JOHNSON COUNTY COMMUNITY JUNIOR COLLEGE

111th & Quivira Road
Overland Park, Kansas 66210
Area Code 913, 888-8500

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.

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MESSAGE
FROM THE PRESIDENT

It takes no crystal ball to see that our society is changing at almost a frightening rate, and that education must keep pace with such change if it is to meet the aspirations of all age groups and interests. I think you will find Johnson County Community College both capable and committed to bringing a new dimension to your life.

In five short years of existence, JCCC has opened a modern new campus facility for its local community. It has expanded programs in university transfer, general studies and career areas. It has broadened continuing education and community services activities to where they now serve more than 4,300 adults each semester!

Johnson County Community College is an alive and thriving educational family, not bound by traditions and intent on meeting both present and future needs of the Johnson County area. By launching instructional and community service programming over cable television; by providing special programs for high school students; by opening all College programs free of charge to senior citizens; through special community studies, programs for high school students, hearing impaired citizens and active duty military personnel, JCCC is proving its value and relevance in our changing community and changing world.

We welcome you to your community college and to the prospect of sharing an exciting and fruitful year ahead!

Robert G. Harris
President
BOARD OF TRUSTEES

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

DR. WILBUR T. BILLINGTON
Terms: 1967-75

DR. JACK J. HOLDER, JR.
Terms: 1969-77

DR. JOHN R. PRICE
Terms: 1969-77

DR. JOYCE A. SMITH
Terms: 1973-77

DR. O. DALE SMITH
Terms: 1967-75

DR. HUGH W. SPEER
Terms: 1967-75
The concept of the community junior college is a major innovation in American education which embraces not only broad consid-
erations but also necessary local adaptations. The goal of Johnson
County Community College is to provide a high-quality, comprehen-
sive and flexible program which is available to all individuals in the
rapidly growing urban-suburban-rural community.

The major purposes of the College are reflected in the commitment
to a comprehensive educational program including transfer, career,
general studies and adult continuing education. In addition, the
College seeks to become an integral part of the community by utilizing
the resources, talents and opportunities of the community to the
greatest possible extent and by offering the community its facilities,
staff and stimulus.

The Johnson County Community College Board of Trustees and
Staff are committed to the development of a distinctive institution,
definitely attuned to the needs of the community. The Board and the
Staff believe that each individual should have the opportunity to attain
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 realize his goals.
The foundation is a non-profit corporation which was formed by area citizens to promote charitable, cultural, educational and scientific activities of the College. The Foundation provides a means by which private resources can be directed to College programs. Contributions to the Foundation are tax deductible.

The Directors of the Foundation have identified three areas of major emphasis towards which their activities are directed:

* Financial aid for students attending the College
* Support of the staff and staff projects
* Capital improvements

The Board of Directors of the Foundation is made up of a cross section of the community and includes the Board of Trustees and President of the College. The executive director of the Foundation is Murray L. Nolte. Current directors are:

Dr. Wilbur T. Billington  
Mr. Mel Clingan  
Mr. Ben Craig  
Mr. Glen Dickinson  
Mr. Arthur W. Gabriel  
Mr. Rick Harman  
Dr. Robert G. Harris  
Dr. Jack J. Holder, Jr.  
Mr. Ed King  
Mr. Karl Lehman  
Mr. Richard McAnany  
Mrs. Jan Meyers  
Dr. John R. Price  
Mr. Marvin Rainey  
Mr. John H. Robinson  
Dr. Joyce A. Smith  
Dr. O. Dale Smith  
Dr. Hugh W. Speer  
Mr. C.Y. Thomas
### SUMMER SESSION & FIRST MINI SESSION, 1974

<table>
<thead>
<tr>
<th>MAY</th>
<th>Thur.-Fri.</th>
<th>30</th>
<th>Registration and payment of fees for eight week summer session, first mini session and Continuing Education summer program.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>1</td>
<td>Last day for application by foreign students for fall semester entry.</td>
</tr>
<tr>
<td>JUNE</td>
<td>Monday</td>
<td>3</td>
<td>Summer session, first mini session and Continuing Education program begin.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>4</td>
<td>Last day for registration or schedule changes without Dean's permission.</td>
</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>6</td>
<td>Last day for withdrawal from a course or from the College and receive a refund for summer and first mini sessions.</td>
</tr>
<tr>
<td></td>
<td>Friday</td>
<td>28</td>
<td>First mini session ends.</td>
</tr>
</tbody>
</table>

### SECOND MINI SESSION, 1974

<table>
<thead>
<tr>
<th>JUNE</th>
<th>Friday</th>
<th>28</th>
<th>Registration and payment of fees for second mini session.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JULY</td>
<td>Monday</td>
<td>1</td>
<td>Second mini session begins.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>2</td>
<td>Last day for registration or schedule changes without Dean's permission.</td>
</tr>
<tr>
<td></td>
<td>Thur.-Fri.</td>
<td>4</td>
<td>Independence Day Holiday.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>8</td>
<td>Last day for withdrawal from a course or from the College and receive a refund for second mini session.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>30</td>
<td>Second mini session and eight week summer session ends.</td>
</tr>
<tr>
<td>AUG.</td>
<td>Monday</td>
<td>5</td>
<td>Registration and payment of fees for fall semester begins.</td>
</tr>
<tr>
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<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>26</td>
<td>Fall Semester begins. Continuing Education registration begins.</td>
</tr>
<tr>
<td>SEPT.</td>
<td>Monday</td>
<td>2</td>
<td>Labor Day Holiday. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>3</td>
<td>Last day for registration or schedule changes without Dean’s permission. Last day for withdrawal from a course or from the College and receive a refund.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>16</td>
<td>Continuing Education classes begin.</td>
</tr>
<tr>
<td>OCT.</td>
<td>Tuesday</td>
<td>1</td>
<td>Last day for application by foreign students for spring semester entry.</td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td>15</td>
<td>In-Service Day. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Thur.-Fri.</td>
<td>28</td>
<td>Thanksgiving Holiday. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Nov.</td>
<td>29</td>
<td>Thanksgiving Holiday. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Wed.</td>
<td>11</td>
<td>In-Service Day. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Friday</td>
<td>20</td>
<td>Fall semester ends.</td>
</tr>
<tr>
<td></td>
<td>Tues.-</td>
<td>24</td>
<td>Christmas Holiday. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Wed.</td>
<td>25</td>
<td>Christmas Holiday. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>26</td>
<td>Intersession begins.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>30</td>
<td>Registration and payment of fees for spring semester begins.</td>
</tr>
<tr>
<td></td>
<td>Tues.-</td>
<td>31</td>
<td>New Year’s Holiday. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Wed.</td>
<td>1</td>
<td>New Year’s Holiday. College offices closed.</td>
</tr>
</tbody>
</table>
### SPRING SEMESTER, 1975

<table>
<thead>
<tr>
<th>JAN.</th>
<th>Thurs.</th>
<th>2</th>
<th>Continuing Education registration begins.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monday</td>
<td>13</td>
<td>Spring semester begins.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>20</td>
<td>Continuing Education classes begin.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Last day for registration or schedule change without Dean's permission.</td>
</tr>
<tr>
<td>FEB.</td>
<td>Tues.</td>
<td>4</td>
<td>In-Service Day. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>17</td>
<td>Washington's Birthday Holiday. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td>MARCH</td>
<td>Saturday</td>
<td>1</td>
<td>Last day for application by foreign students for summer session entry.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>10</td>
<td>Spring recess begins. Classes not in session. College offices open.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>17</td>
<td>Classes resume.</td>
</tr>
<tr>
<td>APRIL</td>
<td>Wed.</td>
<td>16</td>
<td>In-Service Day. Classes not in session. College offices closed.</td>
</tr>
<tr>
<td>MAY</td>
<td>Wed.</td>
<td>14</td>
<td>Last day of spring semester.</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>17</td>
<td>Commencement.</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td>26</td>
<td>Memorial Day Holiday. College offices closed.</td>
</tr>
<tr>
<td>Date</td>
<td>Day</td>
<td>Event Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
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<td></td>
</tr>
<tr>
<td>MAY</td>
<td>Thurs.-Fri. 29-30</td>
<td>Registration and payment of fees for eight week summer session, first mini session and Continuing Education summer program.</td>
<td></td>
</tr>
<tr>
<td>JUNE</td>
<td>Sunday 1</td>
<td>Last day for application by foreign students for fall semester entry.</td>
<td></td>
</tr>
<tr>
<td>Monday 2</td>
<td>Summer session, first mini session and Continuing Education program begin.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday 3</td>
<td>Last day for registration or schedule changes without Dean’s permission.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday 5</td>
<td>Last day for withdrawal from a course or from the College and receive a refund for summer and first mini sessions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday 27</td>
<td>First mini session ends.</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUNE</td>
<td>Friday 27</td>
<td>Registration and payment of fees for second mini session.</td>
</tr>
<tr>
<td>Monday 30</td>
<td>Second mini session begins.</td>
<td></td>
</tr>
<tr>
<td>JULY</td>
<td>Tuesday 1</td>
<td>Last day for late registration or schedule changes without Dean’s permission.</td>
</tr>
<tr>
<td>Monday 7</td>
<td>Last day for withdrawal from a course or from the College and receive a refund for second mini session.</td>
<td></td>
</tr>
<tr>
<td>Friday 25</td>
<td>Second mini session and eight week summer session ends.</td>
<td></td>
</tr>
</tbody>
</table>
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 graphic illustrations, slides, audio and video tapes, motion pictures and printed matter 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 clinic with dental facilities for patients.

D CAMPUS SERVICES BUILDING: Security office; telephone communication center; maintenance office and shops; vehicle repair area; central warehouse; instructional space; mechanical room for air conditioning and electrical equipment.

E GYMNASIUM Three basketball cross-courts which can be converted to a 2,300 seat varsity basketball arena; physical education facilities including weight room, wrestling room, classrooms; staff offices and minor first aid center for the campus; outdoor activities play fields located adjacent to the Gymnasium.

F COLLEGE COMMONS: Bookstore, food service and recreational facilities; offices, meeting rooms and lounge space; College Commons administrative offices and meeting room.

SITE: 220 acres
GENERAL INFORMATION
The expressed purpose of Johnson County Community College is to serve the community. The College attempts to fulfill this purpose in many ways . . . through an Instructional program which is offered during the day and evening hours through fall and spring semesters and summer sessions; through continuing education activities which are offered in various locations throughout the area; and through community services which seek to meet the needs of the community.

The College attracts a diversified student body with varying backgrounds, motives and goals. In order to serve the wide range of individual needs, JCCC provides programs, services and personal counseling to assist students who wish to obtain one or more of the following educational objectives:

• attainment of an Associate of Arts degree
• improvement of present professional abilities
• advancement in present occupational skills
• achievement of personal satisfaction and enrichment

ACCREDITATION
Johnson County Community College was granted Recognized Candidacy status by the North Central Association of Colleges and Secondary Schools in March, 1972, and is on schedule in the accreditation process for new institutions. The College articulates with neighboring colleges and universities to insure transferability of credits to these and other institutions. The College is recognized by the American Association of Community Junior Colleges (AACJC), as a Servicemen’s Opportunity College (SOC). A Servicemen’s Opportunity college provides the opportunity for active duty service personnel and their dependents to complete their studies for the Associate degree by recognizing the exigencies of military service.

CURRICULUM
UNIVERSITY TRANSFER
The College offers courses in liberal arts, science and general education which are comparable to those offered during the first and second years of most four-year colleges and universities. These courses are designed for the student who is planning to continue his education at a four-year institution.

CAREER PROGRAMS
Career programs are designed to prepare students for entry into various occupations at the technical or mid-management level and may be completed in two years or less. Program areas include Accounting, Commercial Pilot, Data Processing, Dental Hygiene, Drafting, Electrical/Electronic Engineering and Service Technologies, Fashion Merchandising, Journalism,
Law Enforcement, Nursing, Marketing and Management, Recreation Leadership, Secretarial Careers and others. Further information about the career programs may be obtained from the Counseling Office.

GENERAL STUDIES
General Studies are for the student who is in the process of determining his educational goals. Fulfillment of individual needs and interests is emphasized. Students may choose courses from any of the curriculum areas and explore a variety of learning experiences. If, at a later date, the student wishes to enroll in a Career program area or decides to transfer to a four-year institution, the courses he has taken in General Studies may be applied to these requirements.

CONTINUING EDUCATION
A wide variety of educational activities are provided by JCCC through Continuing Education. Courses, workshops and other activities are offered in many subject areas including art, aviation, business and finance, developmental skills, foreign languages, folk arts, office education, sports and recreation, etc. Most Continuing Education activities are not for college credit, are held in locations throughout Johnson County and are open to any person 18 years of age or over.
ADMISSION REQUIREMENTS

Any resident of Johnson County 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.

High school students who have approval of their high school principal may enroll in College courses.

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

- Application: Complete and file an application form with the office of Admissions. The complete social security number must be listed on the form.
- High School Transcripts: Full time students must provide an official transcript of high school work unless they have been out of high school for at least two years. Transcripts should be sent directly from the high school to the Admissions Office.
- College Transcripts: College transcripts from each college attended are required for all students transferring from another institution. Transcripts should be sent directly from the college to the JCCC office of Admissions. If college transcripts are not received by the Admissions Office prior to registration a $5.00 fee will be charged and refunded when the transcript arrives.
- Residency: Residency in Johnson County requires six (6) months to establish. See the Director of Admissions for specific residency requirements. Students having legal residence in another Kansas community college district will be required to present a letter of permission from the chief executive officer of that community junior college district or be required to pay an amount equal to out-of-state tuition.
- Tests: It is recommended but not required that each full time student filing an application for admission provide American College Testing (ACT) scores. Students are advised to take the ACT test as early as possible on one of the national dates and to list Johnson County Community College as one of the three colleges to receive the test results.
- Foreign Students: Foreign students are required to take the Test of English as a Foreign Language (TOEFL) or present evidence of proficiency in the English language.

All records are expected to be complete and on file in advance of registration.
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.

ADVANCED STANDING CREDIT
Advanced standing credit may be granted to students for knowledge acquired through self-study, work experience and courses successfully completed at other colleges. The following is Johnson County Community College's advanced standing credit program. (NOTE: no advanced standing credit will be recorded on a student's transcript until one credit course has been successfully completed at JCCC.)

Credit Transferred from Other Colleges
Johnson County Community College may accept appropriate credits earned from a college of recognized standing and may permit up to forty-five semester hours of transferred course work towards completion of the requirements for an Associate of Arts degree.

College Level Examination Program (CLEP)
Credit may be granted to those who demonstrate a knowledge of a general or specific nature, equivalent to an undergraduate college course, through the College Level Examination Program. The General Examination tests knowledge of general information comparable to that obtained during the freshman year of college. The Subject Examinations offers the student an opportunity to be tested in selected subject areas. There are no restrictions as to age or educational background for the CLEP examinations. Credit will be granted to students for performance at the 25th percentile or above.

Application to take the CLEP examination may be made in the Counseling Office at JCCC or at any other CLEP testing center. At the time of application, the student must indicate that he wishes to have the results of the examination sent to JCCC.

College Entrance Examination Board (CEEB)
Advanced Placement Program
Credit may be granted to students through the Advanced Placement Program tests which are administered at high schools during the third week of May. Students will be granted advanced standing credit upon presentation of scores of 3, 4 or 5. 

23
Credit by Examination
Students wishing to receive credit by examination must submit a written request to the Director of Admissions by the following dates:

<table>
<thead>
<tr>
<th>Deadline date</th>
<th>Testing dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>July 15 through August 15</td>
</tr>
<tr>
<td>September 1</td>
<td>October 15 through November 15</td>
</tr>
<tr>
<td>February 15</td>
<td>March 1 through April 1</td>
</tr>
</tbody>
</table>

A fee of $15 will be charged for each examination.

Area Vocational Technical
School-Proprietary School Credits
Credit may be granted for credits earned at an area vocational technical school or a proprietary school if the school is accredited by a recognized accrediting agency. If the school is not accredited, a group of professional people may be selected by the College to equate the experience to college credit. A student must present proof of earned credit as well as descriptions of the classes he successfully completed to the Director of Admissions. There is no charge for the evaluation.

Military Service
Credit granted for military service is based upon the recommendation of the Commission of Accreditation of Service Experiences which was appointed by the American Council on Education. To be eligible for such credit, a student must have had a minimum of one year's continuous active duty as a member of an active duty unit. Students currently enrolled may apply for military service credit by presenting a copy of Form DD 214 for discharged personnel or Form DD 295 for active duty servicemen.

Experienced Based Education
Credit may be granted for experience based education. Students who feel that they have acquired knowledge equivalent to college credit through their life experience (work, personal, etc.) may apply for this credit through the Director of Admissions.
A fee of $15 will be charged for each course at the time of application for credit.
FOREIGN STUDENTS
The College welcomes students from different cultural and sociological backgrounds. As technology brings people closer together, it is important that an awareness of human values be developed which encompasses all cultures. The College encourages foreign students to enroll and works closely with them to insure that their college experience is meaningful and enjoyable.

Foreign students should make application for admission to JCCC by the following dates:
- June 1 (for fall semester entry)
- October 1 (for spring semester entry)
- March 1 (for summer session entry)

Foreign students transferring from another college or university in the United States must file all additional documents no later than one month prior to the first day of classes. For detailed information, contact the Director of Admissions.

