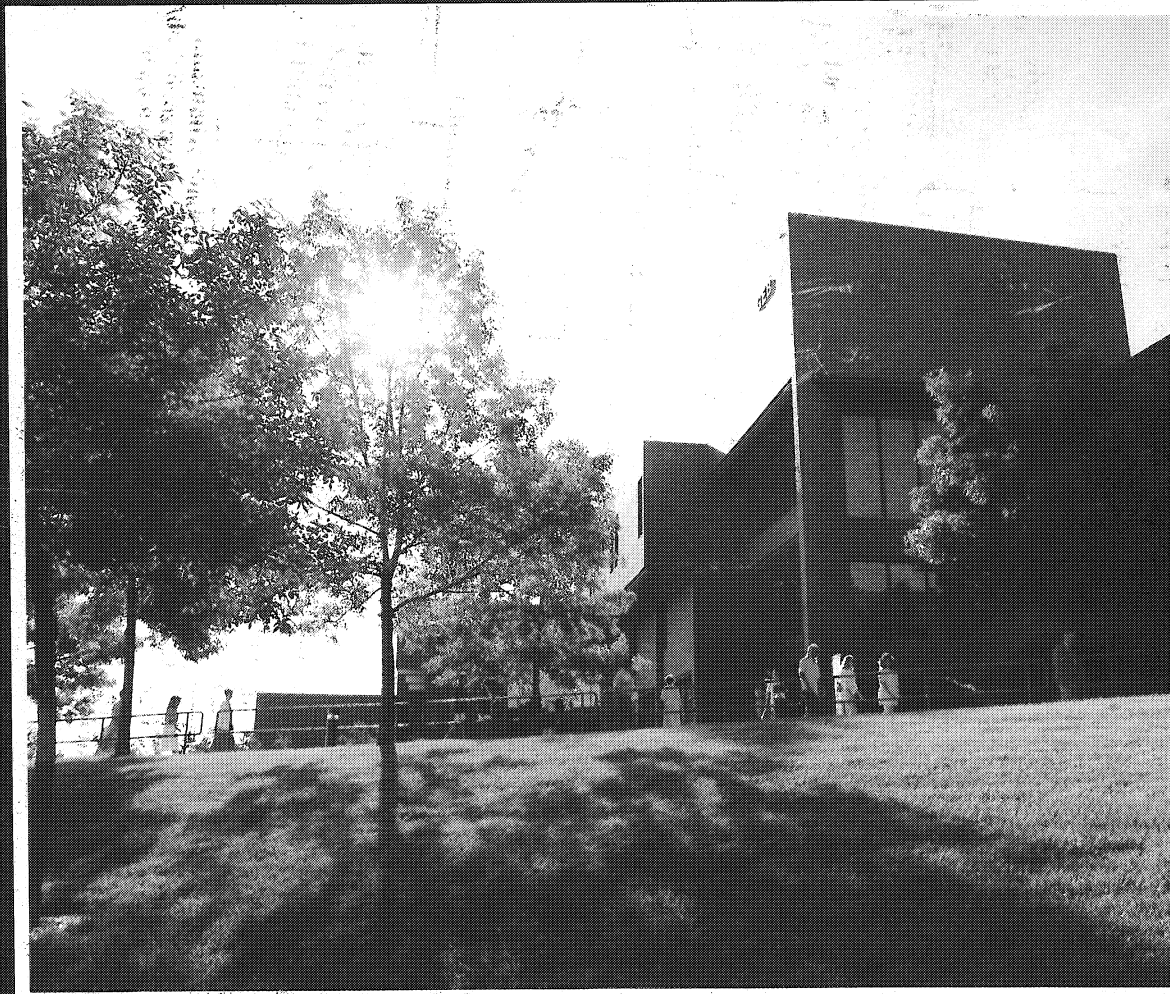


JCCC

Johnson
County
Community
College



**Catalog of Courses
and General Information**

1988-1989

Notice of Non-discrimination

Johnson County Community College is committed to a policy of non-discrimination involving equal access to education and employment opportunity to all regardless of sex, race, age, religion, color, national origin, or handicap. The administration further extends its commitment to fulfilling and implementing the Federal and State laws and regulations as specified in Title IX and Section 504 of the Rehabilitation Act. For assistance in these areas contact Dr. Glen E. Gabert, Johnson County Community College, 12345 College at Quivira, Overland Park, Kansas 66210-1299, (913) 469-8500, or The Director, Office of Civil Rights, HHS, Washington, DC 20201.

Accreditation

Johnson County Community College is officially accredited by the North Central Association of Colleges and Schools. In addition, individual programs are accredited by associated professional organizations: Dental Hygiene – American Dental Hygienists Association and American Dental Association; Nursing program – State Board of Nursing; National League for Nursing; Paralegal Program – American Bar Association; Respiratory Therapy – American Medical Association; Joint Review Committee for Respiratory Care Education; Basic Police Academy – University of Kansas and Mobile Intensive Care Technician – American Medical Association's Committee on Allied Health Education and Accreditation.

This catalog becomes effective July 1, 1988.

This catalog is for information only and does not constitute a contract. The College reserves the right to change, modify or alter without notice all fees, charges, tuition, expenses and costs of any kind and further reserves the right to add or delete without notice any course offering or information contained in the catalog.

(Blue bar is actual year)
1988-1989

JCCC

Johnson
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College

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PROFILE OF JCCC

UP CLOSE

Johnson County Community College is a comprehensive two-year community college that attracts students of all ages, from all economic and ethnic backgrounds. Ranked one of the top 10 community colleges in the nation, it is the fourth largest institution of higher education in Kansas. More than 20,000 students enroll each semester in credit and non-credit courses and events. JCCC is dedicated to the principle of life-long learning for everyone.

THE EARLY YEARS

In 1967 a pioneering attitude figured prominently in the founding of JCCC when several people identified a need over a Saturday-morning cup of coffee. Now, 20 years later, JCCC has responded to that need so well it has become the centerpiece of a dynamic economic and cultural expansion in Johnson County.

The College began as an idea, but it soon became a reality. Before today's 220-acre campus was built, JCCC held classes in several rented buildings in Merriam and northeast Johnson County. By 1972, six buildings had been completed. Since then, three buildings have been added and a new Cultural Education Center is planned to be completed in 1990. It will include a recital hall, a 1,000-seat auditorium and classroom and office space. JCCC is the center of the county – geographically, culturally and educationally.

AN EDUCATIONAL LEADER

JCCC has become an educational leader by serving traditional students, business and the community at large. It provides exceptional classroom, laboratory and athletic facilities and more than 400 different courses and 43 career programs. The area's most advanced instructional computer system and the most complete business assistance program are both offered at JCCC. Other facilities include: a library, Little Theater, gymnasium, fine arts studios, restaurant-sized kitchen, sound-proofed practice rooms and a computerized music laboratory.

A HEALTHY MIX

People from the very young to the young at heart attend JCCC. This mixture – a reflection of the community – makes JCCC an interesting place to learn. About a third of its students earn associate's degrees during the first two years after graduating from high

school. The rest usually have some college experience before enrolling at JCCC. All have something in common: they choose JCCC because it fits their career needs, lifestyle and educational goals.

Students say again and again that they like JCCC because it is close to home, because they can attend school and work, because tuition is low, because they know that courses will transfer and because of JCCC's gifted faculty. They find success at other colleges and universities when they transfer.



IN SESSION

Credit classes are scheduled in the fall and spring semesters and one summer session. Fall classes begin in late August and end in December. Spring classes resume in late January and continue through mid-May. Four-week and eight-week sessions are scheduled during June and July. Check the latest bulletins for current information, or call 469-8500.

ADMISSION

Anyone 18 years of age or older or anyone with a high school diploma or its equivalent who meets admission guidelines may enroll at JCCC for credit and continuing education courses. Special courses and programs may be offered for students under 18 years old or for those having special needs.

TUITION

JCCC's tuition costs are among the most affordable in the metropolitan area and are significantly less than those at four-year schools.

Kansas residents: \$25.50 per credit hour

Out-of-state: \$91 per credit hour

Foreign students: \$91 per credit hour

HOUSING

JCCC is a non-residential campus. However, an agreement with apartment complexes near the campus provides discount rental rates for JCCC students. The Student Activities office will provide information for students looking for suitable housing and roommates through a campus referral system.

GOVERNANCE

JCCC is governed by a six-member Board of Trustees elected at-large from the county. Current board members are: Robert Fry, Jean Hunter, Molly Baumgardner, Hugh Speer, John "Jack" Cramer and Virginia Krebs. Students, faculty and staff participate in decision-making through an extensive committee system.

FACULTY

Talk to students about JCCC faculty members. They will confirm the commitment to high-quality instruction and personal attention. Class sizes are small, averaging 30 or fewer students. Most faculty members teach 15 hours a semester. Nearly all JCCC teachers have master's degrees and extensive teaching experience – often 15 years or more. Increasing numbers earn doctoral degrees. Ask the faculty members themselves about teaching support at JCCC, and they will affirm that teaching is a No. 1 priority. Instructors spend their time teaching, and they like it that way.



THE CAMPUS

The college campus consists of nine major buildings on 220 acres of rolling prairie grasslands. Modern architecture and extensive use of red brick immediately identify the college complex. But a college is much more than bricks and mortar. Inside, students have access to state-of-the-art equipment in many disciplines. JCCC works hard to stay on the cutting edge of advancements in the workplace, which is yet another reason that employers say JCCC students are well-prepared.

The College also offers commodious social space. The College Commons building houses food services, student activities areas and other special services that enable students to become involved or to unwind from academic rigors.

THE CURRICULA

JCCC offers an array of educational options to answer many needs. Basically, they fall into the following categories:

Transfer Programs

Many students want to earn a degree before transferring to another college or university. JCCC offers three two-year degree options: the associate of arts, the associate of science and the associate of applied science.

Most courses transfer easily. In fact, JCCC has more than 100 specific transfer agreements with area colleges and universities. Transfer students can begin preparing for careers in fields such as agriculture, business, education, engineering, home economics, liberal arts, medicine and health, social science, science and math at JCCC.

Career Programs

At least a third of the students enrolled in one of the 43 career and certificate programs seek to enhance their skills so that they can advance in their jobs. Career programs can be completed within two years, and some students choose to pursue four-year degrees when they complete them. Courses of study range from accounting to radiologic technology, from hospitality management to automotive technology, from equine studies to fashion merchandising to nursing.

Lifelong Learning

For the adult learner, JCCC offers more than 400 short-term courses, seminars and workshops each year. Most of these earn no college credit, although some do carry Continuing Education Units (CEUs) for professionals who want to upgrade skills and knowledge in a particular discipline.

For adults, the GED program offers classes to help

students prepare for the GED exams. Other basic programs include classes in reading, writing and arithmetic for those who want to improve their skills, as well as in English as a Second Language for people with a limited command of English.

College Credit Options for High School Students

High school students who want to earn JCCC credit may do so. Understandably, there are some restrictions. High school counselors or JCCC's director of Admissions and Records have details on this program.

STUDENT FINANCIAL SERVICES

JCCC's Student Financial Services works to meet the financial needs of all qualified students. Many grants and loans are available, although the College offers no tuition waivers, book waivers or partial payment plans. Still, some 500 students share \$150,000 in stipends, scholarships or private grants each year. An additional \$1.3 million is available through federal grants, work-study programs and loans.

CAREER PLANNING AND OTHER SERVICES

A professional counseling staff is ready to assist in many areas. Whether the need is for information on careers or academic programs, transfer, career guidance and exploration, or for help in solving social or personal problems, a trained group of professionals is willing to help.

The Testing/Assessment Center, the Career Planning and Placement Center, The Writing Center, Academic Achievement Center, Learning Strategies Program and other service centers help students develop direction and basic skills in reading, vocabulary, writing, math and languages.

CHILD PLAY CENTER

The Child Play Center provides child care for students at a small fee, throughout the day and evening. The center cares for children 2½ to 10 years old on a first-come, first-served basis.

BUSINESS AND INDUSTRY INSTITUTE

The Business and Industry Institute offers training with short-term courses, seminars and credit classes taught at the business site so that employees can learn on the

job. It provides on-campus courses and programs designed to fit specific needs and goals, professional seminars and a range of special resources including consultants, demonstrations and training needs assessment.

SERVICES FOR THE HANDICAPPED AND HEARING IMPAIRED

Because our doors are open to everyone, JCCC makes a special effort to meet the needs of hearing impaired and handicapped students, employees and visitors. Buildings are equipped with ramps, elevators and restrooms designed to accommodate wheelchairs. Parking areas convenient to buildings are reserved for the disabled.

Services for the hearing impaired include developmental courses, a full range of support services, academic counseling and a summer preparatory program for incoming freshmen.

Disabled Student Services provides special classroom and equipment services to any student with a disability that inhibits classroom learning.

College Learning Experiences for Adults with Retardation, or CLEAR, provides non-credit classes for mentally retarded adults. The program teaches independent living skills and provides life-enhancing experiences.

ATHLETICS

JCCC supports a full slate of intramural athletic programs for students and staff. In addition, the College sponsors 12 varsity sports for men and women. Women compete in tennis, volleyball, golf, basketball, softball, track and cross-country. Men compete in baseball, tennis, basketball, golf, soccer, track and cross-country.

JCCC is a member of the National Junior College Athletic Association and the Kansas Jayhawk Conference. Students and staff may use JCCC's modern gym, weight room, tennis courts, jogging track, par course and the Lifetime Fitness and Wellness Center.

FOR MORE INFORMATION

For specific information on admission procedures, course descriptions or programs, stop by the Admissions & Records Office in 151 GEB, call (913) 469-8500 or write: Admissions & Records, JCCC, 12345 College at Quivira, Overland Park, KS 66210-1299.

MISSION OF JOHNSON COUNTY COMMUNITY COLLEGE

Johnson County Community College is a comprehensive community college committed to serving the needs of the residents of Johnson County for higher education and lifelong learning. The college seeks to provide educational leadership while responding to the identified needs of the community by providing quality educational programs that are accessible to all who can benefit from them. These educational programs and services include, but are not limited to the following:

providing credit courses and associate degree programs to prepare students to transfer to four-year colleges and universities and earn bachelor's degrees;

providing credit courses and certificate and associate degree programs to prepare students for immediate employment and retraining in career positions;

providing instructional programs containing a strong general educational component for the personal development of students;

providing non-credit courses and programs, such as conferences, seminars, lectures, workshops and other activities to meet the continuing education, professional and enrichment needs of members of the community;

providing educational and support services to business and industry in the county, including skills training, seminars, cooperative education programs, and technical and consulting services to meet commercial work force requirements and to promote the county's economic development;

providing support services, including counseling, career planning, job placement, testing, financial aid, academic advisement, basic skills development and remediation to assist students in benefiting from academic programs;

providing college credit and non-credit instructional programs and support services to meet the needs of special clientele, including mentally and physically handicapped, gifted, talented, senior citizens, non-high school graduates, high school students and college graduates;

sponsoring student activities to complement the academic program;

providing instructional programs, facilities, human resources and information services to local agencies, businesses, individuals and groups in the community;

initiating programs and activities to develop audiences for cultural activities and providing facilities and services to support community cultural activities, including the fine and performing arts;

providing educational leadership for collaborative efforts among the college, local school districts, state universities and other educational institutions to meet the educational needs of county residents; and

providing support and leadership to various local, state and national organizations to assist in the promotion and development of the community college movement.



Charles J. Carlsen

MESSAGE FROM THE PRESIDENT

Dear Friends,

As Johnson County Community College enters its 19th year, it continues to be among only a handful of schools nationwide that set the standards for the community college movement. Our faculty and staff, our facilities, our support from the community and our commitment to serve students are unsurpassed by any community college I know of.

We are especially fortunate to enjoy extraordinary community support. We take our mission to serve the entire community seriously, and hope our efforts in lifelong learning and economic development continue to attract record numbers of students.

We also intend to play an increasingly prominent role in the county's cultural development. Long-neglected programs in the arts should begin to blossom on the JCCC campus in 1990 with the opening of the new Cultural Education Center, the county's first truly comprehensive performing arts center. The CEC should be open in the spring of 1990 in time to help us culminate the celebration of our 20th anniversary.

Other exciting building projects have been completed recently or are in the planning stages. In January of

1988 we opened the new Industrial Technical Center, home of the national technical training program for Burlington Northern Railroad, the nation's largest railroad. More than 2,000 BN employees annually will receive training at the ITC. The ITC also has provided badly needed classroom and office space to help us meet our growing enrollments.

Other buildings planned for the campus include the central county library, which may be constructed beginning in 1990 on 14 acres we donated to the county library board. We also are considering building more parking structures, a new child play center, a renovation of the College Commons, and additional recreational facilities.

These changes to the face of the campus are important, because they will enable us to meet the challenge of serving a growing student population with an increasingly complex set of programs and services. But our primary commitment continues to be to teaching, especially in developing innovative approaches to traditional subjects such as English, mathematics, history and the social sciences.

This year the Burlington Northern Foundation honored 18 of our faculty members for their outstanding efforts in the classroom. Three received cash awards of \$1,500. Each of these faculty members undertook exceptional classroom efforts to make sure his or her students could excel. Their performance and results were outstanding. They and their many colleagues continue to be responsible for the acclaim JCCC receives from its peer institutions.

Managing a progressive educational institution like Johnson County Community College is both a pleasure and a tremendous challenge. I hope you — our students and constituents — continue to find the programs and services we offer as useful and stimulating as you have thus far. You are the reason we exist, and we bear this constantly in mind.

Sincerely,

Charles J. Carlsen, President

BOARD OF TRUSTEES



Molly Baumgardner



John "Jack" Cramer



Dr. Robert Fry



Jean Hunter



Virginia Krebs



Dr. Hugh Speer

ACADEMIC CALENDAR

Please check your class schedule each semester as dates listed are subject to change.



Summer Session 1988

- June 6 Eight-week summer session and first four-week session classes begin.
- June 30 First four-week session ends.
- July 4 Independence Day holiday. Classes not in session. College offices closed.
- July 5 Second four-week session begins.
- July 28 Eight-week summer session and second four-week session end.

Fall Semester 1988

- Aug. 18 Fall semester begins. First day of credit classes.
- Sept. 5 Labor Day. Classes not in session. College offices closed.
- Nov. 1 Application to Graduate in December deadline.
- Nov. 24-25 Thanksgiving holiday. Credit classes not in session. College offices closed.
- Dec. 12 Last day to withdraw from 16-week class and receive a "W"
- Dec. 13-16 Final Exams.
- Dec. 19 Last day of fall semester classes.
- Dec. 23-Jan. 2 Christmas and New Year's holiday. College offices closed.

Note: Saturday credit classes begin August 20 and end December 10. Saturday classes will not meet on November 26.

Spring Semester 1989

- Jan. 16 Spring Semester begins. First day of credit classes.
- Feb. 20 President's Day holiday. Classes not in session. College offices closed.
- Mar. 20-25 Spring break. Credit classes not in session. College offices open.
- April 3 Application to Graduate in May deadline.
- May 15 Last day to withdraw from a 16-week class and receive a "W"
- May 16-19 Final exams.
- May 19 Commencement.
- May 22 Last day of spring semester.
- May 29 Memorial Day. Classes not in session. College offices closed.

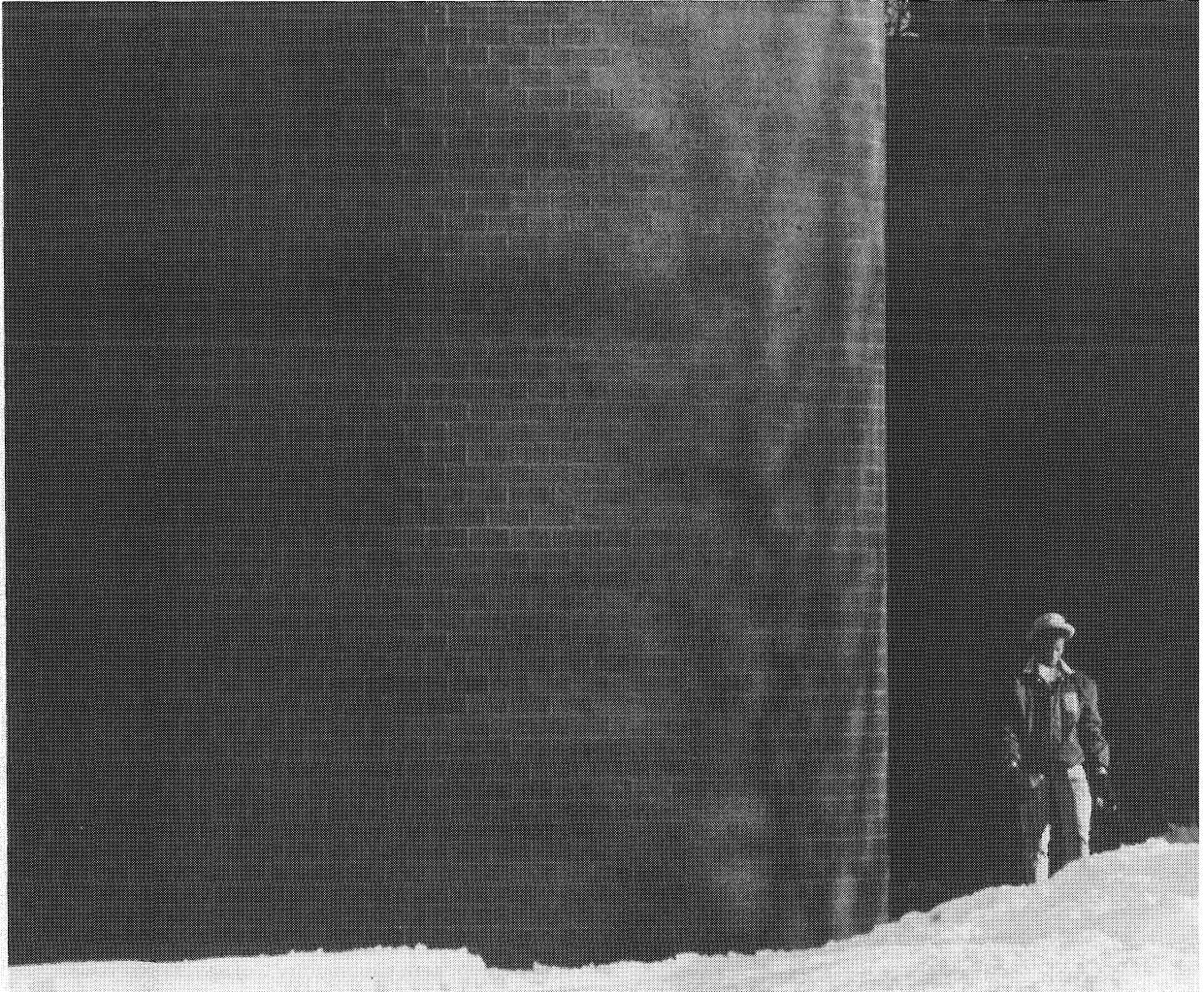
Note: Saturday credit classes begin on January 21 and end on May 13. Saturday credit classes will not meet on March 25.

Summer Session 1989

- June 5 Eight-week summer session and first four-week session classes begin.
- June 29 First four-week session ends.
- July 3 Second four-week session begins.
- July 4 Independence Day holiday. Classes not in session. College offices closed.
- July 17 Application to Graduate in July deadline.
- July 27 Eight-week summer session and second four-week session end.



ADMISSIONS



Admissions Policy
Admission Procedures - Credit
New Students
Former Students
Affiliate Programs
International Students
High School Students

Brown and Gold
Special Students
Admission Procedures - Non-credit
Programs with Selective Admissions
Nursing
Articulation by Licensed
Practical Nurses

Dental Hygiene
Mobile Intensive C
Technician
Paralegal Program
Accelerated Cert
Program
Respiratory Therap

ADMISSIONS POLICY

Any person seeking admission to Johnson County Community College must meet one of the following requirements: be a high school graduate; passed the GED exam; or reached the age of 18 and demonstrated the ability to benefit through the JCCC student assessment process.

Individuals may be admitted with special student status as defined below:

- a) Persons under 18 years old who have not received a high school diploma; students who are currently enrolled in high school and have completed at least 15 units of credits; or students who are enrolled in a gifted program may obtain special student status and be admitted to JCCC with written authorization from their high school.
- b) Persons 18 or older who do not have a high school diploma or GED certificate, have not completed the student assessment process and are not degree seeking may be admitted with special student status.

Priority for admission will be considered in the following order: Johnson County residents, other Kansas residents, out-of-state students and foreign students.

The College reserves the right to deny admission or readmission to any individual considered detrimental to the best interest of the College community and when the College is unable to provide the services, courses or program needed to assist a student to meet his or her educational objectives.

ADMISSION PROCEDURES – CREDIT

New Students

To apply for admission at JCCC for the first time, follow these steps:

1. Complete an application form and return it to the Admissions & Records Office. Application forms are available in the Admissions & Records Office.
2. Provide official high school transcripts. Students are responsible for contacting their high schools and requesting to have a transcript sent directly to the JCCC Admissions & Records Office. People who have been out of high school for five years or more or who have earned 15 or more college credits need not submit their transcripts.
3. Provide official college transcripts. Individuals transferring to JCCC from another college must have the previous institutions mail transcripts directly to the JCCC Admissions & Records Office. An

individual's transcript records at JCCC will be withheld and future enrollment will be denied if transcripts are not submitted. Individuals who hold a bachelor's degree or higher and are not seeking a degree at JCCC are not required to submit college transcripts.

4. Determine residency. Kansas law requires individuals to live in the state six months prior to the first day of the semester or session. The six-month requirement may be waived for students who live in Kansas and were transferred or recruited by a Kansas company as a full-time employee to work in the state. Non-residents at JCCC must pay out-of-state tuition and fees. Address changes that will result in a change to Kansas residency will require validation through a residency appeal. See the director of Admissions & Records for details.
5. Provide the American College Testing (ACT) scores. Students are encouraged – but not required – to submit ACT scores unless entering the Nursing or Dental Hygiene career programs. ACT scores must be submitted by Feb. 1 for Nursing and Dental Hygiene students. If planning to submit scores, take the ACT test as early as possible and request that scores be sent to JCCC.

Former Students

Students who have previously attended JCCC and were not enrolled in the previous semester must refile an application for admission with the admissions office. Official transcripts of all college credits earned since last attending JCCC must be provided.

Affiliate Programs (Cooperative Programs)

Johnson County Community College and the Metropolitan Community College District have developed cooperative agreements to allow students to enroll in selected career programs at resident tuition and fee rates. JCCC students planning to enroll in any of the following programs must talk with a JCCC counselor prior to seeking admission to any of the following programs: Animal Health Technology, Aviation Maintenance Technology, Medical Records Technology, Occupational Therapy Assistant, Physical Therapy Assistant and Radiologic Technology.

International Students

International students are students who are not U.S. citizens as categorized below:

- a) Resident Aliens – international students who have been granted permanent resident status by Immigration and Naturalization Services.

- b) Foreign Students – international students who are applying for an I-20 from JCCC to obtain a Student “F” Visa.
- c) Visiting Students – international students who currently hold a valid visa.

Resident Aliens

Resident aliens must meet all College admission policies in addition to the following criteria:

1. Provide “green card” or other official document issued by the U.S. Department of Immigration and Naturalization Services that shows the Resident Alien Registration Number.
2. Submit OFFICIAL transcripts from all U.S. secondary and postsecondary educational institutions attended. Transcripts must be sent to the JCCC Admissions & Records Office directly from the issuing institution. Hand-carried transcripts are not acceptable. NOTE: People who have been out of high school five or more years need not submit their high school transcript.
3. Complete the JCCC assessment process:
 - a) Complete JCCC assessment tests **during times specified for international students.**
 - b) Discuss course selection, based on assessment results, with a JCCC counselor. Have the Assessment and Advisement Verification form (received in the Testing/Assessment Center) signed by the counselor. Course selection may be restricted due to JCCC assessment test results.
 - c) Submit the signed Assessment and Advisement Verification form to the Admissions & Records Office. Students will not be allowed to enroll in classes until this form is on file.

If evaluation of foreign credits is desired, submit transcripts from all foreign postsecondary institutions to World Education Services in New York. NOTE: This is **not** required for admission to JCCC. Applications for World Education Services are available from the Admissions & Records Office. There is a fee for their services.

Foreign Students

Foreign students who are applying for an I-20 from JCCC to obtain a student “F” Visa must meet all College admission policies in addition to the following criteria:

1. Complete a Foreign Student Application Packet. The packets are available from the Admissions & Records Office.
2. Submit the completed application packet and all requested supporting documents, including but not

limited to, a valid TOEFL score and verification of ability to pay tuition, fees and other supporting costs to the director of Admissions & Records. Specific information concerning application deadlines and other admission requirements is provided in the packet.

If a student is accepted for admission, the JCCC assessment process as described under “Resident Aliens” must be completed prior to enrollment in classes. Course selection may be restricted due to JCCC assessment test results.

Foreign students who have completed one or more semesters at another U.S. postsecondary institution and are transferring to JCCC may be eligible to apply for institutional-based financial aid. Other foreign students will not be eligible to apply for institutional-based financial aid from the College until they have satisfactorily completed one semester of credit courses at JCCC.

Visiting Students

Visiting students must meet all College admission policies in addition to the following criteria:

1. Present current passport and visa to the director of Admissions & Records. The visa must be valid through the end of the semester in which the student wishes to enroll.
2. Complete the JCCC assessment process as described under “Resident Aliens.” Course selection may be restricted due to JCCC assessment test results.

Students who hold a valid student visa must present a letter from the U.S. institution that issued the I-20 verifying current enrollment and good standing at that institution.

Visiting students will be assessed tuition at the same rate as foreign students.

Visiting students will not be eligible to apply for institution-based financial aid from the College until they have satisfactorily completed one semester of credit courses at JCCC.

College Credit Class Options for High School Students

High school students may enroll in college credit classes by selecting one or both of the following options:

- A. College Now – for high school students enrolled in honors classes for which college credit equivalency has been established. Instruction is provided on the high school campuses. High school transcripts are **not** required at the time of enrollment. However, approval from a high school principal or counselor

is necessary. A schedule of College Now classes will be available early each semester at participating high schools.

- B. Quick Step – for high school students who have earned at least 15 units. Instruction is provided by JCCC faculty on the college campus. Students must provide high school transcripts at the time of enrollment and get approval from their principal or counselor to take college classes. A complete list of classes may be found each semester in JCCC's Credit Class Schedule.

For more information about these college credit class options, students should see their high school counselor or call JCCC's Admissions & Records Office.



Brown and Gold Club

People who have lived in Johnson County for six months prior to enrollment and are 60 years of age or older are eligible for membership in the Brown and Gold Club.

Registration for members is tuition-free in most credit and community education courses on a space-available basis, although Brown and Gold Club members may be charged the full or reduced rates for some courses and special events. Most classes and activities have a required minimum paid enrollment that must be met before Brown and Gold Club members are enrolled. There may be charges for textbooks, course materials, food service and transportation. Some credit classes may have fees in addition to tuition.

Special Students

People 18 or older who do not have a high school diploma or GED certificate and have not completed the student assessment process are admitted as special students. Individuals in this category are considered non-degree seeking students. The admission status may be changed to that of a degree-seeking student by completing the student assessment process, talking with a counselor and submitting a signed advisement form to the Admissions & Records Office. For additional information contact the director of Admissions & Records.

ADMISSION PROCEDURES — NON-CREDIT

Admission to non-credit classes is usually open to any person 18 years of age or older. Any exception to this age restriction will be stipulated in college publications.

PROGRAMS WITH SELECTIVE ADMISSIONS

Nursing

The College selects a maximum of 55 people for admission to the Nursing Program each year. New students entering the program will begin their clinical courses only during the fall semester. Applications for admission to the program must be submitted to the Admissions & Records Office on or before Feb. 1 of each year for consideration for the following fall. All applicants must submit a high school transcript, all transcripts of previous college credit and results of the American College Test (ACT) by Feb. 1 in order to be guaranteed consideration. All applicants who meet the minimum academic standards will be scheduled for a personal interview and/or assessment testing.

Before May 15, final selection will be made based on the ranking of applicants with the interview results, the academic criteria and residency status contributing to the process. Non-residents of Johnson County will not be admitted to the program until all Johnson County residents have been considered. Those applicants ranking high enough for acceptance will be given 10 days to accept or deny their positions. All applicants who accept their positions in the program will be required to pay a \$125 tuition deposit. Deposits will be refunded if a student notifies the Admissions & Records Office in writing of his or her intention not to accept this position in the class on or before June 1. No refunds will be made after June 1.

After May 15, all remaining qualified applicants will be re-ranked for admission to the program without regard

to residency. Students accepting a position in the program after June 1 will be required to submit a non-refundable \$125 tuition deposit.

Articulation by Licensed Practical Nurses

The College will provide the mechanism for articulation by Licensed Practical Nurses into the Associate Degree Program. Advanced standing credit may be granted to qualified applicants based on successful completion of challenge examinations for first-year nursing courses. The challenge process includes assessment of both theoretical and clinical performance. Applications for admission to the program must be submitted to the Admissions & Records Office on or before Jan. 15 of each year to be guaranteed consideration for the following fall. Applicants must have successfully completed all required supportive courses defined in the first year of the nursing curriculum.

students. Applicants for admission are ranked using academic criteria, interview results and challenge test scores. Final selection is made as soon as possible after completion of the challenge exams and is limited to the spaces available in the second-year nursing class (maximum of 55 students). Satisfactory completion of the LPN-RN transition course (NURS 123) is required before enrollment in the second year of the program. NURS 123 is offered during the summer session.

Dental Hygiene

The College selects a maximum of 24 individuals for admission to the Dental Hygiene Program each year. New students entering the program will begin their clinical courses only during the fall semester. Final acceptance is contingent on completing the prerequisite courses (minimum 2.0 G.P.A.) prior to fall enrollment. Applications for admission must be submitted on or before Feb. 1 of each year to be guaranteed consideration for admission for the following fall. By Feb. 1 all applicants must submit a high school transcript or the equivalent, official college transcripts, results of the American College Test (ACT) and other documents as specified in the application packet. Each applicant will also be required to submit residency verification. All applicants who meet the minimum academic standards will be scheduled for personal interviews.

Final selection will be made before May 15 based on the ranking of applicants, with the interview results, the academic criteria and residency status contributing to the ranking process. All Johnson County residents will have 10 bonus points applied to their final ranking. County residency must be established six (6) months prior to the date the application is filed in the admissions office. State residency is also established at this

time. Bonus points will not be granted to non-residents. Applicants ranking high enough for acceptance will be given five days to accept or deny their positions. All applicants who accept their positions in the program will be required to pay a \$125 tuition deposit. The deposit will be refunded if a student notifies the Admissions & Records Office in writing of his or her intention not to accept this position in the class on or before June 1. No refunds will be made after June 1.

After May 15, all remaining qualified applicants will be re-ranked for admission to the program, without regard to residency. Students accepting a position in the program after June 1 will be required to submit a non-refundable \$125 tuition deposit.

MICT

(Mobile Intensive Care Technician)

The College selects a maximum of 20 individuals for admission to the Mobile Intensive Care Technician Program each year. New students entering the program will begin their course of study during the spring semester. Applications must be submitted on or before Oct. 15 for admission consideration for the following spring. All applicants must submit: a high school transcript or the equivalent, prior college transcripts, completed health forms, completed service-related forms, photocopy of current driver's license, and evidence of completion or current enrollment in both an EMS course and completion of an Anatomy / Physiology class. Each applicant also will be required to submit residency verification. All applicants who meet the minimum academic standards will be scheduled for interviews.

Final selection will be based on the ranking of applicants with interview results, academic criteria and residency status contributing to the ranking process. Johnson County residents are given priority in admission.

Paralegal Program – Accelerated Certificate Program

The College selects a maximum of 15 individuals for admission to the Paralegal Program – Accelerated Certificate each summer. New students entering this program will begin their studies only during the summer semester. Applications for admission must be submitted **on or before** April 10 of each year. By April 10, all applicants must submit an official copy of transcripts of **all** prior college work. All applicants who successfully meet the academic criteria will qualify for a combined interview(s) and/or testing process.

Final selection will be based on a ranking of the ap-

plicants, with interview and/or testing process and academic criteria contributing to the ranking process.

Applicants ranking high enough for acceptance will be given 10 days to accept or deny their positions. All applicants who accept their positions in the program will be required to pay a \$125 tuition deposit. The deposit will be refunded if the student notifies the Admissions & Records Office in writing of his or her intention not to accept this position in the class on or before May 15. No refund will be made after May 15.

After May 15, students accepting a position in the program will be required to submit a non-refundable \$125 tuition deposit.

Respiratory Therapy

The College selects a maximum of 20 individuals for admission to the Respiratory Therapy Program each year. All students seeking admission must meet admission requirements on or before Feb. 15 for admission consideration to the clinical courses beginning the following summer. All applicants must submit an application for admission, high school transcript or the results of the GED, official college transcripts, results of the American College Test (ACT) and two letters of reference. All applicants should have a minimum overall college G.P.A. of 2.0 and a minimum grade of "C" in all science and math prerequisites. All applicants who meet the minimum academic standards and have submitted the required admission materials will be scheduled for a personal interview. The applicant will be requested to bring an outline or description of his or her knowledge of respiratory therapy to the interview.

Final selection will be made before May 15, based on the ranking of applicants, with the interview results, academic criteria and residency status contributing to the process. Non-residents of Johnson County will not be admitted to the program until all Johnson County residents have been considered. Those applicants ranking high enough for acceptance, will be given 10 days to accept or deny their positions. All applicants who accept their positions in the program will be required to pay a \$125 tuition deposit. The deposit will be refunded if a student notifies the Admissions & Records Office in writing of his or her intention not to accept this position in the program on or before June 1. No refunds will be made after June 1.

