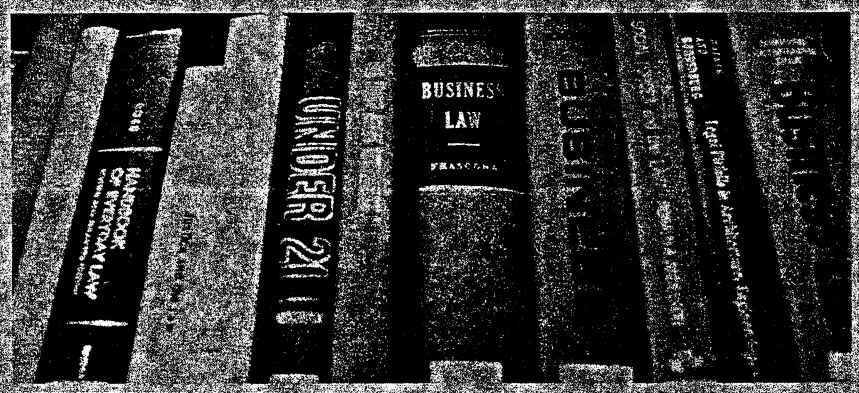
A continuation of Legal Secretaries I. Particular emphasis placed on wills and probate, real estate transactions, and law library management as they apply to the legal secretary. Class meets two hours per week.

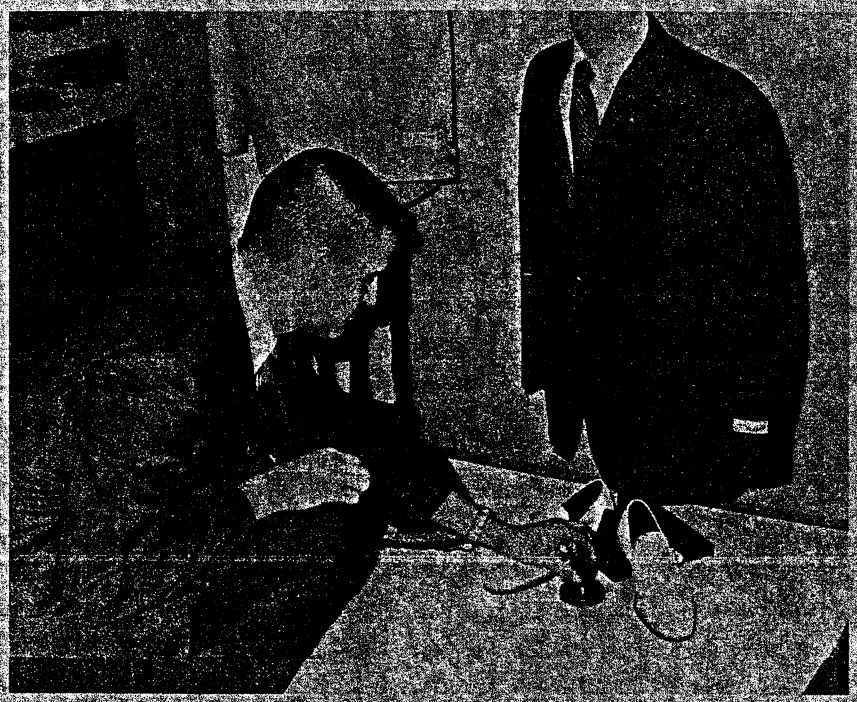
(BUS 160) OFFICE MACHINES **2 Credits**

Laboratory course in the operation of ten-key and full-bank adding machines, comptometers, key driven, rotary, and electronic calculators. Emphasis on using machines as an aid to solving the variety of mathematical problems encountered in business. Class meets three hours per week.

(BUS 161) RECORDS MANAGEMENT **2 Credits**

A study of alphabetic, numeric, subject and geographic filing systems. Provides a foundation of general office routines and efficient methods and systems of storing and retrieving information. Includes survey of various types of office filing equipment. Class meets two hours per week.





(BUS 170.1 - 170.4) RETAIL FIELD STUDY **3 Credits (each semester)**

Courses are designed to give the student work experience at an approved retail training station. Emphasis will be on coordinating the theory and knowledge acquired in the classroom and using it to solve case problems, discussion problems, situations experienced on the job, and hypothetical situations related to on-the-job experiences. Seminar meets two hours per week. Students must acquire a minimum of 15 hours on-the-job training per week. Students must complete from 9 to 15 credit hours of field study by arrangement with coordinator.

(BUS 176) RETAILING **3 Credits**

Course gives the student an understanding of retail store organization and operation. Location and layout, retail buying techniques, human relations employee supervision, pricing and merchandising are explored. Class meets three hours per week.

(BUS 177) SALESMANSHIP **3 Credits**

Course covers the three main areas of selling – speciality, wholesale, and retail. Selling principles and tactics are developed into a wide variety of selling situations. Personality development is stressed in addition to the practical steps in making sales. Actual sales talks and demonstrations are an integral part of the work. Class meets three hours per week.

(BUS 178) FASHION FUNDAMENTALS **3 Credits**

Course acquaints student with careers in the fashion industry along with fashion history, fashion trends, fashion creators in Europe and America, fashion terminology and fashion periodicals. Student develops a total concept of fashion and its application to business. Class meets three hours per week.

(BUS 179) FASHION FUNDAMENTALS **3 Credits**

Prerequisite: Fashion Fundamentals 178 or by permission

Course is designed to acquaint students with the basics of merchandising, the role of a buyer, and buying principles. Emphasis is on technical processes in merchandising, merchandising math, and planning for profit. Class meets three hours per week.

(BUS 180) RETAIL ADVERTISING AND DISPLAY **3 Credits**

Course deals with modern techniques of advertising and display. Topics covered include media use, show-card writing, script writing, display techniques and sales promotion scheduling. Class meets three hours per week.

(BUS 181) TEXTILES **2 Credits**

Study of natural and man-made textile fibers, weaves, finishes and their comparative characteristics. Knowledge and skills in selling techniques along with care and use of textiles are studied. Class meets two hours per week.

(BUS 185.1 - 185.5) FASHION FIELD STUDY **3 Credits (each semester)**

Courses are designed to give the student an opportunity to work in an approved retail training station in a fashion area. Emphasis is on coordinating classroom learning experiences with actual on-the-job experiences. Seminar meets two hours per week. Students must complete from 9-15 hours of field study by arrangement with the coordinator.

(BUS 191) SURVEY OF ECONOMICS **3 Credits**

This course is a survey of both micro and marco economics and is designed primarily for the student who is planmng on taking only a single course in economics.

(BUS 200) PERSONNEL MANAGEMENT **3 Credits**

Study of the personnel functions as they relate to management philosophy in employee procurement, placement, training, retention, job evaluation, wage administration, performance rating and welfare services. Class meets three hours per week.

(BUS 201) ECONOMICS I **3 Credits**

Prerequisite: By permission

Study of the basic economic problems of resource allocation, national income determination, money and banking, fiscal policy and international trade and finance. Class meets three hours per week.

(BUS 202) ECONOMICS II **3 Credits**

Prerequisite: BUS 201 or by permission

Continuation of Economics 201 with emphasis on supply and demand, theory of the firm and market structures. Class meets three hours per week.

(BUS 207) JOURNALISM FIELD STUDY **3 Credits**

Prerequisite: By permission

Actual work experience at an approved training center under staff supervision. Emphasis is placed on the application of good writing techniques to producing news and/or advertising copy. Class meets for two hours and a minimum of 15 hours of on-the-job training per week by arrangement.

(BUS 208) JOURNALISM FIELD STUDY **3 Credits**

Prerequisite: By permission

Actual work experience at an approved training center under staff supervision. The student must be able to develop copy for news and/or advertising and have it published on a paid basis. Class meets for two hours and a minimum of 15 hours of on-the-job training per week by arrangement.

(BUS 209) JOURNALISM FIELD STUDY **3 Credits**

Prerequisite: By permission

Actual work experience at an approved training center under staff supervision. Emphasis is placed on producing a portfolio of published materials sufficient for the student to pursue his career objective. Class meets for two hours and a minimum of 15 hours of on-the-job training per week by arrangement.

(BUS 210) COST ACCOUNTING **3 Credits**

Prerequisite: BUS 102

Allocation of production costs to determine unit cost of goods manufactured and sold and the utilization of such data by management. Class meets three hours per week.

(BUS 211) INTERMEDIATE ACCOUNTING **3 Credits**

Prerequisite: BUS 102

Application of accounting theory to the valuation of balance sheet accounts and to fund flow analysis. Emphasis on cash and receivables, inventories, fixed assets, and liabilities. Class meets three hours per week.

(BUS 212) BUSINESS LAW **3 Credits**

Basic principles of law that apply to business transactions in the present business environment and legal system. Material is related to Uniform Commercial Code. Includes introduction to the study of law, business crimes and torts, contracts, and agency. Case studies are used. Class meets three hours per week.

(BUS 213) BUSINESS LAW **3 Credits**

Prerequisite: BUS 212

Continuation of Business Law 212 and includes negotiable instruments, personal property, real property, secured transactions, corporations, and partnership. Case studies are used. Class meets three hours per week.

(BUS 214) MARKETING **3 Credits**

Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of distribution, customer relations, functions of sales departments, price policies, and communications are included. Class meets three hours per week.