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:

<table>
<thead>
<tr>
<th>End of Semester</th>
<th>Minimum Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>2</td>
<td>1.65</td>
</tr>
<tr>
<td>3</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Behavioral
The students and staff 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.

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 responsibilities 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.

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

Applications for admission after suspension 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.

REGISTRATION PROCEDURES
Registration for classes and payment of tuition and fees take place during the dates specified in the College Calendar. Registration must be preceded by a conference with a College counselor for the purpose of selecting curriculum. Procedures are explained in the class schedules provided prior to registration.

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.

WITHDRAWAL
A student who wishes to withdraw 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 semesters 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 Add-Drop date. In all cases requests for refunds must be initiated by the student through a College counselor.

COSTS

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

TUITION AND FEES
The tuition for Kansas residents attending Johnson County Community College is $12 per semester credit hour and a College Commons fee of $1.50 per semester hour. Tuition for out-of-state, foreign students, or students from community college districts in Kansas who have not received permission from the chief executive officer of their district is $26.50 per semester credit hour and a College Commons fee of $1.50 per semester credit hour. The cost of tuition is subject to change from year to year by action of the College Board of Trustees.

LABORATORY AND/OR COURSE FEES
Laboratory and/or course fees to defray special course expenses such as the cost of breakage or the replacement of expendable supplies, are charged in some courses. Fees are listed in the schedule of classes available at the time of registration.

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 by the College, is located on the campus in the College Commons.
PARKING PERMITS
No parking fee is assessed 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.

ACADEMIC INFORMATION
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.

GRADING SYSTEM
Grades measure the student's performance in terms of the goals and objectives of a course, and 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
The optional grading system is as follows: S - Credit earned; W - Withdrawal; and I - Incomplete.

A student in University Transfer should use the regular system in all courses that satisfy the normal freshman-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 a 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 not 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.

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.
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.

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. 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. 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 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 average of 3.5 in all courses applicable to the degree.

Certificate of Graduation

Requirements for a Certificate of Graduation include the successful completion of an approved program and enrollment during the semester in which the student receives the Certificate. The Certificate will be granted "With Honors" if the recipient earns an overall average of 3.5 in all applicable courses. Contact the Director of Admissions for more information.

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 graduation exercises are held at the close of each spring semester.

STUDENT SERVICES

The function of Student 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 in-
structural 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 his progress toward a successful and meaningful life.

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’s responsibility 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.

Following admission, each full-time student has an individual conference with a member of the counseling staff to help him plan his program at the College. Careful consideration is given to high school background, test results, interests, talents, aptitudes and goals. A student who experiences difficulty or dis-
satisfaction 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.

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 reevaluate 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.

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.

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'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 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 to the office designated on the form. Family Financial Statements are available from the Financial Aids Counselor.

A student who is financially independent of his parents would follow the same financial 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 from the Financial Aids Counselor.

Application for Financial Aids
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 Financial Aids Counselor.

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.

LOANS AND GRANTS
Supplemental Educational Opportunity Grant (SEOG)
Funds for these grants are provided by the Federal Government and will be awarded to those students with the greatest financial need. The maximum grant under this program is $1,500. The amount of this grant will be determined by the Need Analysis System.

Basic Educational Opportunity Grant (BEOG)
The Federal Government instituted a new program in 1972 for undergraduate students. These grants amount to $1,400 minus the amount expected from the family contribution. The actual dollar amount depends on the funding level established by the Federal Government.
National Direct Student Loan (NDSL)
Johnson County Community College is a participating member of the National Direct Student Loan Program. Students who are U.S. citizens are eligible to apply for one of these loans. Students may borrow a maximum of $2,500 for their first two years of college.

College Work Study (CWS)
The College provides part-time jobs on campus for students from low income families with the greatest financial need. The present minimum salary is $1.80 per hour and numerous types of jobs are available on campus (clerical, secretarial, lab assistant, library assistant, etc.).

Federally Insured Loans
The education of young people from middle or upper income groups frequently places a financial burden on their families. 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. These Loans may be obtained from any local participating lending agency and are underwritten by the Federal government.

Students may borrow as much as $2,500 per academic year and an aggregate amount not to exceed $7,500 for undergraduate studies. Students may obtain application forms from the Financial Aids Counselor and must also receive verification of their enrollment from the College. Please note that under this program loans are made or denied at the discretion of the participating lending agency.

Nursing Scholarship and Loan Program
A number of scholarships and loans are funded by the Federal Government for students enrolled in nursing programs. The nursing scholarships can amount to $1,500 each academic year. However the actual awards are based on funding levels established by the Federal Government, the number of applications and their specific financial need. Nursing students should contact the Financial Aids Counselor for the appropriate applications.

Dental Hygiene Scholarship and Loan Program
A number of scholarships and loans are available through the American Dental Hygienists’ Association for students enrolled in dental hygiene programs. The scholarships, which are based on financial need, may range from $300 to $3,000. Applications must be made
by April 1. The student loan program is designed to provide another source of financial aid for dental hygiene students who need additional funds to complete their education. Eligible students can borrow up to $1,000 per academic year.

Law Enforcement Education Program
Loans and Grants
The loan program 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 enforcement. The grant program provides for payment of tuition and fees of not more than $300 per semester for full-time or part-time enrollment in an undergraduate program leading to a degree or certificate in law enforcement. Applications may be obtained from the Financial Aids Counselor and from most law enforcement agencies.

Board of Trustees Grants
The Johnson County Board of Trustees provides grants which remit all tuition for one semester and are renewable for three consecutive semesters. Grants are available to Johnson County residents who are full time students and have financial need, maintain academic excellence and have special talents or abilities.

Applications may be obtained from the Financial Aids Counselor.

COMMUNITY GRANTS AND SCHOLARSHIPS
A number of grants and scholarships are provided by interested service, business and industrial organizations and individuals. The following organizations currently provide grants or scholarships for JCCC students:

- La Sertoma
- American Business Women's Association
- B'Nai B'rith Women
- Johnson County Cosmopolitan Club
- American Association of University Women
- Yellow Freight
- Preferred Business Corporation
- King's Food Host
- Lenexa Lions Club
- Stanley Lions Club
- Certified Professional Secretary Fund

VETERAN'S ELIGIBILITY (G.I. BILL)
The Veterans Administration fully approves 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 veterans' benefits should contact the office of College Services to
through 11 semester hours-⅓ time; 6 through 8 semester hours-½ time; 1 through 5 semester hours-less than ½ time.

PLACEMENT OFFICE
The primary purpose of the Placement Office is to assist individuals in securing and learning about effective ways to secure suitable employment.

The Placement Office maintains cooperative working relationships with employers, other college and university Placement Offices, and both public and private employment agencies throughout the metropolitan area through personal and telephone contact.

In addition to publicizing specific job openings and notifying individuals of such openings, the Placement Office welcomes individual conferences with individuals who wish to discuss present, future, or long-range career plans. The conference may include such topics as writing resumes and letters of application, interviewing, and information about the many sources of finding job openings.

Individuals interested in placement services may visit the Placement Office in person or secure a brochure regarding its services at the Admissions Office.

EDUCATIONAL MEDIA CENTER SERVICES
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.

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.

In addition to assisting 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. If the library does not have needed materials, the staff will secure books and photocopies of magazine articles from other libraries.
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 22,000 books, 500 current periodicals, over 60,000 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.

College Learning Center

The College Learning Center (CLC), located on the second floor of the Educational Media Center, contains basic learning services; a Hearing Impaired Program; the program for General Educational Development (GED); the Adult Basic Education (ABE) Program; and the English as a Second Language program. CLC services are available to all individuals of the community as well as to students enrolled at JCCC.
The learning services provided by the College Learning Center include improving reading rate and comprehension; phonics; study skills, memory improvement; spelling, vocabulary; in mathematics, science, social science, communications, and foreign languages skills.

Diagnostic testing is conducted in order to develop an appropriate program of individualized instruction.

JCCC students may receive college credit or they may use the CLC on a no credit basis.

Hearing Impaired Program

The Hearing Impaired Program provides the student who has a hearing loss with on-the-job training coordinated with classroom activities. Students in this program attend classes with hearing students and are offered special assistance in the form of interpreters, tutors, note-takers, etc. When the hearing loss of the student is not severe, special equipment to augment hearing is provided. Staff members from the Hearing Impaired Program teach classes in the fundamentals of writing, mathematics and manual communication. See page 48 for more information.
GED Program
Individuals who are interested in obtaining a high school equivalency certificate by taking the General Educational Development Test (GED) may receive help through the College Learning Center. A personalized program will be designed to assist the student in preparing for the test. Instructional material is available in the Center. Students work at their own speed, without formal class meetings. Other methods of preparation for the GED test are available, including tutoring and organized classes.

English as a Second Language
For those individuals whose native language is not English, a course in English as a Second Language is available at the Center. Designed for students who have already mastered the basic concepts of English, the course stresses conversation, pronunciation and idioms. Participants enjoy a unique opportunity to meet people from other countries at the same time they are improving their fluency in English.

STUDENT ACTIVITIES
Extracurricular activities are recognized as an essential part of a student's education. At JCCC, the College supports student activities in the same manner it supports academic activities. Student activities are financially supported by General Operating funds of the College and no student fees are assessed for this purpose.
Student Activities Coordinating Council
All students are encouraged to participate in the planning and development of activities. The Student Activities Coordinating Council (SACC) serves as a vehicle for the long range planning and budgeting that is necessary for most activities. Whenever an individual or group of students determine the need and decide to organize an activity, they become a part of SACC and receive assistance and support from other students and the Student Activities Coordinator. Activities in the past have included intramural athletics, drama presentations, dances, debates and the establishment of many special interest clubs and organizations.

Student Participation on College Committees
In addition to the extracurricular activities, students take an active part in the many areas within the College. Students serve on committees for curriculum, admissions, intercollegiate athletics, student discipline, etc. In this way, active participation from the students is encouraged in the organizational structure of the College.

Intercollegiate Athletics
JCCC is a member of the Greater Kansas City Community College Conference and competes in basketball, baseball, golf, track and tennis. The College will participate in other intercollegiate athletics as approved by the Board of Trustees.

All athletes participating in intercollegiate athletics must have a physical examination.
Intramural Activities
The College provides 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 WELFARE
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. The College will review the medical examination forms and may advise students not to participate in physical activities.

Civil Rights
Johnson County Community College complies 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 grounds of race, sex, 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.
CONTINUING EDUCATION

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 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
Many 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 enroll-
ed in the Continuing Education program. The counsel-
ing service offers assistance to the individual by helping him to 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 Continuing Education staff includes instructors from the College, from nearby colleges and schools, persons from business, industry and other areas of specialization.

OFF-CAMPUS ATTENDANCE 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.

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

ADDING NEW COURSES
The Continuing Education Office 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 Continuing Education. If a reasonable number of persons are interested, a class can begin at anytime during the school year.

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

Business and Finance  Office Skills  Physical Education  Creative Arts & Crafts  Foreign Language  Health and Safety  Language Arts  Leisure Skills  Aviation  Recreation  Home and Family  High School Completion  GED Preparation

Adult Basic Education  Industrial Education  Cultural Affairs  Horticulture  Discussion Groups  Special Interests  Practical Know-How  Driver Education  Art and Music  Human Relations  Photography  Sports and Recreation
COMMUNITY SERVICES
JCCC is committed to involving the community in the College and the College in the community in an educational concept that includes broad social considerations and local adaptations. JCCC cooperates with individuals and organizations in the use of College and community resources and talents to develop programs and provide services.

USE OF FACILITIES
The College offers the community the use of its facilities and the services of its staff when the academic calendar permits. Contact the Division of Community Cooperation for more information.

COLLEGE INFORMATION
Information about the College and about special programs of general interest is offered to the public through a variety of media. Journalism students prepare a section of the "Johnson County Herald" which is published weekly and enjoys a wide distribution. In addition, visits and tours of the campus are encouraged.

COMMUNITY DEVELOPMENT
The College has developed extensive county, metropolitan and state information which is available to the public. These data and associated computer programs can be useful to organizations and agencies involved in long range planning. Additionally, the College staff will help in the necessary planning preparatory to conducting a survey, the selection of the sample for the survey and the mechanics of the survey itself.

SPEAKERS' BUREAU, PROGRAM PLANNING
Organizations may obtain help in locating speakers as well as assistance in planning programs and service projects by contacting the Division of Community Cooperation.
PROGRAMS TO MEET SPECIAL NEEDS

OPERATION QUICK STEP
The Quick Step program at JCCC offers high school seniors the opportunity to take college courses while they are still enrolled in high school. If the student's high school schedule permits, he may enroll in courses offered by the College. Certain courses are scheduled at times especially convenient for high school students with beginning dates to coincide with local high school schedules. Interested students should contact their high school counselor for more information.

PROGRAMS FOR WOMEN
JCCC's VIEWS for Women programs are designed to bring information, encouragement, support and exploration opportunities to women who are interested in the many options open in today's evolving society. Both for personal fulfillment and for career involvement. Scheduled throughout the year, the programs include panel discussions, guest speakers, films, and organized class sessions, as well as counseling and assistance in finding paid or volunteer employment. In addition, following the precept that the "home should be the center but not the boundary," educational experiences are offered which are designed to aid in improving basic understanding and communication skills within the family and considering the individual and interdependent needs of each family member.
SENIOR ADULTS

The special needs and interests of senior adults in the community have become an area of growing concern for the College. JCCC invites and encourages senior adults to be active participants in College activities. A Brown and Gold Club has recently been established for Johnson County residents 60 years of age or older. Individuals who become members of the Club will be entitled to free entry on a general admission basis to such College sponsored public events as musical performances, dramatic presentations and athletic contests. The College will reimburse tuition for all Brown and Gold Club members who wish to participate in College credit classes and the continuing education program on a space available basis when a class or other activity has the required minimum enrollment. To obtain an application blank for the Brown and Gold Club, contact the Division of Community Cooperation. Programs are provided on campus with special arrangements to attract senior adults — including provision of some special bus transportation. The College also has programs in various locations throughout the county in cooperation with senior adults and their organizations. To develop better understanding of this growing segment of our population, JCCC also provides education regarding the psychology of aging, pointing out the potential and necessity for life-long development and involvement. JCCC has been working with other agencies in the community to establish a county advisory committee of senior adults and the groups who serve their interests. For more information concerning JCCC's cooperation with senior adults, contact the Community Cooperation Office.
MADCOP (Marine Associate Degree Completion Program)
The MADCOP program provides selected enlisted Marines with the opportunity to earn an Associate of Arts degree by attending JCCC as a full-time student. The U.S. Marine Corps pays all costs of tuition, books, laboratory fees and all other required fees for up to 21 consecutive months of instruction plus normal pay and allowances. Interested Marines should contact their Commanding Officer for more detailed information.

SOC (Servicemen's Opportunity College)
JCCC is recognized by the American Association of Community and Junior Colleges as a Servicemen’s Opportunity College. This means that JCCC provides educational opportunities for active duty service personnel and their dependents, recognizing the exigencies of military service. JCCC provides special services to meet the needs of the serviceman, including a “contract for degree” option and a transfer policy that is generous in recognition of traditional and non-traditional learning obtained at other institutions. Active duty servicemen who are interested in educational opportunities at the College should contact the Counseling Office for more information.

GED (General Education Development)
The GED program offers students who did not graduate from high school the opportunity to earn a high school equivalency certificate. The GED certificate is accepted in most areas on the same basis as a high school diploma. To qualify for the certificate, the student must receive a satisfactory score on a series of examinations based on high school subjects. The examinations are offered every month through the College Counseling Office. To help students who wish to prepare for the examination, JCCC offers GED preparation classes, individualized instruction through the College Learning Center and tutoring on an individual basis. For more information about the GED program, contact the Counseling Office.

PROGRAMS FOR THE HEARING IMPAIRED
JCCC opens as many programs as possible to the hearing impaired student. Students whose hearing is impaired attend classes with hearing students and are offered special assistance in the form of interpreters, tutors, note-takers and preparatory classes designed especially for the hearing impaired student in communications and mathematics. When the hearing loss of the student is not severe, special equipment to augment hearing is provided. Classes are arranged to accom-
modate both the oral and manual student. Some instructors use the simultaneous method (speaking and signing at the same time) while others use interpreters. The College employs only interpreters listed with the National Registry of Interpreters for the Deaf. Additionally, the College offers training in sign language to any individual interested in this method of communication. For more information concerning programs for the hearing impaired, contact the College Learning Center.
EXTENSION COURSES
College junior/senior and graduate level courses are offered on JCCC's campus by several four-year colleges and universities. Registration and the granting of credit is handled by the sponsoring institution. Several junior/senior and graduate level college courses are offered on the College campus through the statewide academic extension telenetwork. The telenetwork programs generally originate on the campus of a state college or university in Kansas and are linked to JCCC classrooms via telephone line. Complete information on upper division and graduate level courses can be obtained by contacting the office of Continuing Education.

MINI COURSES
Many of the regular credit courses have been designed to be offered as Mini Courses which offer an unusual educational opportunity for those students who are interested in obtaining instruction in less than a semester. Students who for some reason are forced to enroll late may earn regular semester credit through Mini Courses. Although Mini Courses are shorter in duration than regularly scheduled courses, they are more intensive and generally meet for more hours per day. For more information about Mini Courses, check the current class schedule or contact the Counseling Office.