REGISTRATION, TUITION AND FEES



Registration Procedures
Counseling
Assessment
Scheduling Classes
Student Course Load

Early Telephone Registration
On-Campus Registration
Late Registration
Registration for Audit Classes
KCRCHE

**Adding and Dropping
a Class**
Tuition and Fees
Refunds
Textbook Costs

REGISTRATION PROCEDURES

Counseling

Students must meet with their JCCC counselor to develop an educational plan. Degree-seeking students must have an educational plan on file in the Counseling Center before they complete 30 hours of credit at the College. Counselors will inform students about course prerequisites, the transferability of courses and the sequence in which they should be taken. When questions have been answered and the educational plan developed, students are then ready to register. The exact time and day to register will be listed in the schedule of credit classes available each semester at the Admissions & Records Office. This schedule also details the registration procedures. Tuition and fees must be paid at the time of registration. Students with past-due obligations to the College may not register for classes until such obligations are resolved to the satisfaction of the College.

The College reserves the right to deny registration to any individual considered detrimental to the best interests of the College community and when the College is unable to provide the services, courses or programs needed to assist a student to meet his or her educational objectives.

Assessment

As a part of JCCC's continuing philosophy of assisting students in successfully achieving their academic goals, all students who enroll in credit classes will be required to participate in the assessment process except as listed below:

- Students who have earned a two-year or higher degree from an accredited postsecondary institution.
- Students who plan to enroll in courses offered through contract arrangements between JCCC and an outside agency.
- Students who plan to enroll in courses offered through the JCCC Business and Industry Institute.
- Students who plan to enroll in courses that have been specially designed for specific populations. (These specific courses will be designated by the division director and the dean of Instruction.)

In the following instances, participation in all or part of the assessment process may be required as indicated.

- Students who have satisfactorily completed a college-level composition course with a minimum grade of "C" are not required to take the English or reading sections of the assessment test.

- Students who have satisfactorily completed the first college-level mathematics course required in their JCCC degree program with a minimum grade of "C" are not required to take the math section of the assessment test.
- Students who indicate their educational objective as "personal interest or self-improvement" on the JCCC application for admission may enroll in any credit course except mathematics, English or reading without participating in the assessment process.

Scheduling Classes

Students at JCCC are responsible for scheduling their classes. Counselors are available to assist in the process. The College reserves the right to cancel, combine or change the time, day or location of any class without obligation. The College also reserves the right to change the instructor and/or instructional methodology without obligation. Schedule changes will be available at registration. It is the student's responsibility to be aware of all schedule changes.

Student Course Load

A student wishing to enroll for more than 18 semester hours of credit in a fall or spring semester or more than nine hours of credit in an eight-week summer session must receive written permission from a counselor. In a fall or spring semester, students enrolling in 12 credit hours or more are considered full-time; those enrolling in six to 11 credit hours are part-time. In the summer session, students enrolling in 6 credit hours or more are considered full-time students; those enrolling in less than six credit hours are part-time students.

Early Telephone Registration

Early telephone registration is open to students who have submitted admission applications or who are currently enrolled. During early registration, students may register over the telephone at times specified in the credit class schedule. Applications for admission must be submitted to the Admissions & Records Office at least two days prior to registration.

On-Campus Registration

On-campus registration is held one week before the beginning of the semester. Specific dates, times and location are listed each semester in the credit class schedule.

Late Registration

Students may register for classes during the first week of the semester. There is a \$10 fee charged for late registration. Check the credit class schedule for the specific dates.

Registration for Audit Classes

A student may enroll to audit a credit class. No credit will be received for the course, but a grade of X will be recorded on the permanent transcript. Students may not enroll as a credit student and later change to audit status. Enrollment to audit classes will require division director approval and can be done only during specific time periods;

16-week term - 2nd week of term

eight-week term - 3rd, 4th, 5th day of term

four-week term - 2nd, 3rd day of term

two-week term - 2nd day of term

Regular tuition and fees will be charged for the course and refunds will be authorized only by the dean of Student Services. Students will not be allowed to change the audit status to regular credit status at any time.

KCRCHE

Through its affiliation with the Kansas City Regional Council for Higher Education, Johnson County Community College is able to offer its students access to selected courses and programs at KRCRCHE colleges and universities.

Johnson County Community College full-time students can take one course a semester at any one of these colleges at the JCCC tuition rate.

This program provides a rich resource especially if students are interested in developing a creative academic program. For more information contact the Admissions & Records Office.

ADDING AND DROPPING A CLASS

Adding a Credit Class

Students may add a credit class through the first week of classes during a regular semester, the first four days of classes during an eight-week summer session, the first two days of a four-week mini session and the first day of a course shorter than four weeks.

Adding a Non-credit Class

A student may add a non-credit class any time during the semester.

Dropping a Credit Class

16-Week Term: A student may drop a class up to one week before the last day of the semester for a regular 16-week term.

Eight-Week Term: A student may drop a class up to three days before the last day of an eight-week term.

Four-Week Term: A student may drop a class up to two days before the last day of a four-week term.

Terms Less Than Four Weeks: A student may drop a class up to one day before the last day of the term.

A "W" grade is recorded on the student's permanent record if the drop occurs after one quarter of the term has passed.

Note: Students whose records are on "hold" status will not be allowed to drop a class.

Exceptions to these policies may be authorized by the dean of Student Services. All appeals must be made in writing.

Adding and Dropping Credit Classes – Effect on Tuition and Fees

Courses dropped and added simultaneously that have the same number of credit hours will be treated as an even exchange of tuition and fees during the refund period of each semester or term. Courses dropped and added simultaneously with different total credit hours will be processed as a drop at the appropriate refund percentage and added at the total tuition and fees cost. Students dropping a class on one day and adding a class on another will be required to pay for the class added.

After the expiration of the refund period, only changes in sections of the same course will be treated as an even exchange for tuition purposes. Course level changes as recommended by the division director after the refund period will be treated as even exchanges if the credit hours are the same. If a student drops a course and adds a different course after the expiration of the normal refund period, the student will be required to pay the additional tuition. If the dropped class falls within the withdrawal period of each term, the student will be given a "W" for the course.

Dropping a Non-credit Class

Because non-credit classes begin at different times throughout the semester, non-credit classes may be dropped according to procedures outlined in the Community Education Non-credit Bulletin.

TUITION AND FEES

Credit Class Tuition

Kansas Residents:

Tuition	\$22.00 per semester credit hour
Commons Fee	\$1.50 per semester credit hour
Student Activity fee . . .	\$2.00 per semester credit hour

TOTAL PER CREDIT HOUR \$25.50

Out-of-State, Foreign and Visiting International Students:

Tuition	\$87.50 per semester credit hour
Commons Fee	\$1.50 per semester credit hour
Student Activity fee . . .	\$2.00 per semester credit hour

TOTAL PER CREDIT HOUR \$91.00

The JCCC Board of Trustees has the right to change tuition and fees without notice.

Some courses may require fees in addition to tuition. These fees are listed in the class schedule each semester.

All tuition and fees must be paid at enrollment.

Students will not graduate or have a transcript issued until all tuition, fees and past-due obligations are paid.

Non-credit Class Tuition

Course fees for non-credit classes are determined on an individual course basis. Check the Community Education Non-credit Bulletin for specific course fees.

REFUNDS

Credit Class Refunds

A full refund of tuition and fees will be issued if JCCC exercises its right to cancel a class. Students who withdraw from classes may receive a partial refund. Apply for a refund by completing a drop form in the Admissions & Records Office. Students who have completed registration and desire to withdraw from a class or classes in which they are enrolled will receive the following refund:

- 100 percent of tuition and fees refunded if withdrawal is processed by the Admissions & Records Office before – but not on – the first day of the semester, term or session;
- 80 percent of tuition and fees refunded if withdrawal is processed by the Admissions & Records Office
 - within two weeks after the beginning of classes for fall and spring semester;
 - four calendar days after the beginning of classes for an eight-week term;
 - two calendar days after the beginning of classes for a four-week session;

– one calendar day after the beginning of classes for a two-week mini-session, a short course or a seminar.

- No refund will be authorized for withdrawals or changes of registration made after the calendar days as specified. The only exceptions are if the class is canceled by the College or a revision of the class schedule is necessary, in which case a 100 percent refund of tuition and fees will be issued. Refunds are calculated based on the day the student officially drops a class in the Admissions & Records Office and not when the student stops attending class. Exceptions to this policy may be authorized by the dean of Student Services. All appeals must be made in writing; however, appeals may not be considered after half of a course has been completed.

Non-credit Class Refunds

A full refund will be made for non-credit classes if the College exercises its right to cancel a class, if a class is full at the time the registration is received or if the Admissions & Records Office receives a written request from the student before the second class meeting begins. There is no refund of fees paid for classes or activities that meet for less than one week in duration. There will be no refunds for sports clinics or individualized riding instruction.

Exceptions to this policy may be authorized by the dean of Student Services. All appeals must be in writing.

TEXTBOOK COSTS

Full-time students can expect to pay from \$200 to \$250 a semester for textbooks. Textbooks may be purchased in the JCCC Bookstore, located in the COM building.

Procedures for refunds for textbooks and buy-back for textbooks are listed each semester in the credit and non-credit schedule of classes.

STUDENT FINANCIAL SERVICES



Application Procedures
Types of Financial Assistance
Need-based Assistance
Other Financial Assistance
Satisfactory Academic Progress

STUDENT FINANCIAL SERVICES

JCCC makes available grants, scholarships and loans to both full-time and half-time students. Some part-time employment opportunities are also available to students.

Most financial assistance is awarded to students who can demonstrate financial need. Each individual's financial need is based on the amount of money the parent(s) and/or the student is expected to contribute to educational costs. The JCCC Student Financial Services Office assesses the financial needs of each student through a fair and objective analysis called the Family Financial Statement provided by the American College Testing Program (ACT).

TO APPLY FOR FINANCIAL ASSISTANCE

Complete an application for admission to JCCC. If applying for federal aid or other need-based assistance, the student must submit a completed **Family Financial Statement (FFS)** with the required fee to ACT. If applying for aid not based on need, the student need only submit the **Kansas Student Data Form (KSDF)** to the JCCC Student Financial Services Office.

The FFS and KSDF are available from the JCCC Student Financial Services Office. Signed copies of tax forms may be requested to verify information if the application is selected for verification by the federal government.

The JCCC Student Financial Services Office will make every effort to meet the financial needs of each qualified student based on eligibility criteria and the availability of national, state, local and institutional funds.

Students should submit financial aid applications by **April 1** for the fall and spring semesters. Applications received after those dates will be considered as funds remain available.

A written **Offer of Financial Assistance** will be sent to the applicant as soon as all requested/required forms and verification documents have been received, reviewed, and eligibility determined.

Financial aid will be used to pay tuition and fees; a book waiver may be requested. **Financial Aid funds will NOT be disbursed directly to students before the fifth week of classes**, with the exception of GSL, Supplemental and PLUS Loans, which are disbursed on the first day of classes (if available).

There are no tuition waivers or partial payment plans at JCCC. If the financial aid award is not enough to pay the entire enrollment expenses, the student must pay the balance no later than the published due date.

If the written Offer of Financial Assistance has not been received by the student, signed and returned to the Student Financial Services Office, the student will be responsible for payment of tuition and fees. Financial assistance may still be awarded after tuition has been paid. In this instance the award will also be applied to tuition and fee expenses, and the student will receive a tuition refund from the JCCC Business Office.



TYPES OF FINANCIAL ASSISTANCE

Several types of financial assistance are available to students enrolled in a minimum of six credit hours.

Need-Based Assistance

- **Pell Grants** are funded by the Federal Government. If eligible, the student may receive up to \$2,100 an academic year at JCCC. The grant can apply toward any education-related expenses.
- **The Supplemental Educational Opportunity Grant (SEOG)** is a government grant that ranges from \$100-\$4,000 an academic year and can be applied toward any education-related expense.
- **Need-Based Board of Trustees Grants (BOT)** are financial awards made to JCCC students who have a 3.0 GPA and demonstrate need, and will pay tuition and fees up to 15 credit hours. Only Johnson County residents are eligible. Funds are limited and competitive.

- **Foundation Grants (need-based)** are restricted to students who have completed the ACT FFS application. Each grant has unique qualifications and is administered by the JCCC Foundation. For a list of these grants and their qualifications, contact the Student Financial Services Office.
- **The Kansas State Scholarship** is limited to students designated as Kansas High School Scholars who have financial need as defined by the State of Kansas. The student must apply by completing the ACT Family Financial Statement, and sending this information directly to the State of Kansas by designating Code 1433 in addition to the JCCC school code.
- **Vocational Rehabilitation** supports student's educational costs through the student's area vocation rehabilitation office. Students should contact that office to determine their eligibility. Furthermore, eligibility for the Pell Grant must be determined before vocational rehabilitation can be awarded.
- **The Bureau of Indian Affairs** offers grants to American Indian students. In part, eligibility requirements include demonstrated financial need and satisfactory academic progress. Additional information and application materials are available through the area agency office holding records of tribal membership.
- **The Perkins Loan** (formerly known as National Direct Student Loan) a 5 percent federal government loan, is processed through JCCC. The loan ranges from \$200-\$2,250 a year. A cumulative maximum of \$4,500 may be borrowed while a student is enrolled at JCCC. The loan is interest-free while the student is enrolled in at least six credit hours. First time applicants begin repayment nine months after leaving school, renewal applicants begin repayment six months after leaving school.
- **Guaranteed Student Loan (GSL)** funds are provided by a participating bank, savings and loan, or credit union of the student's choice. Eligibility for this 8 percent loan is determined by the JCCC Student Financial Services Office. A JCCC student may borrow up to \$2,625 a year (if eligible). The GSL is interest-free while the student is enrolled in at least six credit hours. Six months after leaving school, the student must begin repaying the loan. The loan is subject to lender and guarantee fees which are deducted from the loan proceeds.

- **College Work Study Program** is a federally funded program in which students work part-time on campus. The pay will vary according to the job position. Paychecks are issued twice a month.

Other Financial Assistance

- **The Presidential Scholarship** is awarded for tuition and activity fees up to 15 credit hours to students who have graduated from a Johnson County high school the previous year and were National Merit finalists or semifinalists.
- **Academic Board of Trustees Grants (BOT)** are financial awards made to JCCC students who have a 3.5 cumulative GPA, and will pay tuition and fees up to 15 credit hours. Only Johnson County residents are eligible. Funds are limited and competitive.
- **Talent Board of Trustees Grants (BOT)** require a faculty recommendation and a 2.0 cumulative GPA, and will pay tuition and fees up to 15 credit hours. Only Johnson County residents are eligible. Funds are limited and competitive.
- **JCCC Athletic Grants** will pay for tuition and books only. Eligibility for athletic grants is based on academic standards established by the National Junior College Athletic Association (NJCAA). Awards are made upon the recommendation of the physical development department. Eligible applicants must enroll in a minimum of 12 credit hours each semester. Furthermore, eligible candidates must complete 24 credit hours with a 1.75 minimum cumulative GPA after completion of first academic year.
- **Brown and Gold Club** offers free membership to all Johnson County residents 60 years of age and older. Credit courses are offered free to Brown and Gold members. Course fees must be paid by the student.
- **Note-taker Stipends** are available for students who wish to take notes for hearing-impaired students in their classes. This stipend will reimburse the student for the tuition and activity fee for the class at the end of the semester. Contact Special Services.

- **The Vocational Education Scholarship** provided by the State of Kansas will award \$500 a year up to two years for Kansas residents enrolled in a vocational program. The award is made to those students with the highest DAT test scores. The DAT test is administered at JCCC the first Saturday in November and March.
- **The Congressional Teachers Scholarship** provided by the State of Kansas will award \$5,000 a year to Kansas residents who are in preschool, elementary and secondary educational programs. Eligible candidates must have graduated in the upper 10 percent of their class and have the highest ACT scores. Application deadline is May 1.
- **Veterans Educational Benefits** are typically approved for all of JCCC's **DEGREE programs**. Veterans, reservists and eligible dependents requesting benefits must complete the appropriate forms available through the JCCC Student Financial Services Office.

All applicants for VA educational benefits must have a degree program plan developed and approved (or updated) by a JCCC academic counselor before each registration. Benefit pay is authorized for only those courses specifically listed or indicated on each individual program plan. Formal enrollment must be maintained in order to lawfully receive educational benefits. To maintain benefit eligibility, all participants are required to meet the same published standards of Satisfactory Academic Progress as all other entitlement and financial aid recipients at JCCC.

Benefit pay rates are based on the following enrollment schedule:

*Credit Hours Enrolled	Eligibility Rate
12 or more semester hours	full-time benefits
9-11 semester hours	¾-time benefits
6-8 semester hours	½-time benefits

* Fewer hours are needed for benefits during summer semester.

- **Corporate Billing** is available to students who have their tuition paid by their employer. The student must provide a letter from the employer verifying eligibility, as well as specifying the terms and amount the employer agrees to pay.
- **Supplemental Loans for Students/Parent Loan for Undergraduates** are administered by a bank, savings and loan or credit union of the student's choice. Eligibility is determined by the Student Financial Services Office. Eligible independent students or parents of dependent students may borrow up to \$4,000 a year. This amount may be in addi-

tion to any amount borrowed under the Guaranteed Student Loan program. However, the amount borrowed cannot exceed the cost of education (as determined by JCCC) minus any other financial assistance received. These loans carry variable interest rates with a maximum chargeable rate of 12 percent. Repayment of this loan usually begins 60 days after receipt of the loan check. In some cases the Supplemental Loan for Students may have repayment delayed while continuous school enrollment is maintained. However, interest will accumulate and periodically be added to the balance (original amount borrowed). This will increase the amount of the outstanding balance owed. Interest will be charged against the increased balance when actual repayment begins.

- **Foundation Short-term Loans** are made available by the Johnson County Community College Foundation to pay for tuition and fees, or books, and are issued only at the beginning of the school term. You must repay these loans in 30-60 days. Funds are limited and awards are based on special circumstances and ability to repay.
- **Emergency Short-term Tuition Loans** are available to help pay tuition and fees only. If the loan is not repaid by the agreed upon date, your registration will be canceled. Funds are limited and awards are based on special circumstances and ability to repay.
- **Many Employment Opportunities** are available while attending JCCC, both on-campus and in the community. For information concerning on-campus employment, contact the JCCC Human Resources Office, 252 GEB. Assistance locating off-campus employment is available through the JCCC Career Planning and Placement Office, 155 GEB.

SATISFACTORY ACADEMIC PROGRESS

Federal regulations require that a student must be making "satisfactory academic progress" toward a certificate, degree or transfer program leading to a bachelor's degree in order to be eligible to receive aid from any of the following federal educational aid/entitlement programs: Pell Grant, Supplemental Educational Opportunity Grant, Perkins Loan, College Work Study, Guaranteed Student Loan, Supplemental/PLUS Loan and Veterans Educational Benefits. In addition, students requesting institutionally funded assistance must meet these same standards.

**Satisfactory Academic Progress
Is Evaluated by the Following Criteria**

1. Students enrolled in six or more credit hours during any individual enrollment period who withdraw from total enrollment **OR** fail to successfully complete **ANY** credit hours will automatically be placed on Financial Aid Exclusion, and will not be eligible for financial assistance. (See "Financial Aid Exclusion" for further explanation.)

2. Students must successfully **complete 66 percent (2/3) of ALL credit hours attempted** while in attendance at JCCC – up to a maximum of 97 hours. A Satisfactory Academic Progress Chart may be obtained from the Student Financial Services Office.

3. Students must attain a minimum cumulative grade point average (GPA) based on the number of credit hours **COMPLETED**.

Number of Successfully Completed Hours	Minimum Cum. GPA
1-8	1.0
9-16	1.2
17-24	1.4
25-32	1.6
33-40	1.7
41-48	1.8
49-56	1.9
57-64	2.0

4. Determining satisfactory academic progress for each student requesting financial assistance at JCCC is based on academic transcript review of **ALL PREVIOUS ENROLLMENTS AT JCCC**, including enrollment periods when financial aid was not requested or received.

5. Courses in which a grade of "F" (failure), "I" (incomplete), "W" (withdrawn) and "R" (repeated) are recorded **count toward the total hours attempted**. However, of these grades, only the "F" is included in the computation of the cumulative grade point average.

6. Students who have **ATTEMPTED** more than 97 credit hours and have not completed the requirements for a degree, certificate or transfer program are no longer considered to be making satisfactory academic progress.

Financial Aid Warning

Students who are deficient in either percentage of hours completed and/or cumulative grade points earned will automatically be placed on Financial Aid Warning for one semester.

A student who is placed on Financial Aid Warning will be notified in writing by the Student Financial Ser-

vices Office as soon as possible. However, **notice of Financial Aid Warning may be retroactively incurred based on evaluation of the student's previous academic history at JCCC.**

Terms of Financial Aid Warning

During the Financial Aid Warning period students will remain eligible to receive financial aid/entitlements. At the end of the warning period a student's academic performance will again be evaluated. At that time, one of the following actions will occur:

1. If minimum standards of progress have been met, the student will be automatically reinstated in good academic standing and removed from Financial Aid Warning.

2. If the student is not yet meeting the minimum standards of progress, but **did complete all attempted** credit hours (minimum six hours attempted) with grades of "C" or above, the Financial Aid Warning period will be renewed. (Remember: "W" and "I" count as hours attempted.)

3. If neither of the preceding terms of Financial Aid Warning are met, the student will be placed on Financial Aid Exclusion.

Financial Aid Exclusion

1. Students enrolled in six or more credit hours during any individual enrollment period who withdraw from total enrollment **or** fail to successfully complete **any** credit hours will automatically be placed on Financial Aid Exclusion and will be ineligible for financial aid/entitlements at JCCC.

2. Students who attempt more than 97 hours will automatically be placed on Financial Aid Exclusion (with the exception of Veterans Benefit recipients).

3. Students who do not meet the conditions or terms of Financial Aid Warning will also be placed on Financial Aid Exclusion.

A student who is placed on Financial Aid Warning will be notified in writing by the Student Financial Services Office as soon as possible. However, **notice of Financial Aid Warning may be retroactively incurred based on evaluation of the student's previous academic history at JCCC.**

Financial Aid Exclusion does **not** mean a student will be prohibited from attending JCCC. Students **may** attend JCCC, but cannot receive any federal or institutional funds until one of the following conditions is satisfied.

Conditions For Reinstatement of Financial Assistance

Students on Financial Aid Exclusion will be denied financial assistance until one of the following occurs:

1. The student meets the minimum standards of satisfactory academic progress at JCCC.
2. The student completes **ALL attempted credit hours** at JCCC (minimum of six hours attempted) with grades of "C" or above AND the sum total of **ALL CREDIT HOURS ATTEMPTED AND ADDITIONAL CREDIT HOURS NEEDED** to complete a degree, certificate or transfer program do not exceed 97 hours. (Remember: "W" and "I" count as hours attempted.) **If this condition is satisfied, the student may have aid reinstated within the terms of Financial Aid Warning.**
3. The student's written appeal is approved by the Student Affairs Committee.

Appeal Process

An appeal process is available to any student placed on Financial Aid Exclusion. The appeal should be submitted to the Student Financial Services Office in writing within 30 calendar days of the notice of aid termination. The statement should explain mitigating circumstances that prevented the student from maintaining satisfactory academic progress, and include supporting statements and documentation from appropriate sources (such as a physician, academic advisor or employer).

Appeals will be reviewed by the Student Affairs Committee within 20 working days after receipt of the written appeal and supporting documentation. The Student Affairs Committee will make a determination after reviewing the documentation provided by the student. If the appeal is approved, the student will be placed on Financial Aid Warning. If the appeal is denied, the student will remain on Financial Aid Exclusion. The decision of the Student Affairs Committee is final and will be communicated to the student in writing.

STUDENT SERVICES



**Counseling Center
Testing/Assessment Center
Career Planning
and Placement Center
Disabled Students
Hearing Impaired Program
Student Health
Smoking Policy
Student Housing
Food Service
Adults Unlimited**

**Child Play Center
Dental Hygiene Clinic
Library
Bookstore
Parking
Student Code of Conduct
Student Grievance
Sexual Harassment of Students
Access to Student Information
Student Activities Program**

**Student Government
Alumni Association
Student Publications
Clubs and Organization
Intercollegiate and
Intramural Athletics
Phi Theta Kappa
Forensics
Music Organizations
Drama**

COUNSELING CENTER

JCCC's counseling staff is available to help with academic, career or personal problems. Students may meet with a counselor on a walk-in basis or by appointment. The Counseling Center offers:

Information about JCCC transfer and career programs. A counselor can answer questions about JCCC's transfer and career programs, which will be helpful in developing a program plan.

- **Current transfer information**
Students who are planning to transfer to a four-year institution need to come to the center before enrolling in courses at JCCC. A counselor will explain which courses will transfer and which courses are recommended by the institution the student plans to attend.
- **Career planning and exploration assistance**
The Counseling Center's interest tests and educational information can provide insight into oneself, and into career possibilities and strategies.
- **Help in solving social or personal problems**
Learn to solve social or personal problems through a self-examination process. A counselor will provide guidance in evaluating attitudes, goals and values. Community referrals also are available.
- **Orientation to the College**
New students may have trouble getting around at first. A Counseling Center orientation session may be helpful. Individual and group sessions are available.

TESTING / ASSESSMENT CENTER

The center provides a variety of services including English, math and reading assessments for new student placement, telecourse testing and administration of standardized tests and vocational interest inventories. Instructional make-up testing for students who have missed regularly scheduled exams is also available. JCCC students seeking credit for life experience through the Assessment of Prior Learning (APL) program or interested in "testing-out" of a course should contact the center for further information.

CAREER PLANNING AND PLACEMENT CENTER

The center provides help in the exploration of career options and the job search. Career education, individual or group career planning, and information on more than 20,000 occupations are among the services available.

Hundreds of current job openings are listed for students and others. Placement services are available to Johnson County Community College students and/or alumni upon registration in the center. Extensive community and corporate files provide other information for an effective job search. Students can receive help with research for classroom assignments on topics related to career and life planning and job hunting. Workshops and individual appointments are available throughout the year. Students are invited to come by the center and learn how to take advantage of this resource.

DISABLED STUDENTS

Disabled students at JCCC have access to a variety of support services including interpreting, note-taking, tutoring and other services that allow the disabled student to fully participate in classes. Equipment specially designed for the visually impaired and the physically disabled, such as speech synthesizers and voice recognition devices to enable a student to use computers, is available to students with disabilities. The buildings are equipped with ramps, elevators and restrooms designed to accommodate wheelchairs. Parking areas convenient to the buildings are reserved for disabled students. For more information about services, activities and facilities available to disabled students, contact the program manager of Special Services.

HEARING IMPAIRED PROGRAM

The Hearing Impaired Program offers a range of services that prepare hearing impaired students to enter the mainstream of regular career and transfer programs at JCCC. Services available through this program include academic counseling, support services (interpreting, tutoring, note-taking), developmental courses (English, reading, math, manual communication) and a summer preparatory program for incoming freshmen.

Summer Preparatory Program for Hearing Impaired Students

All hearing impaired students who intend to enroll in six or more credit hours a semester are encouraged to attend a summer preparatory program. The prep program is a six-week credit learning experience designed to assist students in making the transition from secondary to post-secondary studies. For further information, contact the program manager of Special Services.

STUDENT HEALTH

The College does not provide on-campus medical services, nor does it assume responsibility for injuries incurred by students while participating in College activities. Medical services are available at local clinics and hospitals.

The College reserves the right to require a medical examination of any student at any time. When a medical examination is required for admission or continuation in a program or activity, a satisfactory medical record report from a licensed physician must be filed with the dean of Student Services. The dean will review the medical record report and may deny permission for a student to participate in a program, course or activity.

Due to the potential spread of various communicable diseases, the dean of Student Services may require a physician's statement of health be submitted once a student has contracted and has been treated for a communicable disease.

Students may be required to submit verification of health when engaged in College arranged housing or other College sponsored events.

The College does not provide health and accident insurance for students. Students must contract for this type of coverage on an individual basis. For additional information concerning student health insurance, contact the Student Activities Office.

SMOKING POLICY

Smoking is prohibited in all enclosed areas of Johnson County Community College unless specifically posted as a smoking area. Any violations of this smoking regulation may result in a misdemeanor conviction as prescribed in the state of Kansas statutes.

STUDENT HOUSING

The Student Activities Office will help students obtain housing in the Johnson County area. A computerized listing of area apartment complexes that offer student discounts, a list of community members who wish to rent rooms in their homes to students and a roommate matching program are just a few of the services offered. JCCC does not maintain on-campus student housing, but will refer students and provide information for students.

FOOD SERVICE

The cafeteria is located in the College Commons Building. Breakfast, lunch and dinner are served as well as a variety of snacks and beverages throughout the day, evening and Saturdays. Hours of operation are listed each semester in the credit schedule of classes.

Vending machines are located in each of the buildings on campus.

ADULTS UNLIMITED PROGRAM

Adults returning to school may receive assistance in educational, career and personal decision making and goal setting through the Adults Unlimited Program. Counseling, information and referral services are also provided. The program publishes a monthly newsletter for adult students. It also sponsors support groups and non-credit workshops. The services are available on a walk-in basis or by appointment in the Counseling Center.

CHILD PLAY CENTER

Children may attend the Child Play Center while the parent is in class or on campus for other school activities. The service is designed especially for the children of JCCC students. The center staff, qualified in accordance with Kansas State regulations, is on hand to care for children between the ages of 2½ (toilet trained) and 10. The Child Play Center challenges the imagination and creativity of each child, providing group activities such as songs, games and storytelling as well as individual activities using dramatic play, manipulative toys, art, music and building materials. The center also strives to guide and accept children at their own levels. Students may reserve a place for their child on a regular basis or use the center for occasional care by contacting the Child Play Center. The center is licensed to serve a limited number of children; therefore, early enrollment is recommended. A fee will be charged for this service.

DENTAL HYGIENE CLINIC

Students and their families may have an oral examination, and have their teeth cleaned, X-rayed and treated with fluoride for a small fee at the Dental Hygiene Clinic. Dental hygiene students, supervised by licensed dentists and dental hygienists, will provide these services and will show proper oral care in the future. Call the clinic to make an appointment.

LIBRARY

The JCCC library maintains a collection of books, periodicals, films, slides, tapes, microfilm and other resources available to students and Johnson County residents. A highly trained staff of librarians and library aides is available for assistance in finding and using the resources.

Currently, the library houses 65,000 books, 600 current periodicals, 300,000 documents on microfiche and hun-

dreds of slides, videotapes and audio recordings. The catalog of these materials is maintained and made available to the public via the use of inter-active computer terminals.

Books are arranged on shelves according to the Library of Congress (LC) classification. A printed outline of the LC classification is available at the circulation desk.

Reference books, most audio-visual material, all magazines and newspapers must be used in the library. There is a coin-operated photocopier available if copies are needed. Books are due 21 days from the day the books are checked out. There are no fines assessed for overdue books, but students who fail to return library material will have their records placed on hold. If a book is lost, the cost of the book plus a \$5 service charge will be assessed. Sometimes instructors may place materials on reserve and specify a loan period. Twenty-five cents an hour on each reserve item kept past the time will be charged, or \$5, whichever is less. Transcripts or grades will not be released until all library obligations are met.

BOOKSTORE

The JCCC Bookstore is located on the lower level of COM. Textbooks, classroom supplies and many miscellaneous items are available for purchase. Bookstore hours of operation are listed each semester in the credit schedule of classes and the non-credit bulletin of classes.



PARKING

Each year more and more students attend JCCC. This means more cars in the parking lots and in some cases a longer walk to class. So, allow a little extra time. In addition to the 12 parking lots surrounding the campus, a temporary lot has been added and a new permanent lot is planned.

The College will provide free parking for students. Students are not required to register vehicles.

Parking lots are marked with signs designating areas for student, visitor, handicapped, staff and faculty parking. Students are not permitted to park in areas designated for handicapped (unless they obtain a permit), visitor or staff and faculty parking.

Motorcycles and motorscooters are considered motor vehicles and their operators are required to comply with all parking and traffic regulations. There are designated parking areas for motorcycles and motorscooters.

Tickets will be issued and a fee charged for the following violations:

- parking in restricted areas such as driveways, staff lots, loading areas, designated handicapped spaces or on the grass;
- parking improperly, for instance across the yellow lines or on yellow pads;
- exceeding the speed limit or reckless driving.

Your vehicle will be immobilized if you receive a third ticket. A fee will be charged to remove the immobilizer.

Handicapped Parking

If an individual is permanently or temporarily disabled, a parking permit may be obtained from the Student Development Office. This permit will allow parking in designated spaces on campus. A physician's certification may be required to receive this permit.

Bicycle Racks

Racks are available throughout the campus. Bicycles do not need to be registered.

Emergency Parking or Loading

Special permits for emergency parking and loading are available at the switchboard.

Handicapped Lot Violation

Vehicles will be immobilized upon receipt of the second citation. The fee for the first offense is \$10. The second offense is \$20 and removal of immobilizer is \$5. Additional offenses may result in the vehicle being towed.

Accidents

If involved in an accident on campus, notify the Security Office immediately and file an accident report.

STUDENT CODE OF CONDUCT

Students and staff of Johnson County Community College constitute a special community engaged in the educational process. The College assumes students will demonstrate personal conduct that is based upon courtesy, integrity, common sense and respect for others, both inside and outside the classroom.

The College reserves the right to suspend or dismiss a student for conduct that is determined to be detrimental to the best interest of the College. The following types of behavior are considered violations of College standards for student conduct and may result in suspension or other disciplinary action.

1. Threatening the life or physical safety of others.
2. Conduct that substantially disrupts, impedes or interferes with the operation of the College.
3. Conduct that substantially infringes upon or invades the rights of others.
4. Inflicting damage to College equipment or facilities.
5. Violation of conditions of probation.
6. Academic dishonesty.
7. Any unauthorized manufacture, possession, use, distribution or sale of alcohol or drugs, whether by faculty, staff or students, on College property or any College sponsored event is contrary to the purposes and policies of the College and the state of Kansas.
8. Conduct that has resulted in the conviction of the student for any offense specified in federal or state criminal statutes. It is not the intent of these policies to prohibit the participation in college programs of individuals who may have a previous criminal record for which they have met the requirements of the law.
9. Harassment involving a College instructor or staff member on the basis of sex. Sexual harassment is defined as conduct involving unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature shall be considered to constitute sexual harassment when:
 - a. Submission to such conduct is made either explicitly or implicitly a term or condition of academic success.
 - b. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions, affecting either the instructor or staff member.

- c. Such conduct has the purpose or effect of unreasonably interfering with the instructor or staff member's performance or creating an intimidating, hostile or offensive environment.
- Prohibited is any behavior of students that represents repeated or unwanted sexual attention or sexual advances, when acceptance of such attention or advances is made a condition of reward or of penalty.

10. Willful violation of any published regulation for student conduct adopted or approved by the board of trustees.

The dean of Student Services, or such other person as may be designated by the president, will be responsible for considering and imposing any student disciplinary action. Any student, staff member or administrator may request the initiation of such disciplinary action through the dean of Student Services.

With the exception of matters involving an immediate danger to life, limb or property, a suspension or other disciplinary action will be preceded by an opportunity for the student involved to confer with the dean of Student Services. At such conference, the student will be advised of the nature and extent of the alleged offense. If the student denies having committed such offense, then the student will be given an explanation of the evidence the authorities have and an opportunity to present the student's version of the incident. Subsequent to the conference, the dean of Student Services may impose disciplinary action deemed appropriate.

If the dean of Student Services elects to impose disciplinary measures, the student will be informed in writing of the nature and terms of such disciplinary action and will be further advised of the right to appeal the decision. A copy of the written notice will be sent to the president of the College. Notice of disciplinary action will be sent by certified mail to the student.

The College will emphasize in its daily operations the understanding as formulated by the board of trustees that all policies and procedures will be administered in a manner that is both fair and applicable to all persons. Therefore, the emphasis of all disciplinary actions will be to do everything possible to keep the student in college and to assist him or her in the fulfillment of his or her educational objectives.

There is a written policy about suspension that protects the rights of the individual. All procedures are handled in writing with enough time for appeal of the suspension through a student discipline committee of the College to the president of the college and to the board of trustees. A copy of this policy may be obtained from the dean of Student Services.

STUDENT GRIEVANCE

It is the policy of JCCC to provide students protection against unwarranted infringement of their rights. A student grievance may concern an alleged violation of College policies, infringement of the student's rights and other such problems concerning students, college staff and authorized College activities.

The following procedures will be followed to ensure an appropriate resolution of a student grievance or complaint at the lowest possible level:

1. The student will attempt to rectify the grievance with the supervisor of the area in which the alleged violation occurred within 10 College working days. Every effort will be made to resolve the grievance at the lowest possible level.
2. The student will consult with the appropriate supervisor (e.g. instructor, coordinator or division director) and attempt to solve the grievance through informal discussions. The supervisor must inform the student in writing of any decision made and the reason for that decision within five College working days. If the student feels the problem has not been solved, he or she may submit a written grievance to the next level of authority within 10 College working days from the time the original complaint was filed at the previous level. Each level appealed to will have five College working days to respond.
3. The student will consult with the dean of Student Services.
 - a. Submit a written grievance to the dean of Student Services and request a conference.
 - b. The dean will notify the affirmative action/Title IX officer of the College in writing of any grievance concerned with alleged discrimination.
 - c. The dean must, within five College working days, inform the student in writing of any decision made and the reasons for making the decision.
 - d. The student may appeal in writing to the president of the College if the grievance is not resolved with the dean of Student Services within five College working days after the dean has received the written grievance.
4. The student will consult with the president of the College.
 - a. The president must receive the written appeal within 10 College working days from the time the grievance was filed with the dean of Student Services.
 - b. The president must, within five College working days, inform the student in writing of any decision made and reasons for the decision.
 - c. The decision of the president is final.