(BUS 215) MANAGERIAL ACCOUNTING **3 Credits**

Prerequisite: BUS 102

Development and use of accounting information as an instrument of management control. Material includes financial statement analysis, cost application and budgeting reports to management. Class meets three hours per week.

(BUS 234) SYSTEMS ANALYSIS **3 Credits**

Prerequisites: BUS 132, BUS 133, BUS 143 and by permission

Examination in detail of the principles of systems design and analysis. Brief overview of potential systems for business and industry. Class meets three hours per week.

(BUS 235) DATA PROCESSING MANAGEMENT **2 Credits**

Prerequisite: By permission

History of computers, input and output techniques, flowchart techniques, concepts of programming to understand how problem solving in business can be accomplished by the computer. Class meets two hours per week.

(BUS 242) PL/1 **2 Credits**

Prerequisites: BUS 133 and/or BUS 144

Emphasis is placed upon the development of a complete understanding of the function and use of the various statements and procedures of PL/1. Integrated applications of this knowledge in programming several typical problems using PL/1 and the data processing laboratory facilities also stressed. Class meets two hours per week.

(BUS 243) ASSEMBLER LANGUAGE **3 Credits**

Prerequisite: BUS 131

Emphasis is placed upon the development of a complete understanding of all the commands used in an assembler language. Integrated applications of this knowledge in programming several typical problems using an assembler language and the data processing laboratory facilities also stressed. Class meets three hours per week.

(BUS 245) APPLICATION PROGRAMMING **3-6 Credits**

Prerequisite: BUS 133 and by permission

Corequisite: BUS 143 or BUS 242

Course offers on-the-job training for related areas of data processing in business or industry. Hours by arrangement.

(BUS 246) COBOL II **3 Credits**

Prerequisites: BUS 133 and BUS 243

Advanced course in COBOL programming techniques. Methods of creating, maintaining, and using sequential, random, and indexed sequential manner are stressed. Class meets three hours per week.

(BUS 247) COMPUTING SYSTEMS **3 Credits**

Prerequisites: BUS 131 and BUS 132

Basic concepts and principles of a digital computing system. General framework of the interrelationships between hardware and software and how the whole is controlled is developed and illustrated by a study of a typical digital computing system. Class meets three hours per week.

(BUS 248) TELEPROCESSING **2 Credits**

Prerequisites: BUS 131 and BUS 132

Study of a form of information handlings in which a data-processing system utilizes communication equipment. Course is concerned with that part of the system which is external to the central computer. Class meets two hours per week.

(BUS 249) DATA FILE MANAGEMENT **2 Credits**

Prerequisites: BUS 131 and BUS 132

Comprehensive coverage of the various file organizations and access methods available. Concepts are integrated into the development of an inquiry data base file system. Study of techniques and potential use of system in industry and business also included. Class meets two hours per week.

(BUS 250) SYSTEMS PROJECT **2 Credits**

Prerequisites: BUS 247 and BUS 243

Design and development of software for either compilers (syntax directed and table driving techniques) or operating system software. Class meets by arrangement.

(BUS 262) SECRETARIAL PROCEDURES I **3 Credits**

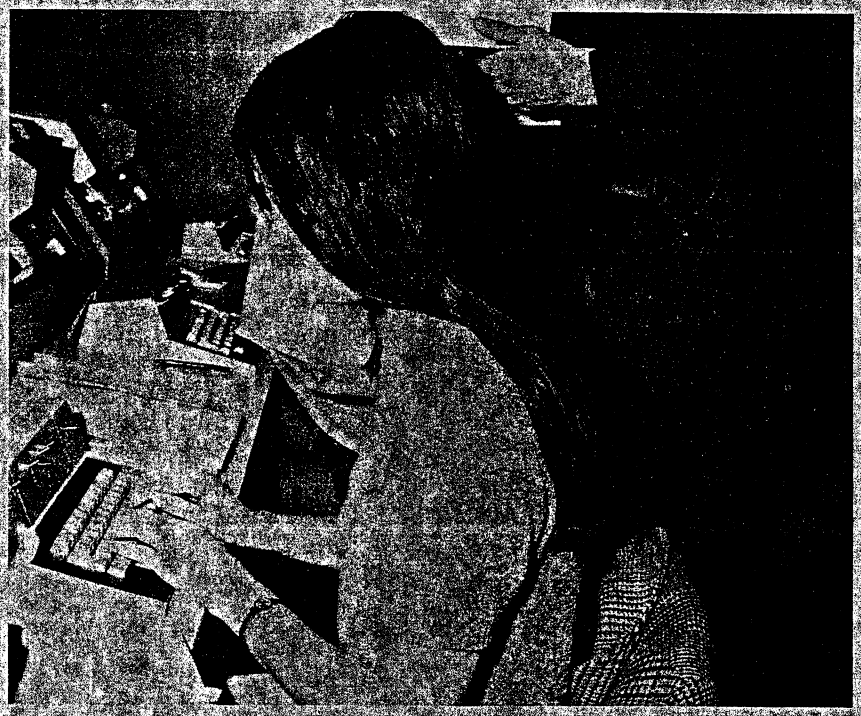
Prerequisites: BUS 151 and BUS 156 or concurrent enrollment or by permission

Individual projects. Content areas: office layout, furnishings, equipment, telephone and telegraph services, mailing and shipping, financial activities and records, filing, organization of time and work, and improvement of secretarial skills. Individualized instruction with a minimum of three hours per week in the Secretarial AVT laboratory. Hours by arrangement.

(BUS 263) SECRETARIAL PROCEDURES II **3 Credits**

Prerequisite: BUS 262

Individual projects. Content areas: meetings and conferences, travel arrangements, letter writing, supervision of others, reproduction equipment and services, seeking and terminating employment, and improvement of secretarial skills. Individualized instruction with a minimum of three hours per week in the Secretarial AVT laboratory. Hours by arrangement.



(BUS 266.1 - 266.5) SECRETARIAL FIELD STUDY **3 Credits (each semester)**

Courses are designed to give the student an opportunity to work in an approved secretarial training station in an office area. Emphasis is on coordinating classroom learning experiences with actual on-the-job situations. Seminar meets two hours per week. Students must work an average of 15 hours per week. Students must complete from 9-15 hours of field study by arrangement with the coordinator.

(BUS 279) SOCIO-ECONOMIC ASPECTS OF CLOTHING **3 Credits**

Study of economic psychology, social needs and satisfaction in the selection of clothing. The student gains an understanding of the influence of fashion and clothing upon society through studying interrelationships of the consumer, the distributor and producer. Class meets three hours per week.

(BUS 299) INDEPENDENT STUDIES IN BUSINESS/MANAGEMENT **3 Credits**

Opportunity for the student to pursue his special interests in business and management, through guided independent study in his chosen area. Class meets three hours per week.

(COM 101) COMMUNICATIONS I **3 Credits**

Expository writing. Emphasis on learning to write concisely, moving from the oral to the written word, and coordinating the needs of the student with the craft of writing. Class meets three hours per week.

(COM 102) COMMUNICATIONS II **3 Credits**

Prerequisite: COM 101

Expository, argumentative, narrative and descriptive writing. Selected interdisciplinary materials and scheduled performances provide the creative stimulus for the writing. Some review of principles of organization and other rhetorical principles. Class meets three hours per week.

(COM 114) SPEECH 120 120 **3 Credits**

This course deals with the communication process through the study of the practical principles of effective oral communication, and the opportunity to apply these principles in a variety of communicative situations. Class meets three hours per week.

(COM 115) PUBLIC SPEAKING **3 Credits**

Prerequisite: COM 114

An advanced course to Speech 114 for students interested in continued work in public speaking. Increased proficiency in a variety of speaking situations is stressed. Class meets two hours per week.

(COM 116) ARGUMENTATION AND DEBATE **3 Credits**

Prerequisite: High school speech or COM 114

A study of the theories and principles of argumentation and debate, with an emphasis on tournament debating. Class meets three hours per week.

(COM 117) ORAL INTERPRETATION **3 Credits**

A study of literature through oral communication. Emphasis is to analyze and interpret prose, poetry and drama. Class meets three hours per week.

(COM 118) PRACTICE IN PUBLIC SPEAKING **1 Credit**

Students approved by the instructor will work in play productions, television and/or radio. Credit will be given for a minimum of 45 clock hours by arrangement.

(COM 121) FRENCH I **5 Credits**

Basic course in French language includes grammar study, conversation, composition and an introduction to the culture of French-speaking countries. Class meets five hours per week.

(COM 122) FRENCH II **5 Credits**

Prerequisite: COM 121 or by permission

Continuation of French 121 with graded reading selections added to be used as basis for conversation and composition in the discussion periods. Course structure same as French 121. Class meets five hours per week.

(COM 123.1 - 123.3) INTERCOLLEGIATE DEBATE **1 Credit (each semester)**

Prerequisite: COM 116 or by permission

Practical application of argumentation and debate principles by individual involvement in intercollegiate competition. Class meets two hours per week.

(COM 130) SPANISH I **5 Credits**

Basic course in Spanish language includes grammar study, conversation, composition and an introduction to the culture of Spanish-speaking countries. Class meets five hours per week.