CERTIFICATE COURSES
Many credit and non-credit courses are offered at JCCC which are specifically designed to help a student update and improve his skills or to learn new ones. Such practical, occupationally oriented training may better suit the needs of many students. Graduates of these courses may receive a Certificate of Proficiency or a Certificate of Completion. Contact the office of the Dean of Instruction for more information about specific Certificate Courses.

ON-SITE TRAINING AND EDUCATION
On-Site Training and Education is another dimension of the services to the community offered by Johnson County Community College. When there is sufficient need, courses, seminars, workshops and institutes including those listed in the College Catalog and in the Continuing Education Bulletin will be offered on the premises of any business or industry in the community. If any firm has a specific need for training or education for their employees, the College staff will help design a program to meet that need. For further information, contact the office of the Dean of Instruction.
Basic to the philosophy of Johnson County Community College is the recognition that each individual has unique abilities, interests and goals. Consequently, each individual should have a unique instructional program designed to meet his needs.

In the following section of this catalog, the various areas of College curriculum are described. There are no program plans listed because each student at JCCC will have an individualized program plan prepared for him in cooperation with a counselor before enrollment takes place.

Program possibilities are practically unlimited. A student at JCCC may be interested in a program which includes courses from several disciplines or he may design a program in a specific area of concentration.

In order to meet the requirements for professional certification or for transfer to a specific four-year institution, individual programs can be arranged. However, even within these programs a certain amount of flexibility may exist, particularly in regard to credit for previous experience. For this reason, individuals will want to develop their program plans when they meet with one of JCCC's Counselors. The counselor works closely with the instructional staff and will be able to assist the student in planning a program that will meet his needs.
AVIATION

Within this area of the College curriculum, students can develop individualized programs which will enable them to learn to fly for business and pleasure; to develop or upgrade aviation trade skills or to increase their knowledge of the field of aviation. Career possibilities include commercial pilot, aviation secretary, private pilot, air traffic controller, airline stewardess, airport manager plus a host of other career options which are included in the broad spectrum of aviation.

For those students who are interested, Aviation Flight instruction is offered by the College. Often considered an integral part of training in any of the areas of aviation specialization, Aviation Flight courses are designed to develop proficiency in flying both single and multi-engine aircraft. All flight operations are conducted in College-owned aircraft which are based at the Johnson County Airport. Students are taught specific flight maneuvers, attend ground school and are taught to operate aircraft during cross-country flight, airport approach and varying weather conditions. Upon successful completion of this program, the student is eligible to take the FAA examination for instrument or multi-engine ratings. Applicants for Aviation Flight instruction must pass the required FAA physical examination before flight training begins.

Through the division of Continuing Education at the College, various courses are also offered in the field of aviation. For example, intensive grounds schools are offered throughout the year for the student who wishes to up-date his skills or to brush-up before taking the FAA examinations.

An individual who is interested in any aspect of aviation should visit with a JCCC counselor concerning the many options available at JCCC in the area of aviation. Each student will have an individualized program designed especially to meet his needs during the student/counselor conference.
AV 101 Private Pilot 2 Credits
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 2 Credits
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 AV 102 (Commercial Pilot). 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 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  Spring 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
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 basis for class instruction. Class meets three hours per week.

AV 217  Air Transportation  Spring 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.
BUSINESS

The area of business within the College curriculum offers a wide variety of educational opportunities. Career possibilities include accounting, retail advertising and display, fashion merchandising, news reporting, advertising copy writing, marketing management, personnel management, data processing, sales or one of the many secretarial options, including legal, medical and certified professional secretary.

Career programs have been designed within many of these business areas. The programs are planned to lead directly to employment and are developed in accordance with the needs of the community as expressed through advisory committees and through need surveys of the potential employment area. The curriculum is flexible, however, and a student may, with his counselor's assistance, develop a program that will include courses from several areas.

Other individuals may be interested in taking courses at JCCC which will transfer to a four-year college or university should they plan to work towards a baccalaureate degree in business. The counseling staff at JCCC has carefully examined the programs of other institutions and can assist each individual in selecting those courses which will most nearly meet his requirements.

An interesting aspect of many of the business programs is the availability of Field Study. Field Study is an on-the-job work experience program which allows the student to gain actual experience in a career field of his choice. Placement for this training is made through the specific career program coordinator who makes special arrangements for each student. Students receive course credit (three hours per term) and wages for the time spent at work. Students enrolled in Field Study must average 15 or more work hours per week.

Audio-Visual Tutorial (AVT) instruction has been developed to supplement classroom teaching in many of the business courses. Individual learning units consisting of films, slides, tape recordings and written material are used by the students. This provides for learning on an individual basis with instructional assistance continuously available. Students may enroll in most AVT courses at any time during the year; instruction and practice periods are available between the hours of 8:00 a.m. and 9:00 p.m. daily.

The Continuing Education division also offers many business courses. In cooperation with the Small Business Administration, courses in financial management, controlling retail theft and income tax workshops are offered throughout the year. In addition, office skill
are available which can help an individual brush-up on necessary skills before attempting to enter the job market.

For the student with a strong interest in the area of business, a visit with one of the counselors at JCCC will offer insights into the many possibilities available. Each student, in cooperation with his counselor and the business instructional staff, can design an individualized program to meet his needs.
BUS 100  Small Business Accounting  3 Credits
Introduction to basic accounting procedures with an emphasis on the daily records necessary in maintaining a small firm. Designed to meet the needs of the individual operating his own firm with the help of an outside accountant for the preparation of periodic statements. Does not prepare the student for Accounting II (BUS102). 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. A Practice Set is required of students. Class meets three hours per week.

BUS 102  Accounting II  3 Credit
Prerequisites: BUS 101 or by permission
Continuation of BUS 101 (Accounting) 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
Prerequisite: BUS 155 or equivalent, or concurrent enrollment
A study of journalism, its role in our society, and the social responsibilities 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
Prerequisite: BUS 155 or equivalent, or concurrent enrollment
An evaluation of news and how news is gathered, written and published. Practical experience includes interview techniques and in-depth writing. Class meets three hours per week.
BUS 105  Fundamentals of Advertising  3 Credits
The role of advertising in today's business world. A study of various forms of advertising and the media involved. Class meets three 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 three hours per week.

BUS 111  Introduction To Business  3 Credits
Upon completion of this course, the learner should understand the nature and scope of business, its component parts, and how business is organized and managed; should be aware of the responsibility of business, government and consumers for improving our environment; should understand the multinational character of business; should understand the external and internal forces that comprise our business and economic system. Class meets three hours per week.

BUS 114  Personal Finance  3 Credits
Upon completion of this course, students will be able to apply techniques of money management and the preparation of a spending plan. The student will be able to manage his income through the proper use of consumer credit, buying, selling, and financing home loan real estate, shopping for and financing automobiles and automobile insurance, food planning and food shopping, knowing what types of health insurance coverages are available in order to choose the best individual coverage, understanding of Social Security benefits and their effect on life insurance planning, buying of stocks, bonds and mutual funds, and the use of general estate planning. Class meets three hours per week.

BUS 131  Programming Fundamentals  3 Credits
Prepares an individual for enrollment in any one of the programming language courses. The viewpoint is primarily technical: Keypunch and terminal usage are covered at an advanced level; exposure to selected pieces of unit record equipment; flowcharting and BASIC computer programming are stressed; and digital computer equipment; data coding and numbering systems are covered. Class meets three hours per week.
BUS 132 Business Data Processing 3 Credits
The uses of computers in government and business and the social and economic implications of computers are considered. The viewpoint is primarily nontechnical. Student will learn how to operate keypunch and a terminal linked to a computer. The student will write and run simple computer programs. Class meets three hours per week.

BUS 133 COBOL I Spring 3 Credits
Prerequisite: BUS 131
Use of COBOL programming language in solving problems. Emphasis is placed upon development of a complete understanding of the function and use of statements in the four divisions of ANSI COBOL. Integrated applications of this knowledge in programming typical problems using COBOL and the data processing facilities are also stressed. Class meets three hours per week.

BUS 144 FORTRAN Spring 3 Credits
Prerequisites: BUS 131; MATH 106 or MATH 116; MATH 110 (MATH 110 may be concurrent)
Use of FORTRAN programming language in solving problems. Emphasis is placed upon the complete understanding of the vocabulary and grammar of ANSI FORTRAN. Integrated application of this knowledge in programming typical problems using FORTRAN and the data processing laboratory facilities are also used. Class meets three hours per week.

BUS 151 Shorthand 3 Credits
Prerequisite: BUS 155 or concurrent enrollment or by permission
Objectives are to learn Gregg Diamond Jubilee Shorthand through word building, phrasing and dictated matter. Class is instructor directed but includes programmed materials. Student is able to work at own ability level. Course includes scheduled use of Secretarial laboratory.
BUS 152  Dictation and Transcription  3 Credits
Prerequisites: BUS 151 and BUS 155 or by permission
Objectives are to increase the speed the student can write shorthand from dictated material and to improve ability to transcribe notes. Class is instructor directed but includes programmed materials. Student is able to work at own ability level. Course includes scheduled use of Secretarial laboratory.

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 and scheduled use of Secretarial laboratory.

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 and scheduled use of Secretarial laboratory.

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 and scheduled use of Secretarial laboratory.
BUS 158  Legal Secretary 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 Secretary II  2 Credits
Prerequisite: BUS 158 or one year’s experience as legal secretary
A continuation of BUS 158 (Legal Secretary 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 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 offices filling equipment. Class meets two hours per week.

BUS 164  Secretarial Field Study  3 Credits
Students must work an average of 15 hours a week in an approved office situation. Emphasis is placed on legal aspects of secretarial work. Weekly class discussion will focus on relating business law content to work experience. Class meets two hours per week.

BUS 165  Secretarial Field Study  3 Credits
Students must work an average of 15 hours a week in an approved office situation. Emphasis is placed on management and supervision affecting the operations of a business organization. Weekly class discussions focus on relating course content to work experience. Class meets two hours per week.

BUS 166  Secretarial Field Study  3 Credits
Students must work an average of 15 hours a week in an approved office situation. Emphasis is on mathematical aspects of secretarial work. Weekly class discussions focus on relating business math content to on-the-job training. Class meets two hours per week.

BUS 171  Marketing and Management Seminar  3 Credits
(Management and Operations)
Prerequisite: Admission to the Marketing and Management Program
Student work experience at an approved business establishment in the community. Seminars on campus each week relate each student’s basic knowledge of his firm’s operation policies and internal organization and structure through the preparation of a series of training reports. Class meets two hours per week.

**BUS 172 Marketing and Management Seminar**  
*3 Credits*

*Prerequisite: Admission to the Marketing and Management Program*

Student work experience at an approved business establishment in the community. Seminars on campus each week relate principles and techniques of effective publicity, promotion, advertising and selling methods to retail, wholesale and service fields in the community. Class meets two hours per week.

**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 gives 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 I  3 Credits
Course acquaints students 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 II  Spring  3 Credits
Prerequisite: BUS 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 selection and use, copy writing, ad layout and illustration, showcard writing, display techniques, sales promotion, budgeting and 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 182  Fashion Seminar  3 Credits
Prerequisite: Admission to the Fashion Merchandising Program
Student work in an approved training situation under faculty supervision. Emphasizes job orientation and sales effectiveness. Discussions include job applications and interviews, sources of job and product information, and techniques for handling customer, employer and employee relations. Class meets two hours per week.

BUS 183  Fashion Seminar  3 Credits
Prerequisite: Admission to the Fashion Merchandising Program.
Student work experience in an approved training situation under faculty supervision. Emphasis is on fashion publicity and promotional media. Students will write publicity releases and fashion editorials, develop radio and TV commercials, and plan and produce fashion shows and other promotional events. Class meets two hours per week.
BUS 184 Fashion Seminar 3 Credits
Prerequisite: Admission to the Fashion Merchandising Program.

Student work experience in an approved training situation under faculty supervision. Emphasis is on increasing sales effectiveness through application of basic design principals. Proportion, color, form, shape, line, texture and patterns are studied in relation to clothing selection for basic body types. Customer fittings and camouflaging figure faults are also discussed. Optional credit may be earned during this session for travel tours of fashion centers.

BUS 191 Survey of Economics 3 Credits

This course is a survey of the basic principles governing the economy and its economic units and is designed primarily for the student who is planning on taking only a single course in economics. Included in the topics covered in this course are: elements of supply and demand, national income accounting, money and banking, and market structures. Class meets three hours per week.

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 fundamental problems of economics and the ways the United States attempts to solve them. Included in the topics covered in this course are: the basic elements of supply and demand, prices, national income determination, money and banking, monetary and 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 BUS 201 (Economics I) 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 BUS 212 (Business Law) and includes negotiable instruments, personal property, real property, secured transactions, corporations and partnerships. Case studies are used. Class meets three hours per week.

BUS 214 Marketing 3 Credits
Study of all activities involved in moving goods and services from the producer to the ultimate consumer, and the study of problems and policies of manufacturers, wholesalers and retailers in the distribution of goods and services. 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 216  Federal Income Taxes  3 Credits
Procedures for reporting federal income taxes with emphasis on income and deductions for individuals. Practice is given in preparing Federal Income Tax Returns. Class meets three hours per week.

BUS 234  Introduction to Systems Design and Analysis  Fall  3 Credits
Prerequisite: BUS 133 or by permission
Presents an explanation of basic philosophy and techniques regarding the development and use of business information systems. Emphasis is placed on the human elements and people involvement necessary in systems design and implementation, as well as addressing the use of specific technical approaches available in relation to information processing. Class meets three hours per week.

BUS 241  Application Programming  3 Credits
Prerequisite: By permission
Corequisite: BUS 133 or BUS 144 or BUS 243
Computer operations, or directly related work experience in Data Processing through on-the-job training, or recognition and formalization of experience for those already employed. Hours by arrangement.

BUS 242  PL/1  Spring  3 Credits
Prerequisites: BUS 133 and/or BUS 144
Use of PL/1 language in solving problems. 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 three hours per week.

BUS 243  Assembler Language  Fall  3 Credits
Prerequisite: BUS 131
Use of Assembler language in solving problems. Emphasis is placed upon the development of 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 Credits**

*Prerequisite: By permission*

*Corequisite: BUS 133 or BUS 144 or BUS 243*

Programming, or directly related work experience in Data Processing through on-the-job training, or recognition and formalization of experience for those already employed. Hours by arrangement.

**BUS 246  COBOL II  Fall  3 Credits**

*Prerequisites: BUS 133 and BUS 243 (BUS 243 may be concurrent)*

Advanced COBOL programming techniques: use of ANS COBOL to solve problems with data on a direct access device. Methods of building, maintaining, and using files in a sequential, random and indexed manner. Sort and Report Writer features are also studied. Class meets three hours per week.

**BUS 247  Computing Systems  Spring  3 Credits**

*Prerequisite: BUS 243 or concurrent enrollment*

Basic concepts and principles of a digital computing system. The general frame work 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  Fall  3 Credits**

*Prerequisite: BUS 131*

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

**BUS 249  Data File Management  Spring  3 Credits**

*Prerequisite: BUS 243*

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 three hours per week.

**BUS 250  Systems Project  Fall  3 Credits**

*Prerequisite: BUS 247*

Study of the design and development of software for either compilers (syntax directed and table driving techniques) or operating system software. Class meets by arrangement.
BUS 252 Legal Dictation and Transcription 3 Credits

Prerequisite: BUS 152 or BUS 157
Legal terminology and forms including dictation practice at speeds up to 140 words a minute. Shortcut outlines, spelling, meaning and accurate transcription of legal terms stressed. Some legal projects on the MT/ST. Course includes scheduled use of Secretarial laboratory.

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 improvement of secretarial skills. Course includes scheduled use of Secretarial laboratory.

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. Course includes scheduled use of Secretarial laboratory.

BUS 264 Secretarial Field Study 3 Credits

Students must work an average of 15 hours a week in an approved office situation. Emphasis is placed on human relations, communications, and decision making. Weekly class discussions focus on relating human relations content to current work experience. Class meets two hours per week.

BUS 265 Secretarial Field Study 3 Credits

Students must work an average of 15 hours a week in an approved office situation. Emphasis is placed on office management, communications media, outside services such as business libraries and travel agencies. Weekly class discussions will focus on relating office procedures to work experience. Class meets two hours per week.

BUS 272 Marketing and Management Internship (Supervisory Management) 3 Credits

Prerequisite: Admission to the Marketing and Management Program
Student work experience at an approved business establishment in the community during the summer. Through individual instruction and work experiences students will examine and solve supervisory problems confronting management in areas of motivation; train-
ing; discipline; delegation; handling grievances, complaints; and related areas. Class meets two hours per week.

BUS 273  Marketing and Management Seminar  3 Credits
(Management Decision-Making)

Prerequisite: Admission to the Marketing and Management Program

Student work experience at an approved business establishment in the community. Seminars on campus each week develop competencies in management decision-making in areas of supervisory human relations and merchandising problems. Sales and related training meetings in areas of marketing and management are studied. Class meets two hours per week.

BUS 274  Marketing and Management Seminar  3 Credits
(Marketing Research)

Prerequisite: Admission to the Marketing and Management Program

Student work experience at an approved business establishment in the community. Seminars on campus each week provide principles and techniques in areas of market research for finding, identifying, determining needs and desires of individuals and organizations for potential business. Class meets two hours per week.