If the student does not take the next step in the grievance procedure within the stated time period, the grievance shall be considered settled.

No reprisals of any kind will be taken against the student by any member or representative of the administration for filing a grievance.

SEXUAL HARASSMENT OF STUDENTS

Harassment of any student on the basis of sex shall be considered a violation of the College policy.

Conduct involving unwelcome sexual advances, requests for sexual favors or other verbal or physical conduct of a sexual nature shall be considered to constitute sexual harassment when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of academic success.
2. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions, affecting the student.
3. Such conduct has the purpose or effect of unreasonably interfering with a student's performance or creating an intimidating, hostile or offensive environment.

Prohibited is any behavior that represents repeated or unwanted sexual attention or sexual advances, when acceptance of such attention or advances is made a condition of reward or of penalty.

In determining whether alleged behavior constitutes sexual harassment, JCCC will examine the record as a whole and all aspects of the circumstances, such as the nature of the sexual advances and the context in which the alleged incidents occurred. The president shall establish and promulgate a procedure for resolving sexual harassment complaints. A copy of these procedures may be obtained from the dean of Student Services.

ACCESS TO STUDENT INFORMATION

Student rights concerning access to educational records are spelled out in Public Law 98-380 as amended by Public Law 93-568 and in regulations published by the Department of Health, Education and Welfare in the June 17, 1976, Federal Register. The law and regulations published by HEW require educational institutions to:

- Provide students the opportunity to inspect their educational records. Contact the JCCC Admissions & Records Office.
- Provide students the opportunity to challenge through a hearing the content of their educational

records if believed they contain information that is inaccurate, misleading or in violation of the right of privacy. (Grades are not subject to challenge.)

- Limit disclosure of information from the student's record to those who have the student's written consent or to officials specifically permitted within the law, such as college officials and – under certain conditions – local, state and federal officials.

If the individual is a dependent student, under 18 years of age, parents will have access to the student's educational record. The College will assume the student is a dependent if parents provide a written statement that the individual is listed as a dependent on their federal income tax forms.

The College may provide the following information:

- student's name
- address
- telephone number
- date and place of birth
- major field of study
- participation in officially recognized activities
- sports – weight and height of athletic team member
- date of attendance
- degrees
- awards received
- most recent previous educational institution attended

Students who object to the disclosure of any of the above information, may notify the Admissions & Records Office in writing which items should not be released without the student's consent.

Students may obtain a copy of the College's policies on access to student information and implementation of these procedures from the Admissions & Records Office.

Students may file a complaint with the Department of Education if they believe their rights under the law have been violated and if efforts to resolve the situation through JCCC appeal channels have proven unsatisfactory. Send complaints to:

FERPA, Department of Education
Room 514 E
200 Independence Avenue SW
Washington, DC 20201

The College will comply with the Kansas Open Records Act, as found in Chapter 171 of the 1983 Kansas Legislative Session Laws. The act is to be liberally construed and applied to promote compliance.

STUDENT ACTIVITIES PROGRAM

JCCC's Student Activities Office, in cooperation with the Campus Activities Board (CAB), brings activities of enormous variety (cultural, social, educational, recreational and vocational) to interested students throughout the year.

Activities are planned and implemented entirely by students for students by the Campus Activities Board via the committee structure. Activities include: films (feature, captioned, specialty and recent releases); travel (winter and spring breaks, skiing and canoeing); special events (comedians, novelty acts, blood drives and thematic programming); recreation (contests, intramural competition, games, tournaments and sporting events); lectures (controversial issues and distinguished speakers); and, concerts (bands, solo artists and videos).

A new facet of the activities program is the Student Action Council (SAC), which was formed to improve the quality of campus life by increasing student involvement, improving awareness, encouraging student interaction and strengthening student clubs and organizations. Membership is open to anyone who shares these goals. Meetings are scheduled on a monthly basis.

More information can be obtained from the Student Information Desk, in COM.

STUDENT GOVERNMENT

The Student Activities Office also works with the Student Senate, which acts as a sounding board for student issues. A totally volunteer organization, the Student Senate has been involved in various activities and campus issues. The Student Senate participates with the faculty and administration in formulating appropriate policies.

ALUMNI ASSOCIATION

The JCCC Alumni Association is a new organization for graduates and those with at least one year of credit courses. We believe that JCCC is the most exciting, dynamic college in the country and want you to be a part of its future as alumni!

If you are interested in joining the Alumni Association, please call the Foundation Office. You will be able to meet with fellow alumni, participate in College programs and plan the future of this new organization.

STUDENT PUBLICATIONS

The *Campus Ledger* is the award-winning student newspaper authorized by the Board of Trustees and published by the Publication Board which oversees the implementation of the newspaper policies. The *Ledger* emphasizes news, features, entertainment, sports and campus events. Staff editors and writers are paid salaries and must be enrolled in a minimum of six credit hours each semester. Students interested in writing for the *Ledger* may stop by the news office.

CLUBS AND ORGANIZATIONS

To be a recognized club and organization at JCCC requires the approval of the Student Senate and the director of Auxiliary Services. Once officially recognized, a club or organization is entitled to all the rights and privileges afforded other JCCC clubs.

Clubs and organizations recognized by the College may not illegally discriminate in membership or participation practices based upon factors related to race, religion, sex, place of origin, age, creed, handicap or marital or parental status.

Club funds may only be used for club activities that are open to all club or organization members.

INTERCOLLEGIATE AND INTRAMURAL ATHLETICS

Intercollegiate and intramural athletics play an important role in the educational process of Johnson County Community College. JCCC offers a wide range of sports and athletics so all students can participate, develop skills and make friends during their leisure time. Intercollegiate athletic teams and individuals have brought the College and themselves national recognition. JCCC's athletic facilities are among the finest in the country, allowing JCCC to host a number of state and national tournaments. Talented coaching staffs and trainers combine to make the campus athletic programs for men and women outstanding endeavors.

Men compete in baseball, tennis, basketball, golf, soccer, cross-country and track at JCCC. Women may take part in tennis, volleyball, basketball, softball, cross-country and track. The College will participate in other intercollegiate athletics as approved by the board of trustees. JCCC is a member of the National Junior College Athletic Association (NJCAA) and the Kansas Jayhawk Community College Conference. Students must meet NJCAA and conference eligibility rules to compete in intercollegiate activities.



PHI THETA KAPPA

Phi Theta Kappa is an honorary society which recognizes and encourages scholarship among community college students. The JCCC chapter of PTK provides opportunities for students to develop leadership abilities, to be of service to their community and to exchange ideas in a stimulating academic environment.

To be invited to become a member of PTK, a full-time student must have completed 15 hours or acceptable credit hours with a cumulative grade point average of 3.5 or above; a part-time student must have accumulated 36 hours of acceptable credit hours (at least 15 of them at JCCC) with a cumulative grade point average of 3.5 or above.

FORENSICS

College debate teams participate in state, regional and national competition. The teams have won wide recognition for their outstanding records in competition with both community and upper-division colleges and universities.

MUSIC ORGANIZATIONS

The College jazz band, choirs, choruses and ensembles are open to all students with musical talents whether or not they are music majors. These groups present numerous programs each year, both on- and off-campus, and participate in various college events.

DRAMA

JCCC's drama department presents several full-length productions each year, and tryouts are open to all students. In addition, there are several programs of experimental one-act plays, produced and directed by students.

COMMUNITY EDUCATION



**Community Education
Business and Industry Institute
Center for Continuing
Professional Education
Gallaudet University
Regional Center
CLEAR Program
Continuing Education**

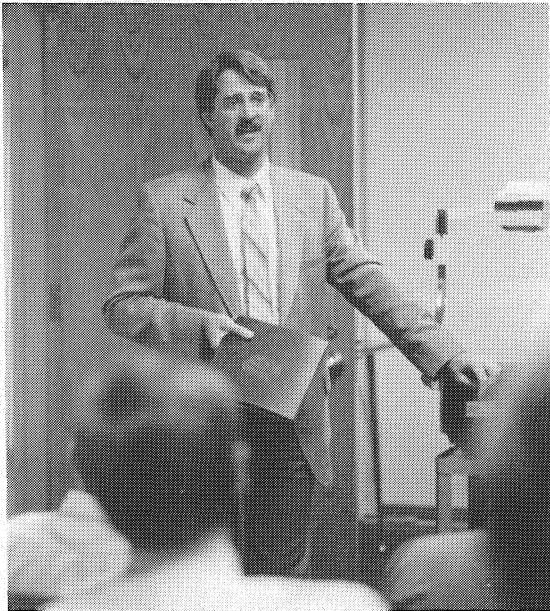
**ABE/GED Program
Clinics for Youth
Community School Program
Extension Courses
Microcomputer Training Center
Arts Council of Johnson County
Center for Literary Culture
Citizens Forums**

**Community Theater, Ch
Community Use of
College Facilities
Conferences and Worksh
Cultural Arts Program
A Program for Those O
Speakers Bureau
Special Events**

COMMUNITY EDUCATION

Non-Credit Courses / Special Events

JCCC offers busy people of all ages and backgrounds short-term courses on hundreds of current course topics in a friendly, informal atmosphere, with convenient hours and locations. It's all part of Learning for Life at the College. Registration may be made by phone, mail or in person. There are no lines or waiting because Community Education enrollment is open in each course until it begins.



BUSINESS AND INDUSTRY INSTITUTE

The Business and Industry Institute is designed to help business and industry solve training and professional development problems and stimulate economic development. The institute offers business, industry and government groups training, research, consulting and technical assistance at a reasonable cost. Among the services offered:

On-site Training: credit and non-credit courses are taught at the business site. Courses can be designed to fit the needs of individual businesses, using their own equipment and facilities so that employees can learn under actual work conditions.

On-campus Training: credit and non-credit courses, seminars, workshops and programs in technology and business are offered on the JCCC campus. Courses and programs can be designed to specifications of individual businesses.

Management and Supervisory Training:

professional, skill-oriented management and supervisory seminars and workshops are offered both on-campus and on-site at company locations.

Professional Resources: assistance in defining and solving company training, equipment and manpower problems.

Economic Development: the institute is active in helping local, expanding industries obtain state and federal funding to pay for training, applicant testing and job skills development activities.

Small Business Development Center: JCCC's Small Business Development Center offers a wide range of small business services, including training programs, counseling services, applied research and library services for small business owners and potential owners in the Johnson County area. There is no charge for the counseling services and results are strictly confidential.

CENTER FOR CONTINUING PROFESSIONAL EDUCATION

The Center for Continuing Professional Education offers a broad range of educational opportunities for professionals, designed to update and maintain skills, provide information on current developments and innovations and meet mandatory continuing education requirements for relicensure or recertification. The center offers programs for professionals in:

Education: early childhood teachers pre-school through grade three, primary and secondary educators.

Fire Sciences: firefighters and fire science administrators.

Health and Human Services: registered nurses, licensed practical nurses, social workers, dietitians, dental hygienists, dentists, adult care home administrators, hospital administrators, counselors, physicians, mental health technicians and psychologists.

Law: attorneys and paralegals.

Others: insurance and real estate professionals, engineers, accountants, professional groundskeepers and other occupations requiring relicensure or recertification.

GALLAUDET UNIVERSITY REGIONAL CENTER

JCCC established the Gallaudet Regional Center in cooperation with Gallaudet University in Washington, D.C. — the world's only four-year liberal arts college for the deaf.



The center serves an eight-state area through workshops, seminars, conferences and consultation. It is the center's work to provide educational opportunities to deaf adults; develop an awareness about deafness in the hearing community; offer technical assistance to area agencies and services; and, train parents, professionals, deaf adults and other interested persons. For more information, contact the Gallaudet Center.

CLEAR PROGRAM

Mentally retarded adults are offered a variety of non-credit, continuing education opportunities through College Learning Experiences for Adults with Retardation, better known as CLEAR. The program focuses on independent living skills and life enhancing experiences through classes offered on Saturdays and weekday evenings during the semester.

CLEAR also offers programs for parents of mentally retarded individuals and for other interested community members. Contact Special Services for complete information.

CONTINUING EDUCATION

Enjoy the stimulation of talented instructors and classmates who share your interests, whether it be job skills, vocational training, professional advancement, personal enrichment, physical fitness or just the pleasure of learning.

Classes, workshops, lectures, seminars and other learning activities are for those to whom academic credit is not a priority and involve no tests, grades or required homework.

Continuing Education students are representatives of our community: employers and employees, home-makers, retirees, parents, youngsters, office and construction workers, business people and professionals.

People interested in improving their on-the-job performance, developing a new skill or pursuing a leisure-time interest will find the workshop, seminars and courses offered through JCCC's Continuing Education program the answer. Courses are non-credit and are held at convenient locations throughout Johnson County. Non-credit class schedules announcing the available courses are mailed to all Johnson County residents four times a year. Courses and activities are offered in these areas:

- | | |
|------------------------------|-----------------------|
| ABE/GED | Office Skills |
| Arts and Crafts | Personal Development |
| Aviation | Practical Know-How |
| Childhood Education | Photography |
| Communications | Real Estate |
| Computers | Science |
| Dance and Exercise | Sewing |
| English as a Second Language | Special Interests |
| Family Life | Sports and Recreation |
| Foods | |
| Foreign Language | |
| Home Improvement | |
| Horsemanship | |
| Landscape and Gardening | |
| Money Management / Finance | |

ADULT BASIC EDUCATION / GENERAL EDUCATIONAL DEVELOPMENT (ABE/GED) PROGRAM

The program offers educational opportunities to people who have not completed a high school education. Specifically, it provides them with the opportunity to master the English language and gain the computational skills necessary to function in today's world. In addition, it provides individuals with an opportunity to obtain a high school equivalency diploma (GED).

Individuals who wish to find out if they are ready to take the GED may take the GED Practice Test in the Testing / Assessment Center. This test identifies areas of strengths and weaknesses and determines whether further study is needed before testing.

GED testing is scheduled through classes offered in convenient locations on an individualized or small-group basis by Project Finish, at our community-based adult learning centers.

CLINICS FOR YOUTH

Each year JCCC offers clinics for boys and girls from 7 to 16 years old. The clinics focus on tennis, baseball, basketball, volleyball, softball and soccer.

COMMUNITY SCHOOL PROGRAM

Johnson County residents do not have to travel far to take JCCC courses. Community school programs have been established in Olathe, co-sponsored by Olathe Unified School District 233; in Stanley-Stilwell, co-sponsored by Blue Valley Unified School District 229; in Spring Hill, co-sponsored by Spring Hill Unified School District 230; and, in Gardner-Edgerton-Antioch, co-sponsored by Unified School District 231.

Each community school also has a community liaison who assists in selecting courses and who acts as a link between the community and JCCC.

EXTENSION COURSES

The College provides off-campus courses for college credit. Most credit courses offered by the College can be offered at any location if there are enough participants and the environment is conducive to learning. For more information contact the dean of Instruction.

MICROCOMPUTER TRAINING CENTER

The JCCC Microcomputer Training Center is designed to serve business and personal needs for micro-computer training.

The center includes demonstration facilities with large screen projection, a laboratory with the IBM personal microcomputer systems and printers for individual hands-on experience, and a library of instructional software.

Courses are designed for practical application for your office or home.

ARTS COUNCIL OF JOHNSON COUNTY

As a part of its mission to serve as a cultural center, the College is a sponsor of the Arts Council of Johnson County. An office with a part-time administrator is maintained on campus. Funding assistance is received from the Kansas Arts Commission, the National Endowment for the Arts, Johnson County Park and Recreation District and the Johnson County Library. The ACJC board is a coalition of more than 25 organizations representing art, education and business. ACJC provides a quarterly arts calendar and newsletter, work-

shops, services and information to community arts organizations and facilities for cooperative arts programs.

CENTER FOR LITERARY CULTURE

The Center for Literary Culture is a national, award-winning program for writers and those who love to read. The center sponsors an annual writers conference.

CITIZENS FORUMS

Join in development, stabilization and change in the community. JCCC invites interested citizens to attend our discussions on:

- examining proposed amendments to the state constitution
- meeting and questioning candidates for political office
- exploring problems and opportunities related to youth, women, single adults, the elderly and minority groups
- discussing health services, land use, water and the environment
- joining Great Decisions discussion groups focusing on foreign policy decisions
- considering today's trends in ethics and economics
- searching for values affecting individuals and society.

COMMUNITY THEATER, CHORUS

The College cooperates with The Barn Players Inc. to bring community theater to Johnson County. An all-volunteer crew produces a summer series of five full-length plays as well as other productions and a Readers Theatre throughout the year. Training for beginning actors is offered in the fall and spring. The Senior Acting Troupe produces a series of one-act plays dealing with the concerns of aging.

The Johnson County Community Chorus rehearses weekly and presents concerts on-campus and throughout the community during the academic year. Membership is by audition.

COMMUNITY USE OF COLLEGE FACILITIES

The College encourages community groups to use its facilities for meetings and activities when there is no conflict with College programs.

CONFERENCES AND WORKSHOPS

The College's Community Services Division offers a wide range of services to public and private organizations, including the planning and arranging of seminars, conferences, institutes, short courses and workshops. The College also conducts and co-sponsors workshops and conferences with other institutions and organizations.

CULTURAL ARTS PROGRAMMING

A rich array of cultural opportunities is available in the greater Kansas City area and JCCC's cultural arts program helps you enjoy them. The programming includes classes, lectures, films, concerts and tours on a variety of subjects – architecture, antiques, anthropology, art, theater, music, photography, travel and nature. The College cooperates with local schools, colleges, institutions and organizations to offer an exciting program of cultural activities both on- and off-campus.

A PROGRAM FOR THOSE OVER 60

People who have lived in Johnson County for six months prior to enrollment and who are 60 years of age or older are eligible for membership in the Brown and Gold Club. Members may register for most credit and non-credit classes at no charge on a space-available basis, although Brown and Gold members may be charged the full or reduced rates for some courses and special events. Most classes and activities have a required minimum paid enrollment that must be met before Brown and Gold Club members are enrolled. There may be charges for textbooks, course materials, food service and transportation, and many credit classes have fees in addition to tuition.

SPEAKERS BUREAU

JCCC's Speakers Bureau is designed to provide various community organizations with guest speakers. The organization picks the topic and JCCC makes the arrangements.

SPECIAL EVENTS

Special events attract thousands of people to the campus and to locations throughout the county each year. Among the many special events sponsored by the College are public forums, candidate forums, lectures, concerts, theater, dance, film festivals and a wide range of public service activities such as dental health days,

blood drives, job fairs, senior fun nights and historical festivals. Special events broaden community involvement in the College, bring speakers of international stature to the community, help educate our citizens and make the county a more interesting, stimulating place to live.

TOURS

Each semester, JCCC offers several day trips to nearby communities of historic or artistic interest such as Abilene, Atchison, Lexington, Weston and Jamesport. The tours usually include lunch at a colorful local restaurant. Half-day tours to artistic events, museums and other places of cultural interest are also available. In addition, foreign travel is available on a credit and non-credit basis.

YOUTH PROGRAM

Classes and workshops in art, theater, language and music have been developed to stimulate creativity and expand growth. There is also a special summer program for high-ability students.



[The text in this section is extremely faint and illegible due to low contrast and scan quality. It appears to be a multi-column layout of text.]



ACADEMIC INFORMATION



Attendance
Course By Arrangement
Advanced Standing Credit
Proficiency Examinations
Military Credit
National Standardized Tests
Assessment of Prior Learning

Credit Transferred
From Other Colleges
Grading System
Honors
Transcript Records
Academic Progress

Academic Renewal
Instructional Support Services
Math Lab
Writing Center
Academic Achievement Center
Learning Strategies Program

ATTENDANCE

Any student who does not attend at least one session of each course for which they are enrolled, by the end of the second week of classes (prorated for classes less than 16 weeks) will automatically be dropped with no refund of tuition or fees.

Students will be notified by mail if they are dropped. Students who were dropped in error will have six working days to be reinstated and must have an approval form signed by the appropriate division director.

Any questions on this policy should be directed to the director of Admissions & Records at 469-3803.

Students are responsible for regularly attending the classes and laboratory sessions in which they are enrolled. There is no policy that permits the lowering of grades for non-attendance. However, instructors may consider class participation, examinations and group work when determining final grades. If special attendance is required to complete a class satisfactorily, instructors will inform the students in writing at the beginning of the semester. Individuals are responsible for making up any class work or assignments if absent from class. Students receiving benefits from a government agency must follow any policies the specific agency stipulates.

COURSES BY ARRANGEMENT

JCCC courses by arrangement are for those students who find it impossible or undesirable to attend regular courses on campus. Those individuals may complete a course by arrangement out of the classroom and on a schedule arranged with the instructor. Before enrolling in a course by arrangement, contact the instructor (or the division director if the instructor is unavailable) who can advise the student on how much instructor-contact the course requires and how performance is measured. See the Credit Class Schedule for the courses available by arrangement each semester.

Independent Study

You may explore in depth an area not covered in the regular curriculum by enrolling in independent study. You must show above-average performance in the area to be eligible. For details, contact the division director of the area in which you are interested.

Self-Paced Study

Courses are available on a self-paced schedule of study that allows students to enroll in the course at any time during the semester and to take up to a calendar year to complete course requirements. Enrollment requires completion of a Self-Paced Study Contract, which may

be obtained in the division office listed for the course, and completion of a registration form in the Admissions & Records Office. Students are required to meet with the sponsoring instructor to complete the contract and obtain course materials.

With self-paced study, students can set their own pace of learning and may complete the course requirements as rapidly or as leisurely as they care to. Other than the one-year limit, there are no restrictions on the time students may take to complete a unit or the entire course. For additional information contact the appropriate division office.

ADVANCED STANDING CREDIT

A maximum of 30 hours of credit may be earned through proficiency examinations, military credit, national standardized tests and assessment of prior learning. Advanced Standing Credit, with the exception of transfer credit, will be included on the student's permanent record after one course has been completed in residence at the College. Credit will not be awarded if: a) a student has successfully completed college courses representing the same content, or b) a student has been awarded credit through other non-traditional programs in areas representing the same content area. The Testing / Assessment Center coordinates all programs leading to Advanced Standing Credit.

Proficiency Examinations

Credit by proficiency examination may be granted for certain JCCC courses in which proficiency examinations are available. Credit will be granted if a student can demonstrate a satisfactory level of performance. A fee will be charged for each examination.

Military Credit

Credit will be granted for educational experience completed while in the armed services if the student has completed a minimum of one year's continuous active duty. Applicants submitting DD form 214, Armed Forces of the United States Report of Transfer of Educational Achievement through the United States Armed Forces Institute (USAFI), will receive credit and advanced placement as recommended by the Commission on Accreditation of Service Experience of the American Council on Education if the courses are equivalent to the courses offered by the College.

National Standardized Tests

The College will grant credit to students who can demonstrate equivalent knowledge and skill contained in undergraduate college courses through national standardized testing programs. Credit will be awarded

per question from Harold Reuber - can a "P" grade change an "F" to an "R"?
yes per P.L. - the "P" represents a letter grade A-D 1-24-89

Contract "I" cannot be dropped! per P.L.

only in subject areas where JCCC offers comparable courses. A fee will be charged for those examinations.

A student transferring to JCCC with credit awarded by another college for national standardized tests must submit an official score report to the Testing/Assessment Center to validate credit previously awarded.

Assessment of Prior Learning

Credit may be granted to a student who has acquired knowledge and skills equivalent to college courses through prior learning experiences. Credit may be awarded only in subject areas where JCCC offers comparable courses. A fee will be charged for each course.

CREDIT TRANSFERRED FROM OTHER COLLEGES

Transfer credits will be accepted from colleges and universities that are accredited or hold candidacy status with the North Central Association of Colleges and Schools, Middle States Association of Colleges and Schools, New England Association of Colleges and Schools, Northwest Association of Colleges and Schools, Southern Association of Colleges and Schools, Western Association of Colleges and Schools or other institutions approved by the director of Admissions & Records. All transfer credit will be equated to the semester-hour system. All credits earned with an F grade or higher will be transferred and calculated in the student's cumulative GPA. Quality points and grade points will be transferred and will be averaged into the grade point earned at the College.

GRADING SYSTEM

Johnson County Community College utilizes the following grades to indicate the level of student achievement of the educational objectives of a course:

- A - outstanding achievement of objectives
- B - highly satisfactory achievement of objectives
- C - adequate achievement of objectives
- D - passing, marginal achievement of objectives
- P - passing (credit earned, but not calculated into student's GPA)
- F - no credit, unsatisfactory achievement
- W - withdrawal without academic assessment (A student may withdraw from a class up to one week before the last day of the semester (prorated for courses less than 16 weeks in duration). The student will receive a "W" on his or her transcript if he or she withdraws after the official state reporting date of the 20th day of class during a regular semester or after one-fourth of the summer or mini-session has been completed. A student will

be considered withdrawn from a class only after the student completes a drop form in the Admissions & Records Office - not when the student stops attending class.)

- I - incomplete (A student will receive this grade only if special circumstances prevent him or her from completing the course. A student cannot re-enroll in the class, but must complete all course work by the end of the following semester or term. An "I" will be changed to "F" if the instructor does not initiate a grade change by the end of the semester following the grading period for which the "I" was given.)
- R - repeated course (Whenever a student repeats a course only the latter grade earned will be used in computing the student's cumulative GPA. The earlier grade for the course will be changed to "R" with the exception of the "W" grade.)
- X - Audit status - no credit awarded.

Pass/Fail Grading System

Students may wish to choose a pass/fail option if they want to explore courses outside their range of subject matter.

A counselor's approval is required before a student chooses the pass/fail option. A student will be allowed to enroll in only one course a semester under this option. If this option is chosen, the student will complete a form in the Counseling Center prior to the eighth week of the fall and spring semesters, the fourth week of the eight-week summer session and the first week of the mini-sessions.

Note: Some schools, scholarship committees and honorary societies do not accept this grading system and may convert grades of "P" to "C" when computing grade point averages or in some other way may penalize the student.

Grade Point Average

- A = 4 grade points per semester credit hour
- B = 3 grade points per semester credit hour
- C = 2 grade points per semester credit hour
- D = 1 grade point per semester credit hour
- F = 0 grade points per semester credit hour

In calculating grade point averages, the hours with grades P, W, I, X and R will not be counted as hours attempted. Courses with grades of "F" will be counted in figuring GPAs.

Grade Changes

Grade changes and withdrawal appeals must be submitted to the Admissions & Records Office within one (1) semester of the student's initial enrollment in the course. Requests for a grade change must be made in

writing and approved by the dean of Instruction. Withdrawal appeals must be made in writing and submitted to the director of Admissions & Records. Additional information and forms may be obtained in the Admissions & Records Office.

HONORS

The name of any student who enrolls in and completes a minimum of six credit hours and earns a grade point average of 3.5 or higher during any semester will appear on the Part-time Honor Roll list. Any student who enrolls in and completes a minimum of 12 credit hours and earns a grade point average of 3.5 to 3.99 will appear on the Dean's List. Any student who enrolls in and completes a minimum of 12 credit hours and earns a grade point average of 4.0 will appear on the President's List.

TRANSCRIPT RECORDS

A student's academic record of course work completed at the College will be maintained in the Admissions & Records Office. Transcripts will be released only after receipt of a written request signed by the student. Transcripts issued directly to the student will be marked "Student Copy."

Transcripts will not be released for students who failed to submit required prior college transcripts. Students with past due obligations to the College may not register for classes or have transcripts sent until their accounts are resolved to the satisfaction of the College.

Official transcripts from other institutions cannot be released to any individual or institution. Copies designated "issued to student" may be released to students for advisement purposes.

ACADEMIC PROGRESS

If satisfactory academic progress is not being made, contact a counselor. A counselor will help reassess the student's program, motives, interests and aptitudes to help decide whether a change in program is needed or additional assistance should be applied. These are JCCC's guidelines for "satisfactory academic progress":

Number of Successfully Completed Hours	Minimum Cum. GPA
1-8	1.0
9-16	1.2
17-24	1.4
25-32	1.6
33-40	1.7
41-48	1.8
49-56	1.9
57-64	2.0

ACADEMIC RENEWAL

Students who have performed poorly in their first year or two at college and then withdraw or are dismissed frequently return to school at a later date to resume their education. However, their prior academic record often presents a major obstacle to their overall GPA and, hence, their overall success.

People in this category who want an opportunity for a new undergraduate start at Johnson County Community College, without the handicap of their prior academic record, may apply for Academic Renewal.

A student must petition the Student Affairs Committee for Academic Renewal according to the following guidelines:

1. All credits taken more than five years ago from all colleges or universities must be dropped.
2. Course work to be disregarded must have been completed at least five years prior to applying for Academic Renewal.
3. At least 12 semester credits must have been completed at JCCC within the last two years. The GPA for all course work taken during this time must be at least 2.0.
4. Academic Renewal will be granted only once.
5. Granting of Academic Renewal does not affect or alter a student's record for financial aid awards or for athletic eligibility.
6. All previous course work will continue to appear on the transcript. However, the dropped course work will not be included in the student's JCCC cumulative GPA.
7. This policy applies to the records at JCCC only. A student transferring from JCCC to another institution will have to follow the receiving institution's policy.

Additional information and forms may be obtained in the Admissions & Records Office.

INSTRUCTIONAL SUPPORT SERVICES

Math Resource Center

The Math Lab offers individualized instruction and personal assistance to help students develop skills. The materials cover most topics in Introduction to Algebra, Intermediate Algebra, College Algebra and Trigonometry. An instructor is available to assist students. For more information come to the Math Lab in 223 EMC.

Writing Center

The Writing Center, a Kansas Excellence in Education Program, is designed to help students improve their writing skills through computerized and individual instruction. Students work at their own pace on proof-reading, researching, writing sentences, composing paragraphs or other areas that need improvement. An instructor is available to assist students. For more information contact the Writing Center in 225 EMC.

Academic Achievement Center

The Academic Achievement Center helps to develop basic skills through individualized instruction, small classes and a tutor exchange. Instructors will help plan a program of study and offer guidance as needed.

Students may work in any of the following:

- Basic Math Review
- Reading Comprehension
- Reading Rate
- Spelling Improvement
- Vocabulary Development
- English Review
- Algebra Preparation
- Chemistry Preparation
- Study Skills
- Tutor Exchange
- Supplemental Instruction for Other Courses

Learning Strategies Program

This program offers students an opportunity to acquire the thinking and learning skills they need to be successful learners. The program benefits a variety of students, including those successful students who want to improve their learning efficiency, as well as those who feel overwhelmed by the demands of college coursework. The information learned in each of the Learning Strategies Program courses will improve students' performance in the other courses they are taking. For more information contact the Learning Strategies Program in 223 EMC.



LC Classes are considered developmental classes as of 7/87
(do not transfer toward a degree)
before 7/87 they did transfer.

GRADUATION REQUIREMENTS



- Associate Degrees**
- Associate Of Arts Degree**
- Associate Of Science Degree**
- Associate Of Applied Science Degree**
- Certificate Of Completion**
- Graduation With Honors**
- Commencement Exercises**

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GRADUATION REQUIREMENTS

Johnson County Community College awards the associate of arts, associate of science and associate of applied science degrees. Johnson County Community College believes that an associate degree represents more than an accumulation of units. The degree should symbolize a successful attempt on the part of the college to lead students through patterns of learning experiences designed to develop certain capabilities and insights. It should reflect the conviction of the faculty that those who receive the degrees possess in common certain basic principles, concepts and skills both unique to, and shared by, the various disciplines.

Those receiving the associate degree are expected to demonstrate the ability to think and to communicate clearly and effectively both orally and in writing; to use mathematics; to understand the modes of inquiry of the major disciplines, including the sciences and technologies; to be aware of our culture and of other cultures and times; to achieve insights gained through experience in thinking about ethical problems; to develop the capacity for self-understanding and problem solving; and finally, to gain sufficient depth in some field of knowledge to contribute to society.

Students must file a written application to graduate in the Admissions & Records Office by the following dates:

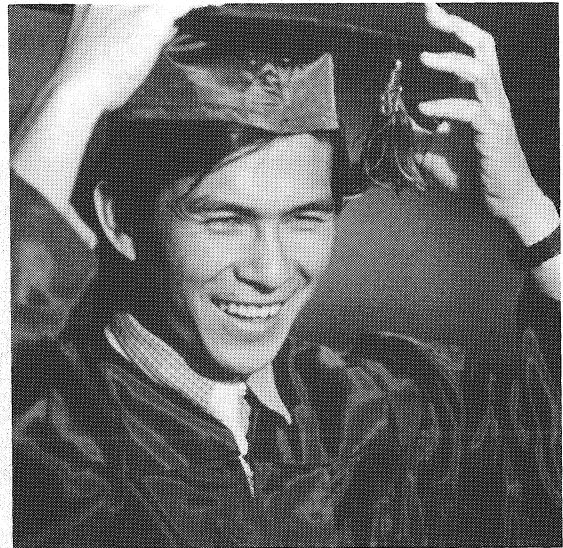
- Nov. 1 for fall graduation
- April 1 for spring graduation
- July 15 for summer graduation

Requests for deadline extensions may be made to the director of Admissions & Records in the form of a written appeal.

ASSOCIATE DEGREES

An associate degree is earned when a student successfully completes a minimum of 64 hours of college credit courses in an approved educational program. These courses shall be comparable to lower division level courses offered at Kansas Regents colleges and universities. Prerequisite courses needed to be completed prior to enrollment in college level courses will not count toward fulfilling degree requirements.

A student must earn a minimum of 15 semester hours of credit in residence at Johnson County Community College and earn a cumulative GPA of 2.0 or better on all course work. Advanced standing credits will not count toward satisfying the 15 credit hours residency requirement.



An approved associate of arts program is one designed specifically to meet the educational objectives and needs of the student through the completion of the general education distribution requirements and is individually approved by the counselor. An approved associate of science or associate of applied science program is one recommended by the faculty and approved by the board of trustees to meet the educational objectives and needs of the student.

A student must be enrolled in the college at the time he or she anticipates completing degree requirements and files an intent to graduate form. A student may complete the requirements for a degree at the end of each term or semester. The degree status will be recorded on the student's permanent transcript record upon certification of completion of the graduation requirements.

Competency in the basic skills – reading, writing and computation – is essential for individuals to function effectively in collegiate programs. The following minimum requirements must be met by students who complete degrees:

Minimum proficiency in reading and writing, either at the original assessment, a subsequent assessment or in courses that address these competencies prior to enrolling in degree-specific courses.

Minimum proficiency in computational skills, either at the initial assessment, a subsequent assessment or in courses that address these competencies prior to enrolling in degree-specific mathematics courses.

The College is committed to integrating computers into its curriculum on an institution-wide basis. In-

formation technology must be relevant and applicable to the curriculum under JCCC's college-wide framework. JCCC has not made computer literacy mandatory. Rather, the faculty strive to integrate the use of computers into traditionally non-computer areas and to increase the use of computers in more traditional, computer-using areas.

In addition to demonstrating the basic skills competencies, students are expected to develop proficiency in more advanced skills required by the courses outlined in the degree programs. The associate degree requirements are intended to develop effective communication, problem solving and knowledge acquisition through interpretation, comparison, analysis, synthesis, evaluation, research and creative thinking.

Implementation

The associate of arts, associate of science and the associate of applied science degree requirements became effective for all new students in the Fall 1985 semester. Currently enrolled students at the time of implementation have the option to complete degree requirements in effect prior to this policy change if they maintain continuous enrollment and successfully complete at least one class (i.e. not withdrawing from all classes) during each regular semester, except for programs with selective admission requirements.

Students are considered continuously enrolled if they complete at least one class during each regular fall and spring semester. If a student does not maintain continuous enrollment, the student will be required to follow the graduation requirements that are in effect at the time of re-enrollment.



ASSOCIATE OF ARTS DEGREE

The 64 hours of credit necessary to complete the associate of arts degree shall include the following:

- Communications 9 hours
- Social Science and/or Economics 6 hours
- Humanities and/ or Art 6 hours
(History is included in this category)
- Science and Mathematics 9 hours
(must include one course from science and one from mathematics)
- Health and/or Physical Education 1 hour

Specific courses that meet the associate of arts degree requirements are as follows.

The 64 hours of credit shall include the following general education distribution requirements:

1. Communications 9 hours
(must include Composition I and II and either Interpersonal Communications, Public Speaking or Personal Communication)
2. Social Science and/or Economics 6 hours
No more than one course from each of the following categories may count toward the six required hours.

Economics

- Basic Economics
- Economics I
- Economics II
- Global Recourse Geological/Economic Viewpoints

Political Science

- American National Government
- International Relations
- Introduction to Comparative Government
- Introduction to Political Science
- State and Local Government

Psychology

- Applied Psychology
- Introduction to Psychology

Sociology

- Social Problems
- Marriage and Family
- Sociology

Anthropology

- Cultural Anthropology
- Physical Anthropology
- World Cultures

3. Humanities and/ or Art 6 hours
No more than one course from each of the following categories may count toward the six required hours.