(COM 131) SPANISH II **5 Credits**

Prerequisite: COM 130 or by permission

Continuation of Spanish 130 with graded reading selections added to be used as basis for conversation and composition in the discussion periods. Course structure same as Spanish 130 with an audio study period replacing the audio-visual. Class meets five hours per week.

(COM 140) GERMAN I **5 Credits**

Basic course in German language includes grammar study, conversation, composition and an introduction to the culture of German-speaking countries. Class meets five hours per week.

(COM 141) GERMAN II **5 Credits**

Prerequisite: COM 140 or two years of high school German

Continuation of German 140 with reading selections added to be used as basis for conversation and composition. Class meets five hours per week.

(COM 210) SHORT STORY AND THE NOVEL **3 Credits**

Prerequisite: COM 102

Introduction to the short story and novel form. Readings from contemporary fiction. Class meets three hours per week.

(COM 211) POETRY AND DRAMA **3 Credits**

Prerequisite: COM 102

An exposure to poetry and drama for insight and appreciation. Great plays of past and present and a broad selection of poetry of all types and styles will be read. Occasional performances of both literary forms, when available and appropriate, will be attended. Class meets three hours per week.

(COM 212) CREATIVE WRITING **3 Credits**

Prerequisite: COM 102

Principles and practice in writing the short story, the essay, the play, the poem. Emphasis on planning, plotting, choice of material and styles. Examination of recommended models. Frequent writing assignments in chosen areas. Class meets three hours per week.

(COM 223) FRENCH III **3 Credits**

Prerequisite: COM 122 or by permission

Intermediate reading course to build vocabulary and comprehension ability. The reading of novels, plus numerous short excerpts from prominent contemporary writers, are integrated with a grammar review. Conversation and composition in French. Class meets three hours per week.

(COM 224) FRENCH IV **3 Credits**

Prerequisite: COM 223 or by permission

Continuation of French 223. Advanced reading. Study of contemporary novels and literature. Complete grammar review. Conversation and composition in French. Class meets three hours per week.

(COM 225) CONVERSATIONAL FRENCH **2 Credits**

Prerequisite: COM 122 or by permission

Course develops a proficiency in everyday, colloquial French through the use of modern and up-to-date situations similar to the ones a traveler would encounter while visiting France. A speaking knowledge of French will be developed. Class meets two hours per week.

(COM 232) SPANISH III **3 Credits**

Prerequisite: COM 131 or by permission

A reading course to build vocabulary, further understanding of Hispanic culture and speaking fluency. Composition and conversation in Spanish. Grammar review. Class meets three hours per week.

(COM 233) SPANISH IV **3 Credits**

Prerequisite: COM 232 or by permission

Continuation of Spanish 232 with extensive study of Hispanic literature. Advanced reading. Composition and conversation in Spanish. Grammar review continues. Class meets three hours per week.

(COM 234) CONVERSATIONAL SPANISH **2 Credits**

Prerequisite: COM 131 or by permission

Conversational course designed to increase vocabulary and speaking fluency. Grammar review with emphasis on idiomatic usage and practical vocabulary. Class meets two hours per week.

(COM 242) GERMAN III **3 Credits**

Prerequisite: COM 141 or by permission

Vocabulary building and grammar review primarily through extensive reading of German expository prose and literature, with additional practice of listening, speaking and writing skills. Class meets three hours per week.

(COM 243) GERMAN IV **3 Credits**

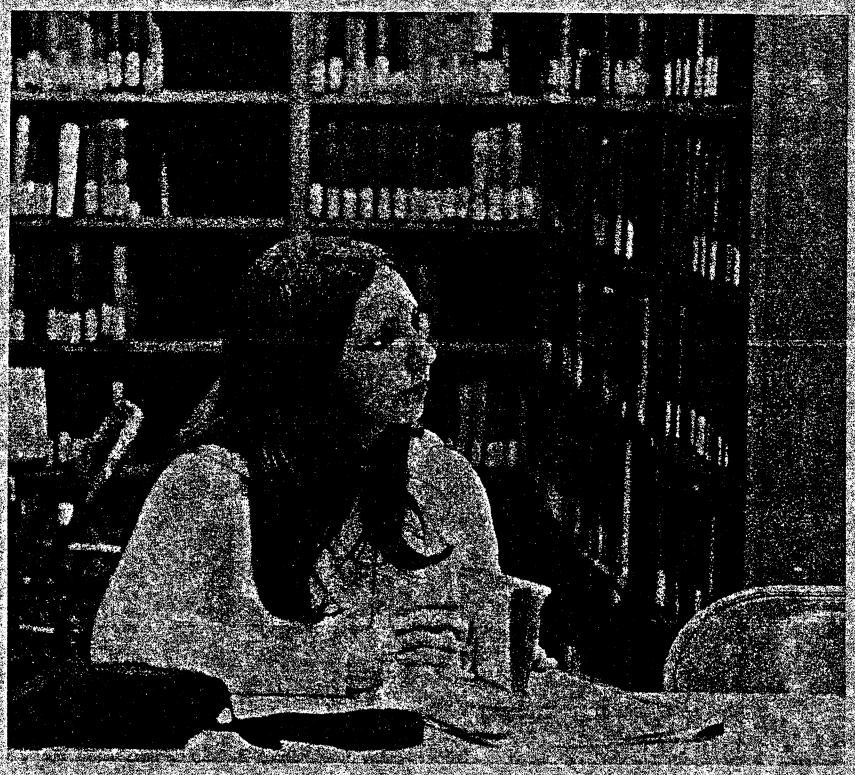
Prerequisite: COM 242 or by permission

Continuation of German 242, with emphasis on more advanced reading material. Class meets three hours per week.

(COM 244) CONVERSATIONAL GERMAN **2 Credits**

Prerequisite: COM 141 or by permission.

Special emphasis on developing listening comprehension and speaking skills. Magazine-type materials, situation problems and media presentations are used to stimulate conversation. Class meets two hours per week.



(ENGR 101) DRAFTING I **7 Credits**

Prerequisite: By permission

Provides theory and application in descriptive and applied geometry, orthographic projection, sketching, lettering, use of instruments and basic conventions. Emphasis on visualization. Two hours of class and 15 hours of laboratory per week.

(ENGR 102) DRAFTING II **7 Credits**

Prerequisite: ENGR 101

Covers detail and assembly drawings, auxiliary views, sections, developments, and reproduction with emphasis on dimensioning and specifications. Two hours of class and 15 hours of laboratory per week.

(ENGR 103) DRAFTING **1-7 Credits**

A course for both experienced and beginning students in drafting. Emphasis is on student needs and provides for flexibility in planning. Students will choose topics from Drafting I, II, III and IV. Three hours of laboratory per week per credit.

(ENGR 105) ENGINEERING GRAPHICS **3 Credits**

Theory and application in the principles of graphics and conceptual design processes. Practical problems relating to interpretation of drawings, interrelation of points, lines and planes; intersections and developments; graphical solutions by charts and graphs; orthographic projection. Use of instruments and lettering. Emphasis on visualization. Class meets six hours per week.

(ENGR 106) ENGINEERING GRAPHICS **3 Credits**

Advanced study and applications of detail and assembly drawings, dimensioning, auxiliary views, sectioning, and developments. Additional emphasis on creative design processes and visualization. Class meets six hours per week.

(ENGR 107) TECHNICAL ILLUSTRATION **3 Credits**

Prerequisite: High school drafting or by permission

Provides opportunity to learn and apply techniques used by technical illustrators. Conversion of engineering drawings to three-dimensional isometric, dimetric, trimetric, and perspective views using pencil and ink on various drawing media. Training in the use of technical illustration equipment and aids. Class meets six hours per week.

(ENGR 110) BASIC PHOTOGRAPHY **3 Credits**

Theory and practice of photography. Basic knowledge and skill in use of photographic equipment and materials while photographing a variety of technical, studio and natural subjects. Class meets six hours per week.

(ENGR 115) AVIONICS **3 Credits**

Introductory course designed to give pilots an understanding of aircraft electrical systems and airborne avionics equipment. Class meets three hours per week.

(ENGR 121) PROCESSES AND MATERIALS OF MANUFACTURING **3 Credits**

Basic principles and theory of production processes for metal and plastics. Class meets three hours per week.

(ENGR 123) BUILDING MATERIALS AND CONSTRUCTION **3 Credits**

Study of the principle materials in building. Emphasis on properties and applications in building construction. Class meets three hours per week.

(ENGR 128) INDUSTRIAL SCIENCE I **5 Credits**

Prerequisite: MATH 101

Introduction to principles of metallurgy, material science, physics, chemistry, and mensuration most applicable to drafting. Class meets five hours per week.

(ENGR 129) INDUSTRIAL SCIENCE II **5 Credits**

Prerequisite: ENGR 128

Continuation of Industrial Science 128 with emphasis on engineering applications. Class meets five hours per week.

(ENGR 140) INTRODUCTORY ELECTRONICS **3 Credits**

Provides familiarization with laboratory instruments, circuit components and basic measurement techniques. Introduces basic circuits used as building blocks in any electronics system. One hour of class and six hours of laboratory per week.