BUS 279  Fashion in Society  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 281  Fashion Seminar  3 Credits
Prerequisite: Admission to the Fashion Merchandising Program

Student work experience in an approved training situation under faculty supervision. Emphasis is on management decision making and supervisory development. Problem solving techniques are employed to solve case studies covering situations ranging from pilferage to advertising mistakes, to handling of employee problems and complaints. Class meets two hours per week.

BUS 282  Fashion Seminar  3 Credits
Prerequisite: Admission to the Fashion Merchandising Program.

Student work experience in an approved training situation under faculty supervision. Emphasis is on
marketing research and problem solving techniques. Classes cover simple statistical measurements, their uses and application to specific business problems. Group and/or individual research projects will be employed applying statistical theories. Class meets two hours per week.

BUS 299  Independent Studies In Business/Management  1-3 Credits
Opportunity for the student to pursue his special interests in business and management, through guided independent study in his chosen area.
COLLEGE LEARNING CENTER

The College Learning Center offers a variety of learning services to JCCC students and individuals within the community. Designed to aid all students, the CLC offers diagnostic testing in order to develop an appropriate program of individualized instruction.

An individual who is interested in improving his reading rate and comprehension or in advancing his skills in mathematics, science, social science, communications and foreign language will receive expert help from the instructors in the College Learning Center.

Students may enroll in the College Learning Center on either a credit or non-credit basis.

Before enrolling in the CLC, interested individuals should see one of the JCCC counselors for assistance in planning his program. The College Learning Center staff will work closely with both the counselor and student in preparing an individualized program to meet the student's needs and abilities.

CLC 101 - 103 College Learning Center 1-3 Credits

Individualized instruction in areas of special need and interest prescribed on the basis of diagnostic tests. Reading rate and comprehension, study skills, memory improvement, communications, mathematics, spelling, vocabulary ad phonics, natural science, social science, elements of health and safety and foreign language sampling. Courses may be taken for credit or on a non-credit basis.
COMMUNICATIONS

In the College curriculum, communications includes all aspects of oral and written communication. Students interested in speech, debate, foreign languages such as French, German or Spanish or the area of written communication including literature, poetry and creative writing will find courses in this area to suit their individual needs.

Basic to all careers, the area of communications can lead to careers such as writing, teaching, acting, translating, or law besides adding to the personal growth and enrichment of the student. Students seeking a baccalaureate degree will find that JCCC offers the courses necessary to complete the freshman and sophomore requirements at most four-year colleges and universities.

Courses such as "Tryouts: The Art of Auditioning" and "French, German or Spanish for Travelers" are offered through the area of Continuing Education. These courses can supplement and enrich a student's program plan.

Each individual will have a program tailored to meet his specific needs in the area of communications when he meets with one of JCCC's counselors.
COM 100.1 - 100.3  Fundamentals Of Writing  3 Credits
Basic written communications. Emphasis on grammar, sentence structure, organization, idiomatic usage, spelling and vocabulary, leading to clear written composition. Class meets five hours per week. May be taken for three semesters.

COM 101.1  The Sentence  1 Credit
Course examines the rhetoric of the sentence, with particular emphasis on the generative sentence. Class meets two hours per week during the first third of each semester with an additional two hours per week of tutorial writing laboratories.

COM 101.2  The Paragraph  1 Credit
Course examines the rhetoric of the paragraph, with particular emphasis on development of descriptive, narrative and expository paragraphs. Class meets two hours per week during the second third of each semester with an additional two hours per week of tutorial writing laboratories. Having successfully completed COM 101.2, the student may enroll in COM 101.3, COM 101.4 or COM 101.5. Students may enroll in the remaining two courses in subsequent semesters.

COM 101.3  The Expository Essay  1 Credit
Prerequisite: COM 101.2
Course examines the rhetoric of the expository essay, with particular emphasis on communicating a purposeful idea in multi-paragraph form supported by details, illustration, reason and facts. Class meets two hours per week during the final third of each semester with an additional two hours per week of tutorial writing laboratories.

COM 101.4  Business Writing  1 Credit
Prerequisite: COM 101.2
Course examines the various types of business writing with particular emphasis on the business letter, resume and office memorandum. Class meets two hours per week during the final third of each semester with an additional two hours per week of tutorial writing laboratories.

COM 101.5  Technical Writing  1 Credit
Prerequisite: COM 101.2
Course examines the various types of technical and scientific writing, with particular emphasis on the progress report, physical research report, process analysis and proposal. Class meets two hours per week during the final third of each semester with an additional two hours per week of tutorial writing laboratories.
COM 102  Communications II  3 Credits
Prerequisite: COM 101 (3 hours)
Course emphasizes a variety of written subjective responses to personal experiences, literature and special topics. Assignments include narrative, descriptive and expository writing. Class meets three hours per week.

COM 105  Basic Manual Communications  3 Credits
The basic course of American sign language as applied to communication with deaf adults. Subject material related to language, psychological, and social aspects of the deaf person. Class meets three hours per week.

COM 110  Masters Of American Cinema  2 Credits
History of the American motion picture; themes, genres and style contribution to the development of film in this country. Class meets two hours per week.

COM 114  Speech  3 Credits
The basic speech course deals with the oral communication process through the study of interpersonal relationships. Practical principles of effective speech-communication in one-to-one and small-group relationships are studied and applied in a variety of learning games and situations. Individualized talks are given but everyday communication is stressed. Class meets three hours per week.

COM 115  Public Speaking  3 Credits
Prerequisite: COM 114 or by permission
An advanced course to COM 114 (Speech) for students interested in continued work in public speaking. Increased proficiency in a variety of speaking situations is stressed. Class meets three hours per week.

COM 116  Argumentation And Debate  3 Credits
Prerequisites: High School Speech, COM 114, or by permission
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 basic course in the study of literature, through oral communication. Emphasis on analyzing and performing prose, poetry and dramatic literature. Class meets three hours per week.
COM 119  Techniques of Acting I  3 Credits
Fundamentals of acting; character analysis; relation of the role to the play as a whole; techniques and practice in posture, movement, voice and projection. Class meets three hours per week.

COM 120  Techniques Of Acting II  3 Credits
Prerequisite:  COM 119
Continuation of COM 119 (Techniques of Acting I); greater emphasis on character analysis and development with corresponding greater responsibility of the actor for his own creativity. Class meets three hours per week.

COM 121  French I  5 Credits
Basic course in the French language includes vocabulary building, grammar study, conversation and introduction to the French culture and civilization. Emphasis on the spoken language. Class meets five hours per week.

COM 122  French II  5 Credits
Prerequisite:  COM 121 or 1 year of High-school French
Continuation of COM 121 (French I); graded reading selections to be used as basis for conversation. Class meets five hours per week.

COM 123.1-123.4  Intercollegiate Debate  2 Credits (each semester)
Prerequisites:  COM 116, High School Debate, or by permission
Practical application of argumentation and debate principles by individual involvement in intercollegiate competition. Class meets three 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 COM 130 (Spanish I) with graded reading selections added to be used as basis for conversation and composition in the discussion periods. Course structure same as COM 130 (Spanish I) 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 COM 140 (German I) 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 style. Examination of recommended models. Frequent writing assignments in chosen areas. Class meets three hours per week.

COM 213  Children's Theater  3 Credits
Concentrates on literature and performance methods as they relate to presentation both for children and/or by children. Workshop situations provide students an opportunity of working in the medium. Class meets three hours per week.

COM 215  Technical Theater I  3 Credits
Acquaints the student with the tools and techniques of scene building. Related to those productions presented by the acting classes which need technical back-up. The student will also be encouraged to make lighting plans and to operate the facilities of the College on a supervised basis. Class meets three hours per week.

COM 216  Technical Theatre II  3 Credits
Advanced technical operation of stage productions; also acquaints the student with techniques of make up, costumes and the creation of hand props. 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 from prominent contemporary writers is 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 three years of High-school French
Continuation of COM 223 (French III). 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 COM 232 (Spanish III) 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 COM 242 (German III), 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.

COM 299  Independent Studies  1-3 Credits
Independent studies in communications. Opportunity for students to pursue special interests through guided independent studies in his chosen area. Class meets by arrangement.
ENGINEERING

Students who are interested in a career in engineering or its related technologies will find many options at JCCC. Individuals who plan to pursue a baccalaureate degree may complete the first two years of their program at JCCC in engineering areas including civil, aerospace, electrical-electronic, industrial, chemical and mechanical.

At JCCC, the engineering student is expected to develop a good understanding of mathematics, physical science, engineering science and economics; an inquisitive and objective attitude; the capacity of innovative and logical problem solving; skill in experimentation, design, communication and human relations; and an appreciation and concern about the interaction of engineering technology with other elements of society.

These programs possess a balance of theoretical education with practical experience over a broad field. Engineering technicians must have a practical knowledge of the construction and operation of engineering systems and machinery and may also need to learn related manual crafts and instrumental, mathematical or graphic skills. The technology programs prepare an individual for employment in such areas as drafting, surveying, electronics, technical sales, technical writing, teaching or training.

Individuals with interest in the many fields of engineering and their related technologies should plan to visit with a JCCC counselor about the available options. Together, the student, counselor and the engineering instructional staff will design a program that will help the student reach his goals.
ENGR 101 Drafting I  7 Credits
Industrially structured to provide activities and experiences typical to those encountered by drafting technicians. Covers descriptive and applied geometry, orthographic projection, sketching, lettering, U.S. and Metric measurement, basic conventions and reproduction techniques. Production drawings; detail, section, auxiliary and assembly. Two hours of class and 15 hours of laboratory per week.

ENGR 102 Drafting II  7 Credits
Prerequisite: ENGR 101
Continuation of ENGR 101 (Drafting I) with emphasis on developments, dimensioning, tolerancing, specifications, manufacturing process and with an introduction to photodrafting and microfilming. Two hours of class and 15 hours of laboratory per week.

ENGR 103 Graphic Communications  1-7 Credits
Activities available for individual student interests whether experienced or inexperienced in drafting. Students may use this course for exploration or to determine aptitudes in the field of drafting with credits earned applicable to the drafting technology program. Three hours of laboratory per week per credit hour.

ENGR 105 Engineering Graphics I  3 Credits
Theory and application in the principles of graphics and 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 II  3 Credits
Prerequisite: By permission
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
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  3 Credits
Prerequisite: MATH 101 or concurrent enrollment in MATH 101 or one year of high school algebra.
Introduction to principles of mechanics, work, power and energy. Class meets three hours per week.

ENGR 129  Industrial Science II  3 Credits
Prerequisite: ENGR 128
Continuation of ENGR 128 (Industrial Science I) with emphasis on applications. Class meets three hours per week.
ENGR 140  Introductory Electronics  3 Credits
Provides familiarization with laboratory instruments, circuit components, and basic measurement techniques. Introduces basic circuits as building blocks in any electronic system. One hour of class and six hours of laboratory per week.

ENGR 141  Resistive Electronics  3 Credits
*Prerequisites:* ENGR 140, MATH 101, and ENGR 150 or equivalent
Study of resistive circuits in which electronic devices are employed. Introduces the Volt-Ampere characteristics and physics of diodes, transistors, and a number of practical circuits using these devices. Two hours of class and three hours of laboratory per week.

ENGR 142  Basic Control Systems  3 Credits
*Prerequisite:* ENGR 140
Theory and application of electromagnetic, electromechanical and other transducers and associated circuitry in basic control systems. Two hours of class and three hours of laboratory per week.

ENGR 143  Basic Electronic Communications  3 Credits
*Prerequisite:* ENGR 140
Theory of operation of the building blocks of a communications system. Includes devices, such as the transistor; circuits, such as oscillators and amplifiers; and terms such as AM, FM, etc. Two hours of class and three hours of laboratory per week.
ENGR 144 Systems Maintenance 3 Credits
Prerequisite: ENGR 147 or ENGR 245 or ENGR 241
Principles of fault location and correction. Techniques are studied by applying them to communications equipment. Two hours of class and three 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, black and white television, color television, AM and FM radios, and transmitters. One hour of class and six hours of laboratory per week.

ENGR 147 Electronic Communication 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 or by permission
Analysis and synthesis of digital circuitry that is used in digital computers, numeric machine control, telephone systems, calculators, etc. Two hours of class and three hours of laboratory per week.

ENGR 149 Basic Computer Components 3 Credits
An introduction to basic digital components and computer organization. Designed for the non-technical student as well as those in Data Processing and Electronics. Class meets three hours per week.

ENGR 150 Resistive Circuits 3 Credits
Prerequisites: ENGR 140 or concurrent enrollment in ENGR 140 and MATH 101, or equivalent
Fundamental AC and DC Circuit concepts such as Kirchoff's Laws, OHM's Law, Thevenin's Theorem, etc., as they apply to Resistive Circuits. Two hours of class and three hours of laboratory per week.

ENGR 151 Capacitive And Inductive Circuits 3 Credits
Prerequisites: ENGR 150 and MATH 102 or concurrent enrollment in MATH 102, or equivalent
Capacitors and inductors are introduced as circuit elements. Construction of magnetic devices and AC
analysis using complex algebra are covered. Two hours of class and three hours of laboratory per week.

ENGR 160  Fire Suppression Fundamentals  3 Credits
Designed for in-service fire personnel and students who wish to enter the profession. Fire suppression organizations; basic elements of ground tactics and organization; manpower and equipment utilization; building designs and construction; hazardous materials; extinguishing agents; equipment; and apparatus are covered. Class meets three hours per week.

ENGR 201  Drafting III  7 Credits
Prerequisite: ENGR 102
Provides theory and practical applications typical of industry in axonometrics, obliques and perspective drawings, conventions and symbols. Introductions to electronics, piping and hydraulic drafting. Extended coverage of photo-drafting. Two hours of class and 15 hours of laboratory per week.

ENGR 202  Drafting IV  7 Credits
Prerequisite: ENGR 201
Advanced topics and problems to suit individual student needs with flexibility in planning. 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 stress and strains in elastic materials, torsion, beams and columns. Class meets three hours per week.

ENGR 225  Mechanisms  3 Credits
Prerequisite: ENGR 102 or 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
Prerequisite: ENGR 102 or ENGR 105
Problems in the design, construction, and operation of dies, jigs and fixtures. Six hours of laboratory per week.

ENGR 240  Nonlinear Electronics  3 Credits
Prerequisites: ENGR 141 and ENGR 151
Study of nonlinear electronic circuits such as clippers, clamps, sweep circuits, pulse formers, logic circuits, etc. Two hours of class and three hours of laboratory per week.

ENGR 241  Linear Electronics  3 Credits
Prerequisites: ENGR 141 and ENGR 151
Study of electronic circuits operating under linear or small signal conditions. Covers wideband amplifiers, power amplifiers, operational amplifiers. Two hours of class and three hours of laboratory per week.

ENGR 242  Systems Analysis  3 Credits
Prerequisites: ENGR 241 and ENGR 250
Study of complete electronic systems covering communications, telemetry, controls, etc. Two hours of class and three hours of laboratory per week.

ENGR 244  Advanced Communication 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 140
Study of techniques and equipment used in industrial control and precision measuring situations. Two hours of class and three hours of laboratory per week.

ENGR 250  Network Analysis  3 Credits
Prerequisites: ENGR 151 and MATH 102 or equivalent
Application of mathematical techniques to the analysis of complex electrical circuits or networks. Class meets three hours per week.

ENGR 260  Project Laboratory  1-4 Credits
Prerequisites: ENGR 140 and by permission
Project lab; construction or design and construction of equipment agreed upon by instructor and student.

ENGR 299  Independent Studies  1-3 Credits
Opportunity for the student to pursue special interests through guided independent study in his chosen area. Class meets by arrangement.
HUMANITIES

The area of the College curriculum devoted to humanities includes art, music, religion, philosophy, logic and ethics. A student who is interested in a career in which a broad acquaintance with cultural values is desirable will find the humanities courses both useful and interesting.

An interdisciplinary approach is used in the study of comparative cultures involving the disciplines of the fine arts, history, philosophy, and religion. The courses are designed to enable the student to view the disciplines as a complex unity of values which result from man's examination of himself and the universe.

Individual and group study in the area of music is provided at the College through a wide range of vocal and instrumental instruction. Opportunities are available for student performance within the College and in the community.

Beginning students, students with previous musical training and students who are interested in music for personal enrichment will find courses in the humanities curriculum to suit their needs. The College also offers an opportunity for interested students to hear guest artists perform and sponsors such activities as "Music at the Library," and "Big Band Jazz of Today."

An individual who is interested in the area of art will find an unusually wide range of activities designed to meet the needs of both those students who wish to prepare for a career and those students who wish to explore the field of art for their personal pleasure and enrichment. Opportunities for students to display their work are provided both on campus and in the community. Courses in acrylic, water color and oil painting are among those offered in the area of art by the Continuing Education division of the College.

Those who have an interest in any of the disciplines included in the humanities curriculum at the College should plan to visit with a JCCC counselor before enrolling. An individualized program will be designed that will meet the student's needs, desires and abilities.
HUM 101  Humanities  3 Credits
Examination of the components and concepts of aesthetics as expressed in literature, painting, sculpture, and music; further examination of identity, alienation, love, and war as expressed in specific mediums of the arts, including drama, poetry and romantic music. Class meets three hours per week.

HUM 102  Comparative Cultures  3 Credits
Interdisciplinary study of cultures. The course will emphasize development of the humanities in selected cultures as a background to the arts in contemporary society. Two European cultures and one non-European culture will normally be studied. The concept of culture and the role of the humanities in culture in general is investigated. 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 two hours 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 in-

tegrating aural and sight-reading skills. Class meets two hours per week.