Humanities and Art

- Introduction to Art History
- Modern Art History
- Comparative Cultures
- Introduction to Humanities
- Introduction to Jazz Listening
- Introduction to Music Listening
- History of Photography
- Issues of Contemporary Photography
- Civilisation

History

- European History
- Local and Kansas History
- Modern Russian History
- U.S. History to 1877
- U.S. History since 1877
- Western Civilization I
- Western Civilization II
- Eastern Civilization

Literature/Theater

- American Poetry
- Introduction to Fiction
- American Prose
- World Masterpieces
- Masterpieces of the Cinema
- Introduction to Theater
- British Writers

Philosophy

- Ethics
- History of Ancient Philosophy
- Introduction to Philosophy
- Logic
- Philosophy of Current Civilization
- Philosophy of Religion

Foreign Language

- Intermediate Spanish I and / or II
- Intermediate French I and / or II
- Intermediate German I and / or II
- Intermediate Russian I and / or II

4. Science and Mathematics 9 hours
(must include one course from a lab science and one from mathematics)

The mathematics requirement will be satisfied by any of the following courses: College Algebra, Trigonometry, Statistics, Analytic Geometry-Calculus I or Calculus I.

The science requirement will be satisfied by any of the following:

Physical Science

- Astronomy
- Engineering Physics I

- Engineering Physics II
- General Chemistry I Lecture and Lab
- General Chemistry II Lecture and Lab
- General Geology
- General Physics I
- General Physics II
- Global Resources Geological / Economic Viewpoints
- Historical Geology
- Introduction to Quantitative Analysis
- Physical Geography and Lab
- Physical Science
- Principles of Chemistry
- Principles of Organic Chemistry

Life Science

- Biology of Organisms
- Environmental Science and Lab
- General Botany
- General Zoology
- Human Anatomy
- Human Anatomy and Physiology
- Human Physiology
- Life Science
- Microbiology and Lab
- Principles of Biology and Lab

5. Health and / or Physical Education 1 hour

This requirement will be satisfied by any of the physical education activity courses, Sports Officiating and by any beginning-level equestrian riding course. It will also be satisfied by any of the following:

- CPR I-Basic Rescuer
- Nutrition and Meal Planning
- Introduction to Physical Development
- Lifetime Fitness
- Individual Lifetime Sports
- Personal and Community Health
- First Aid and CPR
- Fundamentals of Athletics

Career programs offering an associate of arts degree are:
Administration of Justice
Nursing

This is the degree that will be earned by most students transferring to four-year colleges and universities.

ASSOCIATE OF SCIENCE DEGREE

The 64 hours of credit necessary to complete the associate of science degree shall include the following general education distribution requirements:

Communications	6 hours
Social Science and/or Economics	3 hours
Humanities and/or Art	3 hours
Science and Mathematics	12 hours
Health and Physical Education	1 hour

Specific courses that meet the associate of science degree requirements are as follows.

1. Communications 6 hours
Must include Composition I and one of the following courses: Composition II, Technical Writing, Business Communications, Public Speaking, Interpersonal Communications or Personal Communication.
2. Social Science and/or Economics 3 hours
One course from any of the following categories may count toward the three required hours.

Economics

Basic Economics
Economics I
Economics II
Global Resources Geological/Economic Viewpoints

Political Science

American National Government
International Relations
Introduction to Comparative Government
Introduction to Political Science
State and Local Government

Psychology

Applied Psychology
Introduction to Psychology

Sociology

Social Problems
Marriage and Family
Sociology

Anthropology

Cultural Anthropology
Physical Anthropology
World Cultures

3. Humanities and/or Art 3 hours
One course from any of the following categories may count toward the three required hours.

Humanities and Art

Introduction to Art History
Modern Art History
Comparative Cultures

Introduction to Humanities
Introduction to Jazz Listening
Introduction to Music Listening
History of Photography
Issues of Contemporary Photography
Civilisation

History

European History
Local and Kansas History
Modern Russian History
U.S. History to 1877
U.S. History since 1877
Western Civilization I
Western Civilization II
Eastern Civilization

Literature/Theater

American Poetry
Introduction to Fiction
American Prose
World Masterpieces
Masterpieces of the Cinema
Introduction to Theater
British Writers

Philosophy

Ethics
History of Ancient Philosophy
Introduction to Philosophy
Logic
Philosophy of Current Civilization
Philosophy of Religion

Foreign Language

Intermediate Spanish I and/or II
Intermediate French I and/or II
Intermediate German I and/or II
Intermediate Russian I and/or II

4. Science and Mathematics 12 hours
(must include one course in mathematics and one in a lab science)

The mathematics requirement will be satisfied by any mathematics course except Fundamentals of Mathematics, Introduction to Algebra and Intermediate Algebra.

The laboratory science requirement will be satisfied by any of the following:

Life Science

Biology of Organisms
Principles of Biology and Lab
Life Science
General Botany
Environmental Science and Lab
Human Anatomy

Human Anatomy and Physiology
 Human Physiology
 Microbiology and Lab
 General Zoology
Physical Science
 Astronomy
 Engineering Physics I
 Engineering Physics II
 General Chemistry I Lecture and Lab
 General Chemistry II Lecture and Lab
 General Geology
 General Physics I
 General Physics II
 Global Resources Geological/Economic Viewpoints
 Historical Geology
 Introduction to Quantitative Analysis
 Physical Geography and Lab
 Physical Science
 Principles of Chemistry
 Principles of Organic Chemistry
 Technical Physics I
 Technical Physics II

Any remaining hours in this requirement beyond the one math and one lab science requirement may be satisfied by taking additional courses from the above list of approved math and lab science courses or by any course on the approved associate of arts degree list in this catalog with the addition of Pathophysiology and General Nutrition, or Energy Alternatives (a technology option).

5. Health and/or Physical Education 1 hour
 Recommendation: This requirement will be satisfied by any of the physical education activity courses, Sports Officiating and by any beginning-level equestrian riding course. It will also be satisfied by any of the following:
 CPR I-Basic Rescuer
 Nutrition and Meal Planning
 Introduction to Physical Education
 Lifetime Fitness
 Individual Lifetime Sports
 Personal and Community Health
 First Aid and CPR
 Fundamentals of Athletics

The associate of science degree is awarded **only** for the following career programs:

Biomedical Equipment Technology
 Electronics Engineering Technology
 Civil Engineering Technology
 Computer Systems Technology
 Dental Hygiene
 Drafting Technology
 Civil Option

Machine Option
 Fire Prevention
 Fire Protection
 Mobile Intensive Care Technician
 Nursing
 Pre-Engineering
 Respiratory Therapy

Additional programs may offer the associate of science degree in the future. Consult a counselor for questions about particular program degree requirements.

ASSOCIATE OF APPLIED SCIENCE DEGREE

The 64 hours of credit necessary to complete the associate of applied science degree shall include the following general education distribution requirements:

Communications	3 hours
Social Science and/or Economics	3 hours
Humanities and/or Art	3 hours
Science and/or Mathematics	3 hours
Health and/or Physical Education	1 hour

Specific courses that meet the associate of applied science degree requirements are as follows:

1. Communications 3 hours
 Composition I
2. Social Science and/or Economics 3 hours
 Recommendation: One course from any of the following categories may count toward the three required hours.

Economics

Basic Economics
 Economics I
 Economics II
 Global Resources Geological/Economic Viewpoints

Political Science

American National Government
 International Relations
 Introduction to Comparative Government
 Political Science
 State and Local Government

Psychology

Applied Psychology
 Introduction to Psychology

Sociology

Social Problems
 Marriage and Family
 Sociology

Anthropology

Cultural Anthropology
 Physical Anthropology
 World Cultures

3. Humanities and/or Art 3 hours
One course from any of the following categories may count toward the three required hours.

Humanities and Art

Introduction to Art History
Modern Art History
Comparative Cultures
Civilisation
Introduction to Humanities
Introduction to Jazz Listening
Introduction to Music Listening
History of Photography
Issues of Contemporary Photography

History

European History
Local and Kansas History
Modern Russian History
U.S. History to 1877
U.S. History since 1877
Western Civilization I
Western Civilization II
Eastern Civilization

Literature/Theater

American Poetry
Introduction to Fiction
American Prose
World Masterpieces
Masterpieces of the Cinema
Introduction to Theater
British Writers

Philosophy

Ethics
History of Ancient Philosophy
Introduction to Philosophy
Logic
Philosophy of Current Civilization
Philosophy of Religion

Foreign Language

Intermediate Spanish I and/or II
Intermediate French I and/or II
Intermediate German I and/or II
Intermediate Russian I and/or II

4. Science and/or Mathematics 3 hours
Any mathematics course except Fundamentals of Mathematics will satisfy this requirement.

The science requirement will be satisfied by any of the following courses.

Physical Science

Astronomy
Engineering Physics I
Engineering Physics II

General Chemistry I Lecture and Lab
General Chemistry II Lecture and Lab
General Geology
General Physics I
General Physics II
Global Resources Geological/Economic Viewpoints
Historical Geology
Introduction to Quantitative Analysis
Physical Geography and Lab
Physical Science
Principles of Chemistry
Principles of Organic Chemistry

Life Science

Biology of Organisms
Environmental Science and Lab
General Botany
General Zoology
Human Anatomy
Human Anatomy and Physiology
Human Physiology
Life Science
Microbiology and Lab
Principles of Biology and Lab

5. Health and/or Physical Education 1 hour

Recommendation: This requirement will be satisfied by any of the physical education activity courses, Sports Officiating and by any beginning-level equestrian riding course. It will also be satisfied by any of the following:

CPR I-Basic Rescuer
Nutrition and Meal Planning
Introduction to Physical Education
Lifetime Fitness
Individual Lifetime Sports
Personal and Community Health
First Aid and CPR
Fundamentals of Athletics

An associate of applied science degree is awarded by JCCC or a cooperative college for the following career programs:

Accounting
Animal Health Technology
Automotive Technology
Business Management
Chef Apprenticeship
Commercial Art
Data Processing
Energy Technology
Equine Studies
Fashion Merchandising

Fire Protection Administration
 Hospitality Management
 Information / Word Processing
 Interior Merchandising
 Interpreter Training
 Manufacturing Technology
 Marketing and Management
 Medical Records Technology
 Occupational Therapy Technology
 Paralegal
 Physical Therapy Technology
 Radiologic Technology
 Respiratory Therapy
 Secretarial Careers
 Administrative Office Management
 Legal Secretary
 Medical Secretary
 Secretarial Science



CERTIFICATE OF COMPLETION

To earn a certificate of completion at Johnson County Community College a student must have demonstrated the basic skills competencies as outlined. In addition, the student must successfully complete an approved certificate program with a cumulative grade of 2.0 or better. All credit hours must be earned in residence. Exceptions to this policy may be authorized by the dean of Student Services. All appeals must be in writing. The student must be enrolled at the College during the time he or she anticipates completing cer-

tificate requirements. An application to complete certificate requirements must be filed in the Admissions & Records Office.

Specific course completion certificates will be awarded as appropriate and as specified in the College catalog.

Approved Certificate Programs are:

Vocational Certificates

Advanced Data Processing
 Computer Applications Technology
 Data Processing Mini / Micro
 Emergency Medical Technician
 Automotive Repair Mechanic
 Mobile Intensive Care Technician
 Office Automation Technology
 Secretarial

Postsecondary Certificates

Automated Manufacturing
 Emergency Services Dispatcher
 Energy Technology
 Fire Prevention
 Fire Protection
 Hospitality Management
 Manufacturing Technology-Supervisory Option
 Metal Fabrication
 Paralegal

GRADUATION WITH HONORS

A student who earns a cumulative grade point average of 3.5 or higher in all college credit courses completed will be graduated with honors or awarded a certificate with honors.

COMMENCEMENT EXERCISES

Diplomas and certificates will be awarded to students who have successfully completed their program requirements. These awards will be issued at the end of each semester or term. Commencement will be held only once a year in May. Students who have completed degree or certificate requirements in prior semesters or terms will be invited to participate in commencement exercises.

PROGRAMS OF STUDY



Transfer Programs

Individual Transfer Programs
University Transfer Programs
For Undecided Majors
Courses For Undecided Majors

University Transfer Programs

Transfer Information
Honors Program
International Education

Travel-For-Credit

Study Abroad
Courses By Televisio
Career Programs

TRANSFER PROGRAMS

Johnson County Community College is fully accredited by the North Central Association of Colleges. Credits are therefore accepted by most colleges and universities in the United States. Even though most courses at JCCC transfer to most colleges and universities, students should consult with a JCCC counselor to be sure the courses are applicable to the degree they are seeking.

JCCC offers the first two years of most college baccalaureate degree programs. Students can attend JCCC for their first two years, earn an associate of arts degree and then transfer to a four-year institution without loss of time or credit. Students can do this by following a transfer program. There are three types of transfer programs: the Individual Transfer Program, the University Transfer Program for Undecided Majors and the University Transfer Program.

Individual Transfer Program

Students who plan to attend a four-year college or university, which is not local or choose a major not listed under local University Transfer Programs may work with a counselor to develop their own Individual Transfer Program. Examples include degrees such as:

- Administration of Justice
- Agricultural Engineering
- Atmospheric Science
- Pre-Chiropractic
- Geology
- Geophysics
- Industrial Engineering
- Pre-Optometry

University Transfer Program for Undecided Majors

Students who are planning to transfer, but have not decided upon a major or chosen a four-year school, should select courses from the general education requirement areas as illustrated in the Sample Four-Year Program. These courses will come from the five divisions listed on the following pages. The number of courses required in each division will depend on the four-year college or university.

Generally 124-128 hours total are required for most degrees.

Students who are still undecided about a major in their second year should work closely with a counselor to assist in their decision-making and enable them to transfer without loss of time or credit.

Course Suggestions for Undecided Majors

Communications (three-four courses)

ENGL 121 Composition I 3
 ENGL 122 Composition II 3

The next three-six hours could be speech and/or literature depending on your major.

SPD 120 Interpersonal Communications 3
 SPD 121 Public Speaking 3
 SPD 125 Personal Communication 3

Composition II is a prerequisite for the following literature and composition courses:

ENGL 222 Advanced Composition 3
 ENGL 230 Introduction to Fiction 3
 ENGL 231 American Writers 3
 ENGL 232 Children's Literature 3

SAMPLE FOUR-YEAR PROGRAM

Freshman-Sophomore Years

60-64 hours may be taken at JCCC	General Education Requirements						
	English	Speech	Foreign Language (B.A. degrees)	Human- ities	Social Science	Mathe- matics	Science (Lab)

Junior-Senior Years

Remaining 60-64 hours are taken at a four-year school	Courses taken in major field		Upper division courses not in major field	Electives

ENGL 241	British Writers	3
ENGL 243	Literature of Science Fiction	3
ENGL 250	World Masterpieces	3
ENGL 252	Poetry and Drama	3
ENGL 254	Masterpieces of the Cinema	3

Some degrees (B.A.) may require a foreign language. JCCC offers four semesters/ 16 hours each of Spanish, French and German. Two semesters of Russian are offered and two semesters of Italian, Chinese and Japanese.

FL 120	Elementary German I	5
FL 130	Elementary Spanish I	5
FL 140	Elementary French I	5
FL 150	Elementary Russian I	5
FL 160	Elementary Italian I	5
FL 165	Elementary Chinese I	5
FL 170	Elementary Japanese I	5

Mathematics (one course)

At least one math course usually is required. If you are unsure of your skills, take the Math Assessment Test in the Testing Center to determine proper course selection.

MATH 171	College Algebra	3
MATH 172	Trigonometry	3
MATH 231	Calculus I	3
MATH 241	Analytic Geometry-Calculus I	5

Humanities (two-three courses)

You may use literature courses as humanities credits.

HUM 122	Introduction to Humanities	3
HUM 133	Comparative Cultures	3
HUM 144	Introduction to Art History	3
HUM 147	Modern Art History	3
MUS 121	Introduction to Music Listening	3
MUS 125	Introduction to Jazz Listening	3
PHIL 121	Introduction to Philosophy	3
PHIL 132	Logic	3
PHIL 143	Ethics	3
PHIL 165	Philosophy of Current Civilizations	3
PHIL 176	Philosophy of Religion	3
HIST 120	Local and Kansas History	3
HIST 125	Western Civilization I	3
HIST 126	Western Civilization II	3
HIST 130	European History from 1750	3
HIST 135	Eastern Civilization	3
HIST 140	U.S. History to 1877	3
HIST 141	U.S. History since 1877	3
HIST 160	Modern Russian History	3
THEA 120	Introduction to Theater	3

Social Sciences (two-three courses)

History courses will transfer as social science credits to some schools.

ANTH 125	Cultural Anthropology	3
ANTH 126	Physical Anthropology	3
ANTH 130	World Cultures	3
SOC 122	Sociology	3
SOC 125	Social Problems	3
SOC 131	Marriage and Family	3
PSYC 130	Introduction to Psychology	3
PSYC 215	Child Development *	3
PSYC 220	Social Psychology *	3
PSYC 230	Personality Theory *	3
POLS 122	Political Science	3
POLS 124	American National Government	3
POLS 126	State and Local Government	3
POLS 135	International Relations	3
ECON 230	Economics I	3
ECON 231	Economics II	3

Natural Sciences (two-three courses)

All schools require at least one lab science. Some majors require both a biological and a physical science.

Biological Sciences

BIOL 120	Life Science (AVT Lab incl.)	4
OR		
BIOL 122	Principles of Biology	3
BIOL 123	Principles of Biology Lab	1
BIOL 125	General Botany	5
BIOL 127	General Zoology	5
BIOL 130	Environmental Science	3
BIOL 131	Environmental Science Lab	1
BIOL 140	Human Anatomy	4
BIOL 144	Human Anatomy/Physiology	5
BIOL 150	Biology of Organisms *	5
BIOL 205	General Genetics (no lab)	3
BIOL 225	Human Physiology *	4
BIOL 230	Microbiology *	3
BIOL 231	Microbiology Lab *	2

Physical Science

CHEM 122	Principles of Chemistry	5
CHEM 124	General Chemistry I *	4
CHEM 125	General Chemistry I Lab *	1
PHYS 130	General Physics I *	5
PHYS 220	Engineering Physics I *	5
PSCI 120	Physical Science (AVT Lab incl.)	4
PSCI 122	Astronomy	4
PSCI 130	General Geology	5
PSCI 132	Historical Geology	5
PSCI 140	Physical Geography	3
PSCI 141	Physical Geography Lab	2

* Check a JCCC catalog for prerequisites

The following is an example of a first-year program plan for a liberal arts transfer student. Students interested in architecture, fine arts, engineering, science or medicine should talk with a JCCC counselor.

First Semester	Credits
Composition I	3
Social Science Elective	3
Math/Natural Science Elective	5
Humanities Elective	3
General Elective	3
	17

Second Semester	Credits
Composition II	3
Speech Elective	3
Math/Natural Science Elective	5
Social Science/Humanities Elective	3
General Elective	3
	15-17

UNIVERSITY TRANSFER PROGRAMS

Copies of university transfer programs are available in the Counseling Center for the following majors:

Accounting
Architecture
Art
Business Administration
Clothing and Textiles
Computer Science
Dietetics
Education
 Elementary
 Secondary
 Music
Engineering
 Aerospace
 Chemical
 Civil
 Construction Science
 Electrical
 Engineering Management
 Engineering Mechanics
 Metallurgical
 Mining
 Nuclear
 Petroleum
Engineering Technology
Forestry
Hotel and Restaurant Management
Information Systems
Interior Design
Journalism

Music
Nursing
Occupational Therapy
Pharmacy
Physical Education
Physical Therapy
Pre-Chiropractic
Pre-Medicine
Pre-Veterinary
Respiratory Therapy
Social Welfare
Visual Communications

General Education Requirements for area four-year colleges and universities are also available in the Counseling Center.

These programs are updated and approved annually by these four-year colleges and universities:

Avila College	Southwest Missouri State University
Baker University	University of Kansas
Central Missouri State University	St. Mary College
Cleveland Chiropractic College	University of Missouri – Columbia
Emporia State University	University of Missouri – Kansas City
Gallaudet University	University of Missouri – Rolla
Kansas City Art Institute	Washburn University
Kansas State University	Webster University
MidAmerica Nazarene College	Wichita State University
Park College	William Jewell College
Pittsburg State University	
Rockhurst College	

Since the four-year schools do change degree requirements, students are encouraged to check periodically for updates in the Counseling Center. Students should realize that not all majors are available at all colleges.

TRANSFER INFORMATION

The JCCC Counseling Center serves as a resource for students who are planning to transfer. The counselors are available to work with students in planning their academic program and assisting them in making decisions for a successful transfer. Students can find the following information in the Counseling Center:

- Transfer programs for different majors at area colleges – check these sheets periodically for updates
- General information about tuition, financial aid and housing
- Course equivalencies between some four-year colleges and JCCC

- University and college catalogs
- Admissions guides
- Applications to some four-year colleges
- Undergraduate and graduate studies guides
- Financial aid and scholarship catalogs
- Transfer Information Bulletin Board
- Dates of visits from college admissions representatives
- Dates of visits for JCCC transfer students to four-year colleges
- Transfer scholarships available for JCCC students

HONORS PROGRAM

The Honors Program curriculum is designed to stimulate and challenge academically talented students. Students who have the talent and motivation will develop their potential intellectually as college students and as members of their community.

The Components of the JCCC Honors Program

Honors Contracts

Each academic division of Johnson County Community College offers pre-selected courses that can be taken for honors on a contract basis. These contracts permit students to earn one or two hours of additional credit for which additional work is required. For mentor-student tutorials, work might include additional reading and writing, expanded field or lab work, an honors term project, assigned work associated with the Honors Forum and other assignments.

Honors Forum

The Honors Forum focuses on a current issue that affects the local, national and global communities. It complements other courses in the curriculum by combining an emphasis on both specific content and skill development in interaction, analysis, synthesis and conflict resolution. In this course, the process of reflecting, researching, analyzing and evaluating is as important as the content per se. As points of view concerning the issue are developed, the students must articulate and defend these as they are challenged by others and make judgments among alternative options. Regionally and nationally recognized speakers will interact specifically with the students from this course, as well as present seminars/lectures to the campus at large.

Interdisciplinary Courses

At least one interdisciplinary course will be offered each semester. These courses will cover a broad area of

knowledge and center on inquiry, discovery, critical thinking and discussion methods that stress student participation. Students will be asked to read primary and secondary sources, take initiative in course-related activities, use analytical and evaluative skills and complete an honors term project.

Admission

Proof of academic excellence is the first step to acceptance in the Honors Program. Students must submit an application by presenting an official transcript showing proof of having a 3.5 high school GPA; or a 3.5 college GPA for the most recent year of college. Other proofs of academic excellence may be a 25 composite on the ACT test, or a 1110 composite on the SAT, or equivalent score on a standardized test within the last five years. A student may also provide evidence that indicates the ability to do honors work, such as creative writing, demonstrated research skills, endorsement letters, or artistic skills as shown in a portfolio.

Students may enter the JCCC Honors Program at any level of their college career. Students in the program are expected to maintain a GPA of approximately 3.5 to remain part of the program. However, it is recognized that occasionally a student will have personal or academic problems during a semester that may cause a drop in the GPA. GPA/Credit Hours guidelines will be used to determine continuing eligibility in the program.

Scholarships

All students enrolled in one or more Honors Contracts will receive a scholarship for the amount of the tuition and fees for the Honors Contract part of that course. Honors Students will be given scholarship help in the Honors Forum and Interdisciplinary courses, too. Students who are transferring to a four-year college and are involved in the JCCC Honors Program will be given assistance in securing scholarships at the four-year institution. All courses successfully completed under the Honors Program will have both the letter grade and honors credit noted on the transcript.

INTERNATIONAL EDUCATION

International education at JCCC spans the entire range of College activities from credit and non-credit courses and independent study to travel-for-credit. It has even touched the athletic events at the College — JCCC has hosted Asian basketball and baseball teams.

The curriculum reflects the international education effort with classroom instruction offered in Spanish, French, German, Russian, Italian, Chinese and Japanese. In addition, international approaches are

evident in courses in sociology, social problems, anthropology, history, political science, international relations and in some business and economics courses.

As a part of the international relations program JCCC maintains a sister college relationship with two colleges in Taiwan: the Taichung Institute of Commerce and the Taiwan Academy of Arts. An active faculty exchange program brings professionals from other countries to JCCC classrooms.

TRAVEL-FOR-CREDIT

In a travel-for-credit class, students may earn from one to four credits while pursuing special interests through guided travel, reading and instruction. Travel is carefully planned and supervised by instructors. A list of travel-for-credit courses offered each semester is available in the Credit Class Schedule.

STUDY ABROAD

Through the College Consortium for International Studies, JCCC students have an opportunity to study in any one of 17 countries for a semester or a year. Programs exist in countries in Europe, Latin America, the Middle East and Asia and focus on liberal arts, business, performing and visual arts. Eligibility and fees vary with the country. The deadline for application for the spring semester is Nov. 1. For the fall semester, applications are due in March. For additional information, contact the Coordinator of International Education.

COURSES BY TELEVISION

Each semester JCCC offers telecourses which make it possible to earn college credit in the home. Non-credit telecourses are also offered. Each lesson is shown several times a week – students pick the most convenient time. If a lesson is missed, it can be viewed on a videotape in the JCCC library or video (VHS only) tape cassettes can be rented to view at home.

Students need not come to campus except for a few scheduled class meetings and for exams administered in the Testing/Assessment Center.

Students may apply college credits earned through telecourses to the associate degree program and in most cases these credits will transfer to other colleges. Students may be either full- or part-time and there is no limit to the number of telecourses that may be taken.

It is only natural to be apprehensive about learning out of the classroom. But if you are self-disciplined and have the ability to learn without supervision there should be no problems. If a student has questions

during the semester, a JCCC instructor is just a phone call away.

JOHNSON COUNTY AREA VOCATIONAL TECHNICAL SCHOOL

The Johnson County Area Vocational Technical School consists of educational centers in Olathe and Shawnee Mission and at Johnson County Community College, offering vocational training for county residents. Through cooperation and planning, these three centers provide high-school and post-high-school vocational courses and programs to more than 5,000 Johnson County residents. For information about Johnson County Area Vocational Technical School courses, program offerings or financial aid, call or write:

Olathe Center

311 E. Park

Olathe, Kan. 66061

(913) 782-2456

Shawnee Mission Center

6701 W. 83rd Street

Shawnee Mission, Kan. 66204

(913) 642-3130

Johnson County Community College

12345 College at Quivira

Overland Park, Kansas 66210-1299

(913) 469-3863

CAREER PROGRAMS

JCCC's career programs provide students the opportunity to study specific careers and enter the job market directly.

Each program has been designed with the assistance of a community advisory committee of men and women currently working in the field who are well aware of the requirements – and job potential – in today's market.

Although career curricula are not intended to be transfer programs, some of the courses will transfer to four-year colleges and universities. Specific information on course transferability can be found in the Counseling Center. Several of the career programs enable the student to gain valuable work experience in the community while taking the career program courses.

If you are interested in a career program, contact a JCCC counselor for more information. Counselors can assist students with entrance requirements, course selection and sequence, and job possibilities. Careful planning and course selection can be just as important in a career program as dedication in the classroom.

Career Program Descriptions

Career programs are described in detail on the following pages, and in the career brochures available in the Counseling Center. Students are encouraged to see a counselor before enrolling.

Most of JCCC's career programs can be completed in two years or less; however, some may require a longer period of time. The career programs now offered are:

Accounting
 Administration of Justice:
 Law Enforcement Option
 Corrections Option
 Animal Health Technology
 Automotive Technology
 Aviation Maintenance Technology:
 Air Frame Option
 Power Plant Option
 Biomedical Equipment Technology
 Business Administration
 Chef Apprenticeship
 Civil Engineering Technology
 Commercial Art
 Computer Systems Technology
 Data Processing
 Dental Hygiene
 Drafting Technology:
 Civil Option
 Machine Option
 Electronic Engineering Technology
 Emergency Medical Science:
 Mobile Intensive Care Technician (MICT)
 Energy Technology
 Equine Studies
 Fashion Merchandising
 Fire Science:
 Fire Prevention Option
 Fire Protection Option
 Fire Protection Administration Option
 Hospitality Management
 Information / Word Processing
 Interior Merchandising
 Interpreter Training
 Manufacturing Technology
 Marketing and Management
 Medical Records Technology
 Nursing
 Occupational Therapy Assistant
 Paralegal
 Physical Therapy Assistant
 Radiologic Technology
 Respiratory Therapy
 Secretarial Careers:
 Administrative Office Management Option

Legal Secretary Option
 Medical Secretary Option
 Office Management Option
 Secretarial Science Option

ACCOUNTING

Accounting is a crucial part of every business operation. The job outlook according to the U.S. Bureau of Labor Statistics is better than average. There are jobs available for two-year graduates, such as bookkeeping and accounting clerks.

The associate of applied science degree program is designed for the student with no plans to transfer. This program focuses on practical skills often required for entry-level paraprofessional positions. It features field study courses in which the student gains on-the-job experience working in an approved business. If the student is interested in transferring to a four-year institution, the accounting program provides a curriculum of courses that will transfer and does not include on-the-job training. Students are asked to contact a counselor before beginning the associate of applied science degree program.

Associate of Applied Science Degree

<i>First Semester</i>		CR
ENGL 121	Composition I	3
	Social Science and/or Economics	
	Elective	3
ACCT 121	Accounting I	3
MATH 120	Business Math	3
SEC 101	Keyboarding	1
SEC 135	Electronic Calculators	1
	Business Electives	3
	TOTAL CREDIT HOURS	17

<i>Second Semester</i>		
ACCT 122	Accounting II	3
BUS 150	Business Communication	3
BUS 261	Business Law I	3
	Business Electives	3
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	15

<i>Third Semester</i>		
ACCT 231	Intermediate Accounting I	3
	OR	
ACCT 222	Managerial Accounting	3
CPCA 105	Introduction to Personal Computing	1
ACCT 278	Accounting Internship I	1
ACCT 272	Field Study: Human Relations	2
CPCA 110	Spreadsheets on Microcomputers I	1
	Business Electives	7
	TOTAL CREDIT HOURS	15

Fourth Semester

HPER	Health and/or Physical Education Elective	1
ACCT 221	Cost Accounting	3
	OR	
ACCT 232	Intermediate Accounting II	3
	OR	
ACCT 115	Accounting for Non-Profit Organizations	3
ACCT 131	Federal Income Taxes I	3
ACCT 274	Field Study Accounting Seminar	3
CPCA 114	Databases on Microcomputers I	1
	Business Electives	6
	TOTAL CREDIT HOURS	17
	TOTAL PROGRAM CREDIT HOURS	64

**ADMINISTRATION
OF JUSTICE/
LAW ENFORCEMENT**

More than 1 million people are employed in the administration of justice/law enforcement fields in the United States. Employment opportunities are expected to grow as fast or slightly faster than average for all occupations in the field through the 1990s.

JCCC's Administration of Justice/Law Enforcement program provides students the opportunity to specialize in law enforcement, corrections or investigations. Successful completion of 64 hours of credit in this two-year program leads to an associate of arts degree. Students should contact a counselor when developing a program plan.

Associate of Arts Degree

First Semester

		CR
ENGL 121	Composition I	3
	Social Science Course *	3
ADMJ 121	Introduction to Administration of Justice **	3
ADMJ 124	Criminal Justice System	3
ADMJ 127	Criminology	3
	TOTAL CREDIT HOURS	15

Second Semester

ENGL 122	Composition II	3
	Social Science Course *	3
ADMJ 133	Juvenile Delinquency	3
ADMJ 136	Police and the Public	3
ADMJ 140	Constitutional Case Law **	3
	TOTAL CREDIT HOURS	15

Third Semester

ADMJ 154	Fundamentals of Criminal Investigation	3
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PHIL 143	Ethics	3
ADMJ 141	Criminal Law **	3
SPD 120	Interpersonal Communication	3
	Science and/or Mathematics Electives	6
	TOTAL CREDIT HOURS	18

Fourth Semester

Humanities Course	3	
(Cannot be a philosophy course)		
Science and/or Mathematics Elective	3	
HPER	Health and/or Physical Education Elective	1
ADMJ	Program Electives	9
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	64

**Required Program Electives
(9 hours — any three courses)**

ADMJ 130	Crime Prevention	3
ADMJ 145	Fundamentals of Private Security	3
ADMJ 146	Retail Security	3
ADMJ 148	Family Violence and Sexual Abuse	3
ADMJ 157	Patrol Procedures	3
ADMJ 164	Supervisory Techniques	3
ADMJ 166	Police Organization and Management	3
ADMJ 221	Introduction to Criminalistics	3
ADMJ 225	Defensive Tactics for Police **	3
ADMJ 281	Readings in Police Science	3

* You must take two courses from the following list, but not more than one course from each group may count toward the required six hours:

- Group 1:
American National Government
State and Local Government
- Group 2:
Introduction to Psychology
- Group 3:
Social Problems or Sociology

** If you are certified under the Kansas Law Enforcement Training Act, you are eligible to receive Experience-Based Education credit for some or all of these courses.

**Correctional Services Option
Offered at Longview Community College**

Through a cooperative agreement with Longview Community College, you may take all or some of your nine program elective credits in Correctional Services. The following courses are taught at Longview. Contact a JCCC Counselor for information about enrolling.

KADJ 185	Principles of Correction	3
KADJ 186	Correctional Psychology	3



KADJ	188	Principles of Residential Youth Care	3
KADJ	191	Corrections in the Community	3
KADJ	192	Correctional Administration	3
KADJ	193	Communications and Management Techniques with Children and Youth	3
KADJ	194	Human Services Practicum I	3
KADJ	261	Human Services Practicum II	3

Emergency Services Dispatcher

Postsecondary Certificate

ADMJ	124	Criminal Justice System	3
ADMJ	136	Police and the Public	3
ADMJ	157	Patrol Procedures	3
ADMJ	271	Emergency Dispatcher Field Study	3
ENGL	121	Composition I	3
ENGL	122	Composition II	3
PSYC	130	Introduction to Psychology	3
SEC	110	Beginning Typing *	3
SEC	122	Intermediate Typing	3
SEC	136	Records Management	3
		MATH Elective (MATH 115 or higher)	3
		TOTAL CREDIT HOURS	33

* If you can demonstrate proficiency of 35 wpm corrected, you may substitute another course.

ANIMAL HEALTH TECHNOLOGY

A person with a background in animal health technology can expect to find employment opportunities in laboratory care and pharmaceutical animal colonies, assisting a veterinarian in providing professional services and in performing office routines.

JCCC's Animal Health Program is offered in cooperation with the Animal Health Technology Program at Maple Woods Community College. Students will study sanitation and animal care, the preparation of animals for surgery and anesthetic management. They also will perform lab work and use radiologic techniques. The program features a supervised intensive clinical study under the direction of a veterinarian. Students must be accepted into the program by both JCCC and Maple Woods Community College.

Associate in Applied Science Degree (Degree granted by Maple Woods)

First Semester		CR	
KSAH	100	Introduction to Small Animal Technology	2
KSAH	101	Principles of Animal Science I	3
BIOL	127	General Zoology	5
ACCT	111	Small Business Accounting	3
ENGL	121	Composition I	3
KSAH	108	Clinical Mathematics	1
		TOTAL CREDIT HOURS	17

Second Semester

KSAH	110	Principles of Animal Science II	3
KSAH	111	Sanitation and Animal Care	2
KSAH	120	Clinical Pathological Technology I	4
CHEM	122	Principles of Chemistry	5
SPD	120	Interpersonal Communications	3
		TOTAL CREDIT HOURS	17

Summer

KSAH	214	Animal Health Internship	6
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Third Semester

KSAH	200	Animal Hospital Technology I	3
KSAH	202	Animal Technology Anatomy	5
KSAH	212	Large Animal Technology	4
BIOL	230	Microbiology	3
BIOL	231	Microbiology Lab	2
		TOTAL CREDIT HOURS	17

Fourth Semester

KSAH	203	Laboratory Animal Technology	2
KSAH	209	Equine Medicine and Management	3
KSAH	210	Animal Hospital Technology II	3
KSAH	211	Clinical Pathological Technology II	5
KSAH	213	Radiology and Electronic Procedures	2
		American Constitution Option *	3
		TOTAL CREDIT HOURS	18
		TOTAL PROGRAM CREDIT HOURS	75

* All graduates from Maple Woods must meet the constitution requirements. See your JCCC counselor about courses.

AUTOMOTIVE TECHNOLOGY

The two-year associate of applied science degree plan concentrates on a theoretical background in diagnosis and tune-up, chassis, electrical and hydraulic systems, automatic transmissions, engines and emissions. Students will work on developing skills needed to advance to a supervisory position, including dealing directly with customers, estimating materials and labor costs and directing the work of others.

The one-year certificate program is specifically designed for those who wish to enter the field as technicians, service writers or in other related positions. In this program, troubleshooting will be emphasized as well as welding, diagnosis and tune-up, chassis, electrical and hydraulic systems, automatic transmissions, engines (including diesels), air conditioning and emission controls. With the completion of one or both of the certificate programs, students will have obtained a well-rounded background in minor repair and/or major repair required for most dealership service personnel.