(ENGR 141) RESISTIVE ELECTRONIC CIRCUITS **3 Credits**

Prerequisites: ENGR 140, MATH 101 and ENGR 150 or concurrent enrollment

Study of resistive circuits in which electronic devices are employed. Introduces the volt-ampere characteristics and physics of diodes, transistors, multielement vacuum tubes and a number of practical resistive circuits using these devices. Two hours of class and three hours of laboratory per week.

(ENGR 142) MICRO-PRECISION ELECTRONICS **3 Credits**

Prerequisite: ENGR 140

Theory and application of electromagnetic, electromechanical, piezoelectric, and photoelectric transducers and associated circuitry. Emphasis is on application of circuitry required for control of transducer functions. Two hours of class and three hours of laboratory per week.

(ENGR 143) BASIC COMMUNICATIONS **3 Credits**

Prerequisite: ENGR 140

Construction and analysis of basic communications circuits, including R.F. and A.F. amplifiers and oscillators, blocking oscillators and power supplies. Two hours of class and three hours of laboratory per week.

(ENGR 144) SERVICE OF COMMUNICATIONS EQUIPMENT **3 Credits**

Prerequisite: ENGR 140

Principles of amplitude, frequency, phase and pulse modulation and related circuitry-including modulators, demodulators, oscillators, mixers, convertors, detectors, R.F. and I.F. amplifiers. Two hours of class and six hours of laboratory per week.

(ENGR 145) ALIGNMENT TECHNIQUES **3 Credits**

Prerequisites: ENGR 143 and concurrent enrollment in ENGR 147

Service and alignment of radio frequency equipment, including tuners, amplifiers, antennas and connections for TV, AM and FM. One hour of class and six hours of laboratory per week.

(ENGR 146) SYNCHRONIZATION TECHNIQUES **3 Credits**

Prerequisite: ENGR 143

Techniques of servicing timing circuits, including sweep, synchronization, triggering and gating circuits. One hour of class and six hours of laboratory per week.

(ENGR 147) COMMUNICATIONS SYSTEMS **3 Credits**

Prerequisite: ENGR 143 or concurrent enrollment in ENGR 240

Theory and service of electronic communications systems, including black and white television; color television; AM and FM radio receivers; and transmitters. Three hours of class per week.

(ENGR 148) DIGITAL ELECTRONICS **3 Credits**

Prerequisite: ENGR 140

Analysis and synthesis of the electronic circuits utilized in digital equipment such as computers, numeric machine controls and telemetry. Two hours of class and three hours of laboratory per week.

(ENGR 150) RESISTIVE CIRCUITS **3 Credits**

Prerequisites: ENGR 140 and MATH 101 or concurrent enrollment

Study of resistive electrical circuits with both time-varying and constant power sources. Study of the physics of electricity, units, definitions, symbols and notations for electrical quantities. Class meets three hours per week.

(ENGR 151) SINGLE TIME-CONSTANT CIRCUITS **3 Credits**

Prerequisites: ENGR 150 and MATH 101

Study of R-C and R-L circuits. Includes reactance, resonance and sinusoidal and exponential responses. Two hours of class and three hours of laboratory per week.

(ENGR 152) ELECTRONICS PROJECT LABORATORY **1-4 Credits**

Prerequisites: ENGR 140 and by permission

Laboratory experience requiring construction or design and construction of an electronic system or device. By arrangement.

(ENGR 201) DRAFTING III **7 Credits**

Prerequisite: ENGR 102

Provides theory and application in axonometrics, obliques, and perspective drawings, conventions and symbols. Problems typical of industry. Two hours of class and 15 hours of laboratory per week.

(ENGR 202) DRAFTING IV **7 Credits**

Prerequisite: ENGR 201

Emphasis on industrially oriented topics and problems. Team activities provided. Two hours of class and 15 hours of laboratory per week.

(ENGR 210) STATICS **3 Credits**

Prerequisite: MATH 121 or concurrent enrollment

Study of vectors, force systems, friction, centroids, and moments of inertia. Class meets three hours per week.

(ENGR 211) DYNAMICS **3 Credits**

Prerequisite: ENGR 210

Study of unbalanced force systems and the resulting motion, work and energy, impulse and momentum, and impact. Class meets three hours per week.

(ENGR 220) MECHANICS OF MATERIALS **3 Credits**

Prerequisite: ENGR 210

Theory of simple stresses and strains in elastic materials, torsion, beams and columns. Class meets three hours per week.

(ENGR 225) MECHANISMS **3 Credits**

Prerequisite: ENGR 105

Study of the motion of machine parts and of methods of transmission of motion by links, cam, gears, and belts. Class meets six hours per week.

(ENGR 230) TOOL DESIGN **3 Credits**

Prerequisites: ENGR 105, ENGR 106, ENGR 220 and ENGR 225

Problems in the design, construction, and operation of dies, jigs and fixtures. Six hours of laboratory per week.

(ENGR 240) PULSE CIRCUITS **3 Credits**

Prerequisites: ENGR 141 and MATH 102

Study of electronic switching circuits: clippers, clampers, pulse formers, multivibrators, blocking oscillators, logic circuits and sweep circuits. Two hours of class and three hours of laboratory per week.

(ENGR 241) LINEAR ELECTRONICS CIRCUITS **3 Credits**

Prerequisites: ENGR 141, MATH 102 and ENGR 151

Study of electronic circuits in which vacuum tubes and transistors are operated in the linear region of their volt-ampere characteristics. Covers amplifiers, tuned amplifiers, DC and differential amplifiers. Two hours of class and three hours of laboratory per week.

(ENGR 242) SYSTEMS ANALYSIS **3 Credits**

Prerequisite: ENGR 240

Project-type course devoted to the study of complete electronic systems used in industrial applications. Covers numerical control, telemetering, scientific data processing, coding and decoding techniques, control of manufacturing processes and applications as they apply to specific industries. Two hours of class and three hours of laboratory per week.

(ENGR 244) COMMUNICATIONS SYSTEMS **3 Credits**

Prerequisite: ENGR 241

Principles and problems involved in communications. Includes antennas, transmission lines, receiver design and transmitter principles. Two hours of class and three hours of laboratory per week.

(ENGR 245) MEASUREMENTS AND INSTRUMENTATION **3 Credits**

Prerequisite: ENGR 240

Problems and techniques involved in precision measurements required in industrial instrumentation applications. Two hours of class and three hours of laboratory per week.

(ENGR 250) NETWORK ANALYSIS **3 Credits**

Prerequisites: ENGR 151 and MATH 102

Application of mathematical techniques to the analysis of complex electrical circuits or networks. Class meets three hours per week.

(HUM 101) HUMANITIES **3 Credits**

Interdisciplinary study of fine arts, religion, philosophy and history through examination of major concerns of mankind, and of the nature of creativity. Class meets three hours per week.

(HUM 102) HUMANITIES **3 Credits**

Interdisciplinary study of man's search for meaning through his creativity. Various dualisms common to all historical periods is the vehicle for study. Class meets three hours per week.

(HUM 111) SIGHT-SINGING AND EAR-TRAINING I **1 Credit**

Course presents the melodic, harmonic and rhythmic elements of music by integrating aural and sight reading skills. Class meets one hour per week.

(HUM 112) SIGHT-SINGING AND EAR-TRAINING II **1 Credit**

Prerequisite: HUM 111

Course presents an advanced study of the melodic, harmonic and rhythmic elements of music by integrating aural and sight-reading skills. Class meets one hour per week.

(HUM 113.1 - 113.4) BAND **1 Credit (each semester)**

Performance of jazz and popular music at public concerts and college functions. Class meets three hours per week.

(HUM 117.1 - 117.4) CHAMBER CHOIR **1 Credit (each semester)**

Prerequisite: By permission

Rehearsal and performance of vocal music. Choir performs at various student and community activities. Class meets three hours per week.

(HUM 121.1 - 121.4) CHORUS **1 Credit (each semester)**

Open to all students. Rehearsal and performance of vocal music. Occasional joint performances with chamber choir. More emphasis on vocal training. Class meets three hours per week.

(HUM 122.1 - 122.4) ORCHESTRA **1 Credit (each semester)**

Rehearsal and performance with the Kansas City, Kansas Symphony Orchestra. Enrollment by audition. Class meets on Mondays, 7-9 p.m.

(HUM 123) MUSIC THEORY: HARMONY I **2 Credits**

Review of the fundamentals of music. Introduction to melodic line construction, triads and the connection of chords in four-part music writing. Class meets two hours per week.

(HUM 124) MUSIC THEORY: HARMONY II **2 Credits**

Prerequisite: HUM 123

Continuation of work with melodic line, triads and connection of chords in four-part music writing. Emphasis on inverted triads and submediant triads. Introduction to elementary modulation. Class meets two hours per week.

(HUM 125) MUSIC THEORY: HARMONY III **2 Credits**

Prerequisite: HUM 124

Continuation of work with modulation, non-harmonic tones and inverted triads in four-part music writing. Introduction of less common chord progressions, diatonic seventh chords, altered chords and borrowed chords. Emphasis on original student compositions as vehicles for study of materials. Class meets two hours per week.

(HUM 126) MUSIC THEORY: HARMONY IV **2 Credits**

Prerequisite: HUM 125

Continuation of work with original compositions. Introduction to augmented triads, Neapolitan, French and German sixth chords, chords at the ninth, eleventh, thirteenth, advanced modulation and basic counterpoint. Class meets two hours per week.