HUM 113.1-113.4  JCCC Jazz Lab Band  1-2 Credits
(Each semester)
Prerequisite: By audition
Performance of jazz and popular music at public concerts and college functions. Class meets three hours per week.

HUM 114.1-114.4  Concert Band  1 Credit
(Each semester)
Prerequisite: High-school playing experience
This organization draws its literature from the concert band repertoire with emphasis on transcriptions of early works and original contemporary selections. Class meets four hours per week.
HUM 115.1-115.4 Chamber Ensemble 1 Credit (each semester)
Prerequisite: High-school playing experience
The study and performance of standard literature for ensembles: brass, woodwind and percussion. Class meets two hours per week.

HUM 116.1-116.4 Jazz Improvisation 2 Credits (each semester)
Prerequisite: High-school playing experience
Fundamental approach to rhythm and melodic lines involved in creative improvisation. Basic procedures in analyzing chords and chord structures as an outline for organized spontaneous playing. Class meets two 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 118 Music Fundamentals 2 Credits
Basic study of notation of melody, rhythm and meter as well as musical terminology. For the elementary class room teacher or music student without sufficient background for theory. Class meets two 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. 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 composition 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 129 Applied Music (Class) 1 Credit
Class instruction in beginning guitar, piano, wind instruments (flute, trumpet, etc.) and voice. Emphasis on learning to play an instrument or sing correctly from the beginning stages. Instruments may be rented through the college. Class meets one hour per week.

HUM 130 Elementary Art Methods 3 Credits
Exploration of art activities appropriate for children from pre-school through sixth grade with emphasis on relating activities to the child's patterns of growth and development. Three hours of class and three hours of laboratory 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 HUM 131 (Design I) 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 HUM 133 (Sculpture I). 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 consistent body of work. Class meets six hours per week.

HUM 137  Drawing I  3 Credits
Introductory course with emphasis on the development of fundamental drawing skills, increased power 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. Class meets for two three-hour sessions per week.

HUM 140  Ceramics II  3 Credits
Prerequisite: By permission
Continuation of HUM 139 (Ceramic I). 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: HUM 141
Introduction to 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, print-making, painting 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 146  Weaving 3 Credits
Introductory weaving course. Techniques ranging from macrame through more complex procedures involving the use of large floor looms and the creation of three-dimensional woven forms. Class meets six hours per week.
HUM 147  Leather Working  Spring  1 Credit
Five week course of instruction in contemporary leather working techniques. Emphasis on creativity in a variety of class projects ranging from leather sculptural forms to leather clothing. Class meets six hours per week.

HUM 148  Lettering  Spring  1 Credit
Five week specialized study of lettering techniques focusing on contemporary typographic design, hand and transfer lettering, mechanically produced letter forms and layout. 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
To improve ability to reason correctly. Emphasizes clear thinking for effective expression. Covers deductive and inductive arguments and non-formal fallacies. Class meets three hours per week.
HUM 210 Philosophy Of Religion 3 Credits
Study of the components and concepts of religion as expressed primarily by the Judaic-Christian tradition. Emphasis on the nature of God, arguments regarding 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 philosophical 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 determination, 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.

HUM 299 Independent Studies In Humanities 1-3 Credits
Opportunity for the student to pursue special interests through guided independent study in his chosen area. Class meets by arrangement.
MATHEMATICS

The mathematics curriculum at the College is designed to meet the need of those students who desire basic mathematical background courses as well as for students who are interested in intensive mathematical training. A knowledge of mathematics is essential for an individual to function in today's society and the field of mathematics is supportive to careers such as teaching, engineering, construction, accounting or as an actuary or statistician.

Students seeking a baccalaureate degree in mathematics will find that JCCC offers the courses necessary to complete the freshman and sophomore requirements at most four-year colleges and universities. Students interested in the field of education may enroll in finite mathematics in order to meet their education math requirements.

Individuals may wish to explore a course in practical, fundamental mathematics which relate to their everyday life. For those who need extra assistance in mathematics, the College Learning Center offers supportive services which can help a student improve his skills. Through the Continuing Education division of the College, other courses and activities are offered which can supplement or enrich an individual's program.

Students who are interested in mathematics should contact a counselor at JCCC. The counselor and the mathematics instructional staff will work closely with the student in developing an individualized program to meet his needs.
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. Student with two years of high school algebra should consider MATH 117 (Trigonometry) instead. Class meets five hours per week.

MATH 102  Technical Mathematics II  5 Credits
Prerequisite: MATH 101
Continuation of MATH 101 (Technical Mathematics I). Trigonometry and analytic geometry and calculus. Elementary application of the differential and integral calculus. Class meets five hours per week.

MATH 103  Finite Mathematics  3 Credits
Mathematics for the elementary education or liberal arts student. Includes basic concepts of sets, logic, numeration, field properties, probability and statistics. Class meets three hours per week.

MATH 104  Fundamentals Of Mathematics  3 Credits
Review of the operations with fractions, decimals and whole numbers. Numeration. Practical applications of percent, dimensions and linear equations. 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, polynomials and polynomial functions, logarithms and series. Class meets five hours per week.

MATH 110  Statistics  3 Credits
Prerequisite: MATH 106 or equivalent
Introduces descriptive statistics, probability models, sampling distribution, 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 algebra
Course presents topics in mathematics that are
necessary for the study of calculus. Linear and quadratic equations, progressions, binomial theorem, inequalities, permutations and combinations, theory of equations, exponents, logarithms, trigonometric ratios, identities and exponential functions are studied. Class meets five hours per week.

MATH 116 College Algebra 3 Credits
Prerequisite: MATH 106 or two years of high school algebra

Course presents an intensive study of important topics in algebra. Functions, polynomials, logarithms, matrices and determinants, sequences and series, binomial theorem, induction, permutations and combinations are studied. 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 115 or equivalent

The first course of a three semester sequence in analytic geometry and calculus. Consists of elements of plane analytic geometry, differentiation of algebraic functions, integration of polynomial functions with applications of each. 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 trigonometric and exponential functions, parametric equations, 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, second and higher order linear equations, systems of linear equations, solutions by series, the Laplace transform and applications. Class meets three hours per week.
NATURAL SCIENCE

The curriculum within the division of natural science is broadly designed to meet the needs of individuals who are interested in a casual exposure to science as well as those who want intensive science career preparation. Among the science based career possibilities are nursing, dental hygiene, dental assisting, and inhalation therapy.

The life and physical science course offerings provide the student with an increased awareness of the biosphere and the physical universe. They share an emphasis upon laboratory centered inquiry. Students enrolled in these courses receive formal instruction, do laboratory research and use the Audio-Visual Tutorial (AVT) units which have been specifically designed for the science area.

The Associate Degree Nursing program provides the student with supervised clinical experience, formal nursing courses and related biological, humanities, and behavioral science courses. After successfully completing this program, students are qualified to take the state board examination for Registered Nurse (R.N.) to receive licensure in the state.

The Inhalation Therapy program includes pre-clinical work at JCCC and theory and practice in clinics at affiliated hospitals.

Individuals who are interested in a career in Dental Hygiene will find the program at JCCC offers supervised experience with patients in a dental hygiene clinic located on the campus. After successfully completing the program, students will be eligible for licensure as a dental hygienist.

An individual who has a strong interest in any of the science fields should contact a JCCC counselor for assistance in preparing an individualized program to suit his needs and abilities.
NS 051  Inhalation Therapy I  3 Credits
Prerequisite: Admission to the Inhalation Therapy Program
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 of various types of gas supply. Class meets twelve hours per week.

NS 052  Inhalation Therapy II  5 Credits
Prerequisite: Admission to the Inhalation Therapy Program
Introduction to the clinical situation. Nursing arts and applied inhalation therapy procedures relating to internal medicine, surgical care, obstetrics, pediatrics and emergency. Class meets eleven hours per week.

NS 053  Inhalation Therapy III  4 Credits
Prerequisite: Admission to the Inhalation Therapy Program
Work experience with inhalation therapy techniques and procedures. Class meets thirty-five hours per week.

NS 054  Inhalation Therapy IV  4 Credits
Prerequisite: Admission to the Inhalation Therapy Program
Advanced theory of applied inhalation therapy procedures. Emphasis on cardiopulmonary physiology and pathophysiology. Class meets thirty-five hours per week.

NS 055  Inhalation Therapy V  5 Credits
Prerequisite: Admission to the Inhalation Therapy Program
Pharmacology, cardiopulmonary resuscitation, pulmonary insufficiency, pulmonary function testing, blood gas analysis, electrocardiography and cardiac monitoring equipment. Class meets thirteen hours per week.

NS 056  Inhalation Therapy VI  1 Credit
Prerequisite: Admission to the Inhalation Therapy Program
Management and coordination of inhalation therapy service. Class meets four and one half hours per week.

NS 057  Inhalation Therapy VII  2 Credits
Prerequisite: Admission to the Inhalation Therapy Program
NS 058  Inhalation Therapy VIII      2 Credits
Prerequisite: Admission to the Inhalation Therapy Program

NS 101  Natural Science/Life Science  4 Credits
Introduces the fundamental laws, theories and principles of biology, and meets 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 (AVT) 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 concepts and principles of physics, chemistry and astronomy to meet laboratory science requirements for the non-science major. Atomic and molecular theory, the periodic system, chemical combinations and the structure of the universe are studied. Applications in mechanics, electronics, sound, heat and light are used. An Audio-Visual-Tutorial (AVT) presentation aids in understanding. Two hours of class and four hours of Natural Science AVT laboratory per week.

NS 106  Medical Terminology      2-4 Credits
An Audio-Visual-Tutorial (AVT) 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. Class meets by arrangement.

NS 108  Astronomy      3 Credits
Study of our solar system, the stars, the evolution of stars and the expansion of the universe. Class meets four hours per week including several telescopic viewing sessions.

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 seven hours per week.
NS 111  Biology Of Plants  5 Credits
Introduction to plant structure and function. Plant division with emphasis on life cycles and evolutionary relationships from the simplest to the most complex of plants. Class meets seven hours per week.

NS 115  Microbiology  5 Credits
Prerequisite: One year of high school chemistry or NS 125
The study of microorganisms which live with us; their cell structure, physiology, antimicrobial agents, immunology and host-parasite relationships. The laboratory teaches the basic methods used to grow and manipulate microorganisms. Time is allowed for the student to pursue areas of microbiology within his field of interest. Class meets seven hours 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. Class meets seven hours per week.

NS 117  Human Anatomy  4 Credits
Prerequisite: NS 101 recommended
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. Class meets six hours 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. Class meets six hours per week.

NS 120  General Chemistry I  5 Credits
Prerequisite: MATH 106 or concurrent enrollment
Basic introduction to inorganic chemistry with emphasis upon atomic structure, the periodic table, bonding, solutions and chemical calculations. Class meets seven hours per week.

NS 121  General Chemistry II  5 Credits
Prerequisite: NS 120
Presentation of oxidation-reduction systems, chemical thermodynamics, organic chemistry and kinetics, with particular emphasis upon solution equilibria. Laboratory consists of supportive experiments with the latter portion devoted to an introduction to qualitative analysis. Class meets seven hours 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. Class meets seven hours per week.

NS 131  Nursing Care of The Individual:  
       Concepts of Health    Fall    6 Credits
Prerequisite: Admission to the Nursing Program
Corequisite: NS 117
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; the effects of interpersonal relationships and utilization of communicative skills will be included. Clinical laboratory is an integral part of the course. Three hours of class and nine hours of laboratory per week.
NS 132  Nursing Care Of the Individual:  
Adaptation To Change  
Spring  6 Credits  
Prerequisites: NS 117 and NS 131  
Corequisite: NS 118  
Continued study of the maintenance and promotion of 
health with special emphasis on the family, community 
and society. The concept of illness and the resulting 
stress is introduced. 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  
Fall  2 Credits  
Prerequisite: Admission to Dental Hygiene Program  
Anatomy and physiology of the teeth and their support-
ing structures. A laboratory course combined with 
selfteaching opportunities utilizing various media. The 
laboratory work includes tooth identification, the 
relationship of malocclusion to mastication and 
pathological conditions. Six hours of laboratory per 
week.
NS 143 Clinical Dental Hygiene I  Fall  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 hours clinical hours per week.

NS 144 Clinical Dental Hygiene II  Spring  3 Credits

Prerequisite: NS 143
Continuation of application of skills learned in NS 143 (Clinical Dental Hygiene I), utilizing sterile technique and principles of patient education while performing oral prophylaxis on patients in the clinic. Introduction to the various specialty 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. One hour of class and six hours of clinic per week.
NS 145  Dental Radiology  Spring  2 Credits
Prerequisite: NS 143
Provides instruction in the theory of taking, processing and mounting oral radiographs. Bisecting angle and paralleling techniques are taught with emphasis upon radiation safety for patient and operator. One hour of class and three hours of lab per week.

NS 147  Head And Neck Anatomy  Spring  2 Credits
Prerequisite: NS 141
Study of the embryologic development, and microscopic and gross anatomy of the head and neck. Clinical application is emphasized. One hour of class and three hours of laboratory per week.

NS 149  Nutrition And Diet Analysis  Spring  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 150  General Physics I  4 Credits
Prerequisite: MATH 106 or equivalent
Introductory survey of important topics in physics such as motion and energy, matter and heat, and electricity and magnetism. Class meets six hours per week.

NS 151  General Physics II  4 Credits
Prerequisite: NS 150
Continuation of NS150 (General Physics I). Subjects include wave motion and light relativity, quantum physics and fundamental particles of nature. Class meets six hours per week.

NS 215  General Genetics  3 Credits
Prerequisite: NS 150
Fundamental principles of heredity and variation. Concepts of Mendelian and non-Mendelian genetics are illustrated. Plant, animal and human variations are presented. Class meets three hours per week.

NS 220  Organic Chemistry I  Fall  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. Class meets nine hours per week.
NS 221 Organic Chemistry II Spring 5 Credits
Prerequisite: NS 220
Continuation of NS 220 (Organic Chemistry I) to include an introduction to organic qualitative analysis. Class meets nine hours per week.

NS 225 Principles Of Organic Chemistry 5 Credits
Prerequisite: NS 121 or 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. Class meets seven hours per week.

NS 227 Introduction to Quantitative Analysis 5 Credits
Prerequisite: NS 121
An introduction to concepts of acid-base, chromatography, coulometry, equilibrium, oxidation-reduction, and spectro-photometry and their application to quantitative chemical analysis. Laboratory consists of supportive experiments designed to introduce the student to modern quantitative experimental techniques. Class meets nine hours per week.

NS 231 Nursing Care Of The Individual: Short-Term Illness Fall 10 Credits
Prerequisites: NS 118 and NS 132
Continued study of the care of individuals and their needs during illness. Pathophysiology and the application of basic scientific principles in the problem solving process are stressed. Special emphasis is placed on the assessment of needs, preparation of care plans and the evaluation of the effectiveness of the care given. Clinical laboratory in health care agencies is an important part of the course. Five hours of class and fifteen hours of clinical laboratory per week.

NS 232 Nursing Care Of The Individual: Long Term Illness Spring 10 Credits
Prerequisite: NS 231
Continued study of illness with emphasis on the adjustment of the individual to long term care and rehabilitation. The use of patient care plans is required. Adjustment to the role of the graduate seeking employment in the community is discussed. Clinical laboratory in health care agencies is an integral part of the course. Five hours of class and fifteen hours of clinical laboratory per week.
NS 241 Clinical Dental Hygiene III  
Summer 3 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. Management of medical and dental emergencies is discussed and practiced. Two hours of class and twelve hours of clinic per week.

NS 242 Clinical Dental Hygiene IV  
Fall 5 Credits

Prerequisite: NS 241
Corequisite: NS 248
Continuation of NS 241 (Clinical Dental Hygiene III). Continued application of the skills necessary to practice dental hygiene effectively. Emphasis placed on the more advanced techniques of root planing and soft tissue curettage. Current concepts and theories in the area of preventive dentistry are discussed. One hour of class and twelve hours of clinic per week.

NS 243 Clinical Dental Hygiene V  
Spring 7 Credits

Prerequisite: NS 242
Continuation of experience in the clinical areas of dental hygiene with additional experience in performing diet analysis. Advanced clinical techniques in scaling, curettage and administration of local anesthesia is included with clinical application emphasized. Principles of professional ethics, laws and regulations related to dentistry and dental hygiene and the effective administration of the dental practice are presented. Two hours of class and fifteen hours of clinic per week.

NS 245 Dental Materials  
Fall 2 Credits
Prerequisite: NS 145
Provides the student with a basic understanding of the properties of dental materials as well as the influence of manipulative variables. Basic laboratory techniques as well as expanded functions in the restorative area are performed in the laboratory. Six hours of laboratory per week.

NS 246 Dental Pharmacology  
Spring 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 two hours per week.
NS 248  Pathology And Periodontology  Fall  3 Credits

Prerequisites: NS 241 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 and clinical practice of the skills involved in history taking and perio charting, root planing, and soft tissue curettage. Class meets three hours per week.