Associate of Applied Science Degree

First Semester

CR

AUTO 125	Introduction to Auto Shop Practices . . .	3
AUTO 160	Auto Engines I	3
MATH 120	Business Math I	3
ENGL 121	Composition I	3
	Social Science and/or Economics Elective	3
	TOTAL CREDIT HOURS	15

Second Semester

AUTO 163	Auto Align, Brakes and Drivetrain	4
AUTO 255	Auto Carburetion, Diesel and Fuel Injection	4
MFAB 121	Introduction to Welding	3
ENGL 123	Technical Writing I	3
BUS 141	Principles of Management	3
	TOTAL CREDIT HOURS	17

Third Semester

AUTO 150	Auto Transmissions and Transaxles . . .	4
AUTO 222	Auto Starting, Charging and Ignition	3
AUTO 242	Service Management and Techniques I	7
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	17

Fourth Semester

AUTO 230	Auto A/C, Lighting and Power Accessories	4
AUTO 244	Service Management and Techniques II	7
	Health and/or Physical Education Elective	1
	Technical Electives	3-4
	TOTAL CREDIT HOURS	15-16

TOTAL PROGRAM

CREDIT HOURS 64-65

Technical Elective:

AUTO 271	Auto Technology Cooperative Education	3
AUTO 121	Small Engine Service	3
MATH 133	Technical Math I	4
PHYS 125	Technical Physics I	4

Automotive Vocational Certificate Program

The Automotive Certificate Program is constructed to meet the needs of today's beginning and experienced auto mechanics. With the completion of the certificate program, the student will have a well-rounded background in repair required for dealership service personnel. If the student completes the course(s) with a grade of C or higher grade, he or she will qualify for one or all eight of the ASE Certification tests. Most automotive trades expect applicants to pass one or more of the ASE tests enabling them to qualify for technical positions in service repair.

Prior to Admission		CR
AUTO 125	Introduction to Auto Shop Practices . . . 3 OR completion of basic auto course OR one year of basic experience in the automotive field MATH 111 OR appropriate score on math assessment test	
AUTO 150	Automatic Transmissions and Transaxles 4	
AUTO 160	Automotive Engines I 3	
AUTO 163	Automotive Alignment, Brakes and Drivetrain 4	
AUTO 222	Auto Starting, Charging and Ignition . 3	
AUTO 230	Automotive Air Conditioning, Lighting, and Power Accessories 4	
AUTO 255	Auto Carburetion, Diesel and Fuel Injection 4	
MFAB 121	Introduction to Welding 3	
	TOTAL CREDIT HOURS 25	

AVIATION MAINTENANCE TECHNOLOGY

The Aviation Maintenance Technology Program is approved by the Federal Aviation Administration, and prepares the student to sit for the FAA Airframe Mechanic Examination, the FAA Powerplant Mechanic Examination or both.

The program is not intended to prepare students for transfer to a four-year institution.

JCCC's Aviation Maintenance Technology Program is offered in cooperation with Maple Woods Community College. Enrollment in this program is limited, and students must apply and be accepted into the program by both JCCC and MWCC. There are 1,160 clock hours each for the powerplant and airframe sequences if taken separately, and 1,920 if both are taken.

Completion of either option entitles the student to the associate of applied science degree and to sit for the appropriate Federal Aviation Administration Examination.

Associate of Applied Science Degree (awarded by Maple Woods Community College) Airframe Option

First Semester		CR
KAV 100	Introduction to Aviation Maintenance I 14	
KAV 111	Introduction to Aviation Maintenance II 4.5	
ENGL 121	Composition I 3	
KAV 110	Technical Mathematics I 4	
	TOTAL CREDIT HOURS 25.5	

Second Semester		
KAV 102	Wood and Fabric 3	
KAV 104	Assembly and Rigging 6	
KAV 200	Sheet Metal and Welding 6	
KAV 204	Aircraft Communication, Navigation and Instrumentation Systems 5	
	TOTAL CREDIT HOURS 20	

Summer Semester		
KAV 106	Hydraulic and Pneumatic Systems 7	
KAV 202	Aircraft Fuel Systems and Fire Protection Systems 2.5	
	TOTAL CREDIT HOURS 9.5	

Third Semester		
KAV 108	Aircraft Electricity and Related Systems ** 5.5	
KAV 206	Airframe Theory Survey ** 5.5	
KAV 210	Seminar in Airframe ** 4.5	
SPD 120	Interpersonal Communication 3	
	Electives 3	
	American Constitution Option * 3	
	TOTAL CREDIT HOURS 21.5	
	TOTAL PROGRAM CREDIT HOURS 79.5	

Associate of Applied Science Degree (awarded by Maple Woods Community College) Powerplant Option

First Semester		CR
KAV 100	Introduction to Aviation Maintenance I 14	
KAV 111	Introduction to Aviation Maintenance II 4.5	
ENGL 121	Composition I 3	
KAV 110	Technical Mathematics 4	
	TOTAL CREDIT HOURS 25.5	

Second Semester		
KAV 103	Carburetion and Lubrication 7	
KAV 103	Aircraft Reciprocating Powerplant 6	
KAV 109	Aircraft Ignition and Starting Systems . 4	
KAV 107	Jet Propulsion Powerplant 5	
	TOTAL CREDIT HOURS 22	

Summer		
KAV 105	Propellers 4	
KAV 203	Electricity, Generator-Alternator 5.5	
	TOTAL CREDIT HOURS 9.5	

Third Semester

KAV	201	Powerplant Testing **	5
KAV	205	Engine Instruments ***	5.5
KAV	209	Seminar in Powerplant ***	4.5
SPD	120	Interpersonal Communication	3
		Elective	3
		American Constitution Option *	3
		TOTAL CREDIT HOURS	24
		TOTAL PROGRAM	
		CREDIT HOURS	81.5

* All graduates from Maple Woods Community College must meet the Constitution requirement. See your JCCC counselor about the course.

** KAV 108, 206 and 210 may be taken (on a space available basis) by persons qualified by experience to sit for the FAA Airframe Mechanic Exam. This requires 18 months experience in either Airframe or Powerplant (or 30 months combined) – approval issued by the local FAA office.

*** KAV 201, 205, and 209 may be taken (on a space available basis) by persons qualified by experience to sit for the FAA Powerplant Mechanic Exam. This requires 18 months experience in either Airframe or Powerplant (or 30 months combined) – approval issued by the local FAA office.

BIOMEDICAL EQUIPMENT TECHNOLOGY

Electrical and electronic equipment are among the hallmarks of our high-technology society. A biomedical equipment technician may work for a hospital, medical equipment manufacturer, medical equipment service firm or as a field technician selling, maintaining and installing specialized electronic systems used in the health field.

The program is devoted to the fundamentals of electronics, natural sciences and related mathematics. Students will participate in an internship program during their last semester of the program in which six hours each week will be spent in an assigned hospital or related area working on equipment found in the field. Successful completion of this 67 credit hour program will lead to an associate of applied science degree.

Associate of Applied Science Degree

First Semester

ELEC	120	Introduction to Electronics	3
ELEC	122	Circuit Analysis I	3
MATH	133	Technical Math I	4
ENGL	121	Composition I	3
ELEC	125	Digital Electronics I	3
		TOTAL CREDIT HOURS	16

CR

Second Semester

ELEC	225	Digital Electronics II	3
ELEC	130	Electronic Devices I	3
ELEC	140	Circuit Analysis II	3
MATH	134	Technical Math II	5
DP	132	BASIC for Engineering Technology	3
		TOTAL CREDIT HOURS	17

Summer Course

BIOL	144	Human Anatomy and Physiology *	5
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*Can be taken any semester before third semester.

Third Semester

ELEC	230	Electronic Devices II	3
ELEC	245	Microprocessors	3
SPD	120	Interpersonal Communications	3
BMT	210	Biomedical Equipment Tech I *	4
PHYS	125	Technical Physics	4
		TOTAL CREDIT HOURS	17

Fourth Semester

BMT	211	Biomedical Equipment Tech II **	3
BMT	271	Biomedical Internship **	2
		Social Science and/or	
		Economics Elective	3
		Humanities and/or Art Elective	3
		Health and/or Physical Education	
		Elective	1
		TOTAL CREDIT HOURS	12
		TOTAL PROGRAM	
		CREDIT HOURS	67

* Offered in Fall semester only

** Offered in Spring semester only



BUSINESS MANAGEMENT

Approximately a million people are employed in the United States as business managers. While these managers are in a wide variety of businesses, the skills required to fill these positions will be basically the same.

JCCC's career program focuses on the development of these skills ... the ability to make decisions; develop a familiarity with functions of management including planning, organizing, directing and controlling; become familiar with the roles of employees and managers. Courses cover business-related topics including data processing, accounting, communications, personnel management, supervision and business law. The program consists of 64 credit hours which will lead to an associate of applied science degree.

Associate of Applied Science Degree

<i>First Semester</i>		CR
ENGL 121	Composition I	3
ACCT 121	Accounting I	3
BUS 121	Introduction to Business	3
DP 124	Business Data Processing	3
	Elective	3
	Health and/or Physical Education	
	Elective	1
	TOTAL CREDIT HOURS	16

<i>Second Semester</i>		
ACCT 122	Accounting II	3
BUS 141	Principles of Management	3
PSYC 130	Introduction to Psychology	3
ECON 230	Economics I	3
BUS 261	Business Law I	3
MATH 120	Business Math or higher	3
	TOTAL CREDIT HOURS	18

<i>Third Semester</i>		
ACCT 222	Managerial Accounting	3
PHIL 143	Ethics	3
ECON 231	Economics II	3
BUS 230	Marketing	3
BUS 125	Savings and Investments	3
	TOTAL CREDIT HOURS	15

<i>Fourth Semester</i>		
BUS 271	Management Seminar	3
BUS 150	Business Communications	3
BUS 263	Business Law II	3
BUS 243	Personnel Management	3
BIOL 130	Environmental Science	3
	TOTAL CREDIT HOURS	15
	TOTAL PROGRAM	
	CREDIT HOURS	64



CHEF APPRENTICESHIP

The Chef Apprenticeship Program at the College is accredited by the American Culinary Federation and the U.S. Department of Labor. The three-year program has special admission requirements. Students must be 18 years old with a high school diploma or the equivalent. Students must successfully complete all entry-level examinations as prescribed by the Apprenticeship Committee of American Culinary Federation Education Institute. Special consideration will be given to anyone who has had food service training in high school or on-the-job training.

The career program features formal coursework along with the opportunity to actually practice skills of baking, menu planning, food purchasing, beverage control and food preparation. After job placement, application may be made to join the American Culinary Federation Educational Institute for registered apprentice membership. Likewise, registration may be made with the Department of Labor and the individual will be officially indentured to supervising chefs and the sponsoring American Culinary Federation affiliate chapter. The program consists of 67-70 credit hours, which will lead to an associate of applied science degree.

Associate of Applied Science Degree

<i>First Semester</i>		CR
HMGT 121	Hospitality Management	
	Fundamentals	3
HMGT 123	Basic Food Preparation	3
MATH 120	Business Math	3
HMGT 281	Culinary Practicum I	2
	TOTAL CREDIT HOURS	11

Second Semester

HMGT 273 Seminar: Accounting 3
HMGT 230 Intermediate Food Preparation 3
Social Science and/ or
Economics Elective 3
HMGT 282 Culinary Practicum II 2
TOTAL CREDIT HOURS 11

First Summer

HMGT 275 Seminar: Internship 3
Humanities and/or Art Elective 3
TOTAL CREDIT HOURS 6

Third Semester

HMGT 277 Seminar: Menu Planning and Sales
Promotion 3
HMGT 223 Fundamentals of Baking 3
ENGL 121 Composition I 3
HMGT 285 Culinary Practicum III 2
TOTAL CREDIT HOURS 11

Fourth Semester

HMGT 231 Advanced Food Preparation 4
HMGT 279 Beverage Control 3
HMEC 151 Nutrition and Meal Planning 3
HMGT 286 Culinary Practicum IV 2
TOTAL CREDIT HOURS 12

Fifth Semester

HMGT 226 Food Specialties-
Garde Manger 3
HMGT 271 Seminar: Purchasing 3
HMGT 287 Culinary Practicum V 2
TOTAL CREDIT HOURS 8

Sixth Semester

HMGT 128 Supervisory Management 3
HMGT 228 Advanced Hospitality
Management 3
SPD 120 Interpersonal Communication 3
OR
3 hr. elective course in oral
communications
HMGT 288 Culinary Practicum VI 2
TOTAL CREDIT HOURS 11
TOTAL PROGRAM
CREDIT HOURS 70

CIVIL ENGINEERING TECHNOLOGY

A civil engineering technician has the responsibility of maintaining communications between engineers and draftsmen. Employment growth in this occupation is predicted to be much faster than average in the next 10 years. Civil engineering technicians apply theory and practical application in planning, designing, con-

structing and maintaining structures such as bridges, treatment plants and roadways.

JCCC's Civil Engineering Technology program offers a broad base of learning experiences in mathematics, physical science, surveying and graphics, and it will qualify graduates for a variety of entry-level positions in the field and will provide preparation for the individual certification examination of the National Institute for Certification in Engineering Technology (NICET). Successful completion of 65-69 hours from the Civil Engineering curriculum will lead to an associate of science degree.

Associate of Science Degree

Prior to Beginning First Semester CR

MATH 133 Technical Mathematics I 4
OR
MATH 116 Intermediate Algebra 3
OR Appropriate Score on Math Assessment Test

First Semester

ENGR 131 Engineering Graphics I 3
MATH 171 College Algebra 3
PHYS 125 Technical Physics I 4
ENGL 121 Composition I 3
Health and/ or Physical Education
Elective 1
Programming Elective from approved
list 3
TOTAL CREDIT HOURS 17

Second Semester

DRAF 180 Architectural/ Structural
Drafting 4
DRAF 230 Computer-Aided Drafting 2-D 3
MATH 172 Trigonometry 3
OR
MATH 134 Technical Math II 5
PHYS 126 Technical Physics II 3
Technical Elective from approved
list 3
TOTAL CREDIT HOURS 16-18

Third Semester

DRAF 225 Cartography and Land Surveying 3
ENGR 211 Technical Statics and Mechanics 3
Humanities and/ or Art Elective 3
Communication Elective from approved
list 3
Technical Elective from approved
list 4-5
TOTAL CREDIT HOURS 16-17

Fourth Semester

DRAF 127	Building Construction Estimating I	3
ENGR 258	Structural Analysis and Design	5
	Social Science/Economics Elective	3
	Technical Electives from approved list	5-6
	TOTAL CREDIT HOURS	16-17
	TOTAL PROGRAM CREDIT HOURS	65-69

Required Programming Electives

DP 132	BASIC for Engineering Technology	3
ENGR 171	Programming for Engineering & Science	3

Required Communication Electives

ENGL 122	Composition II	3
ENGL 123	Technical Writing I	3
SPD 120	Interpersonal Communication	3

Required Technical Electives

ENGR 180	Engineering Land Surveying	3
DRAF 160	Process Piping	3
ENGR 254	Dynamics	3
ENGR 252	Mechanics of Materials	3
DRAF 231	Computer-Aided Drafting 3-D	3
DRAF 232	Computer-Aided Drafting Applications	3
DRAF 128	Building Construction Estimating II	3
PSCI 130	General Geology	3
MATH 241	Analytic Geometry – Calculus I	5
BIOL 130	Environmental Science	3
BIOL 131	Environmental Science Lab	1
DRAF 271	Drafting Technology Cooperative Education	3

COMMERCIAL ART

The commercial art field is highly competitive for both salaried and free-lance positions. There is always a demand for artists with above-average talents and solid graphic art skills. Opportunities in the field range from entry-level paste-up and layout positions to director-level positions.

Demonstrated abilities are often the key to obtaining a commercial art position. JCCC has structured its Commercial Art Program to help the student develop a comprehensive portfolio. Work will be critiqued by a team of professionals. These professionals working in the field, along with full-time faculty, will help in developing the student's skills in creative problem-solving, and the use of processes, materials, tools and equipment. Outstanding studio facilities are available for class projects. The two-year curriculum consisting of

66 credit hours will lead to an associate of applied science degree.

Associate of Applied Science Degree

First Semester

CR

ART 124	Design 2D	3
ART 129	Design Color	3
CA 130	Rep. Drawing I	3
PHOT 121	Photography I	3
CA 132	Typography	3
ENGL 121	Composition I	3
	TOTAL CREDIT HOURS	18

Second Semester

CA 131	Rep. Drawing II	3
ART 127	Design 3D	3
CA 134	Layout I	3
CA 141	Graphic Art Process I	1
CA 142	Graphic Art Process II	1
CA 143	Graphic Art Process III	1
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	15

Third Semester

PHOT 123	Photography III	3
CA 144	Graphic Art Process IV	1
CA 145	Graphic Art Process V	1
CA 230	Illustration Techniques	3
CA 231	Layout II	3
CA 235	Production Art I	3
	Social Science and/or Economics Elective	3
	TOTAL CREDIT HOURS	17

Fourth Semester

CA 244	Visual Communications	3
CA 236	Production Art II	3
	Health and/or Physical Education Elective	1
	Science and/or Math Elective	3
CA 245	Graphic Design	3
CA 272	Professional Preparation ** or Studio Elective	3
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	66

** Application to the Faculty Review Committee is necessary for acceptance into this course.

Part-Time Students:

If you wish to enroll on a part-time basis (less than 12 hours), enroll in the following courses in the sequence listed or consult with the program director or a JCCC counselor.

ENGL	121	Composition I	3
ART	124	Design 2D	3
ART	129	Design Color	3
CA	130	Rep. Drawing I	3
PHOT	121	Photography I	3
CA	132	Typography	3
		Humanities Elective	3
ART	127	Design 3D	3
CA	131	Rep. Drawing II	3
CA	134	Layout I	3
CA	141	Graphic Arts Process I	1
CA	142	Graphic Arts Process II	1
CA	143	Graphic Arts Process III	1
		Economics and/or Social Science Elective	3
PHOT	123	Photography III	3
CA	144	Graphic Arts Process IV	1
CA	145	Graphic Arts Process V	1
CA	230	Illustration Techniques	3
CA	231	Layout II	3
CA	235	Production Art I	3
		Science or Math Elective	3
CA	236	Production Art II	3
CA	244	Visual Communications	3
CA	245	Graphic Design	3
		Health and/or Physical Education Elective	1
CA	272	Professional Preparation ** or Studio Elective	3
		TOTAL PROGRAM CREDIT HOURS	66

** Application to the Faculty Review Committee is necessary for acceptance into course.

COMPUTER SYSTEMS TECHNOLOGY

Now that microprocessors have become a crucial part of almost every business operation, the need for technicians to repair and maintain equipment has grown. Job opportunities in the Kansas City area for entry-level through supervisory positions are in a growth period throughout the 1980s.

Currently JCCC's program is the only one of its kind in the area. The two-year program concentrates on the skills and theoretical knowledge required to fill these entry-level positions. First year courses are compatible with those required in JCCC's Electronics Engineering Program. This provides an option of starting the Electronics Engineering Program and transferring to JCCC's Computer Systems Technology Program. The "open lab" concept allows access to the electronics lab and the instruments necessary to complete lab assignments. The lab is equipped with the type of equipment currently used in the industry. A minimum of 64 credit hours is required for an associate of science degree.

Associate of Science Degree

First Semester		CR
ENGL	121 Composition I	3
ELEC	120 Introduction to Electronics	3
ELEC	122 Circuit Analysis I	3
ELEC	125 Digital Electronics I	3
MATH	133 Technical Math I	4
	TOTAL CREDIT HOURS	16

Second Semester		
ELEC	140 Circuit Analysis II	3
ELEC	225 Digital Electronics II	3
ELEC	130 Electronic Devices I	3
DP	132 BASIC for Engineering Technology	3
MATH	134 Technical Math II	5
	TOTAL CREDIT HOURS	17

Third Semester		
ELEC	230 Electronic Devices II	3
ELEC	245 Microprocessors	3
	Social Science and/or Economics Elective	3
PHYS	125 Technical Physics I	4
SPD	120 Interpersonal Communication	3
	TOTAL CREDIT HOURS	16

Fourth Semester		
CST	260 Computer Systems	5
DP	245 Operating Systems for Microcomputers	3
DP	230 Data Communications for Microcomputers *	3
	Humanities and/or Art Elective	3
	Health and/or Physical Education Elective	1
	TOTAL CREDIT HOURS	15
	TOTAL PROGRAM CREDIT HOURS	64

* Students may substitute approved CST 271.

DATA PROCESSING

Industry is expected to have a favorable effect on employment opportunities for programmers because of the decrease in size and cost of computers. Demand will focus in the area of systems programming, where specialists will be needed to develop and maintain programs for entire computer systems. The need for applications programmers, those who write programs for specific purposes, will increase.

JCCC's Data Processing Program focuses on the skills needed for entry-level programming and related positions. Students will learn to code COBOL programs and other languages using an on-line editor. The emphasis on practical experience and the specific courses will upgrade and broaden students' knowledge even if they are already working in data processing. An associate of applied science degree is awarded for successful completion of the 64-credit-hour program.

Associate of Applied Science Degree

<i>First Semester</i>		CR
DP 134	Programming Fundamentals	4
ACCT 121	Accounting I	3
ENGL 121	Composition I	3
MATH 120	Business Math or higher	3
	Humanities and/or Art Elective	3
	(PHIL 132 Logic recommended)	
	TOTAL CREDIT HOURS	16

<i>Second Semester</i>		
DP 148	COBOL I	4
DP 140	Editor	1
CS 210	Discrete Structures I	3
	Data Processing Elective	3-4
	Social Science and/or	
	Economics Elective	3
	(ECON 230 Economics I recommended)	
	Health and/or Physical Education	
	Elective	1
	TOTAL CREDIT HOURS	15-16

<i>Third Semester</i>		
DP 248	COBOL II	4
DP 150	Assembler Language I	4
	Data Processing Elective	5-7
	Elective	3
	TOTAL CREDIT HOURS	16-18

Fourth Semester

DP 258	Operating Systems	3
DP 264	Application Programming/ Data Processing Topics	3
DP 242	Introduction to System Design and Analysis	3
	Data Processing Elective	3-4
	Elective	3
	TOTAL CREDIT HOURS	15-16
	TOTAL PROGRAM CREDIT HOURS	64

Thirteen hours of Data Processing Elective courses are to be selected from the following. One elective must be a language course:

DP 137	Advanced BASIC	4
DP 145	Assembler Language for Microcomputers	4
DP 156	RPG II Beginning	4
DP 158	FORTRAN	4
DP 162	dBase III Programming	4
DP 174	Teleprocessing	3
DP 215	OS/VS Job Control Language	3
DP 230	Data Communications/Micro	3
DP 235	Programming in C	4
DP 245	Microcomputer Operating Systems	3
DP 250	Assembler Language II	4
DP 253	CICS Command Level COBOL	4
DP 256	RPG II Advanced	4
DP 260	Data Base Management	4
DP 270	Data Processing Internship	1
CS 180	Introduction to Artificial Intelligence	3
CS 200	PASCAL	4
CS 211	Discrete Structures II	3
CS 250	Basic Programming Structures	4

Computer Applications Technology Vocational Certificate

Students in the Computer Applications Technology Certificate Program acquire skills that are highly sought after in today's marketplace. This program is for people seeking entry-level positions as well as those currently employed who want to enhance their job skills. The certificate will give current or prospective employers tangible evidence of computer competency.

Certificate Program

Required Courses **CR**
(12 credit hours selected from the following courses)

CPCA 105	Introduction to Personal Computers	1
CPCA 108	Word Processing on Micros I	1
CPCA 110	Spreadsheet on Micros I	1

CPCA 114	Database on Micros I	1
	OR	
CPCA 128	Integrated Software may be substituted for CPCA 108, CPCA 110, and CPCA 114	3
CPCA 135	PC DOS	1
CPCA 112	PC Communications	1
DRAF 115	Introduction to Computer Graphics	3
CPCA 120	Microcomputer BASIC	3
	OR	
DP 132	BASIC for Engineering Technology	3
	OR	
DP 134	Programming Fundamentals	4

Elective Courses:

(Three credit hours selected from the following courses)

CPCA 108	Word Processing on Micros I	1
CPCA 110	Spreadsheet on Micros I	1
CPCA 114	Database on Micros I	1
CPCA 125	Word Processing on Micros II	1
CPCA 111	Spreadsheet on Micros II	2
SEC 101	Keyboarding	1
CPCA 128	Integrated Software	3
DP 230	Data Communications for Micros	3
DP 137	Advanced BASIC	4
DP 162	dBASE III Programming	4
DP 200	Pascal	4
	TOTAL CREDIT HOURS	15

Data Processing Mini/Micro

Vocational Certificate

Over the past three years, demand has increased for well-trained support staff to direct the use of microcomputers within organizations. The Data Processing Mini/Micro Certificate Program provides intermediate and advanced courses in microcomputers, which will provide students with the most critical skills required.

Vocational Certificate Program

Prerequisites: **CR**

This certificate requires a level of proficiency with computers prior to starting this program. The following courses must be completed prior to enrolling in the certificate program.

DP 134	Programming Fundamentals	4
CPCA 105	Introduction to Personal Computers	1
CPCA 112	PC Communications	1
CPCA 135	PC DOS	1

Required Courses:

DP 162	dBASE III Programming	4
DP 242	Introduction to System Design and Analysis	3
CPCA 128	Integrated Software	3

Two of the following three courses must be taken:

DP 145	Assembler Language for Micros	4
DP 230	Data Communications for Micros	3
DP 245	Microcomputer Operating Systems	3

One of the following language sequences must be taken for two semesters:

DP 156	RPG II Beginning	4
	AND	
DP 256	RPG II Advanced	4
	OR	
CS 200	Pascal	4
	AND	
CS 250	Basic Programming Structures	4
	OR	
CS 200	Pascal	4
	AND	
DP 235	Programming in C	4
	TOTAL CREDIT	24
	HOURS REQUIRED	24

Advanced Data Processing

Vocational Certificate

Students in the Advanced Data Processing Certificate Program will learn a broad range of skills applicable to the current job market. The program is designed to meet the needs of professionals seeking to add to their expertise and workers who have been out of the field and plan to return to a data processing position. Emphasis is placed on keeping the program current with changes in the field.

Certificate Program

Prerequisites: **CR**

This certificate requires a level of proficiency with computers prior to starting this program. The following courses must be completed prior to enrolling for the certificate program.

DP 134	Programming Fundamentals	4
DP 148	COBOL I	4
DP 248	COBOL II	4
DP 150	Assembler Language I	4
	OR	
CS 200	Pascal	4

Required Courses:

DP 174	Teleprocessing	3
DP 253	CICS	4
DP 260	Data Base Management	4

One of the following two courses must be taken:

DP 235	Programming in C	4
	OR	
DP 250	Assembler Language II	4
	TOTAL CREDIT	15
	HOURS REQUIRED	15



DENTAL HYGIENE

The dental hygienist is a preventive health professional, a member of the dental health team, and is qualified to provide services needed to obtain and maintain total wellness. These preventive services are provided in a variety of health care settings: hospitals, school systems, specialized institutions and private dental offices.

A growing concern for oral health and the availability of prepaid dental plans are generating an increased demand for dental care. That makes the employment outlook for dental hygienists better than average for the next several years. As a dental hygienist you will earn a competitive salary and enjoy flexibility of work hours. A preventive professional may function in many roles. Some of these might be to work in a school system and serve as a preventive educator, conduct oral screening in nursing homes, write textbooks, serve as a salesperson for dental suppliers or provide preventive services in a private dental office.

The Dental Hygiene Program at JCCC is committed to quality education. Fully accredited by the American Dental Association's Commission on Dental Accreditation and designed with the assistance of a community advisory committee, JCCC's dental hygiene program comprises five semesters and a summer session, totaling 80 credit hours, and leads to an associate of science degree. JCCC dental hygiene students gain valuable practical experience in the College's dental hygiene clinic located on campus. Working under the super-

vision of a licensed dentist and registered dental hygienists the student can develop efficiency in preventive dental techniques. This challenging program is demanding and rewarding, and requires full-time involvement. Enrollment in this program is limited, and the deadline for fall semester applications is Feb. 1. Contact the Admissions & Records Office for an application packet, which includes deadlines, admission requirements and options for meeting academic criteria.

Associate of Science Degree

Summer Semester CR (Prior to Beginning Clinical Courses)

CHEM 122	Principles of Chemistry	5
ENGL 121	Composition I	3
SOC 122	Sociology	3
TOTAL CREDIT HOURS		11

First Semester

DHYG 121	Clinical Dental Hygiene I	6
BIOL 146	General/Head and Neck Anatomy	4
DHYG 125	Developmental Dentistry	3
PSYC 130	Introduction to Psychology	3
TOTAL CREDIT HOURS		16

Second Semester

DHYG 140	Clinical Dental Hygiene II	5
DHYG 142	Dental Radiology	2
BIOL 225	Human Physiology	4
BIOL 230	Microbiology	3
DHYG 146	Periodontics	1
DHYG 148	Dental Health Education	1
	Health and/or Physical Education	
	Elective	1
TOTAL CREDIT HOURS		17

Summer Semester

BIOL 235	General Nutrition	3
	Humanities and/or Art Elective	3
	Mathematics Elective	3
TOTAL CREDIT HOURS		9

Third Semester

DHYG 221	Clinical Dental Hygiene III	7
DHYG 225	Pathology/Periodontology	3
DHYG 230	Dental Therapeutics	3
DHYG 235	Dental Materials	2
DHYG 240	Community Dental Health	2
TOTAL CREDIT HOURS		17

Fourth Semester

DHYG 250	Clinical Dental Hygiene IV	7
SPD 120	Interpersonal Communication	3
TOTAL CREDIT HOURS		10

TOTAL PROGRAM

CREDIT HOURS **80**

DRAFTING TECHNOLOGY

Drafters are specialists who draw plans for buildings and machinery. A drafting technician may be involved in detailing production drawings and designs that are used in work with computers, photodrafting and quality control. Often, drafting technicians hold positions in architectural and engineering firms.

JCCC's Drafting Technology Program provides two options: the civil option and the machine option. The two-year curriculum enables the student to use the latest surveying, computer-aided design manufacturing (CAD-CAM) equipment. The course projects and the laboratory procedures are similar to those used in the industry. Upon successfully completing the 64 hours of credit, an associate of science degree will be awarded.

Associate of Science Degree

Civil Option

<i>First Semester</i>		CR
ENGR 131	Engineering Graphics I	3
MATH 133	Technical Math I	4
ENGL 121	Composition I	3
	Humanities and/or Art Elective	3
	Social Science and/or Economics Elective	3
TOTAL CREDIT HOURS		16

Second Semester

DRAF 122	Industrial Drafting	3
DRAF 230	Introduction to CAD 2-D	3
DRAF 180	Architectural/Structural Drafting	4
MATH 134	Technical Math II	5
ENGL 123	Technical Writing I	3
	OR	
SPD 120	Interpersonal Communication	3
	OR	
ENGL 122	Composition II	3
TOTAL CREDIT HOURS		18

Third Semester

DRAF 225	Cartography/Land Surveying	3
DRAF 121	Technical Illustration	3
PHYS 125	Technical Physics I	4
DP 132	BASIC for Engineering Technology	3
	Drafting Elective	3
TOTAL CREDIT HOURS		16

Fourth Semester

DRAF 150	Electrical Drafting	3
DRAF 127	Building Construction Estimating I	3
	OR	
DRAF 160	Process Piping	3
PHYS 126	Technical Physics II	3
	Health and/or Physical Education Elective	1

Drafting Electives *	4
TOTAL CREDIT HOURS	14
TOTAL PROGRAM CREDIT HOURS	64

* Three-Credits Technical Elective can apply

Drafting Electives

DRAF 231	Computer Aided Drafting 3-D	3
DRAF 232	CAD Applications	3
DRAF 222	Machine Drafting	4
DRAF 175	Electronics Drafting	3
DRAF 271	Drafting Cooperative Education	3
DRAF 129	Interpreting Architectural Drawing	2

Technical Elective

ENER 125	Energy Alternatives	3
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Associate of Science Degree

Machine Option

<i>First Semester</i>		CR
ENGR 131	Engineering Graphics I	3
MATH 133	Technical Math I	4
ENGL 121	Composition I	3
MFTG 121	Manufacturing Processes and Testing	3
	Humanities and/or Art Elective	3
TOTAL CREDIT HOURS		16

Second Semester

DRAF 122	Industrial Drafting	3
DRAF 230	Introduction to CAD 2-D	3
MATH 134	Technical Math II	5
ENGL 123	Technical Writing I	3
	OR	
SPD 120	Interpersonal Communication	3
	OR	
ENGL 132	Composition II	3
ENGR 132	Engineering Graphics II	3
	OR	
	Technical Elective	3
TOTAL CREDIT HOURS		17

Third Semester

DRAF 222	Machine Drafting	4
DRAF 121	Technical Illustration	3
PHYS 125	Technical Physics I	4
DP 132	BASIC for Engineering Technology	3
	Drafting Elective	3
	OR	
	Technical Elective	3
TOTAL CREDIT HOURS		17

Fourth Semester

PHYS 126	Technical Physics II	3
	Social Science and/or Economics Elective	3
	Health and/or Physical Education Elective	1

Drafting Elective *	7
TOTAL CREDIT HOURS	14
TOTAL PROGRAM CREDIT HOURS	64

* Three-Credits Technical Elective can apply

Drafting Electives

DRAF 231	Computer Aided Drafting 3-D	3
DRAF 232	CAD Applications	3
DRAF 150	Electrical Drafting	3
DRAF 175	Electronics Drafting	3
DRAF 180	Architectural/Structural Drafting	4
DRAF 225	Cartography and Land Surveying	3
DRAF 271	Drafting Cooperative Education I	3

Technical Electives

ELEC 120	Introduction to Electronics	3
MFTG 126	Machine Tool Processes I	3
MFTG 135	Testing and Inspection	3
MFTG 140	Introduction to Metal Fabrication	3
MFTG 122	Robotics	2

ELECTRONICS ENGINEERING TECHNOLOGY

Industry's demand for high-tech communications equipment and consumers' demand for electronic products will provide increased job opportunities for electronic engineering technicians over the next few years. Graduates of specialty training programs, particularly those with practical work experience, will have better opportunities for job placement according to government research.

Focusing on the fundamentals of electronics and related mathematics, the Electronics Engineering Technology Program offers comprehensive, theoretical and practical knowledge of electronics technology. Laboratory facilities give the opportunity to diagnose circuits with equipment comparable to that used in the industry. The program consists of 64 credit hours and will lead to an associate of applied science degree.

Associate of Applied Science Degree

First Semester

ELEC 120	Introduction to Electronics	3	CR
ELEC 122	Circuit Analysis I	3	
ELEC 125	Digital Electronics I	3	
MATH 133	Technical Mathematics I	4	
ENGL 121	Composition I	3	
TOTAL CREDIT HOURS		16	

Second Semester

ELEC 225	Digital Electronics II	3
ELEC 130	Electronic Devices I	3

ELEC 140	Circuit Analysis II	3
MATH 134	Technical Mathematics II	5
DP 132	BASIC for Engineering Technology	3
TOTAL CREDIT HOURS		17

Third Semester

ELEC 230	Electronics Devices II	3	
ELEC 245	Microprocessors	3	
PHYS 125	Technical Physics I	4	
SPD 120	Interpersonal Communications	3	
		Humanities and/or Art Elective	3
TOTAL CREDIT HOURS		16	

Fourth Semester

ELEC 240	Electronic Communication Systems	4	
ENGL 123	Technical Writing I	3	
		Electronics Technical Elective	4
		Social Science and/or Economics Elective	3
		Health and/or Physical Education Elective	1
TOTAL CREDIT HOURS		15	
TOTAL PROGRAM CREDIT HOURS		64	

Approved Electronics Electives

ELEC 121	Basic Telephony	3
ELEC 271	Electronics Cooperative Education I	3
DP 174	Teleprocessing	3
MFTG 122	Robotics	2
MFTG 124	Robotics Applications	2
MFTG 125	CNC Control Concepts and Programming	3
PHYS 126	Technical Physics II	3

EMERGENCY MEDICAL SCIENCE

In Emergency Medical Science, students can opt for one of two tracks. The EMT Course (Emergency Medical Technician) and MICT Program (Paramedic) afford graduates job opportunities in the dynamic field of emergency medical care. Both courses of study offer certificates upon successful completion. Furthermore, the MICT Program offers students the opportunity to finish either an associate of science or associate of applied science degree. Qualifications for choosing these career fields include compassion for helping victims in medical crises, acting calmly and systematically in high stress environments and possessing a fair amount of physical stamina and dexterity.

EMT: The six credit hour Emergency Medical Technician Course, which is offered every semester, is by open enrollment. This class meets twice a week in the evenings and includes six Saturday sessions. In this course, basic skills taught include CPR, bandaging,

splinting, child-birth assistance, extrication from autos, and recognition and pre-hospital treatment for medical emergencies such as heart attacks, strokes and diabetes. Upon instructor recommendations, students will participate in clinical observation in a hospital setting. Successful completion of this course will enable students to take the State Certification Examinations for Emergency Medical Technicians.

MICT: Fully accredited by the American Medical Association's Committee on Allied Health Education and Accreditation, the year-long, 47-credit-hour Mobile Intensive Care Technician Program (MICT-Paramedic) offers graduates of the EMT course further training in advanced emergency medical care. The long hours required for this accelerated program generally preclude students from holding full-time employment or taking other classes. This program consists of four courses, which include clinical rotation in a hospital setting and a field internship with an ambulance service. Skills taught include the administration of medications, IV fluids and defibrillation. Upon completion of this training, students will be eligible to take the State Certification Examinations for Mobile Intensive Care Technicians. Enrollment in this program is limited and the deadline for applications is Oct. 15. Contact the Admissions & Records Office for an application packet. Accepted students enter the program beginning with the spring semester, attending summer classes and concluding in December.