(HUM 128.1 - 128.4) APPLIED MUSIC **1 Credit (each semester)**

Private lessons in vocal and instrumental music are provided depending on the number of interested students. Lesson time is by arrangement, one hour per week.

(HUM 131) DESIGN I **3 Credits**

Introductory study of the basic elements and principles common to all the visual arts, emphasizing their creative application in two-dimensional design. Class meets six hours per week.

(HUM 132) DESIGN II **3 Credits**

Prerequisite: HUM 131

A continuation of Design 131 in which the principles and elements of design are studied and applied in relation to three-dimensional forms. Class meets six hours per week.

(HUM 133) SCULPTURE I **3 Credits**

Course designed to study and explore natural and man-made sculptural forms and to help the student create a unique, personal body of work through the use of a variety of either traditional or contemporary media and technique. Class meets six hours per week.

(HUM 134) SCULPTURE II **3 Credits**

Prerequisite: By permission

Continuation of Sculpture 133. Focus on more advanced methods and techniques. Emphasis on sculptural materials and forms. Class meets six hours per week.

(HUM 135) PAINTING I **3 Credits**

Emphasis on the formal study from visual experience with still life, landscape, the human figure, and imaginative themes in conjunction with expanded conceptual awareness. Class meets six hours per week.

(HUM 136) PAINTING II **3 Credits**

Prerequisite: By permission

Awareness of historical and contemporary painting. Advanced painting with emphasis on personal direction and the development of a consistant body of work. Class meets six hours per week.

(HUM 137) DRAWING I **3 Credits**

Introductory course explores a wide variety of drawing media. Emphasis on the development of fundamental drawing skills, increased powers of observation, and an awareness of the personally expressive and compositional aspects of drawing. Class meets six hours per week.

(HUM 138) DRAWING II **3 Credits**

Prerequisite: By permission

Fundamentals of figure drawing. Working from models, students study the structure of the human form as seen in action, stationary, and as a part of its environment. A variety of media is used in rapid gesture drawing, long poses, memory work and portraiture. Class meets six hours per week.

(HUM 139) CERAMICS I **3 Credits**

Basic course in hand-building and wheel-throwing techniques. The student becomes familiar with glazing and other methods of surface enrichment, stacking and firing procedures, and the process of casting from a mold of his own design. Class meets for two three-hour sessions per week.

(HUM 140) CERAMICS II **3 Credits**

Prerequisite: By permission

Continuation of Ceramics 139. More advanced methods and techniques. Specific problems explored in greater depth. Class meets for six hours per week.

(HUM 141) PRINTMAKING I **3 Credits**

Introduction to traditional and contemporary techniques of relief and stencil printmaking including linoleum and woodcutting, collography, multiple-color printing and a variety of mixed media techniques. Class meets six hours per week.

(HUM 142) PRINTMAKING II **3 Credits**

Prerequisite: By permission

Introduction to the traditional and contemporary intaglio processes of etching and engraving, and a variety of silk screen and mixed media techniques. Class meets six hours per week.

(HUM 143) SILVERSMITHING I **3 Credits**

Course in basic metalsmithing techniques of casting and construction of silver with the utilization of buffing, sawing, filing and soldering processes. Class meets six hours per week.

(HUM 144) ART FUNDAMENTALS **3 Credits**

Examination of the major art forms: sculpture, printmaking and drawing. Tracing their historical development focusing on 20th century forms and philosophies. Class meets six hours per week.

(HUM 145) SILVERSMITHING II **3 Credits**

Prerequisite: HUM 143

Course in basic metalsmithing techniques of casting, constructing, etching, enameling and chasing, utilizing copper, brass, bronze, silver and other metals. Class meets six hours per week.

(HUM 151) INTRODUCTION TO PHILOSOPHY **3 Credits**

Study of the basic questions of philosophical inquiry, such as the nature of being, the ways we gain knowledge, and man's moral, social, religious and political values. Emphasis on the application of the study of traditional problems of philosophy to the study of contemporary society. Class meets three hours per week.

(HUM 152) LOGIC **3 Credits**

Study of typical forms of reasoning and the discrimination of valid from invalid reasoning. Emphasis on methods of deductive proof, the basic concepts of induction, and fallacies. Class meets three hours per week.

(HUM 200) INDEPENDENT STUDIES IN HUMANITIES **3 Credits**

Opportunity for the student to pursue his special interests in the humanities, through guided independent study in his chosen area. Class meets three hours per week.

(HUM 210) PHILOSOPHY OF RELIGION **3 Credits**

Study of the components and concepts of religion as expressed by various world religions. Emphasis on the nature of God, God's existence, religious language, human destiny, faith, evil and effects of science on religion. Class meets three hours per week.

(HUM 250) PHILOSOPHY OF CURRENT CIVILIZATION **3 Credits**

A systematic and critical analysis of some major current issues in American civilization and the philosophies presupposed by diverse views about these issues; analyzed through relevant articles and news media. Class meets three hours per week.

(HUM 253) ETHICS **3 Credits**

Study of the great problems of ethics, such as free will and determinism, relativism and absolutism, the relationship between individuals and between man and society. Emphasis on studying traditional positions in order to better understand contemporary social and moral issues. Class meets three hours per week.

(MATH 100) INTRODUCTION TO ALGEBRA **3 Credits**

Intended for the student who has had less than one year of high school algebra or whose training is not current. Includes fundamental algebraic operations, fractions, first and second degree equations, graphs, exponents, and radicals. Class meets three hours per week.

(MATH 101) TECHNICAL MATHEMATICS I **5 Credits**

An introduction to applied mathematics for the engineering-related professions. Contains selected topics from algebra, geometry, and trigonometry with emphasis on engineering applications. Students with two years of high school algebra should consider Trigonometry 117 instead. Class meets five hours per week.

(MATH 102) TECHNICAL MATHEMATICS II **5 Credits**

Prerequisite: MATH 101

Continuation of Mathematics 101. Plane and solid analytical geometry. Class meets five hours per week.

(MATH 103) FINITE MATHEMATICS **3 Credits**

Mathematics for the elementary education or general education student. Designed to provide a background for a better understanding of the nature of mathematics. Includes sets, relations, mathematical reasoning, axiomatic systems and graphing. Class meets three hours per week.

(MATH 106) ALGEBRA **5 Credits**

Prerequisite: Two years of high school math including one year of algebra

A study of the fundamental laws, exponents, radicals, linear and quadratic equations, inequalities, systems of relations, graphing, polynominals and polynominal functions, logarithms, and series. Class meets five hours per week.

Not equivalent to College algebra
2 hours Intermediate
3 hours college algebra

(MATH 110) STATISTICS **3 Credits**

Prerequisite: MATH 106 or equivalent

Introduces descriptive statistics, probability models, sampling distributions, hypothesis testing, chi-square test, regression, and correlation. Class meets three hours per week.

(MATH 115) ALGEBRA-TRIGONOMETRY **5 Credits**

Prerequisite: MATH 106 or two years of high school math

Designed for science and engineering majors not requiring more advanced mathematics or for those who feel the need for more background before attempting analytical geometry and calculus. Class meets five hours per week.

(MATH 116) COLLEGE ALGEBRA **3 Credits**

Prerequisite: Two and one half years of college preparatory math

An intensive course designed for the science or engineering major who needs additional background before attempting calculus. Class meets three hours per week.

(MATH 117) TRIGONOMETRY **3 Credits**

Prerequisite: MATH 106 or equivalent. Not recommended for the student with high school credit in trigonometry

A study of trigonometric functions, identities, graphs, equations, inverse trigonometric functions, polar coordinates, complex numbers and applications. Class meets three hours per week.

(MATH 121) ANALYTIC GEOMETRY-CALCULUS I **5 Credits**

Prerequisite: MATH 117 or equivalent

The first course of a three semester sequence in analytic geometry and calculus. Consists of calculus of algebraic functions of one variable, limits, implicit differentiation, definite and indefinite integrals, and applications. Class meets five hours per week.

(MATH 122) ANALYTIC GEOMETRY-CALCULUS II **5 Credits**

Prerequisite: MATH 121 or equivalent

The second course of a three semester sequence in analytic geometry and calculus. Includes the conics, trigonometric and exponential functions, polar coordinates, vectors in a plane, techniques of integration, and applications. Class meets five hours per week.

(MATH 223) ANALYTIC GEOMETRY-CALCULUS III **5 Credits**

Prerequisite: MATH 122 or equivalent

The third course in a three semester sequence in analytic geometry and calculus. Consists of solid analytic geometry, vectors in space, infinite series, partial differentiation, multiple integration, and linear algebra. Class meets five hours per week.

(MATH 224) DIFFERENTIAL EQUATIONS **3 Credits**

Prerequisite: MATH 223 or equivalent

Standard types of ordinary equations of first and second order, linear equations, solutions by series, and application to geometry and physical science. Class meets three hours per week.

(NS 051) INHALATION THERAPY PROCEDURES **3 Credits**

Orientation to hospital, patient care and management, medical ethics and inhalation therapy as a profession. Introduction to the design and function of basic inhalation therapy equipment, the designs and principles of various methods of gas supply, procedures and techniques of equipment maintenance and applications of equipment to various types of gas supply. Class meets three hours per week.