NS 249  Community Dental Health  Fall  3 Credits

Prerequisite: NS 143

Combines the principles of public health and dental health education in providing the student the opportunity to study the principles, practices, and materials used in teaching dental health to people of all ages, and from all socio-economic groups. 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  Fall  5 Credits

Prerequisite: MATH 122 or concurrent enrollment

Introduction to physics for student of science and engineering which stresses mathematical approaches to the study of mechanics, wave motion and thermodynamics. Class meets seven hours per week. Offered in even numbered years.

NS 251  Engineering Physics II  Spring  5 Credits

Prerequisite: NS 250

Continuation of NS 250 (Engineering Physics I) with emphasis on electricity and magnetism, light and topics in modern physics. Class meets seven hours per week. Offered in odd numbered years.

NS 299  Independent Studies in Natural Sciences  1-3 Credits

Opportunity for the student to pursue special interests through guided independent study in his chosen area. Class meets by arrangement.
PHYSICAL DEVELOPMENT

The area of physical development in the College curriculum is specifically designed to meet the needs of students who are interested in participation, theory, background, observation and/or officiating in a wide variety of athletic events. Individuals can enhance their own physical abilities, learn to participate in leisure time activities or prepare for a career. Career possibilities include teaching, coaching, community recreation, first aid supervisor and recreation therapist.

JCCC offers life time sports such as golf, tennis, swimming, archery, which are useful and interesting to students who are enrolled in any area of study at the College. Additionally, students with a strong interest in the area of Physical Development may plan to transfer to a four-year college or university in order to earn a baccalaureate degree.

Many special activities are offered in the area of sports and recreation through the Continuing Education division of the College. Popular courses have included How to Watch a Football Game, Jogger's Club, Wilderness Backpacking and Physical Fitness and Fun which is designed for the whole family. Instructors from the Physical Development Division also offer many clinics during the summer months to increase individual skill in various sports.

Facilities for handball, tennis, weightlifting, archery and other physical activities are available for use by JCCC students and residents of Johnson County.

Individuals who are interested in any aspect of Physical Development should visit with a JCCC counselor and develop an individualized program to suit his needs and abilities.
PD 101 Physical Development

Co-ed 1 Credit

Activities consisting of basketball, volleyball, badminton and tennis, racquetball, softball, body conditioning and weight training and gymnasium games depending on weather conditions. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

PD 102 Physical Development

Co-ed 1 Credit

Continuation of activities consisting of basketball, volleyball, badminton and tennis, racquetball, softball, body conditioning and weight training and gymnasium games depending on weather conditions. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

PD 103.1-103.2 Tennis And Badminton

Co-ed 1 Credit

Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PD 104.1-104.2 Hardball And Paddle Ball

Co-ed 1 Credit

Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PS 105.1-105.2 Gymnastics And Tumbling

Co-ed 1 Credit

Individualized instruction in tumbling, side horse, even and uneven parallel bars, balance beam, trampoline, vaulting and rings. For the inexperienced or limited experienced student. Practice area scheduled by arrangement.
PD 106.1-106.2 Wrestling Fall 1 Credit
Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PD 107.1-107.2 Soccer Co-ed 1 Credit
Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PD 108.1-108.2 Archery Co-ed 1 Credit
Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PD 110 Rules and Officiating Co-ed Fall 2 Credits
Knowledge and interpretation of the rules governing football, basketball, tennis. Such knowledge and interpretive ability is also helpful to spectators of these sports. Class meets three hours per week.

PD 111 Rules and Officiating Co-ed Spring 2 Credits
Knowledge and interpretation of the rules governing basketball, baseball, softball and track. 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 Co-ed 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 121.1-121.2 Physical Fitness And Weight Training Co-ed 1 Credit
Individualized instruction on various aspects of physical fitness. Units on progressive weight training, peripheral heart action training and cardiovascular efficiency. Practice area scheduled by arrangement.

PD 130 Introduction To Physical Education Co-ed Fall 3 Credits
Principles of health and physical education; its history, philosophy, theory, and practice. Class meets three hours per week.

PD 131 Individual Life-Time Sports Co-ed Fall 2 Credits
Provides group instruction and practical experience in archery, badminton, bowling, and tennis. Emphasis is on the planning and organization of these lifetime sports in a recreation setting. Class meets three hours per week.
PD 135  Introduction to Recreation Services  
       Co-ed  3 Credits
Introduces the historical and philosophical foundations of leisure and recreation. Emphasis on the meaning of leisure and recreation, socioeconomic movements, economic importance of recreation, and social institutions which provide recreation services. Class meets three hours per week.

PD 136  Outdoor Recreation  
       Co-ed Spring  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  
       Co-ed Spring  2 Credits
Course presents material necessary to adequately conduct social recreation in clubs, churches, schools, playgrounds, and recreation centers. Emphasis on planning, programming, and conducting social recreation activities. Ample opportunity for developing individual strengths and understanding. Class meets three hours per week.

PD 138  Recreation Field Study  
       Co-ed Spring  3 Credits
Application and study of the basic skills needed as a recreation leader including observation and actual experience. Emphasis on coordinating classroom knowledge with recreation and therapeutic situations in the community. Class meets for a one-hour weekly seminar and a minimum of 15 hours of supervised laboratory experience by arrangement in an area agency, hospital or institution.
PD 140  Fundamentals Of Athletics  
Co-ed  Spring  2 Credits  
Theory of coaching and a study of coaching methods. Emphasis placed on 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  
Co-ed  2 Credits  
Fundamentals of offensive and defensive basketball; individual and team play; strategy and rules. Class meets three hours per week.

PD 153  Folk, Square And Social Dancing  
Co-ed  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  
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 156.1-156.2  Cheerleading and  
Yell-leading  Co-ed  1 Credit  
Basic instruction in the fundamentals of cheerleading and yell-leading. Includes work with a partner. Class meets from October 1 to end of fall semester; from beginning of spring semester to March 1. Hours by arrangement.

PD 157.1-157.2  Horsemanship  Co-ed  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 159.1-159.2 Golf  Co-ed  1 Credit
Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.

PD 160 Fencing  Co-ed  1 Credit
Individualized instruction on rules, fundamentals and history of the sport. Practice area scheduled by arrangement.
PD 170 Swimming/Life Saving  Co-ed  1 Credit
Advanced work in all swimming strokes. Prepares student for certification in American National Red Cross Life Saving. Class meets two hours per week.

PD 171 Synchronized Swimming
Co-ed  Spring  1 Credit
Beginning and advanced water ballet and gymnastics. Water show performance and/or competition. Class meets two hours per week.

PD 172 Swimming/Water Safety Instructions
Co-ed  1 Credit
Prerequisite: Senior Life Saving
Advanced work in all swimming strokes. Review of Senior Life Saving. Prepares student for certification as a Red Cross Water Safety Instructor. Class meets two hours per week.

PD 201 First Aid  Co-ed  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.

PD 299 Independent Studies In
Physical Education  Co-ed  1-3 Credits
Opportunity for the student to pursue special interests through guided independent study in his chosen area. Class meets by arrangement.
SOCIAL SCIENCE

The social science area of the College curriculum includes sociology, political science, psychology, economics, history, government and law enforcement. Students at JCCC generally enroll in social science courses because they are designed to introduce basic concepts of individual and social behavior which are applicable to all aspects of life. Career possibilities include the areas of counseling and guidance, clinical psychology, testing and measurement, teaching, diplomacy, law and law enforcement.

Students seeking a baccalaureate degree will find that JCCC offers the courses necessary to complete the freshman and sophomore requirements at most four-year colleges and universities.

The Law Enforcement career program at JCCC is designed to meet the educational needs of local law enforcement agencies. Law enforcement courses may be taken by students in all areas at the College. In addition, short courses, workshops and seminars are offered for those personnel presently in the field of law enforcement who wish to update or improve their skills and knowledge.

Through the division of Continuing Education, many courses in the social science area are offered to interested individuals. Psychology, one of the most popular areas of intellectual inquiry, has inspired such Continuing Education offerings as "The Psychology of Aging" and "Introduction to the World of ESP."

Information on all the many possibilities within the area of social science is available from the JCCC counseling staff. Each individual can have a specific program designed to meet his needs by making an appointment to see one of the JCCC counselors.
SS 101 Social Science/Sociology 3 Credits
An interdisciplinary sociology course that introduces the basic 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 examined. Class meets three hours per week.

SS 103 Social Science/Psychology 3 Credits
An interdisciplinary psychology course which introduces the basic concept and methods of general psychology and their relationship to the 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 400 clock hours. Class meets five days per week, eight hours a day for ten weeks.
SS 151 Introduction To Law Enforcement 3 Credits
Corequisite: SS 154 or by permission
An orientation to the occupation by exposing the student to contemporary practices of criminal justice, examination of requirements for employment and career opportunities available. The evolution of law enforcement from past to present is explored and discussed. Class meets three hours per week.

SS 153 Juvenile Code And Procedures 3 Credits
Prerequisites: SS 151 and SS 154
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 The Criminal Justice System 3 Credits
Corequisite: SS 151 or by permission
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
Prerequisites: SS 151 and SS 154 or by permission
A study of the Kansas Criminal Code with emphasis upon the elements of crimes and criminal procedure. Class meets three hours per week.
SS 156 Fundamentals Of Criminal Investigation 3 Credits
Prerequisite: SS 155 or by permission
A study of the criminal investigation function of police from the preliminary investigation to the preparation of the case for review by the District Attorney. Emphasis on determining fact by collecting information from people and things, interpretation of this information and then reporting. 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
A study of the police as a social institution within a free society and the relationship between the police and the community and the conflicts that arise. Class meets three hours per week.

SS 201 Economics I 3 Credits
Prerequisite: By permission
Study of the fundamental problems of economics and the ways the United States attempts to solve them. Included in the topics covered in this course are: the basic elements of supply and demand; prices; national income determination; money and banking; monetary and 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 SS 201 (Economics I) 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. Practicum in an educational setting may be required. Class meets three hours per week.

SS 211 Educational Psychology 3 Credits
Prerequisite: SS 103 or by permission
Application of principles of psychology to problems in learning-teaching situations. Study of behavior, attitudes, skills, retention and transfer. Ability and achievement measurement techniques introduced. Practicum in an educational setting may be required. Class meets three hours per week.
SS 220 American History I 3 Credits
A survey course in American history that investigates American society from the early colonial era to the period of the Civil War. The emphasis is on analysis and discussion of the different interpretations and debates about major issues in American history. Class meets three hours per week.

SS 221 American History II 3 Credits
A survey course in American history that investigates American society from the period of Reconstruction to the present. The emphasis is on analysis and discussion of the different interpretations and debates about major issues in American history. Class meets three hours per week.

SS 222 American National Government 3 Credits
Prerequisite: High school civics or by permission
General survey of American national government through the examination of major areas of the political and administrative processes. General political theory, American civil liberties, citizen responsibilities, the role of public opinion, the Presidency, Congress, the Courts and the nature of contemporary national government is covered. 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 244 Supervisory Techniques For Policemen 3 Credits
Prerequisite: SS 154
Elements of Police Supervision in theory and practice. Study of the supervisor's role in Police Service. Examines various dimensions of supervisory responsibility and other pragmatic guidelines for their fulfillment. Class meets three hours per week.

SS 250 Motor Vehicle Law 3 Credits
Prerequisites: SS 151 and SS 154
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 156 or by permission
A skills development course in the techniques and methods used to establish the identity and individualization of persons and things. Class meets three hours per week.

SS 253  Police Organization And Management  3 Credits
Prerequisite: SS 244
Study of latest methods and techniques used in the organization of a police department. Practical application of procedures used in management of people, money and materials to achieve objectives of the department. Class meets three hours per week.

SS 254  Criminology  3 Credits

SS 255  Traffic Safety And Accident Investigation  3 Credits
Prerequisites: SS 151 and SS 154 or by permission
Principles of accident investigation; emphasis on obtaining and recording facts, use of accident investigator’s equipment and examination of graphic procedures used. Class meets three hours per week.

SS 256  Constitutional Case Law  3 Credits
Prerequisite: By permission
In-depth analysis of important Supreme Court decisions dealing with questions of Constitutional Law that have significant impact on law enforcement techniques and procedures. Facts, issues, dissents and reasoning involved in decisions are studied. Students develop guidelines for use in practical application of Constitutional Case Law to Law Enforcement. 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
Defensive tactics. Includes qualification with service revolver, use of baton and armed and unarmed defense. Emphasis on safety and constitutional limitations of use of force. 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.

SS 299  Independent Studies in Social Sciences  1-3 Credits
Opportunity for the student to pursue special interests through guided independent study in his chosen area. Class meets by arrangement.
DIRECTORY
ADVISORY COMMITTEES

Advisory Committees at Johnson County Community College provide communication, advice and support from the community to those who develop and operate College programs. Members are individuals with experience and training in the various program fields being developed by the College. The Board of Trustees approves all appointments to the Advisory Committees. The assistance of these individuals is an essential part in the implementation of the College's philosophy of meeting the expressed needs of the community.
BASIC ADULT EDUCATION (GED)

Mr. Bob Blackman  
Counselor  
Johnson County Community College

Ms. Jan Block  
Drop-out Prevention and Alternative Education  
Shawnee Mission School District

Ms. Pauline Carr  
Former Student

Ms. Marie Fairhurst  
Current Student

Ms. Catie Hensen  
GED Tutor

Mr. Robert Skuphy  
GED Tutor

Ms. Rosemary P. Swank  
Organizer, Sunflower GED Program

Mr. Gene Werner  
Job Placement  
Sears Roebuck, Inc.
CAREERS AND SERVICES FOR THE HEARING IMPAIRED

Mr. Jim Blaze
Internal Revenue Service

Mr. Melvin Bruntzel
Director of Speech & Hearing
State Department of Education

Ms. Janis Grogan
Placement Specialist
Industrial Rehabilitation Center

Dr. Rollie Houchins
Associate Professor of Audiology
Department of Hearing & Speech
University of Kansas Medical Center

Mrs. Betty Hudgens
Counselor
Johnson County Manpower Center

Mr. Jeffery Morrill
Executive Director, Greater Kansas City
Hearing & Speech Center
General Hospital & Medical Center

Mr. Fred Murphy
Instructor
Kansas School for the Deaf

Mr. Lloyd Parks
Principal
Kansas School for the Deaf

Mr. Robert Rowlands
Supervisor
Vocational Rehabilitation Division

Mrs. Suzanne Schrock
Hearing Clinician
Briarwood Elementary School
DATA PROCESSING

Mr. Gary Bietka
Programmer
KU Medical Center

Mrs. Beverly Jamison
Lab Supervisor
Johnson County Community College

Mrs. Ruth Klass
Lab Information Systems Analyst
Baptist Memorial Hospital

Mr. Ron Paul
Director, Data Processing Dept.
Johnson County Courthouse

Mr. Evan Stewart
Project Programmer
Butler Manufacturing

Mr. La Mon Thompson
Manager SR & D Dept.
United Computing Systems

Mr. Chuck Trimble
Manager, Data Center Operations
United Computing Systems

Mr. Gerald Wheatley
Assistant Vice President
Yellow Freight Systems, Inc.

Mr. Paul Wolfe
Director KU Computation Center
University of Kansas
DENTAL HYGIENE

H. Bon Bradbury, D.D.S.

Ms. Patti Breusing
Dental Hygienist

John Dooner, D.D.S.
Chief of Dental Services
K.C. Veterans Hospital

Ms. Sue Garrett
Dental Hygienist

Ray Moore, D.D.S.

Mr. Pete Nicholson
Director
Sunflower Coordinating Council

T.J. Nidiffer, D.D.S.

H.B.G. Robinson, Dean
School of Dentistry
University of Missouri - Kansas City

Ms. Marilyn Shreve
Director, Undergraduate Dental Hygiene
University of Missouri - Kansas City

Ms. Maxine Tishk
Director, Graduate Dental Hygiene
University of Missouri - Kansas City

Steve Young, D.D.S.
DRAFTING TECHNOLOGY

Mr. John Birchler
Draftsman
U.S. Army Corp. of Engineers

Mr. George Bonin
Repro-Graphics Department
Team Industries

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Section Supervisor Engineering Drafting
Bendix Corporation

Mr. Fred Pfeifer
Drafting Supervisor
King Radio Corporation

Mr. Howard L. Scott
Department Chief
Machine Design & Development
Western Electric Company

Mr. Richard Van Verth
Draftsman
Burns and McDonnell Engineering Co.

Mr. Jack Wilkus
Mechanical Engineer
Black & Veatch Engineering
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Test Engineer
Western Electric Co.

Mr. Gene Grillot
Group Leader-Engineering Dept.
King Radio Corporation

Mr. David Hax
Chief Engineer
Product Engineering Services
Bendix Corporation

Mr. Bob Watts
Electrical Mechanic
Trans World Airlines

Dr. Edwin Martin
Staff Engineer
Wilcon

Mr. Gary Marts
Design Lab Technician
King Radio Corporation
Mrs. Louise R. Ayres
Personnel Manager
Harzfeld's

Mr. Wayne Christenson
Buyer
Jones Store

Miss Terry Daniels, Supervisor
Sportswear and Junior Dress
Adler's

Mr. C. Vance Gosney
Department Manager
Sears Roebuck

Mr. Larry Haggard
Fashion Designer
H.D. Lee Co., Inc.