Associate of Science Degree

(Prior to Beginning Professional Courses)

Certified as Emergency Medical Technician (EMS 130)

OR

Approval of Division Director

BIOL 140	Human Anatomy	4
BIOL 225	Human Physiology	4
CHEM 122	Principles of Chemistry	5
TOTAL CREDIT HOURS		13

<i>First Semester (Spring)</i>		CR
EMS 220	MICT I	10
EMS 225	MICT II	10
TOTAL CREDIT HOURS		20

<i>Summer</i>		
EMS 230	MICT III (Clinicals)	12

<i>Second Semester (Fall)</i>		
EMS 271	MICT IV (Field Internship)	15

<i>Third Semester</i>		
ENGL 121	Composition I	3
SPD 121	Public Speaking	3
SOC 125	Social Problems	3

PHIL 143	Ethics	3
TOTAL CREDIT HOURS		12

Fourth Semester

MATH	Mathematics Elective	3
HPER 134	Weight Training and Physical Fitness	1
OR		
Health and/or Physical Education		
Elective		1
TOTAL CREDIT HOURS		4
TOTAL PROGRAM CREDIT HOURS		76

**Associate of Applied Science Degree
(Prior to Beginning Professional Courses)**

Certified as Emergency Medical Technician (EMS 130)

OR

Approval of Division Director

BIOL 144	Human Anatomy and Physiology	5
OR		
BIOL 140	Human Anatomy	4
OR		
BIOL 225	Human Physiology	4

<i>First Semester (Spring)</i>		CR
EMS 220	MICT I	10
EMS 225	MICT II	10
TOTAL CREDIT HOURS		20

<i>Second Semester (Summer)</i>		
EMS 230	MICT III (Clinicals)	12

<i>Third Semester (Fall)</i>		
EMS 271	MICT IV (Field Internship)	15

<i>Fourth Semester</i>		
ENGL 121	Composition I	3
SOC 125	Social Problems	3
OR		
Social Science and/or		
Economics Elective		3
PHIL 143	Ethics	3
OR		
Humanities and/or Art Elective		3
HPER 134	Weight Training and Physical Fitness	1
OR		
Health and/or Physical Education		
Elective		1
Elective		2
TOTAL CREDIT HOURS		12
TOTAL PROGRAM CREDIT HOURS		64

ENERGY TECHNOLOGY

Government researchers say graduates of training programs that emphasize hands-on experience will have a definite advantage when seeking employment in energy technology. JCCC offers the opportunity to work on actual equipment while pursuing a degree or certificate program.

The 64-credit-hour associate of applied science degree program focuses on developing an awareness of basic mathematical and scientific principles. The curriculum is concerned with how these principles affect the control of temperature and the quality of air, design, testing, installation and development of heating and cooling systems. Special emphasis is on energy conservation through computer management. Alternate sources of energy will be explored, such as wind, photovoltaic and solar. The theory of operation as well as installation, servicing and repairing of gas furnaces, electric furnaces, heat pumps, rooftop air conditioners and steam boilers is part of the curriculum.

Associate of Applied Science Degree

<i>First Semester</i>		CR
ENER 121	Basic Principles of HVAC	4
ENER 123	Electromechanical Systems	3
ENER 125	Energy Alternatives	3
MATH 133	Technical Math I	4
ENGL 121	Composition I	3
TOTAL CREDIT HOURS		17

Second Semester

ENER 124	Residential HVAC Estimating	2
ENER 126	Residential HVAC Systems	3
ENER 128	Instrumentation and Control Devices .	3
ENER 143	Reading Blueprints and Ladder Diagrams	2
PHYS 125	Technical Physics I	4
TOTAL CREDIT HOURS		15

Third Semester

ENER 221	Commercial Systems/ Air Conditioning	4
ENER 222	Advanced Control Systems	4
	Social Science and/or Economics Elective	3
	Health and/or Physical Education Elective	1
	Technical Elective	4
TOTAL CREDIT HOURS		16

Fourth Semester

ENER 223	Commercial Systems/Heating	4
ENER 224	Diagnosis and Service Procedures	3
ENER 226	Energy Management	3
MFAB 121	Introduction to Welding	3
	Humanities and/or Art Elective	3

TOTAL CREDIT HOURS	16
TOTAL PROGRAM	
CREDIT HOURS	64

Technical Electives

ENER 129	Domestic Solar Systems	3
ENER 130	Passive Solar Fundamentals	3
ENER 226	Energy Management	3
ENER 271	HVAC Cooperative Education I	3
MFAB 140	Introduction to Metal Fabrication	3
DP 132	BASIC for Engineering Technology ...	3
ENER 291	Independent Study	1

Energy Technology

Postsecondary Certificate Program

The certificate program is designed to prepare graduates for the basic job skills needed to service residential and commercial heating and air conditioning equipment. If you elect the certificate option you will learn the theory of operation, and how to install, service and repair gas furnaces, heat pumps, rooftop air conditioners, chilled water systems and steam boilers. This knowledge is reinforced by working on actual equipment in the laboratory. Completion of this program will allow you to seek employment as a maintenance and service technician in the heating/ air conditioning trade.

<i>First Semester</i>		CR
ENER 121	Basic Principles of HVAC	4
ENER 123	Electromechanical Systems	3
MATH 133	Technical Math I	4
TOTAL CREDIT HOURS		11

Second Semester

ENER 126	Residential HVAC Systems	3
ENER 124	Residential HVAC Estimating	3
ENGL 121	Composition I	3
	Technical Elective	3
TOTAL CREDIT HOURS		12

The following eight credit hours must be completed in addition to the above courses:

ENER 221	Commercial Systems/ Air Conditioning	4
ENER 223	Commercial Systems/Heating	4
PHYS 125	Technical Physics I	4
TOTAL CREDIT HOURS		12

TOTAL PROGRAM

CREDIT HOURS	31
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EQUINE STUDIES

The 8.5 million horses in the United States will create a number of job opportunities for riding instructors, trainers, breeders, stable managers, show judges and ferrriers. JCCC's Equine Studies Program helps students develop the skills needed for a career as a stable owner or manager, breeder, trainer or manager of programs and facilities in the horse industry.

The associate of applied science degree curriculum, which includes 65 credit hours, will improve skills in riding, training, judging and caring for horses.

Associate of Applied Science Degree

First Semester

		CR
ENGL 121	Composition I	3
EQUUS 120	Stable Management I	4
EQUUS 124	Equine Anatomy and Physiology	4
EQUUS 128	Equitation I	4
TOTAL CREDIT HOURS		15

Second Semester

MATH 120	Business Math	3
PSYC 130	Introduction to Psychology	3
EQUUS 140	Stable Management II	4
EQUUS 132	Equine Health, Nutrition, Disease and Disorders	4
EQUUS 154	Equitation II	4
TOTAL CREDIT HOURS		18

Third Semester

ENGL 122	Composition II	3
	Humanities and/or Art Elective	3
EQUUS 220	Stable Management III	4
EQUUS	Equine Electives	4
	Health and/or Physical Education Elective	1
TOTAL CREDIT HOURS		15

Fourth Semester

BUS 140	Principles of Supervision	3
EQUUS 240	Stable Management IV	4
EQUUS	Equine Electives	7
EQUUS 281	Advanced Equitation Project	2
TOTAL CREDIT HOURS		16
TOTAL PROGRAM CREDIT HOURS		64

Equine Electives

EQUUS 142	Techniques of Training and Conditioning	4
EQUUS 134	Techniques of Riding Instruction I	3
EQUUS 135	Techniques of Riding Instruction II	3
EQUUS 222	Equine Breeding and Management	4
EQUUS 260	Advanced Equitation	4



FASHION MERCHANDISING

While New York, Paris and Milan are considered the fashion centers of the world, there are many career opportunities locally for fashion merchandising graduates.

JCCC offers an associate of applied science degree requiring a minimum of 64 credit hours. The program focuses on merchandising, marketing and management in five areas of operation: textile, apparel design, manufacturing, media and promotion, and retailing. Field experience is an integral part of the program. Students will be guided through behind-the-scenes operations in Kansas City to observe the network of merchandising activities as well as distribution and manufacturing operations. There are opportunities to participate in field experiences in Dallas, New York and Europe.

Associate of Applied Science Degree

First Semester

		CR
FASH 272	Seminar: Human Relations	2
FASH 283	Fashion Internship I	1
FASH 121	Fashion Fundamentals	3
FASH 125	Visual Merchandising	3
MKT 134	Creative Retail Selling	3
ENGL 121	Composition I	3
FASH 135	Image Management	1
TOTAL CREDIT HOURS		16

Second Semester

FASH 275	Seminar: Supervisory Development	2
FASH 284	Fashion Internship II	1

FASH 132	Marketing Communications	3
	Health and/or Physical Education	
	Elective	1
MATH 120	Business Math or higher	3
FASH 150	Textiles	3
	Elective	3
	TOTAL CREDIT HOURS	16

Third Semester

FASH 277	Seminar: Career Options	2
FASH 285	Fashion Internship III	1
FASH 231	Merchandising Strategies	3
MKT 121	Retailing	3
FASH 220	Fashion in Society	3
ECON 130	Basic Economics	3
	OR	
ECON 230	Economics I	3
LC 150	Job Search Skills	1
	TOTAL CREDIT HOURS	16

Fourth Semester

FASH 280	Seminar: Marketing Research	2
FASH 286	Fashion Internship IV	1
FASH 242	Merchandise Evaluation	3
BUS 230	Marketing	3
	Humanities and/or Art Elective	3
	Electives	4
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	64

Suggested Electives

FASH 224	History of Costume	3
FASH 130	Fashion Illustration I	3
FASH 140	Garment Design I	3
FASH 230	Fashion Illustration II	3
FASH 268	Field Study: The Market Center	3
CPCA 105	Introduction to Personal Computers	1

FIRE PREVENTION

JCCC offers a program for those interested in fire investigation, fire safety, education and fire codes. The Fire Prevention Program requires four semesters and a minimum of 64 credit hours to earn an associate of science degree. A student may also earn a certificate with successful completion of 30 credit hours and be ready to enter the job market.

A student will be presumed to be in his first semester at the point where he enters the curriculum. Example, if someone starts in semester two, he will follow the scheduled courses through semesters three, four and one.

Associate of Science Degree

First Semester

CR

FIRE 121	Fundamentals of Fire Prevention	3
FIRE 130	Fire Investigation	3
ENGL 121	Composition I	3
	Social Science and/or Economics	
	Elective	3
	Mathematics Elective	3
	TOTAL CREDIT HOURS	15

Second Semester

FIRE 132	Arson Investigation	3
	Science Elective	5
	Health and/or Physical Education	
	Elective	1
	Technical Electives	6
	TOTAL CREDIT HOURS	15

Third Semester

FIRE 135	Building and Fire Codes	3
	Mathematics and/or Science Elective	5
	Communications Elective	3
	Technical Electives	6
	TOTAL CREDIT HOURS	17

Fourth Semester

FIRE 125	Building Construction for Fire Service	3
FIRE 137	Extinguishing, Detection and Alarm Systems	3
	Technical Electives	8
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	17
	TOTAL PROGRAM CREDIT HOURS	64

Technical Electives

Any course in this section not required in program.

FIRE 175	Essentials of Fire Fighting	4
EMS 130	Emergency Medical Technician	6
CHEM 122	Principles of Chemistry	5
MATH 133	Technical Math I	4
ADMJ 124	Criminal Justice System	3
FIRE 281	Directed Study: Fire Service	2

Postsecondary Certificate Program

First Semester

CR

FIRE 125	Building Construction for Fire Service	3
ENGL 121	Composition I	3
	TOTAL CREDIT HOURS	6

Second Semester

FIRE 121	Fundamentals of Fire Prevention	3
FIRE 132	Arson Investigation	3
	TOTAL CREDIT HOURS	6

Third Semester

FIRE 137	Extinguishing, Detection and Alarm Systems	3
PHOT 121	Photography I	3
MATH 115	Introduction to Algebra	3
	TOTAL CREDIT HOURS	9

Fourth Semester

FIRE 130	Fire Investigation	3
FIRE 135	Building and Fire Codes	3
	Communication Elective	3
	TOTAL CREDIT HOURS	9

TOTAL PROGRAM CREDIT HOURS 30



FIRE PROTECTION

JCCC offers the Fire Protection Program for students interested in the various aspects of fire suppression. The program requires four semesters with a minimum of 64 credit hours to earn an associate of science degree. A student may earn a certificate with 30 hours of credit, and may then enter the job market.

A student will be presumed to be in his first semester at the point where he enters the curriculum. Example, if someone starts in semester two, he will follow the scheduled courses through semesters three, four and one.

Associate of Science Degree

First Semester		CR
FIRE 140	Recognition and Identification of Hazardous Materials	1
FIRE 143	Properties and Characteristics of Hazardous Materials	1

FIRE 145	Hazardous Materials Initial Response	1
FIRE 150	Introduction to Fire Science	3
FIRE 162	Fire Tactics and Strategy	3
ENGL 121	Composition I	3
	Mathematics Elective	3
	TOTAL CREDIT HOURS	15

Second Semester

FIRE 159	Fire Hydraulics	4
FIRE 170	Sprinkler and Standpipe Systems	3
	Social Science and/or Economics Elective	3
	Health and/or Physical Education Elective	1
	Technical Elective	6
	TOTAL CREDIT HOURS	17

Third Semester

FIRE 169	Rescue Techniques	4
	Humanities and/or Art Elective	3
	Communication Elective	3
	Science Elective	5
	TOTAL CREDIT HOURS	15

Fourth Semester

FIRE 160	Fire Apparatus and Equipment	3
	Mathematics and/or Science Elective	5
	Technical Electives	9
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	64

Technical Electives

Any course in this section not required in program.

FIRE 175	Essentials of Fire Fighting	4
EMS 130	Emergency Medical Technician	6
CHEM 122	Principles of Chemistry	5
MATH 133	Technical Math I	4
ADMJ 124	Criminal Justice System	3
FIRE 281	Directed Study: Fire Service	2

Postsecondary Certificate Program

First Semester		CR
FIRE 150	Introduction to Fire Science	3
FIRE 170	Sprinkler and Standpipe Systems	3
	TOTAL CREDIT HOURS	6

Second Semester

FIRE 140	Recognition and Identification of Hazardous Materials	1
FIRE 143	Properties and Characteristics of Hazardous Materials	1
FIRE 145	Hazardous Materials Initial Response	1
HPER	Health and/or Physical Education Elective	1
FIRE 159	Fire Hydraulics	4
	TOTAL CREDIT HOURS	8

Third Semester

FIRE 162	Fire Tactics and Strategy	3
FIRE 160	Fire Apparatus and Equipment	3
	TOTAL CREDIT HOURS	6

Fourth Semester

FIRE 169	Rescue Techniques	4
ENGL 121	Composition I	3
MATH 160	Algebra	3
	TOTAL CREDIT HOURS	10
	TOTAL PROGRAM CREDIT HOURS	30

FIRE PROTECTION ADMINISTRATION

Experienced firefighters often continue to study to improve their job performance and prepare for promotion examinations. To progress to higher positions, firefighters must acquire expertise in writing, public speaking, management and budgeting procedures. Officers are required to establish and maintain discipline and efficiency and direct the activities of firefighters in their companies.

JCCC offers a variety of programs to the interested student. The Fire Protection Administration Program provides training in administration of fire protection services. Upon successful completion of the four-semester program and a minimum of 64 credit hours the student will earn an associate of applied science degree.

A student will be presumed to be in his first semester at the point where he enters the curriculum. Example, if someone starts in semester two, he will follow the scheduled courses through semesters three, four and one.

Associate of Applied Science Degree

First Semester

CR

FIRE 162	Fire Tactics and Strategy	3
ENGL 121	Composition I	3
MATH 160	Algebra	3
FIRE 150	Introduction to Fire Science	3
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	15

Second Semester

FIRE 220	Fire Administration	3
POLS 126	State and Local Government	3
CHEM 122	Principles of Chemistry	5
PSYC 130	Introduction to Psychology	3
	Health and/or Physical Education Elective	1
	TOTAL CREDIT HOURS	15



Third Semester

FIRE 224	Emergency Management Operations	3
BUS 261	Business Law I	3
MATH 181	Statistics	3
DP 124	Business Data Processing	3
DP 140	Editor	1
BUS 141	Principles of Management	3
	TOTAL CREDIT HOURS	16

Fourth Semester

FIRE 222	Fire Science Law	3
SPD 121	Public Speaking	3
BUS 140	Principles of Supervision	3
BUS 120	Management Attitudes and Motivation	3
	Approved Electives	3
	Science/Mathematics Elective	3
	TOTAL CREDIT HOURS	18
	TOTAL PROGRAM CREDIT HOURS	64

Approved Electives

Any course in this section not required in program.

ADMJ 124	Criminal Justice System	3
ADMJ 140	Constitutional Case Law	3
BUS 263	Business Law II	3
SPD 120	Interpersonal Communications	3
ECON 230	Economics I	3
ACCT 121	Accounting I	3
ENGL 122	Composition II	3
DRAF 129	Interpreting Architectural Drawings	2
BUS 143	Personnel Management	3

HOSPITALITY MANAGEMENT

The Hospitality Management Program at JCCC is a comprehensive study of the food service and the public lodging industries. It provides an overview of the various departmental functions, positions of the industries in the American economic system and functions and limitations of these types of establishments.

The Hospitality Management Program concentrates on the development of management skills in preparation for placement in management positions in the industry. The curriculum covers food management, food service design, hotel-motel management operations, management accounting, sales promotion and advanced food preparation. Upon successful completion of 64 hours of credit in this career program the student will be awarded an associate of applied science degree.

Associate of Applied Science Degree

First Semester

CR

HMGT 121	Hospitality Management Fundamentals	3
HMGT 123	Basic Food Preparation	3
ENGL 121	Composition I	3
HMGT 271	Seminar: Purchasing	3
MATH 120	Business Math	3
TOTAL CREDIT HOURS		15

Second Semester

HMGT 230	Intermediate Food Preparation	3
HMGT 128	Supervisory Management	3
HMGT 273	Seminar: Accounting	3
	Social Science and/or Economics Elective	3
HMEC 151	Nutrition and Meal Planning	3
TOTAL CREDIT HOURS		15

Summer

HMGT 275	Seminar: Hospitality Management/ Internship	3
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Third Semester

HMGT 277	Seminar: Menu Planning and Sales Promotion	3
HMGT 219	Hotel-Motel Operations	3
HMGT 221	Design Techniques	3
SPD 120	Interpersonal Communication	3
	or	
	3 hrs. elective course in oral communication	
HMGT 223	Fundamentals of Baking	3
TOTAL CREDIT HOURS		15

Fourth Semester

HMGT 126	Food Management	4
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HMGT 228	Advanced Hospitality Management	3
HMGT 279	Beverage Control	3
HMGT 226	Food Specialties: Garde-Manger	3
	Humanities and/or Art Elective	3
TOTAL CREDIT HOURS		16
TOTAL PROGRAM		
CREDIT HOURS		64

Postsecondary Certificate Program

HMGT 121	Hospitality Management Fundamentals	3
HMGT 123	Basic Food Preparation	3
ENGL 121	Composition I	3
MATH 120	Business Math	3
HMGT 271	Seminar: Purchasing	3
HMGT 273	Seminar: Accounting	3
HMGT 126	Food Management	4
HMGT 128	Supervisory Management	3
HMGT 275	Seminar: Internship	3
	Elective	3
TOTAL CREDIT HOURS		31

INFORMATION / WORD PROCESSING

The Information / Word Processing Program is based on a survey and extensive analysis of the needs of more than 3,000 area businesses conducted by JCCC's Institutional Research Office. There is a definite need for skilled word processing technicians.

The JCCC associate of applied science degree program provides students with the technical background and skills needed to become a word processing specialist or a secretary actively working in word processing. Hands-on experience will be obtained in word processing concepts, equipment and procedures. The program is a curriculum requiring a minimum of 64 credit hours for the associate of applied science degree.

Associate of Applied Science Degree

First Semester

CR

ENGL 121	Composition I	3
SEC 136	Records Management	3
DP 124	Business Data Processing	3
MATH 120	Business Math or higher	3
	Technical Electives *	1
	Electives	3
TOTAL CREDIT HOURS		16

Second Semester

IWP 121	Word Processing Applications I	3
IWP 131	Office Automation Concepts	3
ACCT 111	Small Business Accounting	3
	OR	
ACCT 121	Accounting I	3
	Humanities and/or Art Elective	3

Technical Elective *	1
Electives	3
TOTAL CREDIT HOURS	16

Third Semester

IWP 132	Word Processing Applications II	3
IWP 241	Directed Experience I	1
SEC 230	Secretarial Procedures I	3
	OR	
	Technical Elective *	3
	Health and/or Physical Education	
	Elective	1
	Technical Elective	2
	Electives	6
	TOTAL CREDIT HOURS	16

Fourth Semester

IWP 250	Directed Experience II	1
ECON 130	Basic Economics	3
	OR	
	Social Science and/or Economics	
	Elective	3
	Technical Elective *	6
SEC 231	Secretarial Procedures II	3
	OR	
	Technical Elective *	3
	Electives	3
	TOTAL CREDIT HOURS	16

TOTAL PROGRAM

CREDIT HOURS 64

*** Technical Electives**

CPCA 108	Word Processing on Microcomputers I	1
CPCA 110	Spreadsheets on Microcomputers I	1
CPCA 114	Databases on Microcomputers I	1
DP 140	Editor	1
SEC 135	Electronic Calculators	1
ENGL 109	College Skills Development (Proofreading Skills)	1
SPD 120	Interpersonal Communications	3
BUS 121	Introduction to Business	3
BUS 140	Principles of Supervision	3
BUS 141	Principles of Management	3
BUS 150	Business Communications	3

Office Automation Technology

Vocational Certificate

The Office Automation Technology Certificate Program was developed in response to the demand in the workplace for people skilled in office automation. This program offers college graduates or others with appropriate educational or work experience the opportunity to acquire state-of-the-art knowledge and skills in this rapidly changing field.

Vocational Certificate Program

CR

IWP 121	Word Processing Applications I	3
IWP 132	Word Processing Applications II	3
IWP 131	Word Processing Concepts	3
CPCA 105	Introduction to Personal Computing	1
CPCA 110	Spreadsheets on Microcomputers	1
CPCA 114	Databases on Microcomputers	1
	OR	
CPCA 128	Integrated Software may be substituted for CPCA 110 and CPCA 114	
CPCA 135	PC DOS	1
CPCA 112	PC Communications	1
DP 140	Editor	1
DP 134	Programming Fundamentals	4
DP 230	Data Communications for Microcomputers	3
ELEC 121	Basic Telephony	3
DRAF 115	Introduction to Computer Graphics Systems	3
	TOTAL CREDIT HOURS	28

INTERIOR MERCHANDISING

Interior Merchandising at JCCC concentrates on developing the technical, creative and merchandising skills a student needs to be a professional in the interior products industry.

JCCC's associate of applied science degree offers a careful blend of formal course work and on-the-job training in residential, commercial, wholesale and manufacturing areas of the industry. Successful completion of the two-year, 64-credit-hour curriculum will earn the associate of applied science degree.

Associate of Applied Science Degree

First Semester

CR

ITMD 131	Furniture and Ornamentation/ Antiquity to Renaissance	3
ITMD 121	Interior Design I	3
DRAF 261	Graphic Communications for Interior Design	3
MATH 120	Business Math	3
FASH 150	Textiles	3
ENGL 121	Composition I	3
	TOTAL CREDIT HOURS	18

Second Semester

ITMD 122	Interior Design II	3
BUS 140	Principles of Supervision	3
ITMD 132	Interior Products	3
MKT 134	Creative Retail Selling	3
ITMD 231	Furniture and Ornamentation/ Renaissance to 20th Century	3
	TOTAL CREDIT HOURS	15

Third Semester

ITMD 223	Contract Design	3
ITMD 273	Seminar: Practices and Procedures	2
ITMD 282	Interior Merchandising Practicum I	1
HUM 144	Introduction to Art History	3
ECON 230	Economics I	3
ITMD 140	Draperies, Treatment and Construction	1
ITMD 145	Upholstery Construction	1
ITMD 234	Kitchen Planning and Design	1
	TOTAL CREDIT HOURS	15

Fourth Semester

ITMD 224	Barrier Free Design	3
ITMD 275	Seminar: Budgeting and Estimating	2
ITMD 284	Interior Merchandising Practicum II	1
LC 150	Job Search Skills	1
ITMD 148	Furniture and Ornamentation/ Oriental	3
DRAF 264	CAD: Interior Design Health and/or Physical Education Elective	3 1
	Elective	2
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	64

INTERPRETER TRAINING

The employment outlook for Sign Language interpreters looks promising. As the population grows, so will the number of people with hearing problems and the need for interpreters. Another factor in the predicted increase in employment opportunities is the effort many social service agencies, school systems, medical services and industries are making to provide interpreter services for the hearing impaired.

JCCC's program concentrates on developing skills in American Sign Language, deaf culture and fingerspelling interpretation. During the last semester of the program, students will participate in a practicum class in which they will interpret under supervision in a variety of situations at JCCC and in the community. Successful completion of this program will lead to an associate of applied science degree.

Associate of Applied Science Degree

First Semester

INTR 125	American Sign Language I	5	CR
INTR 130	Orientation to Interpreting	3	
INTR 145	Deaf Culture Health and/or Physical Education Elective	3 1	
ENGL 121	Composition I	3	
	TOTAL CREDIT HOURS	15	

Second Semester

INTR 132	American Sign Language II	5
INTR 135	American Sign Language Theory Science and/or Math Elective	3 3
INTR 142	Fingerspelling I	3
INTR 181	Interpreter Practicum I	1
	TOTAL CREDIT HOURS	15

Third Semester

INTR 140	American Sign Language III	5
INTR 250	Interpreting I	6
INTR 225	Physical and Psychological Aspects of Interpreting	2
INTR 242	Fingerspelling II Social Science and/or Economics Elective	2 3
	TOTAL CREDIT HOURS	18

Fourth Semester

INTR 230	American Sign Language IV	4
INTR 255	Interpreting II	6
INTR 281	Interpreter Practicum II Humanities and/or Art Elective	3 3
	TOTAL CREDIT HOURS	16
	TOTAL PROGRAM CREDIT HOURS	64

MANUFACTURING TECHNOLOGY

The employment outlook in manufacturing is good, particularly if the individual is interested in and understands robotics. Industry continues to increase its use of mechanical workers for such tasks as assembling, painting and welding.

Robotics, metal fabrication, drafting and electronics are all a part of the associate of applied science degree program in Manufacturing Technology. Because manufacturing technology encompasses a variety of fields, the 64-credit-hour curriculum is designed to give students background in a number of areas including technical drafting and writing, computer-aided drafting, circuit testing and inspection.

Associate of Applied Science Degree

First Semester

MFTG 121	Manufacturing Processes and Testing	3	CR
MFTG 126	Machine Tool Processes I	3	
DP 132	BASIC for Engineering Technology	3	
MATH 133	Technical Mathematics I	4	
ENGR 131	Engineering Graphics I	3	
	TOTAL CREDIT HOURS	16	

Second Semester

MFTG 116 Industrial Electronics I-DC
(first eight weeks) 2

MFTG 118 Industrial Electronics II-AC
(second eight weeks) 2

MATH 134 Technical Mathematics II 5

DRAF 230 Computer-Aided Drafting 2-D 3

PHYS 125 Technical Physics I 4

TOTAL CREDIT HOURS 16

Third Semester

MFTG 125 CNC Control Concepts and
Programming 3

Technical Electives 6

MFAB 130 MIG and TIG I 3

ENGL 121 Composition I 3

Health and/or Physical Education
Elective 1

TOTAL CREDIT HOURS 16

Fourth Semester

MFTG 122 Robotics 2

MFTG 124 Robotic Applications 2

MFTH 132 Metallurgy 1

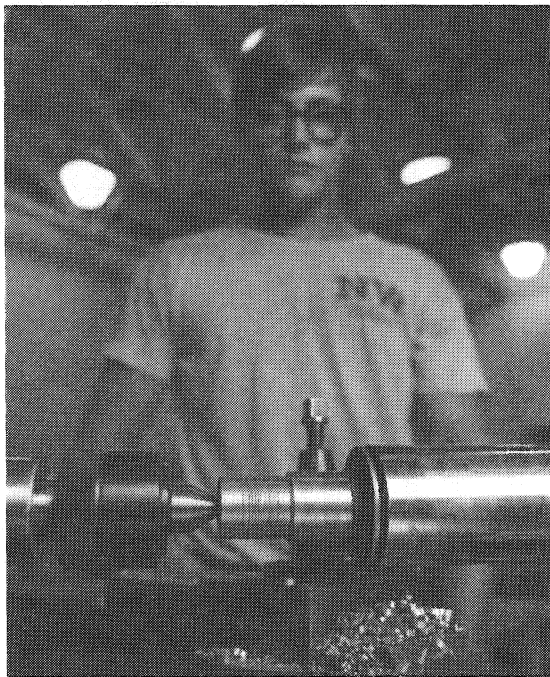
Technical Electives 5

Social Science and/or Economics
Elective 3

Humanities and/or Art Elective 3

TOTAL CREDIT HOURS 16

**TOTAL PROGRAM
CREDIT HOURS 64**



Technical Electives

MFTG 110 Interpreting Electrical Drawings 2

MFTG 112 Hydraulics I 2

MFTG 114 Pneumatics 2

MFTG 120 Industrial Electronics III- Circuits 2

MFTG 128 Machine Tool Processes II 3

MFTG 133 Programmable Controllers 2

MFTG 140 TAI – Statistical Process Control 3

MFTG 211 Industrial Electronics IV -
Troubleshooting I 2

MFTG 212 Industrial Electronics V -
Troubleshooting II 2

MFTG 271 Manufacturing Technology
Cooperative Ed I 3

MFAB 125 Advanced Gas and Arc Welding 3

ENGR 132 Engineering Graphics II 3

DRAF 231 Computer-Aided Drafting 3-D 3

PHYS 126 Technical Physics II 3

DRAF 232 Computer-Aided Drafting Applications 3

Postsecondary Certificate Program

Automated Manufacturing

First Semester **CR**

MATH 133 Technical Mathematics I 4

MFTG 121 Manufacturing Processes and Testing .. 3

TOTAL CREDIT HOURS 7

Second Semester

MATH 134 Technical Mathematics II 5

MFTG 116 Industrial Electronics I - DC
(first eight weeks) 2

MFTG 118 Industrial Electronics II - AC
(second eight weeks) 2

TOTAL CREDIT HOURS 9

Third Semester

PHYS 125 Technical Physics I 4

Fourth Semester

MFTG 126 Machine Tool Processes I 3

OR

MFTG 120 Industrial Electronics III - Circuits 2

DP 132 BASIC for Engineering Technology ... 3

OR

MFTG 140 TAI – Statistical Process Control 3

TOTAL CREDIT HOURS 5-6

Fifth Semester

MFTG 211 Industrial Electronics IV -
Troubleshooting I 2

ENGR 131 Engineering Graphics I 3

ENGL 121 Composition I 3

TOTAL CREDIT HOURS 8

Sixth Semester

DRAF 230 Introduction to Computer-Aided
Drafting 2-D 3

MFTG 212	Industrial Electronics V - Troubleshooting II	2
	OR	
MFTG 125	CNC Control Concepts and Programming	3
	TOTAL CREDIT HOURS	5-6

Seventh Semester

MFTG 112	Hydraulics I (first eight weeks)	2
MFTG 114	Pneumatics I (second eight weeks)	2
	OR	
MFTG 122	Robotics	2
MFTG 124	Robotic Applications	2
	TOTAL CREDIT HOURS	4
	TOTAL PROGRAM CREDIT HOURS	42-44

Note: Students may substitute a maximum of 6 credit hours earned in Cooperative Education or Prior Learning credit for courses listed in semesters 5,6,7.

**Postsecondary Certificate Program
Supervisory Option**

First Semester		CR
MFTG 121	Manufacturing Processing and Testing	3
MATH 133	Technical Mathematics I	4
	TOTAL CREDIT HOURS	7

Second Semester

DP 122	BASIC for Engineering Technology	3
	OR	
MFTG 140	TAI –Statistical Process Control	3
MATH 134	Technical Mathematics II	5
	TOTAL CREDIT HOURS	8

Third Semester

MFTG 122	Robotics	2
ECON 130	Basic Economics	3
	TOTAL CREDIT HOURS	5

Fourth Semester

MFTG 123	Current Numerical Control Concepts	2
BUS 120	Management Attitudes and Motivation	3
	TOTAL CREDIT HOURS	5

Fifth Semester

ENGL 121	Composition I	3
BUS 140	Principles of Supervision	3
	TOTAL CREDIT HOURS	6

Sixth Semester

ENGL 123	Technical Writing I	3
PSYC 124	Human Potential Seminar	3
	OR	
PSYC 121	Applied Psychology	3
	TOTAL CREDIT HOURS	6
	TOTAL PROGRAM CREDIT HOURS	37

**MARKETING
AND MANAGEMENT**

The field of marketing and management is large and competitive. People employed in this field work in the areas of sales, marketing and advertising, insurance agents/brokers, sales workers and sales managers. JCCC's program provides the background often required for entry-level positions.

JCCC's Marketing and Management Program focuses on the skills required in retail, wholesale or manufacturing sales, marketing research analysis, store management, buying and service sales. On-the-job experiences will provide opportunities to apply the theoretical training gained in class to the everyday problems found in a business operation. Students should contact a counselor when planning their program in marketing and management. The program consists of 64 credit hours, which will lead to an associate of applied science degree.

Associate of Applied Science Degree

First Semester		CR
ACCT 111	Small Business Accounting	3
	OR	
ACCT 121	Accounting I	3
MKT 133	Salesmanship	3
	OR	
MKT 134	Creative Retail Selling	3
ENGL 121	Composition I	3
MKT 271	Marketing and Management Seminar: Organization and Operation Communications Elective	3 3 3
	TOTAL CREDIT HOURS	15

Second Semester

BUS 140	Principles of Supervision	3
MATH 120	Business Math	3
MKT 221	Sales Management Health and/or Physical Education Elective Business Elective	3 3 1 3
MKT 272	Marketing and Management Seminar: Management Decisions	3 3
	TOTAL CREDIT HOURS	16

Third Semester

BUS 230	Marketing	3
BUS 261	Business Law I	3
PHIL 143	Ethics	3
BUS 243	Personnel Management	3
MKT 274	Marketing and Management Seminar: Management	3 3
	TOTAL CREDIT HOURS	15

Fourth Semester

BUS 141	Principles of Management	3
ECON 130	Basic Economics	3
	OR	
ECON 230	Economics I	3
MKT 273	Marketing and Management Seminar: Marketing Research	3
	Electives	9
	TOTAL CREDIT HOURS	18
	TOTAL PROGRAM	
	CREDIT HOURS	64

MEDICAL RECORD TECHNOLOGY

The medical record technician has the technical skills to maintain the components of health information systems consistent with the medical, administrative, ethical, legal, accreditation and regulatory requirements of the health care delivery system. Area hospitals and a variety of other health facilities in the community offer field experience in all procedures performed by the medical record technician. This is a cooperative program between JCCC and Penn Valley Community College. Students must be formally accepted by both JCCC and Penn Valley to be admitted to this program.

When the program has been completed and the associate of applied science degree obtained, the student will be eligible to take the accreditation examination of the American Medical Record Association. To apply for admission into the program request "Admissions Procedures" for the Medical Record Program from the Admissions & Records Office.

Associate of Applied Science Degree (Degree granted by Penn Valley)

First Semester

		CR
KMRT 160	Introduction to Medical Records Profession	2
KMRT 161	Health Record Systems, Analysis and Controls	3
BIOL 144	Human Anatomy/Physiology	5
DP 124	Business Data Processing	3
KMRT 151	Medical Terminology for Medical Records	3
	TOTAL CREDIT HOURS	16

Second Semester

KMRT 162	Health Statistics and Research Methods	2
KMRT 169	Legal Aspects of Medical Records	2
KMRT 166	Clinical Education I	2
KMRT 184	Medical Transcription	3

BIOL 210	Pathophysiology	4
ENGL 121	Composition I	3
	TOTAL CREDIT HOURS	16

Summer

SPD 120	Interpersonal Communications	3
	Constitution Requirements *	3
	TOTAL CREDIT HOURS	6

Third Semester

KMRT 164	Quality Assur / Sel Health Records	3
CPCA 108	Word Processing on Microcomputers I	3
KMRT 163	Classification, Nom. Ind. and Reg. I	3
KMRT 167	Clinical Education II	2
ENGL 122	Composition II	3
	TOTAL CREDIT HOURS	14

Fourth Semester

KMRT 175	Specialized Health Record Systems	3
KMRT 168	Clinical Education III	2
KMRT 180	Classification, Nom., Ind. and Reg. II	3
PSYC 130	Introduction to Psychology	3
BUS 243	Personnel Management	3
	TOTAL CREDIT HOURS	14
	TOTAL PROGRAM	
	CREDIT HOURS	66

Enrollees may be full-time or part-time students. The above sequencing is required in order to complete the program in four semesters.

* All graduates from Penn Valley must meet the Missouri constitution requirements. See your JCCC counselor about courses.

METAL FABRICATION

Increases in population and income are expected to stimulate building and demand for heavy equipment that helps provide products that welders manufacture. The rate of expansion in the industries that produce these goods will determine the actual increase in the number of welders. Most openings, however, will arise because of the need to replace experienced welders who transfer to other occupations or retire.