(NS 052) INHALATION THERAPY PROCEDURES **5 Credits**

Prerequisite: NS 051

Introduction to the clinical situation. Nursing arts and applied inhalation therapy procedures relating to internal medicine, surgical care, obstetrics, pediatrics and emergency. Two hours of class and six hours of laboratory per week.

(NS 053) CLINICAL APPLICATION **4 Credits**

Prerequisite: NS 052

Work experience with inhalation therapy techniques and procedures. Eight hours of laboratory per week.

(NS 054) INHALATION THERAPY PROCEDURES **4 Credits**

Prerequisite: NS 053

Advanced theory of applied inhalation therapy procedures. Emphasis on cardiopulmonary physiology and pathophysiology. Four hours of class and four hours of laboratory per week.

(NS 055) INHALATION THERAPY PROCEDURES **5 Credits**

Prerequisite: NS 054

Pharmacology, cardiopulmonary resuscitation, pulmonary insufficiency, pulmonary function testing, blood gas analysis, electrocardiography and cardiac monitoring equipment. Four hours of class and eight hours of laboratory per week.

(NS 056) DEPARTMENTAL MANAGEMENT **1 Credit**

Prerequisite: NS 055

Management and coordination of inhalation therapy service. Class meets one hour per week.

(NS 057) SEMINAR **2 Credits**

Prerequisite: NS 055

Current problems. Therapeutic complications. Review of current literature. Reports of scientific meetings. Special projects. Class meets two hours per week.

(NS 058) ADVANCED INHALATION THERAPY PROCEDURES **2 Credits**

Prerequisite: NS 055

Advanced pulmonary function techniques. Compliance resistance. Diffusion. Perfusion. Work of breathing. Oxygen consumption and physiological dead space. Class meets two hours per week.

(NS 101) NATURAL SCIENCE/LIFE SCIENCE **4 Credits**

Designed to explain the fundamental laws, theories and principles of biology, and to meet laboratory science requirements for the non-science major. Provides a basic understanding of living organisms and their interrelation with the non-living world. An Audio-Visual-Tutorial presentation aids in understanding. Two hours of class and four hours of Natural Science AVT laboratory per week.

(NS 102) NATURAL SCIENCE/PHYSICAL SCIENCE **4 Credits**

Introduces the fundamental laws, theories and principles of chemistry and physics, and to meet laboratory science requirements for the non-science major. Such topics as atomic and molecular theory, the periodic system, the laws of chemical combinations, and gas laws are covered. Applications of mechanics, electronics, sound, heat, and light are studied. An Audio-Visual-Tutorial presentation aids in understanding. Two hours of class and four hours of Natural Science AVT laboratory per week.

(NS 106) MEDICAL TERMINOLOGY **2 Credits**

An Audio-Visual-Tutorial approach to learning general medical terminology. General knowledge concerning the body's functions and how they are impaired. How physicians determine the location and cause of injury and how injuries heal is discussed. Terms are learned in context. The role of paramedical personnel in the care of the injured is covered. One hour of class and four hours of laboratory per week.

(NS 110) BIOLOGY OF ANIMALS **5 Credits**

A survey of animal taxa: systematics and ecology of animal populations. Identification of representative members of the animal phyla using their structural characteristics. Interpretation of anatomical and physiological features in terms of adaptation. Class meets six hours per week.

(NS 111) BIOLOGY OF PLANTS **5 Credits**

Introduction to plant structure and function. Plant divisions with emphasis on life cycles and evolutionary relationships from the simplest to the most complex of plants. Three hours of class and four hours of laboratory per week.

(NS 115) MICROBIOLOGY **5 Credits**

Prerequisite: One year of high school chemistry or NS 125

Morphology, physiology, classification, culture, and distribution of microorganisms. Emphasis on their relationship to health and disease and basic techniques of working with microorganisms. Transfer, culture and identification of common microorganisms. Three hours of class and four hours of laboratory per week.

(NS 116) HUMAN ANATOMY-PHYSIOLOGY **5 Credits**

Analysis of the relation of structure to function in the organ system of man. Emphasis on location of anatomical features and interpretation of their functional morphology. Three hours of class and four hours of laboratory per week.

(NS 117) HUMAN ANATOMY **4 Credits**

Gross and microscopic aspects of cells, tissues and organ systems of the human body are studied. Concentration is on detailed analysis of structure of each body system. Three hours of class and three hours of laboratory per week.

(NS 118) HUMAN PHYSIOLOGY **4 Credits**

Prerequisite: One year of high school chemistry or NS 125

Emphasis upon the activities of human cells, tissues, organs and systems in terms of the physical and chemical processes. A variety of living organisms and physiological tools are used to demonstrate the principles of general physiology. Three hours of class and three hours of laboratory per week.

(NS 120) GENERAL CHEMISTRY I **5 Credits**

Prerequisite: MATH 115 or by permission

Basic introduction to inorganic chemistry with emphasis upon atomic structure, the periodic table, bonding, solutions and chemical calculations. Four hours of class and three hours of laboratory per week.

(NS 121) GENERAL CHEMISTRY II **5 Credits**

Prerequisite: NS 120

Presentation of oxidation-reduction, chemical thermodynamics and kinetics, with particular emphasis upon solution and equilibrium. Laboratory consists of supportative experiments, with the latter portion devoted to an introduction to qualitative analysis. Four hours of class and three hours of laboratory per week.

(NS 125) PRINCIPLES OF CHEMISTRY **5 Credits**

Introduction to the fundamental concepts of chemistry. Emphasis on general concepts of inorganic chemistry, with sufficient study of organic chemistry to introduce the student to biochemistry. Four hours of class and three hours of laboratory per week.

(NS 131) NURSING CARE OF THE INDIVIDUAL **6 Credits**

Prerequisite: By permission

Introduction to nursing with emphasis on the maintenance and promotion of physical and mental health in the individual of any age group. The role of the nurse as a member of the health team is discussed. Clinical laboratory practice is an integral part of the course. Three hours of class and nine hours of clinical laboratory per week.

(NS 132) THE INDIVIDUAL AS HE ADAPTS TO CHANGE **6 Credits**

Prerequisite: NS 131

Continued study of the maintenance and promotion of health with special emphasis on the family, the community and society. The expanded use of community health agencies is included. Basic concepts of public health are examined in relation to trends in patient care. Clinical laboratory practice is an integral part of the course. Three hours of class and nine hours of clinical laboratory per week.

(NS 141) DENTAL MORPHOLOGY AND OCCLUSION **2 Credits**

Prerequisite: Admission to Dental Hygiene Program

Anatomy and physiology of the teeth and their supporting structures. A laboratory course combined with self-teaching opportunities utilizing various media. The laboratory work includes tooth identification, the relationship of malocclusion to mastication and pathological conditions. Four hours of laboratory per week.

(NS 143) INTRODUCTION TO CLINICAL DENTAL HYGIENE **3 Credits**

Prerequisite: Admission to Dental Hygiene Program

History of dentistry and dental hygiene; the development and current state of the profession. Introduction to the necessary skills of the hygienist. Theories of stains and oral deposits and the principles and methods of removal of deposits are studied and practiced through direct application to the mouth. One hour of class and six clinical hours per week.

(NS 144) CLINICAL DENTAL HYGIENE I **3 Credits**

Prerequisite: NS 143

Continuation of application of skills learned in Introduction to Clinical Dental Hygiene 143, utilizing sterile technique and principles of patient education while performing oral prophylaxis on patients in the clinic. Introduction to the theory and procedure of taking, processing, and mounting oral radiographs. One hour of class and six hours of clinic per week.

(NS 145) DENTAL PROCEDURES I **2 Credits**

Prerequisite: NS 143

Familiarization with the procedures used in dentistry. Introduces the various speciality areas of dentistry including periodontics, orthodontics, prosthodontics, endodontics, and oral surgery as well as the principles and techniques of four-handed dentistry and dental hygiene. Field experience will be provided during the summer session. One hour of class and two hours of laboratory per week.

(NS 147) HEAD AND NECK ANATOMY **2 Credits**

Prerequisite: NS 141

Study of the embryologic development, and of microscopic and gross anatomy of the head and neck. Clinical application is emphasized. One hour of class and two hours of laboratory per week.

(NS 150) GENERAL PHYSICS I **4 Credits**

Prerequisite: High school Trigonometry or MATH 117

Introductory survey of important topics in physics such as motion and energy, matter and heat, and electricity and magnetism. Three hours of class and three hours of laboratory per week.

(NS 151) GENERAL PHYSICS II **4 Credits**

Prerequisite: NS 150

Continuation of General Physics I. Subjects include wave motion and light, relativity, quantum physics, and fundamental particles of nature. Three hours of class and three hours of laboratory per week.

(NS 220) ORGANIC CHEMISTRY I **5 Credits**

Prerequisite: NS 121

Develops the nomenclature, principles and theories of organic chemistry with emphasis on electronic theories and reaction mechanisms. The laboratory is supportive in nature with emphasis on developing laboratory techniques and preparation of representative compounds. Three hours of class and six hours of laboratory per week.

(NS 221) ORGANIC CHEMISTRY II **5 Credits**

Prerequisite: NS 220

Continuation of Organic Chemistry 220 to include an introduction to organic qualitative analysis. Three hours of class and six hours of laboratory per week.