Mrs. Sally Horde
Store Manager
The Village Set

Dr. Juanita Kilbourne
Professor & Consultant (Fashion)
Kansas State University

Mr. Thomas R. Saunders
Store Manager
Adler's
JOURNALISM

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Editor
Johnson County Herald

Mrs. Lynne Harmon
Account Executive
Bernstein Rein & Boasberg Advertising Agency

Mr. William E. Millar
Metropolitan Editor
The Kansas City Star

Mr. Barry Robinson
Public Information Officer
Federal Reserve Bank

Mr. Jay Thomas
Journalism Student
University of Kansas

Mr. Edwin H. White
Associate Professor
School of Administration
University of Missouri - Kansas City
LAW ENFORCEMENT

Mr. Fred Allenbrand
Sheriff, Johnson County

Mr. Richard Blume
Chief of Police
Leawood Police Department

Dr. James Bridgens
Dept. of Pathology
Shawnee Mission Hospital

Mr. John Foster
Chief of Police
Lenexa Police Dept.

Mr. R.J. Hundley
Chief of Police
Prairie Village Police Dept.

Ms. Margaret Jordan
District Attorney of Johnson County

Mr. Myron Scafe
Chief of Police
Overland Park Police Dept.

Mr. William Shepard
Chief of Police
Olathe Police Dept.

Mr. Charles Stump
Chief of Police
Shawnee Police Dept.
MARKETING AND MANAGEMENT

Mr. Joe Christiana
Manager
Western Auto Supply

Mr. John Copeland
Director of Food Service
Northeast Kansas Vocational School

Mr. Jim Hennessey
Personnel Manager
The Jones Store Company

Mr. Walter Jacobs
Store Manager
J.C. Penney Company

Mr. Jim Nemecek
Personnel Director
Sears Roebuck and Co.

Mr. Steve Punches
Assistant Manager
Alco Discount

Mr. William C. Richner
Store Manager
Venture Store

Mr. Jim Sheehan
Personnel Director
Fleming Co.

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NURSING

Dr. Margery Duffey, R.N.
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Kansas University Medical Center

Mr. John C. Eisele
Attorney

Dr. Robert Fairchild
Director of Clinics
Childrens Mercy Hospital

Miss Marjorie Hansen, R.N.
Director of Nursing
Shawnee Mission Hospital

Miss Donna Hawley, R.N.
Director of Nursing
Kansas City Kansas Community College

Mrs. Adeline Marshall, R.N.
Chairman, Dept. of Nursing Education
Penn Valley Community College

Dr. Samuel C. Petrie
Medical Staff - Shawnee Mission Hospital

Mrs. Joan Thomas, R.N.
Nursing Director
Johnson County Health Department

Mrs. Mary Ann Tush
ANA Staff Member
RECREATION LEADERSHIP

Ms. Charlene Drosselmeyer
Physical Education and Recreation Consultant
Kansas Special Olympics

Mr. Ward Horton
Superintendent of Recreation
City of Olathe

Mr. Sia Sadri
Superintendent of Recreation
Johnson County Park and Recreation

Mr. Dick Stoffa
Recreation Director
Department of Psychiatry
Kansas University Medical Center

Mr. Bob Wylan
Manager Ice Chateau
King Louie Bowling Corporation

EARLY CHILD DEVELOPMENT

Sister Marie Georgette
Chairman, Department of Education
Avila College

Dr. Ted W. Gray
Director, Special Services
Shawnee Mission School District

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Children's Rehabilitation Center
University of Kansas Medical Center

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Clinical Psychologist

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Brookridge Pre-School and Day Care Center
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Preferred Business Service Corp.

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Kansas City Area Hospital Association

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Moore Business Forms, Inc.

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Cutter Haver Lockhart

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United Telecommunications, Inc.

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Personnel Manager
ECODYNE Corp.
Smith & Loveless Division

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National Fidelity Life Ins. Co.

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Wayne Vohlend Produce, Inc.

Mr. Jim Titmas
District Manager
Automated Business Systems-Litton Industries
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Vice President Harold L. Finch
Personnel Assistant Michael J. Broker
Director of Institutional Research Elaine Tatham

COMMUNITY COOPERATION DIVISION
Director of Community Cooperation John Pearce

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Assistant Dean of Instruction Richard A. Burns
Assistant Dean of Instruction W. Dane Lonborg
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Director of Natural Sciences Division Thomas M. Barnett
Director of Physical Development Division Orville Gregory
Director of Social Sciences and Humanities Division James W. Jackson
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Director of Business
Nick Roach
Director of Facilities
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Joe Hentzen

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Assistant Dean of College Services
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Director of Admissions and Registrar
Linda Dayton
Director of Guidance and Counseling
Don Dougherty
Director of Educational Media Center
William J. Hoffman
Coordinator of Media Production
Michael L. Felton
Director of Athletics
Orville Gregory
Coordinator of Student Activities
Patsie Staake
Director of Data Processing
Tom Elliott
ALVERS, Jean             Instructor, Social Sciences
B.S., Eastern Michigan University
M.A., University of Michigan

ASCANIO, Darlene J.    Instructor, Data Processing
B.S., Kansas State College of Pittsburg

AXON, David E.          Instructor, Speech
B.A., Park College
M.Ed., Pennsylvania State University

BAGGERLY, Larry C.      Instructor, Foreign Languages
B.S., University of Missouri - Kansas City
M.A., University of Missouri - Kansas City

BALLARD, Judith A.      Instructor, Reading Specialist
B.A., William Jewell College
M.A., University of Missouri - Kansas City

BARNETT, Thomas M.      Director of Natural Sciences
B.S., Eastern New Mexico University
M.S., Eastern New Mexico University
Ed.D., North Texas State University

BAUMAN, Anne W.         Instructor, Communications
B.A., Fontbonne College
M.A., Loyola University

BAUMAN, Mark            Instructor, German/Communications
A.B., St. Benedict's College
M.A., University of Kansas
S.T.L., University of Munich, Germany

BEHBEHANI, Zoreh S.     Instructor, Social Sciences
LL.B., University of Tehran
LL.M., University of Missouri - Kansas City

BISHOP, Charles C.      Instructor, Social Sciences/Humanities
B.A., Midland College
M.A., University of Kansas

BROKER, Michael J.      Personnel Assistant
B.S., Central Missouri State University
M.A., Central Missouri State University

BROOKS, Judson W.       Data Processing Programmer
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Department</th>
<th>Education</th>
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<tbody>
<tr>
<td>BROOKS, Ronald W.</td>
<td>Counselor</td>
<td>B.A., University of Missouri - Kansas City</td>
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<td>M.A., University of Missouri - Kansas City</td>
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<tr>
<td>BROWN, Anita J.</td>
<td>Instructor, Dental Hygiene</td>
<td>B.S., University of Missouri - Kansas City</td>
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<td>BROWNING, James R.</td>
<td>Instructor, Law Enforcement</td>
<td>B.S., Central Missouri University</td>
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<tr>
<td>BUCKNER, Virginia</td>
<td>Instructor, Life Sciences</td>
<td>B.A., Vassar</td>
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<tr>
<td>BUESCHER, Kay</td>
<td>Instructor, Nursing</td>
<td>B.S., University of Kansas</td>
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<td>BURNGEN, Judith A.</td>
<td>Instructor, Dental Hygiene</td>
<td>B.S., Ohio State University</td>
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<td>M.S., University of Missouri - Kansas City</td>
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<td>BURNS, Richard A.</td>
<td>Asst. Dean of Instruction</td>
<td>B.A., William Jewell College</td>
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<td>M.S.T., University of Missouri</td>
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<td>BYRUM, Paul</td>
<td>Instructor, Mathematics</td>
<td>B.S., U.S. Naval Academy</td>
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<td>M.A., Duke University</td>
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<td>CAFFREY, Margaret N.</td>
<td>Librarian</td>
<td>B.A., St. Mary College</td>
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<td>B.S./LS Catholic University of America</td>
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<td>CAVAGNOL, Richard M.</td>
<td>Instructor, Life Sciences</td>
<td>A.B., Rochester University</td>
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<td>M.S., University of Kansas</td>
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<td>CERNE, Al</td>
<td>Dean of Business &amp; Facilities</td>
<td>B.S., Kansas State College of Pittsburg</td>
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<td>M.S., Kansas State College of Pittsburg</td>
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<td>CLARK, Barbara</td>
<td>Coordinator, Dental Hygiene</td>
<td>B.S., University of Missouri - Kansas City</td>
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<td>M.A., University of Missouri - Kansas City</td>
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<td>CLARK, John</td>
<td>Instructor, Aviation</td>
<td>B.A., Southwest Baptist College</td>
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<td>CLASPILL, Deanna F.</td>
<td>Job Analyst</td>
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</table>
COFFMAN, Bob L.              Supervisor, Word Production Section
B.A., Bethany College

COLE, Norma L.               Instructor, Nursing
B.A., University of Missouri - Kansas City

CRAWFORD, Samuel J.          Instructor, Physical Sciences
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College

CUNNINGHAM, Alan             Instructor, Humanities
B.A., Chicago State College

CUNNINGHAM, Melvin C.        Librarian
B.S., University of Nebraska at Omaha
M.L., Kansas State Teachers College

DALSING, Max V.              Instructor, Life Sciences
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College
DAYTON, Linda L.  Director of Admissions and Registrar
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College

DIETRICH, Irma  Librarian
B.Mus., Bethany College
M.A., University of Denver

DILLEY, Gerald L.  Instructor, Social Sciences
B.A., University of Kansas
M.A., University of Kansas

DOUGHERTY, Donald  Director of Guidance and Counseling
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College

EDGEMON, Joan  Instructor, Nursing
B.S., Washington University

EFFINGHAM, Marie  Instructor, Nursing
B.S., University of Chicago
M.A., University of Missouri

ELLIOTT, Tom A.  Director of Data Processing
B.S., Kansas State College of Pittsburg
M.S., Kansas State College of Pittsburg

EVANS, David J.  Instructor, Business
B.S.C., University of Iowa
M.Ed., University of Nebraska

EVANS, James D.  Instructor, Business
B.S., Kansas State University
M.S., Kansas State Teachers College

EVESLAGE, Roberta  Instructor, Social Sciences
B.F.A., Texas Christian University
M.A., University of Kansas
Ph.D., University of Kansas

FELTON, Michael L.  Coordinator, Media Production
B.S., Oklahoma State University
M.S., Oklahoma State University

FINCH, Harold L.  Vice President
B.S., University of Kansas
M.S., Ohio State University
Ed.D., University of Kansas
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tr>
<td>FONG, Li Ren</td>
<td>Instructor, Mathematics</td>
<td>B.A., National Cheng Chi University</td>
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<td>M.S., Fort Hays State College</td>
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<td>GARTON, Mary Lou</td>
<td>Instructor, Hearing Impaired</td>
<td>B.A., Kansas State Teachers College</td>
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<td>GEORGE, Dennis J.</td>
<td>Instructor, Life Sciences</td>
<td>B.S., Rockhurst College</td>
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<td>M.A., University of Missouri - Kansas City</td>
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<td>GILBERT, Oliver T.</td>
<td>Instructor, Mathematics</td>
<td>B.S., University of Kansas</td>
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<td>M.S., University of Utah</td>
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<td>GILFORD, Charles B.</td>
<td>Instructor, Communications</td>
<td>B.S., Rockhurst College</td>
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<td>M.A., Catholic University</td>
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<td>Ph.D., University of Denver</td>
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<td>GOLDER, Erica</td>
<td>Instructor, Communications</td>
<td>B.A., University of Missouri - Kansas City</td>
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<td>M.A., University of Missouri - Kansas City</td>
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<tr>
<td>GREGORY, Orville</td>
<td>Director of Physical Development</td>
<td>B.S., Northeast Missouri State College</td>
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<td>M.A., Kansas State Teachers College</td>
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<td>GRIFFITHS, Steve</td>
<td>Photographer</td>
<td>A.A., Penn Valley Community College</td>
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<td>HALL, John S.</td>
<td>Supervisor of Security</td>
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<td>HAMANN, Arthur A.</td>
<td>Instructor, Social Sciences</td>
<td>B.A., Cornell College</td>
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<td>S.T.B., Boston University School of Theology</td>
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<td>M.A., Boston University</td>
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<td>HAMMACK, Roy</td>
<td>Instructor, Physical Sciences</td>
<td>B.S., Kansas State College of Pittsburg</td>
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<td>Ed.S., Kansas State College of Pittsburg</td>
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<td>HARP, Harold</td>
<td>Instructor, Communications</td>
<td>B.S., Central Missouri State</td>
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<td>M.A., Central Missouri State</td>
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</tbody>
</table>
HARRIS, Robert G.  
B.A., Michigan State University  
M.S.E.E., U.S. Naval Postgraduate School  
Ph.D., Michigan State University  
President

HAUN, Gene  
B.S., Kansas State Teachers College  
Director of Facilities

HENNINGTON, Jack L.  
B.S., Kansas State Teachers College  
M.S., University of Kansas  
Instructor, Mathematics

HENTZEN, Joepsh M.  
Manager, Bookstore

HICKS, Ronald D.  
B.S., Kansas State College of Pittsburg  
M.S., Kansas State College of Pittsburg  
Instructor, Art

HILL, David E.  
B.S., Kansas State Teachers College  
M.S., Kansas State Teachers College  
Instructor, Drafting Technology

HOFFMAN, William J.  
B.S., Lakeland College  
M.S., University of Wisconsin  
M.A., University of Denver  
Asst. Dean of College Services

HOWARD, Jean M.  
B.F.A., University of Kansas  
M.F.A., University of Kansas  
Instructor, Art

HUNTER, Robert  
B.S., University of Tulsa  
M.S., University of Tulsa  
Instructor, Business

IMBEAU, Harvey B.  
B.M.E., Oklahoma State University  
M.M.E., North Texas State University  
Instructor, Humanities

JACK, Bonnie  
B.S., Kansas State College of Pittsburg  
M.S., University of Kansas  
Instructor, Business

JACK, Eugene H.  
B.S., Kansas State College of Pittsburg  
M.S., Kansas State College of Pittsburg  
Instructor, Physical Sciences

JACKSON, James W.  
B.A., Arkansas Polytechnic College  
M.Ed., University of Arkansas  
Director of Social Sciences and Humanities
JACKSON, Marilyn A.  Instructor, Social Sciences  
A.B., Indiana University 
M.A., Indiana University 
M.S., Indiana University

JONAS, Albert  Instructor, Aviation

KALMAN, Nancy A.  Instructor, Life Sciences  
B.A., University of Iowa 
M.S., University of Iowa 
Ph.D., University of Kansas

KANELAKIS, Vassilios  Instructor, Business  
B.S., Athens Graduate School of Economics & Business Science 
M.A., Kansas State University

KARL, Norman H.  Instructor, Retail Marketing  
B.A., Wartburg College 
M.A., University of Northern Colorado

KARNAZE, William C., Jr.  Instructor, Physical Sciences  
B.A., University of Kansas 
M.A., University of Kansas

KELLEY, Diana L.  Research Evaluation Specialist  
B.S., Wichita State University 
M.S., University of Kansas

KINDERMANN, Maurice E.  Instructor, Physical Sciences  
B.A., University of Missouri - Kansas City 
M.A., University of Missouri - Kansas City

KIRKMAN, Kay  Coordinator, Publications  
A.A., Johnson County Community College

KLARNER, Walter E., Jr.  Instructor, Communications  
B.A., College of Emporia 
M.S., Kansas State Teachers College

KREBS, Frederick A.  Instructor, Humanities  
B.A., University of Kansas

KREBS, Virginia W.  Coordinator, Community Services  
B.S., University of Denver

KUEHN, William E.  Supervisor of Operations  
B.S., Concordia Teachers College
KURKI, Alan  Instructor, Business
B.S., St. Louis University
M.B.A., University of Pittsburg
M.S., University of Pittsburg

LAWYER, Darwin  Financial Aids Counselor
B.A., Northwest Missouri State
M.S., University of Missouri

LINDSEY, Carl E.  Director of Engineering/Technology
B.S.M.E., University of Kansas
M.S.M.A.E., University of Missouri - Columbia

LONBORG, W. Dane  Asst. Dean of Instruction
B.S., University Kansas
M.A., University of Northern Colorado

LONBORG, Rocelyn  Instructor, Nursing
B.S., University of Kansas

LOZANO, William A.  Dean of Instruction
B.A., Wayne State University
M.A., Wayne State University
Ph.D., Michigan State University

MACKEY, Wayne  Instructor, Mathematics
B.A., University of Arkansas
M.S., University of Arkansas

MAHONEY, Ted H.  Media Technician
B.S., Northeast Missouri State Teachers College

MATTHEWS, Darrell E.  Instructor, Hearing Impaired/Interpreter
B.S., Concordia Teachers College
M.Ed., University of Tennessee

MAYNARD, R.T.  Instructor, Physical Development
B.A., Southwestern College
M.S., Oklahoma State University

McCARTHY, Edward  Supervisor, Food Service

McMORRIS, Sylvia  Instructor, Nursing
B.S.N., University of Kansas
M.S., Kansas State Teachers College

METTENBURG, Alfred J.  Instructor, Law Enforcement
B.S., University of Missouri
MEYER, Donald P.  Dean of College Services  
B.S., Central Michigan University  
M.A., University of Michigan  
Ed.D., Michigan State University

MILLER, Margaret K.  Counselor  
B.A., Central Methodist College  
M.A., University of Missouri - Kansas City

MOORE, Dorothy Jane  Instructor, Physical Development  
B.S., Oklahoma State  
M.S., Oklahoma State

NELSON, Stewart A.  Counselor  
B.S.E., Kansas State Teachers College  
M.S., Kansas State Teachers College