JCCC provides three well-equipped laboratories that enable students to receive practical experience in oxyacetylene welding and cutting, stick-welding (SMAW), Heliarc (GTAW), metal fabrication, wire welding (GMAW-FCAW), machine shop, manufacturing processes and testing. This certificate program may be used to pursue an associate of applied science degree through JCCC's Manufacturing Technology program.

Postsecondary Certificate Program

<i>First Semester</i>		CR
MFAB 121	Introduction to Welding	3
MFAB 130	MIG and TIG I	3
MFTG 126	Machine Tool Processes I	3
MATH 133	Technical Math I	4
TOTAL CREDIT HOURS		13

Second Semester

MFAB 125	Advanced Gas and Arc Welding	3
MFAB 230	MIG and TIG II	3
MFTG 128	Machine Tool Processes II	3
MFTG 132	Metallurgy	1
ENGL 121	Composition I	3
TOTAL CREDIT HOURS		13

The following eight credit hours must be completed in addition to the above courses:

MFTG 121	Manufacturing Processes & Testing ...	3
MFAB 140	Introduction to Metal Fabrication ...	3
MFTG 122	Robotics	2
TOTAL CREDIT HOURS		8

TOTAL PROGRAM

CREDIT HOURS 34

NURSING

As health care needs of a growing and aging population have increased, so have employment opportunities for nurses. The employment outlook for the future is excellent. New roles for RNs are being created by the development of such alternative health care programs as health maintenance organizations, ambulatory surgical clinics, free-standing emergency centers and home health care.

JCCC offers two degree programs for nursing accredited by the Kansas State Board of Nursing and the National League for Nursing, the associate of science and associate of arts degrees. Both degrees focus on the biological, physical and behavioral sciences, as well as nursing. Because it is a difficult curriculum requiring long hours of classroom, laboratory and independent study, certain academic requirements must be met before enrolling. Upon successful completion of either degree, the student will be eligible to take the registered nurse licensing exam. The application deadline is Feb. 1.

If you are a licensed practical nurse, you may wish to apply for admission with advanced standing. You must meet specific criteria to be eligible for admission to the program at this level. Additional information is available through the admissions office. The deadline for application is Jan. 15.

Associate of Science Degree

<i>Summer</i>		CR
(Prior to Beginning Clinical Courses)		
CHEM 122	Principles of Chemistry	5
	Mathematics Elective	3
TOTAL CREDIT HOURS		8

First Semester

BIOL 140	Human Anatomy	4
PSYC 130	Introduction to Psychology	3
NURS 121	Concepts of Health	8
TOTAL CREDIT HOURS		15

Second Semester

BIOL 225	Human Physiology	4
PSYC 215	Child Development	3
NURS 122	Adaptation to Change	8
TOTAL CREDIT HOURS		15

Summer

ENGL 121	Composition I	3
TOTAL CREDIT HOURS		6

Third Semester

NURS 221	Short-Term Health Problems	9
SOC 122	Sociology	3
OR		
SOC 125	Social Problems	3
	Communications Elective	3
TOTAL CREDIT HOURS		15

Fourth Semester

NURS 222	Long-Term Health Problems	9
	Humanities and/or Art Elective	3
	Health and/or Physical Education	
	Elective	1
	Communications Elective	3
TOTAL CREDIT HOURS		16
TOTAL PROGRAM		
CREDIT HOURS		75

Associate of Arts Degree

<i>Summer</i>		CR
(Prior to Beginning Clinical Courses)		
CHEM 122	Principles of Chemistry	5
	Mathematics Elective	3
TOTAL CREDIT HOURS		8

First Semester

BIOL 140	Human Anatomy	4
PSYC 130	Introduction to Psychology	3
NURS 121	Concepts of Health	8
TOTAL CREDIT HOURS		15

Second Semester

BIOL 225	Human Physiology	4
PSYC 215	Child Development	3
NURS 122	Adaptation to Change	8
TOTAL CREDIT HOURS		15

Summer

ENGL 121	Composition I	3
	Humanities and / or Art Elective	3
	TOTAL CREDIT HOURS	6

Third Semester

NURS 221	Short-Term Health Problems	9
SOC 122	Sociology	3
	OR	
SOC 125	Social Problems	3
ENGL 122	Composition II	3
	TOTAL CREDIT HOURS	15

Fourth Semester

NURS 222	Long-Term Health Problems	9
	Humanities and / or Art Elective	3
	Health and / or Physical Education	
	Elective	1
	Speech Elective	3
	TOTAL CREDIT HOURS	15
	TOTAL PROGRAM	
	CREDIT HOURS	75

OCCUPATIONAL THERAPY ASSISTANT

The occupational therapy assistant (OTA) assists the registered occupational therapist, helping people with physical, emotional and developmental limitations achieve more functional lives. The two-year Occupational Therapy Program is offered in cooperation with Penn Valley Community College. The support courses are held at JCCC, and the clinical courses are held at Penn Valley and affiliated clinical agencies. Students must be formally accepted by both JCCC and Penn Valley. Course registration is at JCCC. Upon graduation, the student will be granted a certificate and identification number. Consult a JCCC counselor about additional information.

Associate in Applied Science Degree (Degree granted by Penn Valley)

First Semester		CR
KOT 100	Introduction to Occupational Therapy *	2
SPD 120	Interpersonal Communications	3
LC 130	Medical Terminology	3
BIOL 120	Life Science	4
PSYC 130	Introduction to Psychology	3
ENGL 121	Composition I	3
	TOTAL CREDIT HOURS	18

Second Semester

KOT 103	Occupational Therapy Growth and Development	3
	Missouri Constitution **	3

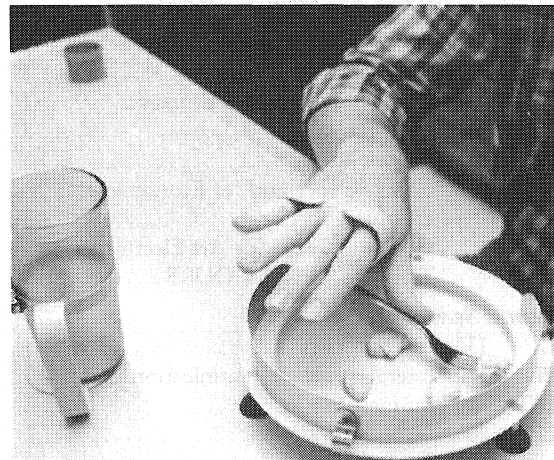
KOT 102	Occupational Therapy in Mental Health I	3
BIOL 144	Anatomy and Physiology	5
	TOTAL CREDIT HOURS	14

Summer Semester

KOT 103	Clinical Conditions	3
KOT 104	Therapeutic Media	2
	Art Elective	3
	TOTAL CREDIT HOURS	8

Third Semester

KOT 201	Occupational Therapy in Mental Health II	5
KOT 202	Occupational Therapy in Physical Disabilities	5
KOT 203	Shop Practices/Orthotics	2
KOT 204	Therapeutic Media II	3
	TOTAL CREDIT HOURS	15



Fourth Semester

KOT 200	Principles of Occupational Therapy	2
KOT 205	Field Work in Occupational Therapy I	3
KOT 206	Field Work in Occupational Therapy II	3
KOT 207	Clinical Seminar	2
SOC 122	Sociology	3
	TOTAL CREDIT HOURS	13
	TOTAL PROGRAM	
	CREDIT HOURS	67

* Enrollment in this course does not imply acceptance into program.

** All graduates from Penn Valley must meet the Missouri Constitution requirement. See your JCCC counselor about courses.

PARALEGAL

Career prospects are excellent for paralegals. Private law firms will continue to be the largest employers of legal assistants. Other organizations such as corporate legal departments, insurance companies, real estate and title firms, and banks should continue hiring paralegals. The Paralegal Program at JCCC has grown to be one of the most popular programs available.

JCCC's Paralegal Program is approved by the American Bar Association. Upon successful completion of 64 credit hours, an associate of applied science degree will be awarded. A certificate program is also available to qualified individuals with the successful completion of 24 credit hours of paralegal specialty courses (PL designation), Composition I, Interpersonal Communications or other speech courses, and Integrated Software-IBM or Business Data Processing.

Associate of Applied Science Degree

First Semester

PL	121	Introduction to Law	3	CR
PL	123	Paralegal Professional Studies	1	
PL	131	Legal Research	3	
ENGL	121	Composition I	3	
		Social Science and/or Economics Elective	3	
		Humanities and/or Art Elective	3	
		TOTAL CREDIT HOURS	16	

Second Semester

PL	132	Litigation I	3
SPD	120	Interpersonal Communication	3
MATH	120	Business Math	3
PL	205	Legal Writing	2
		Paralegal Electives	2
DP	124	Business Data Processing	3
		OR	
CPCA	128	Integrated Software-IBM	3
		TOTAL CREDIT HOURS	16

Third Semester

PL	271	Seminar: Legal Interviewing and Investigation	2
PL	275	Paralegal Internship I	1
		Health and/or Physical Education Elective	1
		Paralegal Elective	3
		Electives	9
		TOTAL CREDIT HOURS	16

Fourth Semester

PL	276	Paralegal Internship II	1
		Paralegal Elective	3
		Electives	12
		TOTAL CREDIT HOURS	16
		TOTAL PROGRAM CREDIT HOURS	64

Paralegal Electives

PL	140	Computerized Litigation Support	1
PL	152	Real Estate Law	3
PL	162	Family Law	3
PL	171	Law Office Systems	2
PL	212	Business Organizations	3
PL	221	Commercial Transactions	1
PL	232	Litigation II	3
PL	241	Wills, Trusts and Probate Administration	3
PL	242	Estate Planning	3
PL	261	Retirement Plans, Qualifications and Administration	1
PL	264	Workers' Compensation	1
PL	268	Bankruptcy	1
ADMJ	141	Criminal Law	3

Postsecondary Certificate Program (for qualifying students)

Required Courses

			CR
PL	121	Introduction to Law	3
PL	123	Paralegal Professional Studies	1
PL	131	Legal Research	3
PL	132	Litigation I	3
PL	271	Seminar: Legal Interviewing and Investigation	2
PL	275	Paralegal Internship I	1
ENGL	121	Composition I	3
MATH	115	Introduction to Algebra or higher mathematics course	3
SPD	120	Interpersonal Communication	3
DP	124	Business Data Processing	3
		OR	
CPCA	128	Integrated Software-IBM	3
		Paralegal Electives	11
		TOTAL CREDIT HOURS	36

The Accelerated Certificate Program (ACP) is a highly concentrated daytime course of study during the summer semester with completion during the following fall semester. During the summer semester students will attend class for nine (9) weeks, six (6) hours a day, Monday through Thursday. Courses may be taken in the fall semester during the day, evening or both as long as curriculum requirements are met.

Prior to enrolling for the Accelerated Certificate Program a student must have:

Earned at least an associate degree.

Earned a 2.5 cumulative grade point average (GPA) for all prior college credits.

Successfully completed ENGL 121 Composition I or an equivalent college English course.

Successfully completed SPD 120 Interpersonal Communication or equivalent college-level speech course.

Completed a pre-enrollment interview.

<i>Summer</i>			CR
PL	121	Introduction to Law	3
PL	123	Paralegal Professional Studies	1
PL	131	Legal Research	3
PL	132	Litigation I	3
PL	152	Real Estate Law	3
TOTAL CREDIT HOURS			13

<i>Fall Semester</i>			
PL	271	Seminar: Legal Interviewing/ Investigation	2
PL	275	Paralegal Internship I	1
		Paralegal Electives	8
TOTAL CREDIT HOURS			11

PHYSICAL THERAPY ASSISTANT

The physical therapy assistant, under the supervision of a licensed physical therapist, performs direct patient care. As prescribed by a physician, physical agents such as heat, light, sound, water, cold, massage, exercise and rehabilitation techniques are used by the therapist.



JCCC offers a cooperative program with Penn Valley Community College. The Physical Therapy Assistant Program at PVCC is accredited by the American Physical Therapy Association. The support courses are held at JCCC and the clinical courses at Penn Valley and affiliated clinical agencies. All course registration is at JCCC. Students must be accepted into the program by both JCCC and PVCC. Consult a JCCC counselor for additional information about the program.

Associate in Applied Science Degree (Degree granted by Penn Valley)

<i>First Semester</i>			CR
KPT	100	Molecular Basis of Living Systems	3
LC	130	Medical Terminology	2
SOC	122	Sociology	3
KPT	151	Introduction to Physical Therapy	2
PSYC	130	Introduction to Psychology	3
BIOL	140	Human Anatomy	4
TOTAL CREDIT HOURS			17

<i>Second Semester</i>			
KPT	153	Kinesiology	4
ENGL	121	Composition I	3
KPT	152	Fundamentals of Modalities I	3
SPD	120	Interpersonal Communication	3
KPT	154	Applied Neurology	1
KPT	159	Clinical Pathology	4
TOTAL CREDIT HOURS			18

<i>Summer</i>			
		Missouri Constitution *	3
KPT	161	Fundamentals of Modalities II	5
TOTAL CREDIT HOURS			8

<i>Third Semester</i>			
KPT	155	Rehabilitation	4
KPT	158	Therapeutic Exercise	4
KPT	170	Clinical Experience I	3
KPT	171	Clinical Seminar	1
BIOL	225	Human Physiology	4
TOTAL CREDIT HOURS			16

<i>Fourth Semester</i>			
KPT	172	Clinical Experience II	12
TOTAL CREDIT HOURS			12
TOTAL PROGRAM			
CREDIT HOURS			71

* All graduates from Penn Valley must meet the Missouri Constitution requirement. See your JCCC counselor about courses.

RADIOLOGIC TECHNOLOGY

The Radiologic Technology curriculum (X-ray technology) is a cooperative program between JCCC and Penn Valley Community College and consists of a continuous 26-month period of study. Students must be formally accepted into the program by both JCCC and PVCC. Areas of study will be in radiographic exposure, positioning and anatomy, and the use of imaging equipment.

Related courses will be taken at JCCC with lab and clinical courses held at PVCC or at a cooperating health facility.

Associate in Applied Science Degree (Degree granted by Penn Valley)

<i>First Semester</i>		CR
KRAD 169	Medical and Radiology Terms	3
KRAD 170	Radiologic Technology I	3
KRAD 171	Radiographic Exposures I	3
KRAD 172	Radiographic Positioning I	3
KRAD 173	Clinical Training I	2
TOTAL CREDIT HOURS		14

<i>Second Semester</i>		
BIOL 144	Anatomy and Physiology	5
KRAD 174	Radiographic Exposures II	3
KRAD 175	Clinical Training II	2
KRAD 176	Radiographic Positioning II	3
PSYC 130	Introduction to Psychology	3
TOTAL CREDIT HOURS		16

<i>Summer</i>		
ENGL 121	Composition I	3
SOC 122	Sociology	3
KRAD 178	Clinical Training III	1
TOTAL CREDIT HOURS		7

<i>Third Semester</i>		
PSCI 120	Physical Science	4
SPD 120	Interpersonal Communications	3
KRAD 279	Radiographic Positioning III	3
KRAD 280	Clinical Training IV	2
TOTAL CREDIT HOURS		12

<i>Fourth Semester</i>		
		Constitution Requirement *
		3
KRAD 278	Radiologic Technology II	3
KRAD 281	Physics of X-ray Equipment	4
KRAD 282	Clinical Training V	2
TOTAL CREDIT HOURS		12

<i>Summer</i>		
KRAD 283	Final Seminar	3
KRAD 284	Clinical Training VI	1
KRAD 285	Specialty Procedures	3
TOTAL CREDIT HOURS		7

Fifth Semester

KRAD 287	Clinical Training VII	3
KRAD 288	Specialty Training Elective **	9
TOTAL CREDIT HOURS		3-12
TOTAL PROGRAM		
CREDIT HOURS		71

* All graduates from Penn Valley must meet the Missouri Constitution requirement. See JCCC counselor about courses.

** Students must have consent of advisor / director prior to enrollment. Students DO NOT have to complete this course for graduation.

RESPIRATORY THERAPY

The respiratory care practitioner is involved in a wide variety of life-saving and life-supporting situations. As a member of the health care team, he or she treats patients ranging in age from newborns to senior citizens. Respiratory therapy offers a set of unique challenges in prevention, treatment, management and rehabilitation of patients with lung problems. Employment outlooks are expected to be good because of developments in new diagnostic and treatment procedures in this field. The health care needs of an aging population also will play a role in the future of the respiratory therapist.

JCCC's program is designed to meet the requirements specified by the Joint Review Committee for Respiratory Care Education. Following completion of at least the prerequisite courses, all students spend a 12-month clinic year attending didactic course activities at JCCC and direct clinic activities at several Kansas City area hospitals for eight hours a day, five days a week. Students must apply for admission to the Respiratory Therapy Program prior to the clinic year. Successful completion of the program can lead to an associate of science degree, an associate of applied science degree or certificate of completion, depending on the general education requirements completed. The student will be eligible for the National Board for Respiratory Care (NBRC) examination process after graduation. This will first earn them the Certified Respiratory Therapy Technician (CRTT) credential and ultimately the Registered Respiratory Therapist (RRT) credential.

Students should contact a counselor for additional information about the selective admission requirements, registry process and the possible transfer of courses to four-year institutions.

Associate of Science Degree

Summer		CR
CHEM 122	Principles of Chemistry *	5
ENGL 121	Composition I *	3
	Social Science/Economics Elective	3
	TOTAL CREDIT HOURS	11

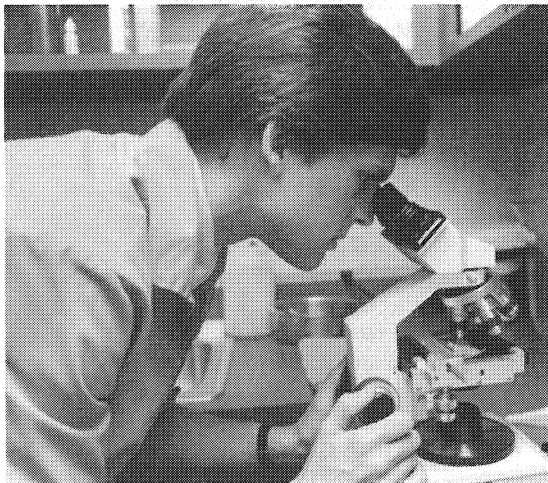
First Semester

BIOL 122	Principles of Biology	3
BIOL 123	Principles of Biology Lab	1
BIOL 140	Human Anatomy *	4
MATH 171	College Algebra *	3
PSCI 120	Physical Science *	4
	TOTAL CREDIT HOURS	15

Second Semester

BIOL 225	Human Physiology *	4
BIOL 230	Microbiology *	3
BIOL 231	Microbiology Lab *	2
SPD 120	Interpersonal Communications	3
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	15

* Indicates prerequisite courses which must be completed prior to the clinic year.



Summer

RT 125	Beginning Principles of Respiratory Therapy	4
RT 130	Respiratory Therapy Equipment	4
RT 135	Cardiopulmonary Medicine I	1
EMS 121	CPR I Basic Rescuer	1
	TOTAL CREDIT HOURS	10

Third Semester

RT 220	Clinical Cardiopulmonary Physiology	2
RT 271	Clinical Practice I	4
RT 230	Clinical Topics and Procedures I	4
RT 235	Cardiopulmonary Medicine II	2

RT 240	Respiratory Pharmacology	2
	TOTAL CREDIT HOURS	14

Fourth Semester

RT 272	Clinical Practice II	4
RT 231	Clinical Topics and Procedures II	4
RT 233	Respiratory Care of Children	2
RT 236	Cardiopulmonary Medicine III	2
	TOTAL CREDIT HOURS	12

Summer

	Communications Elective	3
	Social and/or Behavioral Science Elective	3
	Humanities and/or Art Elective	3
	TOTAL CREDIT HOURS	9

TOTAL PROGRAM

CREDIT HOURS 86

Associate of Applied Science Degree

Summer Session

CHEM 122	Principles of Chemistry (or higher Chem) *	5
ENGL 121	Composition I *	3
	TOTAL CREDIT HOURS	8

First Semester

BIOL 122/123	Principles of Biology and Lab *	4
BIOL 140	Human Anatomy *	4
MATH 171	College Algebra *	3
PSCI 120	Physical Science (or a physics course with a lab) *	4
	TOTAL CREDIT HOURS	15

Second Semester

BIOL 225	Human Physiology *	4
BIOL 230	Microbiology *	3
BIOL 231	Microbiology Lab *	2
	Oral Communication Elective	3
	Social/Behavioral Science Elective	3
	TOTAL CREDIT HOURS	15

* Indicates prerequisite courses which must be completed prior to the clinic year.

Summer Session

RT 125	Beginning Principles of Respiratory Therapy	4
RT 130	Respiratory Therapy Equipment	4
RT 135	Cardiopulmonary Medicine I	1
EMS 121	Basic Rescuer	1
	TOTAL CREDIT HOURS	10

Third Semester

RT 220	Clinical Cardiopulmonary Physiology	2
RT 271	Clinical Practice I	4
RT 230	Clinical Topics and Procedures I	4
RT 235	Cardiopulmonary Medicine II	2

RT	240	Cardiopulmonary Pharmacology	2
		TOTAL CREDIT HOURS	14

Fourth Semester

RT	272	Clinical Practice II	4
RT	231	Clinical Topics and Procedures II	4
RT	233	Respiratory Care of Children	2
RT	236	Cardiopulmonary Medicine III	2
		TOTAL CREDIT HOURS	12
		TOTAL PROGRAM CREDIT HOURS	74

Certificate of Completion – Total Program Hours 68

Students who successfully complete the required prerequisites and the clinic core may receive a certificate of completion in lieu of the associate of science degree. They will technically meet the requirements of the respiratory therapy registry examination process, allowing them to become registered respiratory therapists. Students are encouraged, however, to pursue the associate of science degree, especially if they plan to continue their education.

SECRETARIAL CAREERS

An abundance of jobs will be available to secretaries with strong typing, shorthand and word processing skills. The steadily growing need to process information ensures a future for secretaries. Though application of new technologies will change the secretary's work environment, equipment is not expected to replace the individual.

JCCC's two-year secretarial programs focus on developing skills in typing, records management, accounting, data processing and word processing. Students will have the opportunity to learn on a wide range of automated business machines in modern laboratories, using the latest in equipment and procedures. With a minimum of 64 credit hours, an associate of applied science degree may be earned in either secretarial science, administrative office management, legal secretary option, or medical secretary option. Consult with a JCCC counselor for planning the specific area of emphasis desired. The student may earn a certificate in the secretarial program with the successful completion of 31 credit hours.

Associate of Applied Science Degree Secretarial Science

First Semester

BUS	121	Introduction to Business	3
ENGL	121	Composition I	3
SEC	122	Intermediate Typing	3
SEC	125	Shorthand I	3
		OR	

CR

SEC	130	Stenoscrypt Speedwriting Shorthand . . .	3
SEC	136	Records Management	3
		Electives	2
		TOTAL CREDIT HOURS	17

Second Semester

DP	124	Business Data Processing	3
SEC	126	Shorthand II	3
		OR	
SEC	131	Stenoscrypt Dictation Transcription . . .	3
SEC	135	Electronic Calculators	1
SEC	223	Machine Transcription	3
SEC	283	Secretarial Internship I	1
SEC	275	Human Relations Seminar	2
		Electives	3
		TOTAL CREDIT HOURS	16

Third Semester

SEC	230	Secretarial Procedures I	3
ACCT	121	Accounting I	3
		OR	
ACCT	111	Small Business Accounting	3
MATH	120	Business Math	3
		Humanities and/or Art Elective	3
IWP	121	Word Processing Applications I	3
SEC	284	Secretarial Internship II	1
SEC	272	Management Seminar	2
		TOTAL CREDIT HOURS	18

Fourth Semester

SEC	231	Secretarial Procedures II	3
PL	121	Introduction to Law	3
ECON	230	Economics I	3
		OR	
ECON	130	Basic Economics	3
		Health and/or Physical Education Elective	1
SEC	285	Secretarial Internship III	1
SEC	277	Administrative Office Management Seminar	2
		Electives *	2-3
		TOTAL CREDIT HOURS	15
		TOTAL PROGRAM CREDIT HOURS	64

Recommended Electives

BUS	150	Business Communications	3
BUS	243	Personnel Management	3
ACCT	122	Accounting II	3
BUS	123	Personal Finance	3
SEC	221	Production Typing	3
PSYC	130	Introduction to Psychology	3

* The associate degree requires 64 credit hours minimum. If necessary an additional three-hour elective may be added.

Vocational Certificate Program

SEC 122	Intermediate Typing	3
ACCT 111	Small Business Accounting	3
SEC 230	Secretarial Procedures I	3
SEC 231	Secretarial Procedures II	3
ENGL 121	Composition I	3
SEC 136	Records Management	3
SEC 135	Electronic Calculators	1
IWP 121	Word Processing Applications I	3
	OR	
SEC 223	Machine Transcription	3
MATH 120	Business Math	3

* You must take two of the following internships and seminar courses.

SEC 283	Secretarial Internship I	1
	AND	
SEC 272	Management Seminar	2
	OR	
SEC 284	Secretarial Internship II	1
	AND	
SEC 275	Human Relations Seminar	2
	OR	
SEC 285	Secretarial Internship III	1
	AND	
SEC 277	Administrative Office Management Seminar	2

**Associate of Applied Science
Administrative Office Management**

First Semester		CR
BUS 121	Introduction to Business	3
ENGL 121	Composition I	3
SEC 110	Beginning Typing	3
MATH 120	Business Math	3
SEC 136	Records Management	3
	TOTAL CREDIT HOURS	15

Second Semester

DP 124	Business Data Processing	3
SEC 283	Secretarial Internship I	1
SEC 275	Human Relations Seminar	2
PL 121	Introduction to Law	3
BUS 150	Business Communications	3
	Elective	3
	TOTAL CREDIT HOURS	15

Third Semester

SEC 230	Secretarial Procedures I	3
ACCT 111	Small Business Accounting	3
SPD 120	Interpersonal Communications	3
SEC 284	Secretarial Internship II	1
SEC 272	Management Seminar	2
	Humanities and/or Art Elective	3
	Elective	3
	TOTAL CREDIT HOURS	18

Fourth Semester

ECON 130	Basic Economics	3
	OR	
ECON 230	Economics I	3
	Health and/or Physical Education	
	Elective	1
SEC 285	Secretarial Internship III	1
SEC 277	Administrative Office Management Seminar	2
BUS 243	Personnel Management	3
	Electives *	6-9
	TOTAL CREDIT HOURS	15-16
TOTAL PROGRAM		
	CREDIT HOURS	64

Recommended Electives

SPD 122	Group Discussion	3
SOC 125	Social Problems	3
SEC 130	Stenoscrypt and Speedwriting Shorthand	3
SEC 135	Electronic Calculators	1

* The associate degree requires 64 credit hours minimum. If necessary, an additional three-hour elective may be added.

**Associate of Applied Science Degree
Medical Secretary**

First Semester		CR
SEC 122	Intermediate Typing	3
LC 130	Medical Terminology	3
ENGL 121	Composition I	3
SEC 125	Shorthand I	3
	OR	
SEC 130	Stenoscrypt Speedwriting Shorthand	3
SEC 135	Electronic Calculators	1
SEC 136	Records Management	3
	TOTAL CREDIT HOURS	16

Second Semester

SEC 223	Machine Transcription	3
IWP 121	Word Processing Applications I	3
ECON 130	Basic Economics	3
	OR	
ECON 230	Economics I	3
	Health and/or Physical Education	
	Elective	1
SEC 283	Secretarial Internship I	1
SEC 275	Human Relations Seminar	2
	Electives	3
	TOTAL CREDIT HOURS	16

Third Semester

SEC 230	Secretarial Procedures I	3
MATH 120	Business Math	3
PL 121	Introduction to Law	3

SEC	284	Secretarial Internship II	1
SEC	272	Management Seminar	2
		Elective	3
		TOTAL CREDIT HOURS	15

Fourth Semester

SEC	231	Secretarial Procedures II	3
SEC	184	Medical Transcription	3
ACCT	121	Accounting I	3
		OR	
ACCT	111	Small Business Accounting	3
SEC	285	Secretarial Internship III	1
SEC	277	Administrative Office Management Seminar	2
		Humanities and/or Art Elective	3
		Elective *	3
		TOTAL CREDIT HOURS	18

TOTAL PROGRAM

CREDIT HOURS 64

* The associate degree requires 64 credit hours minimum. If necessary an additional three-hour elective may be added.



Recommended Electives

SEC	126	Shorthand II	3
		OR	
SEC	131	Stenoscript Dictation Transcription	3
SEC	221	Production Typing	3
DP	124	Business Data Processing	3
BUS	150	Business Communications	3
PSYC	130	Introduction to Psychology	3
BIOL	144	Human Anatomy/Physiology	3
SPD	120	Interpersonal Communications	3

Associate of Applied Science Degree

Legal Secretary

First Semester

ENGL	121	Composition I	3
SEC	136	Records Management	3
SEC	122	Intermediate Typing	3
SEC	223	Machine Transcription	3
		Health and/or Physical Education	
		Elective	1

CR

PL	121	Introduction to Law	3
		TOTAL CREDIT HOURS	16

Second Semester

PL	171	Law Office Systems	2
SEC	142	Legal Transcription	3
ECON	230	Economics I	3
		OR	
ECON	130	Basic Economics	3
		Humanities and/or Art Elective	3
SEC	135	Electronic Calculators	1
SEC	285	Secretarial Internship I	1
SEC	275	Human Relations Seminar	2
		TOTAL CREDIT HOURS	15

Third Semester

SEC	125	Shorthand I	3
		OR	
SEC	130	Stenoscript Speedwriting	3
		Shorthand	3
SEC	230	Secretarial Procedures I	3
MATH	120	Business Math	3
PL	131	Legal Research and Writing	3
SEC	284	Secretarial Internship II	1
SEC	272	Management Seminar	2
		Electives	3
		TOTAL CREDIT HOURS	18

Fourth Semester

IWP	121	Word Processing Applications I	3
SEC	231	Secretarial Procedures II	3
ACCT	121	Accounting I	3
		OR	
ACCT	111	Small Business Accounting	3
SEC	285	Secretarial Internship III	1
SEC	277	Administrative Office Management Seminar	2
		Electives *	3
		TOTAL CREDIT HOURS	15

TOTAL PROGRAM

CREDIT HOURS 64

* The associate degree requires 64 credit hours minimum. If necessary an additional three-hour elective may be added.

Recommended Electives

SEC	126	Shorthand II	3
		OR	
SEC	131	Stenoscript Dictation Transcription	3
BUS	150	Business Communications	3
DP	124	Business Data Processing	3
BUS	121	Introduction to Business	3
SEC	225	Dictation and Transcription	3
BUS	261	Business Law I	3
BUS	263	Business Law II	3
SPD	120	Interpersonal Communication	3



COURSE PREFIX LISTING

Academic Achievement Center	LC	Fashion Merchandising	FASH
Accounting	ACCT	Fire Protection/Prevention	FIRE
Administration of Justice	ADMJ	Foreign Language	FL
Agribusiness	AGRI	Hearing Impaired	HRIM
Animal Health Technology	KSAH	History	HIST
Anthropology	ANTH	Home Economics	HMEC
Art	ART	Horticulture	HORT
Automotive Technology	AUTO	Hospitality Management	HMGT
Aviation	KAV	Humanities	HUM
Biology	BIOL	Information/Word Processing	IWP
Biomedical Equipment	BMT	Interior Merchandising	ITMD
Business Administration	BUS	Interdisciplinary Studies	IDSP
Business Data Processing	DP	Interpreter Training	INTR
Chemistry	CHEM	Journalism	JOUR
Commercial Art	CA	Manufacturing Technology	MFTG
Computers: Personal Computer	CPCA	Marketing Management	MKT
Computer Science	CS	Mathematics	MATH
Computer Systems Technology	CST	Medical Records Technology	KMRT
Correctional Services	KADJ	Metal Fabrication	MFAB
Dental Hygiene	DHYG	Music	MUS
Drafting Technology	DRAF	Nursing	NURS
Economics	ECON	Occupational Therapy	KOT
Education	EDUC	Paralegal	PL
Electronics	ELEC	Philosophy	PHIL
Emergency Medical Science	EMS	Photography	PHOT
Energy Technology	ENER	Physical Education	HPER
Engineering	ENGR	Physical Science	PSCI
English	ENGL	Physical Therapy Assistant	KPT
Equine	EQUUS	Physics	PHYS
		Political Science	POLS
		Psychology	PSYC
		Radiologic Technology	KRAD
		Respiratory Therapy	RT
		Secretarial Careers	SEC
		Sociology	SOC
		Speech and Debate	SPD
		Theater	THEA

COURSES BY DIVISION LISTING

Business and Technology Division

Accounting
Automotive Technology
Aviation Maintenance
Biomedical Equipment Technology
Business Administration
Drafting Technology
Economics
Electronics Technology
Energy Technology
Engineering
Fashion Merchandising
Home Economics
Hospitality Management
Information / Word Processing
Interior Merchandising
Marketing and Management
Manufacturing Technology
Metal Fabrication
Paralegal
Secretarial Careers

Communications and Academic Enhancement Division

Academic Achievement Center
English
Foreign Language
Interpreter Training
Journalism
Learning Strategies
Speech and Debate

Computer and Information Systems

Data Processing
Computers: Personal Computer Application
Computer Science

Humanities, Social Science and Human Services Division

Administration of Justice
Anthropology
Art
Basic Police Academy
Commercial Art
Correctional Services
Education

Emergency Medical Science
Fire Science
History
Humanities
Music
Philosophy
Photography
Political Science
Sociology
Theater

Science, Health Care and Math Division

Agribusiness
Animal Health Technology
Biology
Chemistry
Dental Hygiene
Horticulture
Interdisciplinary Studies
Mathematics
Medical Records Technology
Nursing
Occupational Therapy Assistant
Physical Science
Physical Therapy Assistant
Physics
Radiologic Technology
Respiratory Therapy

Physical Education Division

Equine Studies
Health
Physical Education

Student Development Division

Hearing Impaired



ACADEMIC OFFERINGS



ACADEMIC ACHIEVEMENT CENTER

DEVELOPMENTAL COURSES

The following courses are designed to assist students to develop and enhance skills necessary for successful completion of college level requirements. Study skills, reading comprehension and other basic needs will be addressed through individualized instruction, small classes or self-paced programs. These courses do not fulfill degree requirements.

LC COLLEGE SKILLS DEVELOPMENT (1-3CR)

This is a flexible credit course designed for the student who wishes to improve specific academic skills in order to function more efficiently in the classroom. These areas include the development of skills in reading (comprehension, rate or general improvement), study, vocabulary and spelling, or the review of the concepts of basic math, algebra or chemistry. A specific program of study will be designed for the individual student based on the result of diagnostic pretesting. Because the student's mastery level and learning style are considered, instruction is offered both in a classroom setting and lab setting. In addition, this course can be taken for one, two or three credit hours. Specific course numbers will be listed in the schedule of classes published prior to the beginning of each semester. For more detailed information, stop by or call the Academic Achievement Center, located in 227 EMC (469-8500, ext. 3320).

LC READING SKILLS IMPROVEMENT (1-3CR)

Prerequisite: LC 125 or appropriate assessment score

In this class, students will review various reading skills. The primary focus will be on analytical reading skills, study techniques, flexible reading rate and vocabulary enrichment. Specific course numbers will be listed in the schedule of classes published prior to the beginning of each semester. 3 hrs./wk.

LC 130 MEDICAL TERMINOLOGY (3CR)

In this self-instructional approach, students will use a handbook, computer software program, and tapes to build a medical vocabulary. Definition, spelling and pronunciation will be stressed. Students will study twelve body systems, the body as a whole, and an oncology unit. By arrangement.

LC 150 JOB SEARCH SKILLS (1CR)

Job-hunting techniques will be explored in this class. Class consists of lecture, assignments and role playing. In class, students will develop a resume, complete job applications and practice interviewing. 1 hr./wk.

ACCOUNTING

ACCT 111 SMALL BUSINESS ACCOUNTING (3CR)

This course introduces the basic accounting procedures needed to maintain daily records for the small business and the use of such records in the decision-making process. Upon successful completion, the student will be able to maintain a set of financial records with the occasional help of an outside accountant. This course does not prepare the student for Accounting II. 3 hrs./wk.

ACCT 113 PAYROLL ACCOUNTING- CERTIFICATE REVIEW (3CR)

Prerequisite: ACCT 121 or division director approval.

This course offers a study of payroll tax laws and the records that are required by these laws. A review of both federal and state payroll tax legislation and methods of calculating earnings and payroll deductions will be included. Sales tax, property tax and the forms that are necessary to complete such reports will also be discussed. 3 hrs. lecture/wk.

ACCT 115 ACCOUNTING FOR NON-PROFIT ORGANIZATIONS (3CR)

Prerequisite: ACCT 121

This course is a three-hour survey course of not-for-profit accounting and its primary users: federal, state and local governments, hospitals and schools. Upon completion, the student will be able to effectively deal with the primary funds and accounting groups, assist the budget process and practice variances among the major non-profit organizations according to their authoritative pronouncements. 3 hrs./wk. Course will not be offered every semester.

ACCT 121
ACCOUNTING I (3CR)

This course is an introduction to accounting fundamentals. Upon successful completion of this course, a student will be able to analyze transactions, use various journals and ledgers, prepare financial statements and summarize results at the close of the fiscal period for the sole proprietorship and the partnership. 3 hrs./wk.

ACCT 122
ACCOUNTING II (3CR)

Prerequisite: ACCT 121

This course is a continuation of ACCT 121. Upon successful completion of this course, a student will be able to prepare and use financial statements with increased emphasis on interpretation and use of accounting data peculiar to corporations and manufacturing firms. 3 hrs./wk.