(NS 225) PRINCIPLES OF ORGANIC CHEMISTRY **5 Credits**

Prerequisite: NS 125

Introduction to aliphatic and aromatic compounds with emphasis on application to biochemistry and related fields. Nomenclature, principles, and basic theories of organic chemistry will be studied. Four hours of class and three hours of laboratory per week.

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(NS 231)* THE INDIVIDUAL AND HIS ILLNESS *-SHORT TRM HLTH PRO) **10 Credits**

Prerequisite: NS 132

Introduction to the care of patients with illness. Special emphasis placed on nursing intervention when there is a threat to homeostasis. Pathophysiology and the application of basic scientific principles of care stressed. Clinical laboratory experience in hospitals and other health agencies is an important part of the course. Five hours of class and 15 hours of clinical laboratory per week.

(NS 232) *THE INDIVIDUAL AND HIS ADAPTION TO ILLNESS — (*LONG TRM HLTH PRO) 10 Credits

Prerequisite: NS 231

Continued study of illness with emphasis on the adjustment of the individual to acute and/or long term illness, rehabilitation, or impending death. Extensive utilization of patient care plans is required. Adjustment to the role of the nursing graduate is discussed. Five hours of class and 15 hours of clinical laboratory per week.

(NS 241) CLINICAL DENTAL HYGIENE II 5 Credits

Prerequisites: NS 144 and NS 145

An intensive clinical experience during which one may perfect the previously learned clinical skills. Interpretation of radiographs and radiation hygiene is emphasized. Additional experience in the speciality areas provided through affiliations with UMKC School of Dentistry and Kansas City Veterans Administration Hospital. Management of medical and dental emergencies is discussed. Two hours of class and 24 hours of clinic per week.

(NS 242) CLINICAL DENTAL HYGIENE III 5 Credits

Prerequisite: NS 241

Corequisite: NS 248

Continuation of Clinical Dental Hygiene 241. Continued application of the necessary skills to practice dental hygiene effectively. Emphasis placed on the more advanced techniques of root planning and soft tissue curretage. Current concepts and theories in the area of preventive dentistry are discussed. Field experience at UMKC School of Dentistry, Kansas City Veterans Administration Hospital, Kansas State School for the Deaf and Johnson County public schools. One hour of class and 12 hours of clinic per week.

(NS 243) CLINICAL DENTAL HYGIENE IV **5 Credits**

Prerequisite: NS 242

Continuation of experience in the clinical areas of dental hygiene with additional experience in performing diet analysis and finishing restorations. Principles of professional ethics, laws and regulations related to dentistry and dental hygiene and the effective administration of the dental practice are presented. One hour of class and 12 hours of clinic per week.

(NS 244) NUTRITION AND DIET ANALYSIS **3 Credits**

Prerequisite: NS 143

Fundamental principles of normal nutrition; sources and utilization of essential nutrients. Special emphasis on the action of these substances on the dental and periodontal tissues. Evaluation of various diets and recommendations for alterations of diets for prevention of oral disease are discussed. Three hours of class per week.

(NS 245) DENTAL PROCEDURES II **2 Credits**

Prerequisite: NS 145

Continuation of the study of the procedures utilized in dentistry. Provides the student with a basic understanding of the properties of dental materials as well as the influence of manipulative variables. Basic laboratory techniques are performed. One hour of class and two hours of laboratory per week.

(NS 246) DENTAL PROCEDURES III **2 Credits**

Prerequisite: NS 245

Study of drugs, anesthetics and therapeutic agents with emphasis on those used in the dental office as well as commonly prescribed medications, their effects upon the body and upon the clinical practice of dentistry and dental hygiene. Class meets three hours per week.

(NS 248) PATHOLOGY AND PERIODONTOLOGY **3 Credits**

Prerequisites: NS 115, NS 116 and concurrent enrollment in NS 242

Fundamentals of microscopic and gross pathology; discussion of general pathological processes. Study of the diseases of the highly specialized dental and periodontal tissues, their etiology and prevention. Special emphasis on therapeutic practice of periodontics including demonstrations of clinical practice of the skills involved in history taking and perio charting, root planning, and soft tissue curettage. Class meets three hours per week.

(NS 249) COMMUNITY DENTAL HEALTH **3 Credits**

Prerequisite: NS 143

Combines the principles of public health and dental health education and the principles, practices, and materials used in teaching dental health. The needs and demands for dental treatment and mechanisms for financing dental care are emphasized. Field experience is included. Three hours of class per week.

(NS 250) ENGINEERING PHYSICS I **5 Credits**

Corequisite: MATH 122

Introduction to physics for students of science and engineering which stresses mathematical approaches to the study of mechanics, thermodynamics and electricity. Four hours of class and three hours of laboratory per week.

(NS 251) ENGINEERING PHYSICS II **5 Credits**

Prerequisite: NS 250

Continuation of Engineering Physics I with emphasis on electricity and magnetism, wave motion and light, and topics in modern physics such as relativity, quantum mechanics, and elementary particles. Four hours of class and three hours of laboratory per week.

PHYSICAL DEVELOPMENT

(PD 101) CO-ED PHYSICAL DEVELOPMENT — 1 Credit

Activities consist of softball, volleyball, badminton, tennis, soccer, marching, calistenics, bowling, films, lectures, and general discussion of physical development. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

(PD 102) CO-ED PHYSICAL DEVELOPMENT — 1 Credit

Activities consist of golf, tennis, archery, soccer, calistenics, bowling, films, lectures, and general discussion of physical development. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

(PD 103) TENNIS AND BADMINTON — 1 Credit

Brief history of each sport including instruction and practice in the fundamentals of each sport. Class meets two hours per week.

(PD 104) HANDBALL AND PADDLE BALL — 1 Credit

Brief history followed by instruction and practice in basic fundamentals. Co-ed. Class meets two hours per week.

(PD 105) CO-ED GYMNASTICS AND TUMBLING — 1 Credit

Instruction and practice in tumbling, side horse, even and uneven parallel bars, balance beam and trampoline. For the inexperienced or limited experienced student. Class meets two hours per week.

(PD 106) WRESTLING — 1 Credit

Brief history of wrestling followed by instruction and practice in basic fundamentals. Class meets two hours per week.

(PD 107) CO-ED SOCCER **1 Credit**

Brief history of soccer followed by instruction and practice in basic fundamentals. Class meets two hours per week.

(PD 108) ARCHERY **1 Credit**

Brief history of archery. Selection and care of equipment and skill in shooting. Class meets two hours per week.

(PD 110) RULES AND OFFICIATING **2 Credits**

Knowledge and interpretation of the rules of football, basketball, track and field, and baseball is essential in preparing for coaching and/or officiating. Such knowledge and interpretive ability is also helpful to spectators of these sports. Class meets three hours per week.

(PD 120) PERSONAL HEALTH AND COMMUNITY HYGIENE **3 Credits**

Insight into some of the problems of maintaining good health. Topics include exercise, personal appearance, narcotics, tobacco, alcohol, recreation, sleep, and minor health disturbances. Also involves social, emotional, economic, physical aspects, and community life. Class meets three hours per week.

(PD 121) CO-ED PHYSICAL FITNESS AND WEIGHT TRAINING **1 Credit**

Involves the development of various aspects of physical fitness. Units on postural status, body weight control, tension factors (causes and control) exercise tolerance and general body mechanics and control. Class meets two hours per week.

(PD 130) INTRODUCTION TO PHYSICAL EDUCATION **3 Credits**

Study of the principles of health and physical education; its history, philosophy, theory, and practice. Class meets three hours per week.

(PD 131) INDIVIDUAL LIFE-TIME SPORTS **2 Credits**

Survey of the basic terminology, skills and rules of selected team sports, individual lifetime sports, and their use in recreation. Emphasis on knowledge and understanding of the organization, administration and promotion of sports rather than mastery of performance skills. Class meets three hours per week.

(PD 135) INTRODUCTION TO RECREATION SERVICES **3 Credits**

Introduces the basic fundamentals of the nature, scope and significance of organized recreation services. Includes study of factors involved in the operation of basic recreation units, major program areas, organizational patterns and the interrelationship of special agencies and institutions which serve the recreation needs of society. Class meets three hours per week.

(PD 136) OUTDOOR RECREATION **3 Credits**

Includes study of the history, development and trends of outdoor recreation conservation and organized camping. Emphasis is on laboratory work, field trips and the development of outdoor skills. Class meets three hours per week.

(PD 137) SOCIAL RECREATION **2 Credits**

Introduces methods and materials for planning, organizing and conducting social activities for groups of various sizes and ages in a variety of social situations. Emphasis is on the mechanics of planning and presenting a repertoire of activities for social recreation events. Major activities are discussed, played and/or demonstrated. Class meets three hours per week.

(PD 140) FUNDAMENTALS OF ATHLETICS **2 Credits**

Theory of coaching and a study of coaching methods. Emphasis placed on the sports currently in season and popular within the local high schools and college athletic programs. Class meets three hours per week.

(PD 141) FUNDAMENTALS OF BASKETBALL **2 Credits**

Fundamentals of offensive and defensive basketball; individual and team play; strategy and rules. Co-ed. Class meets three hours per week.