NERNEY, Patricia K.  Instructor, Communications  
B.A., Mt. St. Scholastica College  
M.A., University of Missouri - Kansas City

NOLTE, Murray L.  Executive Director of JCCC Foundation  
B.A., University of Missouri - Kansas City

OETTING, Ronald H.  Instructor, Mathematics  
B.S., Central Missouri State College  
M.A., Louisiana State University

PARKHURST, Harry  Counselor  
B.S., Southwest Missouri State  
M.Ed., University of Missouri - Columbia

PEARCE, John  Director of Community Cooperation  
B.S., University of Kansas  
M.S., University of Kansas

PENNISTON, Lloyd  Television Engineer  
B.S., University of Missouri - Kansas City

PERKINS, Diane  Instructor, Dental Hygiene  
B.S., University of Missouri - Kansas City

PROFFER, Doug  Instructor, Mathematics  
B.S., West Texas State University  
M.S., West Texas State University

PURINTON, Dorothy  Supervisor, Graphics  
B.A., Baker University
RAMSEY, Robert W.  Instructor, Mathematics  
B.S., University of Missouri  
M.A., Central Missouri State College

RANDOLPH, Richard J.  Instructor, Business  
B.S., University of Kansas  
M.A., George Washington University

RECHTFERTIG, Lawrence  Instructor, Business  
B.A., University of North Iowa  
M.Ed., Colorado State University

REYNOLDS, Elizabeth  Instructor, Dental Hygiene  
B.S., Indiana University of Pennsylvania

RICHMOND, James  Asst. Director, Public Information  
A.A., Metropolitan Junior College

ROACH, Nick  Director of Business  
B.B.A., Washburn University

ROBINSON, Patricia  Instructor, Communication  
B.A., University of Missouri - Kansas City  
M.A., University of Missouri - Kansas City

ROSENSHIELD, Liliane N.  Instructor, Foreign Language  
License in English “LaSorbonne”  
M.A., University of Paris

SCHELOSKI, Peggy Y.  Instructor, Secretarial Careers  
B.S., Kansas State College

SCHRICK, Sharon  Instructor, Fashion Merchandising  
B.S., Mt. St. Scholastica College  
M.S., Kansas State Teachers College

SCONCE, Evelyn R.  Instructor, Secretarial Careers  
B.A., George Mason University

SEBAUGH, Jeanne  Instructor, Data Processing  
B.A., University of Kansas  
M.S., Kansas State University

SHAFFER, Linda  Reading Specialist  
B.S., University of Missouri - Kansas City  
M.A., University of Missouri - Kansas City
SHANKEL, Carolyn M.  Instructor, Business  
B.S., Kansas State College of Pittsburg  
M.S., Kansas State College of Pittsburg  

SHAPIRO, Gerald D.  Coordinator, Community Education  
B.A., University of Kansas  
M.A., University of Kansas  

SIMONS, Jeffery C.  Instructor, Physical Development  
B.S., Kansas State University  
M.S., University of Kansas  

SMITH, B. Jean  Instructor, Secretarial Careers  
A.A., Hutchinson Community Junior College  
B.S.Ed., Kansas State Teachers College  

SMITH, James E.  Instructor, Instrumental Music  
B.M.E., Kansas State College of Pittsburg  
M.S., Kansas State College of Pittsburg  

SNEAD, Carl  Television Director/Producer  
B.S., University of Kansas
Snyder, Susan L.    Instructor, Communications
B.A., Belmont College
M.A., Stanford University

Spizzirri, Barbara    Instructor, Humanities
B.A., University of Missouri - Kansas City
M.A., University of Missouri - Kansas City

Staake, Patsie    Coordinator, Student Activities
B.S., Oklahoma Baptist University
M.S., University of Missouri

Steen, Douglas Wayne    Counselor
B.A., University of Kansas
M.A., University of Kansas

Stewart, Sandra Kay    Counselor
B.S., Kansas State University
M.S., Kansas State University

Stine, Richard    Instructor, Debate/Speech
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College

Stites, Glenna L.    Placement Counselor
B.S., Columbia University
M.A., University of Missouri

Studyvin, William G.    Instructor, Electronics
B.S.E.E., University of Missouri at Rolla
M.S.E.E., University of Missouri at Columbia

Sutton, Hugh C.    Instructor, Mathematics
B.S., Texas A&M University
M.S., Louisiana Polytechnic Institute

Tatham, Elaine    Director of Institutional Research
B.A., Carleton College
M.A., University of Kansas
Ed.D., University of Kansas

Taylor, Mary Lou    Coordinator, Nursing
B.S., Drury College
M.A., University of Missouri - Kansas City
TEBBE, Paul L.  Instructor, Physical Sciences
A.B., Spring Hill College
M.S., Georgetown University
S.T.L., St. Louis University

TEEL, Marion E.  Instructor, Life Sciences
B.A., Nebraska State College
M.S., Kansas State Teachers College

TERRYBERRY, David W.  Instructor, Law Enforcement
B.S., Central Missouri State University

TEWS, Donald  Counselor
B.A., University of Iowa
M.A., University of Iowa

TOLER, Michael G.  Director of Continuing Education
B.S., University of Kansas
M.S., University of Kansas
Ed.D., University of Colorado

TROTTER, Roger  Instructor, Physical Development
B.S., Adams State College
M.S., Kansas State Teachers College

VAUGHAN, Arthur  Instructor, Electronics
B.S., University of Wisconsin
M.S.E.E., University of Wisconsin

VERSTRAETE, Cheryl  Instructor, Nursing
B.S., University of Kansas

VINCENT, Jerry  Manager, Food Service
B.S., Oklahoma State University

VOMHOF, James P.  Director of Business & Management
B.S., University of Minnesota
M.A., University of Minnesota

WADSWORTH, Dorothy  Instructor, Art
B.F.A., Wichita State University
B.A.E., University of Kansas
M.F.A., Wichita State University

WATKINS, Robert E.  Research Assistant
B.S., Kansas State University

WEGMAN, Philip J.  Counselor
B.A., St. Benedict's College
M.S., Kansas State University
WEST, Sally B.  
**Instructor, Dental Hygiene**  
A.S., Pensacola Junior College  
B.S., Armstrong State  
M.S., Columbia University

WRISLEY, Carole  
**Librarian**  
B.A., Western Michigan University  
M.S.L.S., University of Wisconsin

WILLIAMS, Edwin S.  
**Data Specialist**  
B.S., University of Santa Clara  
M.S., University of Southern California

XIDIS, Kathleen M.  
**Instructor, Social Sciences**  
B.A., St. Mary's College  
M.A., Indiana University  
Ph.D., Indiana University

WILLIAMS, James  
**Instructor, Communications**  
B.S., Kansas State Teachers College  
M.S., Kansas State Teachers College

XIDIS, Robert D.  
**Instructor, Communications**  
B.A., University of Kansas  
M.A., Indiana University

WILLIS, Margaret  
**Instructor, Nursing**  
B.S.N., University of Virginia

YEARGAIN, Scott  
**Instructor, Humanities**  
B.A., University of Missouri  
M.A., University of Missouri  
Ph.D., University of Missouri

WOODARD, Joel  
**Counselor**  
B.S., Bethany College  
B.S., Kansas State University  
M.S., Kansas State University

ZAVOS, Panayiotis  
**Instructor, Life Sciences**  
B.A., Kansas State Teachers College  
M.S., Kansas State Teachers College
ANCILLARY INSTRUCTIONAL STAFF

ABERNATHY, Richard  Instructor, Aviation

ALVAREZ, Julia  Instructor, Adult Basic Education
D.C.F.M., University of Havana, Cuba
M.A., University of Missouri - Kansas City

ANGELL, Ken  Instructor, Life Sciences
B.S., Northwestern State
M.S., Kansas State Teachers College

BELSHE, Jerry  Instructor, Adult Basic Education
B.S., Central Missouri State
M.A., University of Texas

BIESE, Leo F.  Supervising Dentist
B.S., Southern Illinois University
D.D.S., University of Illinois

BLAIR, Kay  Instructor, Communications
B.S., University of Kansas
M.A., University of Kansas

BRANYAN, Helen  Instructor, Speech
B.A., Muskingum College
M.A., University of Iowa

BRAZIL, Judy  Instructor, Art
B.A., Avila College
M.A., Illinois Institute of Technology

BREITHAUP, Janet  Instructor, Weaving
B.F.A., University of Kansas
M.F.A., University of Kansas

BRUCEL, Joseph  Instructor, Communications
B.S., Rockhurst College
M.A., Kansas State College

BURLEIGH, Judith  Instructor, Mathematics
A.B., Mary Manse College
A.M., University of Toledo

BUTLER, Eugene  Instructor, Choral Music
B.A., University of Oklahoma
M.S., Union Theological Seminary
CALLAWAY, Donna    Instructor, Communications  
B.S.E., Kansas State Teachers College  
M.A., University of Kansas

CHESEBRO, Donald    Instructor, Life Sciences  
B.S., University of Missouri - Kansas City

CHESTER, Beverly    Instructor, Horsemanship

CLARK, Kenneth      Instructor, Humanities  
B.A., Kansas State University  
M.A., University of Kansas

COFFEY, Ken         Instructor, Accounting  
B.A., Colorado State College  
M.A., Colorado State College

CORDER, Mark        Instructor, Adult Basic Education  
B.S., University of Kansas  
M.S., University of Kansas

CRAWFORD, Charles   Instructor, Ceramics  
B.S., Kansas State College  
M.S., Kansas State College

CROTCHETT, Judy     Instructor, Communications  
B.A., University of Kansas  
M.A., University of Kansas

DAHLOR, Barbara     Instructor, Voice  
A.A., Kansas City Kansas Junior College

DEAN, Joseph        Instructor, Data Processing  
B.A., University of Kansas  
B.S., University of Kansas  
M.S., University of Kansas

DIECKHOFF, Jane     Instructor, Mathematics  
B.S., Kansas State Teachers College  
M.S., Kansas State Teachers College

DUNCAN, Randall     Instructor, Social Sciences  
B.A., Wichita State University  
M.A., Wichita State University

DUNKAK, Paul        Instructor, Drawing  
B.F.A., University of Kansas  
M.A., University of Missouri
ELDER, Stephanie  Instructor, Adult Basic Education
B.A., Texas Technical University
M.A., Texas Technical University

ELLIOTT, Charles  Instructor, Social Sciences
B.A., Baker University
J.D., Washburn Law School

ELLIOTT, Rebecca  Instructor, Secretarial Careers
B.S., Kansas State College, Pittsburg

ERDMAN, Bernard  Instructor, Business
B.A., University of Missouri - Kansas City
M.B.A., University of Missouri - Kansas City

EWAN, Gary  Instructor, Data Processing
B.S., Southwest Missouri

FIELDS, Martha  Instructor, Business
B.S., Purdue University
M.S., Purdue University

GASTL, Deanna  Instructor, Voice
B.M.E., Kansas State Teachers College

GIESZELMANN, Don  Instructor, Aviation

GILLILAND, John  Instructor, Chemistry
B.S., Kansas State Teachers College
M.S., Kansas State Teachers College

GLENN, Charles  Instructor, Economics & Marketing
B.S., Kansas State University
M.S., Kansas State University

GOODMAN, Phyllis  Instructor, Business
B.S., Miami University (Ohio)
M.B.A., University of Michigan

GRAHAM, Marilee  Instructor, Communications
B.A., McPherson College
M.S., University of Missouri - Kansas City

GRATTON, Kevin  Instructor, Chemistry
A.B., Rockhurst College
Ph.D., University of Kansas

GRIFFITHS, Steve  Instructor, Photography
A.A., Penn Valley Community College
GRIMSHAW, William  Instructor, Criminal Law  B.A., Kansas State University  J.D., Washburn University

HAMILTON, Caroline  Instructor, Piano  B.A., University of Arkansas  M.Mus., University of Texas

HANNA, Wayne  Instructor, Teleprocessing  B.S., Utah State University  M.A., Stevens Institute Of Technology

HARVEY, Gerald  Instructor, Accounting  B.S., University of Kansas  M.S., University of Kansas

HASSEN, Ronald  Instructor, Communications  B.A., Central Missouri State University  M.A., Central Missouri State University

HAYNES, Roberta  Instructor, Business  B.S., Oklahoma State University  M.S., Oklahoma State University

INGRAM-EISER, Sarah  Instructor, Humanities  B.A., Scripps College

IRA, Elaine  Instructor, Communications  B.A., University of Kansas  M.A., University of Missouri - Kansas City

JACOBS, Vernon  Instructor, Accounting/Personnel Mgmt.  B.B.A., Wichita State University

JAMESON, Beverly  Instructor, Data Processing  B.S., University of Kansas

JOHNSON, Elise  Instructor, Speech  B.A., University of North Dakota  M.A., San Jose State

JOHNSON, Shirlee  Instructor, Secretarial Careers  B.S., Union College

KASPAR, Richard  Instructor, Psychology  B.A., Beloit College  M.A., University of Arkansas  Ph.D., University of Arkansas

KEITH, Donald  Instructor, System Analysis  B.A., Baker University
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<tr>
<th>Name</th>
<th>Title</th>
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<td>Khoury, Georgette</td>
<td>Instructor, French</td>
<td>B.A., University of Missouri - Kansas City</td>
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<tr>
<td>Krebs, Susan</td>
<td>Instructor, Physical Development</td>
<td>B.S., University of Kansas</td>
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<td>M.S., University of Missouri</td>
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<tr>
<td>Kushner, Stanley</td>
<td>Instructor, Psychology</td>
<td>B.A., University of Missouri</td>
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<td>M.A., University of Missouri</td>
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<tr>
<td>Lauer, James</td>
<td>Instructor, Ceramics</td>
<td>B.F.A., Kansas City Art Institute</td>
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<td>Layson, Judy</td>
<td>Instructor, Adult Basic Education</td>
<td>B.A., University of Missouri</td>
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<td>Lyons, Robert</td>
<td>Instructor, Mathematics</td>
<td>B.A., University of Kansas</td>
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<td>M.A., University of Missouri - Kansas City</td>
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<tr>
<td>Meier, Linda</td>
<td>Instructor, Accounting</td>
<td>B.S., University of Missouri, Columbia</td>
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<td>Morton, William</td>
<td>Instructor, Law Enforcement</td>
<td>B.S., Central Missouri State</td>
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<td>M.S., Central Missouri State</td>
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<tr>
<td>North, Carol</td>
<td>Instructor, Communications</td>
<td>B.A., Kansas State University</td>
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<td>Patton, Maureen</td>
<td>Instructor, Psychology</td>
<td>B.A., University of Missouri</td>
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<tr>
<td>Payton, Ray</td>
<td>Instructor, Business Law</td>
<td>B.A., Kansas State Teachers College</td>
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<td>L.L.B., University of Missouri - Kansas City</td>
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<tr>
<td>Pelle, Betty</td>
<td>Instructor, Adult Basic Education</td>
<td>B.S., Schauffler College</td>
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<tr>
<td>Pierce, Preston</td>
<td>Instructor, Psychology</td>
<td>B.S., Kansas State Teachers College</td>
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<td>M.S., Kansas State Teachers College</td>
</tr>
</tbody>
</table>
RILEY, Robert  Instructor, Engineering Graphics/Drafting  B.S., University of Kansas

ROSE, Bonnie  Instructor, English as Second Language  B.A., West Virginia University  M.A., University of Kansas

SANDILOS, James  Instructor, Aviation  B.S., Temple University  M.S., Temple University

SAUVAN, Robert  Instructor, Microbiology  A.B., University of Kansas  M.A., University of Kansas  Ph.D., University of Kansas

SHERARD, H.T.  Supervising Dentist  D.D.S., University of Missouri - Kansas City

SIGMON, Marta  Instructor, Secretarial Careers  B.S., Ohio University

SLOWINSKI, Martha  Instructor, Art  B.A., Oberlin College  M.A., University of Missouri - Kansas City

SOUTHARD, Bruce  Instructor, Adult Basic Education  B.A., Southwestern College  B.D., Perkins School of Theology

SOUTHARD, Phyllis  Instructor, Basic Adult Education  B.A., Southwestern College

STAFF, Adrienne  Instructor, Communications  B.A., Pennsylvania State University  M.A., New York University

STEINLE, Gordon  Instructor, Secretarial Careers  B.S., Kansas State College  M.S., Kansas State Teachers College

STUERZL, Janice  Instructor, Child Development  B.A., Elmhurst College  M.S., University of Minnesota
SWANDER, Lynda  Instructor, Life Science  
B.S., Wittenberg University  
M.A., West Michigan University

THRELKELD, June  Instructor, Secretarial Careers  
B.S.E., University of Missouri, Columbia

THOMPSON, Joyce  Instructor, Speech  
B.A., University of Kansas  
M.A., University of Kansas

TROTMAN, Harry  Instructor, Guitar

WIEThARN, Clarence  Instructor, Political Science  
B.A., Washburn University  
M.D., Washburn University

WIGHTMAN, Laurence  Instructor, Aviation  
B.S., Kansas State College, Pittsburg

WILLIAMS, Kenneth  Instructor, Communications  
B.S., University of Missouri  
M.Ed., University of Missouri

YEHLE, Paula  Instructor, Secretarial Careers  
B.S., University of Missouri

ZIMMERMAN, Darrell  Instructor, Adult Basic Education  
B.S., Kansas State Teachers College
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