(PD 150) CO-ED SWIMMING **1 Credit**

Instruction and practice in water skills and safety. Covers basic techniques in learning to be a better swimmer and skills in senior lifesaving. Class meets two hours per week.

(PD 151) INTERMEDIATE SWIMMING **1 Credit**

Prerequisite: By permission

Stroke instruction at the intermediate and swimmer level; water sports and game participation will be included. Co-ed. Class meets two hours per week.

(PD 153) FOLK, SQUARE AND SOCIAL DANCING **2 Credits**

Introduces methods and materials of folk, square and social dancing. Attention is given to terminology, skills, selection and presentation of dances. Emphasis on knowledge and understanding rather than mastery of performance skills. Class meets three hours per week.

(PD 154.1 - 154.4) GIRL'S DRILL TEAM **1 Credit (each semester)**

To teach precision drill team techniques and to represent the College in community activities. Enrollment by audition. Class meets from October 1 to end of fall semester; from beginning of spring semester to March 1. Hours by arrangement.

(PD 155) MODERN DANCE **1 Credit**

Co-ed course with emphasis on motor control and skill in executing the fundamentals of dance. Basic techniques. Class meets two hours per week.

(PD 156.1 - 156.4) CHEERLEADING **1 Credit (each semester)**

Co-ed basic instruction in the fundamentals of cheerleading. Class meets from October 1 to end of fall semester; from beginning of spring semester to March 1. Hours by arrangement.

(PD 157) HORSEMANSHIP **1 Credit**

General care of horse and equipment. Mounted session includes riding on the flat and over fences. Class meets two hours per week.

(PD 158) LIFE SAVING AND WATER SAFETY **1 Credit**

Advanced work in all swimming strokes, as well as instruction for certification in American National Red Cross Life Saving and Water Safety. Co-ed. Class meets two hours per week.

(PD 159) GOLF **1 Credit**

Techniques and fundamentals of golf. Choice and use of club, posture, rules and courtesies of the game. Class meets two hours per week.

(PD 160) FENCING **1 Credit**

History, etiquette, and rules of fencing. Basic offensive and defensive tactics and combat strategy. Class meets two hours per week.

(PD 201) FIRST AID **2 Credits**

Standard and/or advanced first aid with certification by the American Red Cross. Cause, prevention, and first aid care of common emergencies. Class meets three hours per week.

(SS 101) SOCIAL SCIENCE/SOCIOLOGY **3 Credits**

Interdisciplinary sociology course that is concerned with the concepts and methods of sociology and their relationship to the other behavioral sciences. Concepts from sociology, as well as other disciplines, are used to explore various dimensions of social organizations. Class meets three hours per week.

(SS 102) SOCIAL SCIENCE/POLITICAL SCIENCE **3 Credits**

An interdisciplinary political science course which introduces the basic concepts and methods from political science and their relationship to the behavioral sciences. Such topics as the city, the environment and international relations are probed by the class. Class meets three hours per week.

(SS 103) SOCIAL SCIENCE/PSYCHOLOGY **3 Credits**

An interdisciplinary psychology course which introduces the basic concepts and methods of general psychology and its relationship to the other behavioral sciences. The application of psychological principles to the understanding of behavior is stressed. Class meets three hours per week.

(SS 150) BASIC POLICE TRAINING COURSE **4-7 Credits**

Prerequisite: Must be currently employed full-time by a participating law enforcement agency

Basic patrol procedures: Traffic investigation and control, arrests, search and seizures. Fulfills and exceeds requirements of the Kansas Minimum Standards Training Act. May be applied as elective credit to satisfy requirements of the Associate Degree Program in Law Enforcement. A minimum of 240 clock hours. Class meets five days a week, eight hours a day for nine weeks.

(SS 151) INTRODUCTION TO LAW ENFORCEMENT **3 Credits**

Philosophical and historical background, organizations, purpose and functions of police agencies on the local, state, and federal levels and their respective roles in the administration of criminal justice in the United States. Class meets three hours per week.

(SS 152) POLICE ADMINISTRATION **3 Credits**

Prerequisite: SS 151

Study of the contemporary law enforcement agency, its functions, structures, and operational techniques. Class meets three hours per week.

(SS 153) JUVENILE CODE AND PROCEDURES **3 Credits**

Origin and development of juvenile agencies, organization functions and jurisdiction of juvenile courts. Detention, procedure and disposition, and custody and treatment of juvenile offenders in Kansas is included. Class meets three hours per week.

(SS 154) STUDY OF CRIMINAL JUSTICE **3 Credits**

Survey of the administration of criminal justice in the United States emphasizing the role of the police, the prosecution, judicial and correctional processes. Class meets three hours per week.

(SS 155) CRIMINAL LAW **3 Credits**

Classification and analysis of crimes and criminal acts. Discussion of Kansas Criminal Statutes. Class meets three hours per week.

(SS 156) FUNDAMENTALS OF CRIMINAL INVESTIGATION **3 Credits**

Prerequisite: SS 155 or by permission.

Study of the criminal act and its investigation, including specific crimes against the person and against property. Processes of fact gathering, testing of hypotheses, and problems of proof. Class meets three hours per week.

(SS 159) POLICE AND THE PUBLIC **3 Credits**

Study of police community relations. Intensive examination of the many programs used throughout the United States with emphasis placed on the role of the individual police officer. Class meets three hours per week.

(SS 201) ECONOMICS I **3 Credits**

Prerequisite: By permission

Study of the basic economic problems of resource allocation, national income determination, money and banking, fiscal policy, and international trade and finance. Class meets three hours per week.

(SS 202) ECONOMICS II **3 Credits**

Prerequisite: SS 201 or by permission

Continuation of Economics 201 with emphasis on supply and demand, theory of the firm, and market structures. Class meets three hours per week.

(SS 210) CHILD DEVELOPMENT **3 Credits**

Prerequisite: SS 103 or by permission

Growth and development of the child from conception to puberty. Emphasis on factors important to an understanding of development: internal growth, self and external adjustment processes. Class meets three hours per week.

(SS 211) EDUCATIONAL PSYCHOLOGY **3 Credits**

Prerequisite: SS 103 or by permission

Concepts in human development related to problems in the school learning-teaching situations. Study of behavior, attitudes, values, skills, retention and transfer. Measurements of abilities and achievements of students. Class meets three hours per week.

(SS 220) AMERICAN HISTORY **3 Credits**

Prerequisite: By permission

Colonial period to Civil War. Survey course of American history in light of the growth of institutions, economic development, Westward expansion and cultural history. Emphasis also placed on the nature and methodology of history. Class meets three hours per week.

(SS 221) AMERICAN HISTORY **3 Credits**

Prerequisite: By permission

Civil War to present. Survey course in American history tracing the economic, political, social and cultural influences on contemporary society. Emphasis also placed on the nature and methodology of history. Class meets three hours per week.

(SS 222) AMERICAN NATIONAL GOVERNMENT **3 Credits**

Prerequisite: By permission

General systems approach to the process of American national government. Emphasis on interaction and interrelationships among components of American society which create the dynamics of our governmental system. Class meets three hours per week.

(SS 230) SOCIAL PROBLEMS **3 Credits**

Prerequisite: By permission

Provides a meaningful sociological framework for the analysis of social problems and a consideration of the application of varying methods to the study of social problems. Class meets three hours per week.

(SS 250) MOTOR VEHICLE LAW **3 Credits**

Study of the standard traffic ordinances for cities in Kansas with a view to understanding the fundamentals of traffic regulation and control as they relate to the police service, motor vehicle administration traffic courts and other governmental functions. Class meets three hours per week.

(SS 251) INTRODUCTION TO CRIMINALISTICS **3 Credits**

Prerequisite: SS 155

Physical evidence, collection, identification preservation, and transportation; crime laboratory capability and limitation; examination of physical evidence within resources of the investigator and demonstration of laboratory criminalistics to the extent supported by existing or available facilities. Class meets three hours per week.

(SS 254) CRIMINOLOGY **3 Credits**

Manifestations of crime and theories of criminal behavior. Process and purpose of treatment, correction, crime prevention and control. Contemporary trends. Class meets three hours per week.

(SS 255) TRAFFIC SAFETY AND ACCIDENT INVESTIGATION **3 Credits**

Prerequisite: SS 151 or by permission

Study of the enforcement problems created by modern society with emphasis on control, engineering and accident investigation principles. Class meets three hours per week.

(SS 257) PATROL PROCEDURES **3 Credits**

Prerequisites: SS 153, SS 155 and SS 250

Skills development course in the mechanics of basic patrol techniques. Communications, report writing, answering calls, traffic enforcement and courtroom procedures included. Class meets three hours per week.

(SS 258) DEFENSIVE TACTICS FOR POLICE **3 Credits**

Prerequisites: SS 153, SS 155 and SS 250

Use of police firearms, defensive tactics and emergency first aid. Includes qualification with the service revolver and use of the baton. Class meets three hours per week.

(SS 259) READINGS IN POLICE SCIENCE **1-3 Credits**

Prerequisite: 15 hours credit in Law Enforcement

Selected readings in Police Science; e.g., Police Administration, Criminal Investigation, Criminology, Corrections, Juvenile Problems, Evidence. Course designed for independent study. Permission of instructor required.

JOHNSON COUNTY COMMUNITY COLLEGE

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