ACCT 131
FEDERAL INCOME TAXES I (3CR)

This course teaches the student federal income tax rules and the procedures for reporting federal income tax. Upon completion of this class, the student will be able to do short- and long-range tax planning and keep records which will provide appropriate information to be used in preparing federal income tax. The student will also be able to prepare the standard individual federal income tax return. 3 hrs./wk.

ACCT 142
MANAGERIAL ACCOUNTING AND FINANCIAL CONCEPTS (2CR)

This course is a review of the accounting process and principles, managerial use of accounting, financial statements and their analysis, budget preparation, and the use of computers. The specific needs of property management will provide focus for the course. 3 hr./wk.

ACCT 221
COST ACCOUNTING (3CR)

Prerequisite: ACCT 122

Upon completion of this course, the student will be able to use accounting information to plan and control operations, value inventory and determine income in a manufacturing environment and to evaluate subsequent results. 3 hrs./wk. Spring.

ACCT 222
MANAGERIAL ACCOUNTING (3CR)

Prerequisite: ACCT 122

Upon completion of this course, the student will be able to develop and use accounting information as an instrument of management control. Material includes financial statement analysis, cost application and budgeting reports to management. 3 hrs./wk.

ACCT 231
INTERMEDIATE ACCOUNTING I (3CR)

Prerequisite: ACCT 122

The course presents the use of accounting theory in the preparation of financial reports. The student will be able to solve problems that arise in the presentation of cash, receivables, inventories, tangible and intangible assets on the balance sheet and their related effect on the income statement. 3 hrs./wk. Fall.

ACCT 232
INTERMEDIATE ACCOUNTING II (3CR)

Prerequisite: ACCT 122

Accounting theory learned through the study of accounting concepts and technical procedures will be presented in this course. Upon completion of this course, the student will be able to solve problems in the presentation of the capital structures, long-term investments, debts, leases, pensions, the analysis of financial statements, and price-level and fair value accounting and reporting. 3 hrs./wk. Spring.

ACCT 272 (2CR)
FIELD STUDY: HUMAN RELATIONS

Upon completion of this course, the student will be able to build better working relations with fellow employees and supervisor, and to become more skilled in communications and decision-making. Weekly class discussions focus on applying course content to work experience. 2 hrs./wk. Course will not be offered every semester.

ACCT 274 (3CR)
FIELD STUDY: ACCOUNTING SEMINAR

Prerequisite: ACCT 122

Job simulation is provided through the use of practice sets. After completion of this course, the student will be able to maintain a complete set of books through an accounting cycle, both manual and automated. 2 hrs./wk. Course will not be offered every semester.

ACCT 278 (1CR)
ACCOUNTING INTERNSHIP I

Prerequisite: ACCT 121. Pre- or Co-requisite: ACCT 272

This internship is designed to provide students with the opportunity to use skills learned in accounting courses. Students will work in an approved training situation under instructional supervision. A minimum of 15 hours each week of on-the-job training.

**ADMINISTRATION
OF JUSTICE**

ADMJ 121
**INTRODUCTION TO
ADMINISTRATION OF JUSTICE (3CR)**

Emphasis will be on the historical and philosophical development of the criminal justice system. This course includes participation in the field as well as classroom experience. 3 hrs./wk.

ADMJ 124
CRIMINAL JUSTICE SYSTEM (3CR)

Subsystems of the criminal justice system will be analyzed and identified. 3 hrs./wk.

ADMJ 127
CRIMINOLOGY (3CR)

This class explores theories of criminal behavior, treatment, correction, crime prevention and control. Contemporary trends will be highlighted. 3 hrs./wk.

ADMJ 130
CRIME PREVENTION (3CR)

Topics of special interest include the techniques public service agencies use to operate crime prevention programs and to provide technically accurate, cost-effective security recommendations to the community. 3 hrs./wk.

ADMJ 133
JUVENILE DELINQUENCY (3CR)

This class provides an analysis of detention procedures, disposition, custody and treatment of juvenile offenders throughout the United States with a specific interest in area systems. The origin and development of juvenile agencies, as well as organization, functions and jurisdiction of juvenile courts will be studied. 3 hrs./wk.

ADMJ 136
POLICE AND THE PUBLIC (3CR)

This course will identify and analyze conflict that arises between police and the communities they serve. 3 hrs./wk.

ADMJ 140
CONSTITUTIONAL CASE LAW (3CR)

Students will study Supreme Court decisions that have had significant impact on law enforcement techniques and procedures. 3 hrs./wk.

ADMJ 141
CRIMINAL LAW (3CR)

Prerequisite: ADMJ 124 or PL 121

The Kansas Criminal Code will be the focus of this class, which emphasizes elements of crimes and criminal procedure. 3 hrs./wk.

ADMJ 145
**FUNDAMENTALS OF
PRIVATE SECURITY (3CR)**

This overview of the private security field includes a look at how industry, business, government and institutions handle security. 3 hrs./wk.

ADMJ 146
RETAIL SECURITY (3CR)

This is a study of retail security supervision and management. Topics include employment practices, employee dishonesty, controlling shoplifters and building and perimeter protection. 3 hrs./wk.

ADMJ 148
**FAMILY VIOLENCE
AND SEXUAL ABUSE (3CR)**

A description and causal analysis of the different physical, psychological and sexual abuse acts that may occur within the primary family unit. The study will include possible causative factors; psychological and social impact on the various family members; psychological, social and legal implications; treatments; and, the relationship between abuse and crime. 3 hrs./wk.

ADMJ 154
**FUNDAMENTALS OF
CRIMINAL INVESTIGATION (3CR)**

Prerequisite: ADMJ 124

Topics covered in this course include crime-scene search techniques, collection and preservation of evidence, interviewing and logical reconstruction of the crime. 3 hrs./wk.

ADMJ 157
PATROL PROCEDURES (3CR)

Prerequisite: ADMJ 124

This course covers basic police patrol functions including report writing, traffic law enforcement, arrest, search and seizure, patrol and peacekeeping. 3 hrs./wk.

**ADMJ 164
SUPERVISORY
TECHNIQUES FOR POLICE (3CR)**

Prerequisite: ADMJ 124 or approval of division director

Current theory and practice of the supervisor's role in the police service will be discussed. 3 hrs./wk.

**ADMJ 166
POLICE ORGANIZATION
AND MANAGEMENT (3CR)**

Prerequisite: ADMJ 124 or approval of division director

The organization of a police department will be the focus of this class. Emphasis will be on achieving departmental objectives through the management of people, money and materials. 3 hrs./wk.

**ADMJ 221
INTRODUCTION TO CRIMINALISTICS (3CR)**

Prerequisite: ADMJ 154 or approval of division director

This course provides training in the techniques and methods used to establish the identity and individualization of persons and things in a criminalistic laboratory. 3 hrs./wk.

**ADMJ 225
DEFENSIVE TACTICS FOR POLICE (3CR)**

Prerequisite: ADMJ 124 and ADMJ 136

Subjects covered in this class include the use of the baton and service revolver and constitutional limitations on the use of force. Students are required to furnish ammunition for the service revolver. 3 hrs./wk.

**ADMJ 265
ADVANCED POLICE TRAINING (12CR)**

Prerequisite: Open only to currently employed full-time police officers attending the Police Academy under sponsorship of a law enforcement agency.

This course consists of 180 clock hours of law enforcement training provided in addition to the 320 hours required by the Kansas Minimum Standards Training Act for recruits attending the Police Academy. While the required 320-hour curriculum is provided without fee, enrollment in the advanced training is required of all those attending the Academy. The curriculum covers law, criminal investigations, patrol procedures, defensive tactics, report writing and specialized training required by local law enforcement agencies.

**ADMJ 271
EMERGENCY
DISPATCHER FIELD STUDY (3CR)**

Prerequisite: Only students in appropriate programs will be accepted. Approval of division director required.

Students will gain on-the-job training under the supervision of a qualified dispatcher in law enforcement, fire protection or emergency medical services. The field study will be conducted at an approved dispatching station and arranged by the JCCC program coordinator. By arrangement.

**ADMJ 281
READINGS IN POLICE SCIENCE (3CR)**

Prerequisite: 15 credit hours in ADMJ courses

The class consists of selected readings in police science on topics such as police administration, criminal investigation, criminology, corrections, juvenile problems and evidence. By arrangement.

AGRIBUSINESS

**AGRI 120
INTRODUCTION TO AGRIBUSINESS (2CR)**

This survey of agribusiness and its role in the economy includes a look at career opportunities in the field. Students also will compare several business forms. 2 hrs./wk.

**ANIMAL HEALTH
TECHNOLOGY**

**KSAH 100
INTRODUCTION TO
ANIMAL TECHNOLOGY (2CR)**

This course is an orientation to career opportunities available in animal health technology. Professional ethics, public relations, psychological adjustment of student to the need for physical treatment and emotional involvement in the treatment and care of animals are discussed. Client relations, vaccination programs, regulatory organizations, receptionist duties, breeds and breed characteristics, neutering, puppy care, diets and hospital management are also covered. 2 hrs./wk.

**KSAH 101
PRINCIPLES OF ANIMAL SCIENCE I (3CR)**

This course presents the principles of handling, housing and management of animals, basic dietary and sanitation requirements, restraint and handling, administration of medications, bathing, skin scraping TPRs and basic laboratory tests. Emphasis is on animal physiology including the cell, muscle, nervous, respiratory and cardiovascular systems. An introduction to anesthesia and general animal nursing is also included. 2 hrs. lecture, 2 hrs. lab./wk.

**KSAH 108
CLINICAL MATH (1CR)**

Metric system and conversion of units; apothecaries' equivalents and vocabulary; preparation of solutions: strengths, procedures and computations; and drug administration: calculating and measuring dosages are covered. 1 hr./wk.

**KSAH 110
PRINCIPLES OF ANIMAL SCIENCE II (3CR)**

Prerequisite: KSAH 101

Continuation of Animal Science I. Specimen collection, urinary catheterization, blood collection, basic bandaging and an introduction to surgical preps and radiographic processing are covered. Emphasis is on anesthesia and the physiology of the digestive, urinary, endocrine and reproductive systems. 2 hrs. lecture, 2 hrs. lab./wk.

**KSAH 111
SANITATION AND ANIMAL CARE (2CR)**

This course is an introduction to micro-organisms, sanitation, disinfectants and sterilization. Zoonotic diseases and public health problems; parasitology and vermin control; specimen preservation, instrument identification, cleaning and sterilization; and anesthesia monitoring and patient care will be discussed. 1 hr. lecture, 2 hrs. lab/wk.

**KSAH 120
CLINICAL PATHOLOGICAL
TECHNIQUES I (4CR)**

This course is an introduction to laboratory procedures including preparation of blood smears, cell identification, fecal analysis and parasitology. Urinalysis and urine sediment evaluation will also be covered. 1 hr. lecture, 6 hrs. lab/wk.

**KSAH 200
ANIMAL HOSPITAL TECHNOLOGY I (3CR)**

This course covers the administration of anesthetic and surgical assisting, bandaging, casting, blood transfusions, surgical preparation and postoperative procedures. Parenteral fluid administration and intravenous hook ups and an introduction to orthopedics, electrocardiography, bone marrow cytology and pharmacology will also be presented. 1 hr. lecture, 4 hrs. lab/wk.

**KSAH 202
ANIMAL TECHNOLOGY ANATOMY (5CR)**

This course presents the basic principles of anatomy using a systemic approach. Physiology as it relates to anatomy and applicable pathology involving the animal body systems and a comparison of the animal species using the cat for dissection also are covered. 3 hrs. lecture, 4 hrs. lab/wk.

**KSAH 203
LABORATORY ANIMAL TECHNOLOGY (2CR)**

Prerequisites: KSAH 101, KSAH 110, KSAH 120

Restraint and handling, laboratory animals and birds, and blood collection, physical examinations, medicating and anesthesia of various species are covered. 1 hr. lecture, 2 hrs. lab/wk.

**KSAH 209
EQUINE MEDICINE
AND MANAGEMENT (3CR)**

This course covers breeds and types of horses and their use. A study of conformation as it relates to soundness, horse psychology, fitting, conditioning, first aid and restraint, parasites and their control, farm management for safety, nutrition, mare care, breeding, foaling, hoof soundness, diseases and their prevention. 2 hrs. lecture, 2 hrs. lab/wk.

**KSAH 210
ANIMAL HOSPITAL TECHNOLOGY II (3CR)**

Prerequisite: KSAH 120

Theory and techniques in hematology, urinalysis, clinical chemistries and parasitology are covered, as well as an introduction to simple immunological tests, blood coagulation tests and bone marrow evaluation. 2 hrs. lecture, 3 hrs. lab/wk.

**KSAH 211
CLINICAL
PATHOLOGICAL TECHNIQUES II (5CR)**

Prerequisite: KSAH 120

Theory and performance in hematology, urinalysis, clinic chemistry and parasitology are covered. This course is an introduction to simple immunologic tests, blood coagulation tests and bone marrow evaluation. 2 hrs. lecture, 6 hrs. lab/wk.

**KSAH 212
LARGE ANIMAL TECHNOLOGY (4CR)**

Prerequisites: KSAH 101 and KSAH 110

Techniques necessary to assist the veterinarian in a large animal or mixed practice and in research facilities are studied. Equine, bovine, porcine and ovine medicine and management including restraint, blood collection, medicating and nursing techniques will be covered. 2 hrs. lecture, 4 hrs. lab/wk.

**KSAH 213
RADIOLOGY AND
ELECTRONIC PROCEDURES (2CR)**

This course is an intensive study providing practice in radiological techniques, radiographic exposure techniques, film processing, contrast radiography and machine electronics.

1 hr. lecture, 2 hrs. lab/wk.

**KSAH 214
ANIMAL HEALTH INTERNSHIP (6CR)**

Prerequisite: Two semesters of first-year animal health courses

Supervised intensive clinical study under the direction of a cooperating veterinarian will provide the student with actual work experience. 420 actual work hours.

ANTHROPOLOGY

**ANTH 125
CULTURAL ANTHROPOLOGY (3CR)**

The political economic, religious, family and social aspects of major groups of people around the world will be examined. Hunters, tribesmen, peasants and industrial populations will also be studied. 3 hrs./wk.

**ANTH 126
PHYSICAL ANTHROPOLOGY (3CR)**

This study of physical anthropology includes archaeology, human variation, physical evolution, primate societies and the emergence of human society. Cross-disciplinary topics of interest will be included. 3 hrs./wk.

**ANTH 130
WORLD CULTURES (3CR)**

This ethnographic course in anthropology will examine a representative group of societies from each major environmental region of the world. Hunters and gatherers such as the Pygmy and the Eskimo, tribal farmers from the Pacific Islands and the Americas, chiefdoms such as the Swazi and the Tahitians, state structures from Africa and Southeast Asia, and folk societies such as the peasants of Ireland and China will be studied holistically. 3 hrs./wk.

ART

**ART 121
ART FUNDAMENTALS (3CR)**

This intensive exploration of the visual arts is designed to acquaint students with art forms and art application. 6 hrs. lecture/wk.

**ART 123
ELEMENTARY ART METHODS (3CR)**

This is an exploration of art activities for children from preschool through sixth grade. 3 hrs. lecture, 3 hrs. lab/wk.

**ART 124
DESIGN 2D (3CR)**

This is an introductory study of the principles of visual perception, two-dimensional space organization and the visual element of line, shape, value and texture. 6 hrs./wk.

**ART 127
DESIGN 3D (3CR)**

Prerequisite: ART 124

This is a study of the function of three-dimensional organization in the development of visual ideas. Concepts, materials and processes necessary to an understanding of the three-dimensional relationships of space, form, form evolution and the dynamics of structure are explored. 6 hrs./wk.

**ART 129
DESIGN, COLOR (3CR)**

This is a study of the nature of color, its physical properties and visual qualities. Color as light and pigment will be explored. 6 hrs./wk.

**ART 130
DRAWING I (3CR)**

This is an introductory course with an emphasis on the development of fundamental drawing concepts and skills. 6 hrs./wk.

**ART 131
DRAWING II (3CR)**

Prerequisite: ART 130

Advanced problems with an emphasis on conceptual and mixed media drawing will be explored. 6 hrs./wk.

**ART 135
PAINTING I (3CR)**

This is an introductory course with an emphasis on the development of visual perception and creative response through studies of still life, landscape and human form. 6 hrs./wk.

**ART 136
PAINTING II (3CR)**

Prerequisite: ART 135

This course offers a stronger emphasis on the perceptual and conceptual problems in painting and the development of an individual direction. 6 hrs./wk.

**ART 142
CERAMICS I (3CR)**

This course is an introduction to ceramics, emphasizing the combination of technical insights and creative thought. Emphasis is on wheel-throwing with optional hand-building and slab construction. Students are encouraged to develop their own creative responses through attention to both product and process. 6 hrs./wk.

**ART 143
CERAMICS II (3CR)**

Prerequisite: ART 142

This course deals with more advanced methods and studio experiences in ceramic wheel, creative expression and glaze formulation. Emphasis is on development of a sense of thrown form and creative decoration. 6 hrs./wk.

**ART 145
SCULPTURE I (3CR)**

Students will explore and study natural and synthetic sculptural forms as they create work using traditional or contemporary media and techniques. Assignments require work in sandstone, clay, wax, bronze and steel, and involve carving, modeling and building-up. 6 hrs./wk.

**ART 146
SCULPTURE II (3CR)**

Prerequisite: ART 145

This continuation of ART 145 focuses on advanced methods and techniques with emphasis on materials,

forms and student selection of an individual direction. 6 hrs./wk.

**ART 148
METAL AND SILVERSMITHING I (3CR)**

The metalsmithing techniques of casting and constructing brass, copper and silver will be studied along with buffing, sawing, filing and soldering processes. 6 hrs./wk.

**ART 149
METAL AND SILVERSMITHING II (3CR)**

Prerequisite: ART 148

Students will study advanced metal-smithing techniques of casting, constructing and etching using copper, brass, bronze, silver and other materials. 6 hrs./wk.

**ART 151
WEAVING I (3CR)**

In this introductory fiber course, projects range from two-harness weaver-controlled techniques to more complete procedures involving the use of four-harness floor looms. 6 hrs./wk.

**ART 152
WEAVING II (3CR)**

Prerequisite: ART 151

Advanced problems in structural weaving will be explored using multi-harness looms. Notebook required. 6 hrs./wk.

**ART 155
SMALL LOOM TECHNIQUES (3CR)**

This is a study of the art of textile construction methods. Topics include single and double element construction, fiber properties, spinning and dyeing. 6 hrs./wk.

**ART 166
RAKU CERAMICS (3CR)**

Raku Ceramics deals with the oriental process of making and firing Raku pottery – a spontaneous, low-fire approach to a finished product involving the rapid firing and cooling of the pottery. Hand-formed (pinched and slab) as well as wheel-thrown forms will be researched. Emphasis is on non-wheel manipulations of form. Students are encouraged to develop a personal philosophical basis for their creative process and product. 6 hrs./wk.

ART 172
WATERCOLOR PAINTING (3CR)

The use of transparent medium to work from a variety of representational and non-objective situations in the study of color, value and composition will be explored. 6 hrs./wk.

ART 222
INTRODUCTION TO PRINTMAKING (3CR)

Prerequisite: ART 124 and either ART 130 or CA 130

This is an introduction to a variety of traditional and contemporary printmaking processes including relief, intaglio, lithography and mixed media. 6 hrs./wk.

ART 223
SILKSCREEN (3CR)

Prerequisite: ART 124 and either ART 130 or CA 130

An exploration of silkscreen techniques, this class covers paper stencil, hand-cut film and photo stencil processes. 6 hrs./wk.

ART 231
LIFE DRAWING I (3CR)

Prerequisite: ART 130

This is a study of the fundamentals of figure drawing, working from live models, skeletons and other presentations. 6 hrs./wk.

ART 232
LIFE DRAWING II (3CR)

Prerequisite: ART 231

This course offers advanced figure drawing with emphasis on varying figure form interpretations. 6 hrs./wk.

ART 235
STUDIO WORKSHOP I (3CR)

Prerequisite: ART 131 or ART 136

Emphasis will be on individual studio activity in painting or drawing with the course content decided by the student under a faculty member's supervision. 6 hrs./wk.

ART 236
STUDIO WORKSHOP II (3CR)

Prerequisite: ART 235

Emphasis will be on individual studio activity with course content decided by the student under the supervision of a faculty member. 6 hrs./wk.

ART 244
CERAMICS WORKSHOP I (3CR)

Prerequisite: ART 143 and permission of division director

Students will have the opportunity to pursue advanced individual research under the direction of the instructor. Emphasis is on creative expression as well as development of technical skills. 6 hrs./wk.

ART 281
**DIRECTED READING IN
CONTEMPORARY AMERICAN ART (1CR)**

Prerequisite: Approval of division director

The technical and philosophical points of view of contemporary American artists are examined in this course. By arrangement, 1 hr./wk.

ART 298
AMERICAN ART SINCE 1945 (1CR)

A study of American painting and drawing, this class traces developments from 1945 through today. Students will study work in major museums and important commercial galleries through travel to major art centers.

AUTOMOTIVE TECHNOLOGY

AUTO 116
AVTS: BASIC AUTO I (4CR)

Prerequisite: MATH 111 or appropriate score on math assessment test.

Upon successful completion of this course, the student will have a working knowledge of shop equipment and safe working habits. Other basic competencies will include lubrication and cooling system service and a working knowledge of belts and accessories, basic ignition and carburetor adjustments and brake service. The use and identification of service manuals, fasteners, hand tools and equipment will also be covered. 3 hrs. lecture, 7 hrs. lab/wk.

AUTO 118
AVTS: BASIC AUTO II (5CR)

Prerequisite: AUTO 116

Upon successful completion of this course, the student will have developed an understanding of internal engine, 2 and 4 stroke cycle, theory and basic electricity. Students will also have the opportunity to develop a working knowledge of driveline service, an understanding of emission standards and basic diagnostic procedures. 4 hrs. lecture, 6 hrs. lab/wk.

**AUTO 121
SMALL ENGINE SERVICE (3CR)**

Among areas examined in this class are four-stroke cycle and two-stroke cycle engines, lubricating, cooling, fuel and governor systems, troubleshooting engine problems, inspecting engine components, and servicing the fuel, cooling and exhaust systems. 2 hrs. lecture, 3 hrs. lab/wk.

**AUTO 125
INTRODUCTION TO
AUTOMOTIVE SHOP PRACTICES (3CR)**

Corequisite: MATH 111 or satisfactory score on Math Assessment Exam.

Basic skills will be covered including selection and use of fasteners, service manuals, wiring diagrams and diagnosis charts. 2 hrs. lecture/demonstration, 3 hrs. lab/wk.

**AUTO 150
AUTOMATIC
TRANSMISSIONS AND TRANSAXLES (4CR)**

Prerequisites: AUTO 125, AUTO 160, AUTO 163

Upon completion of this course, the student will be able to service, diagnose and repair various automatic transmissions and progress to automatic transaxles including computer controlled systems.

3 hrs. lecture/demonstration, 3 hrs. lab/wk.

**AUTO 160
AUTOMOTIVE ENGINES I (3CR)**

Corequisite: AUTO 125

Focus will be on the 4-stroke cycle internal combustion engine, calculating compression ratio, piston displacement, horsepower and torque, and analyzing and correcting internal engine malfunctions. 2 hrs. lecture/demonstration, 3 hrs. lab/wk.

**AUTO 163
AUTOMOTIVE ALIGNMENT,
BRAKES AND DRIVETRAIN (4CR)**

Prerequisite: AUTO 125

In order to successfully complete this course, the student will complete competencies in suspension systems (including electronic height control), steering systems (two- and four-wheel), brake systems with anti-lock features, manual transmission/transaxles assemblies, and final drive components. 2 hrs. lecture/demonstration, 3 hrs. lab/wk. Spring.

**AUTO 222
AUTOMOTIVE STARTING,
CHARGING AND IGNITION (3CR)**

Prerequisite: AUTO 160

The construction, operation and diagnosis of the starting, charging and ignition systems will be covered in this course including computer controlled assemblies. 2 hrs. lecture, 3 hrs. lab/wk.

**AUTO 230
AUTOMOTIVE A/C, LIGHTING
AND POWER ACCESSORIES (4CR)**

Prerequisite: AUTO 160

Topics include the construction, operation and diagnosis of auto air conditioning, lighting systems and power accessories such as power windows, speed control and instrument panel components.

3 hrs. lecture/demonstration, 3 hrs. lab/wk.

**AUTO 242
SERVICE MANAGEMENT
AND TECHNIQUES I (7CR)**

Prerequisites and Corequisites: AUTO 125, AUTO 150, AUTO 160, AUTO 163, AUTO 222, AUTO 250

Introduction to ordering parts, writing repair orders, presenting work orders to customers, questioning customers about automobile service problems, answering the telephone and assigning work loads. Students will perform repair work on engines, transmissions, steering and suspension, and brakes.

4 hrs. lecture/demonstration, 9 hrs. lab/wk.

**AUTO 244
SERVICE MANAGEMENT
AND TECHNIQUES II (7CR)**

Prerequisites: All courses required during the first three semesters for the Automotive program.

The student will be required to become proficient in customer relations, parts ordering, supervising work load, filling out repair orders and telephone usage. Students perform service work on air conditioning and emission systems, electrical problems, and drivelines.

4 hrs. lecture/demonstration, 9 hrs. lab/wk.

**AUTO 255
AUTO CARBURETION,
DIESEL AND FUEL INJECTION (4CR)**

Prerequisite: AUTO 160

Topics include the construction, operation and diagnosis of computer controlled carburetors, fuel pumps, injection pumps and injectors in diesel and gasoline engines. 3 hrs. lecture/demonstration, 3 hrs. lab/wk.

**AUTO 271
AUTOMOTIVE TECHNOLOGY
COOPERATIVE EDUCATION I (3CR)**

Prerequisite: Division director approval

This cooperative education course provides advanced students with on-the-job experience under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

**AUTO 272
AUTOMOTIVE
COOPERATIVE EDUCATION II (3CR)**

Prerequisite: AUTO 271 and approval of division director

This course provides the advanced student with supervised on-the-job learning. Course must not duplicate course work offered at JCCC. Job experiences will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.



AVIATION

**KAV 100
INTRODUCTION TO
AVIATION MAINTENANCE I (14CR)**

General aviation practices will be introduced. Also addressed will be theory and practical application in the areas of basic electricity, drafting, fluid lines and fittings, materials and processes, ground operation and servicing, publications, and mechanic's privileges and limitations. 19.7 hrs. lecture, 11.9 hrs. lab/wk.

**KAV 101
CARBURETION AND LUBRICATION (7CR)**

Prerequisites: KAV 100 and KAV 111

This class presents the theory and practical application of engine lubricating systems, engine fuel systems, fuel metering systems and induction systems. 9.6 hrs. lecture, 4.8 hrs. lab/wk.

**KAV 102
WOOD AND FABRIC (3CR)**

Prerequisites: KAV 100 and KAV 111

The fundamentals of wood structures, aircraft covering and aircraft finishes will be introduced. 4.5 hrs. lecture, 2.7 hrs. lab/wk.

**KAV 103
AIRCRAFT
RECIPROCATING POWER PLANT (6CR)**

Prerequisites: KAV 100 and KAV 111

Aircraft reciprocating power plants will be introduced along with the theory and practical application of reciprocating engines and engine exhaust systems. 8.4 hrs. lecture, 4.8 hrs. lab/wk.

**KAV 104
ASSEMBLY AND RIGGING (6CR)**

Prerequisites: KAV 100 and KAV 111

Students will focus on the theory and practical application of aircraft assembly and rigging, and airframe assembly inspection. 8.4 hrs. lecture, 4.8 hrs. lab/wk.

**KAV 105
PROPELLERS (5CR)**

Prerequisites: KAV 100 and KAV 111

The theory and practical application of a wide range of propeller types will be introduced as well as engine cooling systems. 6 hrs. lecture, 3.6 hrs. lab/wk.

**KAV 106
HYDRAULIC AND
PNEUMATIC SYSTEMS (7CR)**

Prerequisites: KAV 100 and KAV 111

Areas covered include inspection, checking, servicing and troubleshooting hydraulic and pneumatic power systems and air conditioning, pressurization and oxygen systems. 9.6 hrs. lecture, 4.8 hrs. lab/wk.

**KAV 107
JET PROPULSION POWER PLANT (5CR)**

Prerequisites: KAV 100 and KAV 111

Principles of operation of gas turbine engines and their application to present day aircraft. Theory and practical application in inspection, servicing and troubleshooting. 6 hrs. lecture, 2.4 hrs. lab/wk.

**KAV 108
AIRCRAFT ELECTRICAL
AND RELATED SYSTEMS (5.5CR)**

Prerequisites: KAV 100 and KAV 111

Theory and practical application in aircraft electrical, position and warning, and ice and rain control systems. 7.2 hrs. lecture, 3.6 hrs. lab/wk.

**KAV 109
AIRCRAFT IGNITION
AND STARTING SYSTEMS (4CR)**

Prerequisites: KAV 100 and KAV 111

The principles of aircraft ignition and starting systems will be introduced with emphasis on the practical application of ignition timing and magneto disassembly and repair. 5.4 hrs. lecture, 3 hrs. lab/wk.

**KAV 110
TECHNICAL MATH (4CR)**

Algebraic functions, factoring, linear equations, quadratic equations, systems of equations, exponents and radicals. Trigonometric functions, solutions of right triangles, functions of the general angle, graphs of trigonometric functions. Laboratory emphasis on elementary physics related to aircraft. 4 hrs./wk.

**KAV 111
INTRODUCTION TO
AVIATION MAINTENANCE II (4.5CR)**

General aviation practices. Theory and practical application in the area of basic electricity. 6.2 hrs. lecture, 3.2 hrs. lab/wk.

**KAV 115
ENGLISH (3CR)**

English for aviation majors only. Methods of rhetorical organization, sentence and paragraph development and diction will be stressed. Students will write and read essays of various types. 3 hrs./wk.

**KAV 200
SHEET METAL AND WELDING (6CR)**

Prerequisites: KAV 100 and KAV 111

Gas welding, sheet metal fabrication, and methods and application of aircraft structural repair. 10.2 hrs. lecture, 7.8 hrs. lab/wk.

**KAV 201
POWER PLANT TESTING (5CR)**

Prerequisites: KAV 100 and KAV 111

This course will address reciprocating engine and engine system theory and inspection, theory and practical application in removal, installation, run-up and troubleshooting of aircraft reciprocating engines. 2.4 hrs. lecture, 4.8 hrs. lab/wk.

**KAV 202
AIRCRAFT FUEL SYSTEMS AND
FIRE PROTECTION, NAVIGATION
AND INSTRUMENT SYSTEMS (2.5CR)**

Prerequisites: KAV 100 and KAV 111

Aircraft fuel systems and fire protection systems will be addressed. Topics include inspection, checking, servicing and troubleshooting. 3 hrs. lecture, 1.4 hrs. lab/wk.

**KAV 203
ELECTRICITY,
GENERATOR-ALTERNATOR (5.5CR)**

Prerequisites: KAV 100 and KAV 111

Theory of aircraft engine electrical systems, practical applications of generating power, and electrical control systems. 7.2 hrs. lecture, 3.6 hrs. lab/wk.

**KAV 204
AIRCRAFT COMMUNICATIONS,
NAVIGATION AND
INSTRUMENT SYSTEMS (5CR)**

Prerequisites: KAV 100 and KAV 111

This course focuses on the theory and practical application of auto pilot and approach systems and inspection and repair of antenna and equipment installations. 6.9 hrs. lecture, 3.3 hrs. lab/wk.

KAV 205
ENGINE INSTRUMENTS (5.5CR)

Prerequisites: KAV 100 and KAV 111

This course provides a review of engine systems through the analysis of related instruments and control systems. Engine fire protection will also be covered. 7.2 hrs. lecture, 3.6 hrs. lab/wk.

KAV 206
AIRFRAME THEORY SURVEY (5.5CR)

Prerequisites: KAV 100 and KAV 111

In this review of airframe theory courses, emphasis is on areas of difficulty. 7.2 hrs. lecture, 3.6 hrs. lab/wk.

KAV 209
SEMINAR IN
POWER PLANT MAINTENANCE (4.5CR)

Prerequisites: KAV 101, 103, 105, 107, 109, 203, 205, 210

This is a review of theory and laboratory experiences in previous power plant courses. 6 hrs. lecture, 3 hrs. lab/wk.

KAV 210
SEMINAR IN
AIRFRAME MAINTENANCE (4.5CR)

Prerequisites: KAV 102, 104, 106, 108, 200, 204, 206

This is a review of theory and laboratory experiences presented in previous airframe courses. 6 hrs. lecture, 3 hrs. lab/wk.

KAV 240
SHOP AND
PERSONNEL MANAGEMENT (9CR)

Prerequisite: A & P license and approval of instructor

Management and leadership techniques in aviation maintenance will be addressed.

KAV 242
POWER PLANT PRACTICAL REVIEW (1CR)

Prerequisite: FAA approval for taking the power plant exam

A review designed to prepare the student for the FAA oral and practical examination for the Power Plant Certificate. Theory and practical applications in the common subjects and shop projects with emphasis on individual areas of need will be covered. 2.5 hrs. lab/wk. for 8 weeks.

KAV 243
AIRFRAME PRACTICAL REVIEW (1CR)

Prerequisite: FAA approval for taking the airframe exam

A review designed to prepare the student for the FAA oral and practical examination for the Airframe Certificate. Theory and practical applications in the common subjects and shop projects with emphasis on individual areas of need will be covered. 2.5 hrs. lab/wk. for 8 weeks.

BANKING AND FINANCE

AIB 101
PRINCIPLES OF BANKING (2CR)

This course is a comprehensive introduction to the diversified services and operations of the banking industry. Topics include the history and evolution of banking, the documents and language of banking, loans and investments, and bank regulation and examination. Bookkeeping, deposit and check processing and various specialized services also will be covered. 2 hrs. lecture/wk.

AIB 104
TRUST OPERATIONS (3CR)

Students will have the opportunity to learn basic trust terminology and to explore the concepts that comprise the various trust functions and translate them into workable procedures. Upon successful completion of this course, the student should be able to adapt this information to individual trust function situations. 3 hrs. lecture/wk.

AIB 124
INTRODUCTION TO
COMMERCIAL LENDING (2CR)

Prerequisites: ACCT 121 or ACCT 122

This comprehensive treatment of commercial lending is designed for entry-level commercial loan officers and any individuals who want to know more about the role of commercial lending in the banking industry and in collective economy. Characteristics of the business loan customer and the fundamentals of commercial loan products, pricing decision-making, support and documentation will also be discussed. Additional topics will include commercial loan portfolio management, legal and regulatory requirements and overall management of the commercial lending function. 2 hrs. lecture/wk.

* BIOL 120 LIFE SCIENCE (4CR)
BIOL 122 + BIOL 123 can replace BIOL 120 as a repeat. Both have to be taken.



BIOLOGY

BIOL 110 NUTRITION FOR LIFE (2CR)

Designed for students who wish to apply nutrition information to their lives, this course will provide students the opportunity to study how food selection affects body size, body composition, performance, disease resistance and longevity. Students will analyze the composition of their diets and develop a plan of action to improve their eating behaviors. 2 hrs. lecture/wk.

* **BIOL 120 LIFE SCIENCE (4CR)**

~~Audiovisual materials, laboratory experiments and lecture sessions will be used in this class to study the principles of living organisms including plants and animals. This course is not open to students who have taken BIOL 122 and BIOL 123. 6 hrs. class-lab/wk.~~

BIOL 122 PRINCIPLES OF BIOLOGY (3CR)

Students will explore selected concepts and principles important to an understanding of how biological systems operate. They also will examine the world of both plants and animals. This course is not open to students who have taken BIOL 120. 3 hrs./wk.

BIOL 123 PRINCIPLES OF BIOLOGY LAB (1CR)

Prerequisite or Corequisite: BIOL 122 or equivalent

This introductory lab focuses on the structures and functions of plants and animals. 2 hrs./wk.

BIOL 125 GENERAL BOTANY (5CR)

Phyla of the plant kingdom will be presented with emphasis on life cycles, anatomy, physiology and ecology of major groups. 3 hrs. lecture, 4 hrs. lab/wk.

BIOL 127 GENERAL ZOOLOGY (5CR)

This is a survey of the life, structure and growth of animals. Students will concentrate on identifying animals by their structural characteristics and will look at the role adaptation plays in anatomical and physiological features. 3 hrs. lecture, 4 hrs. lab/wk.

BIOL 130 ENVIRONMENTAL SCIENCE (3CR)

Students will study the human population's impact on the environment. Topics will include population, air and water pollution, hazardous wastes, land use and energy. 3 hrs./wk.

BIOL 131 ENVIRONMENTAL SCIENCE LAB (1CR)

Prerequisite or Corequisite: BIOL 130

In this lab, students will sample the local environment for air, water and noise pollution. Field trips will include a visit to a local industry to observe pollution control and a visit to a sewage treatment plant. 2 hrs. lab/wk. plus up to 3 field trips.

BIOL 140 HUMAN ANATOMY (4CR)

Students will study gross and microscopic aspects of cells, tissues and organ systems of the human body. They will concentrate on a detailed analysis of the structure of each body system. 3 hrs. lecture, 3 hrs. lab/wk.

BIOL 144 HUMAN ANATOMY AND PHYSIOLOGY (5CR)

Students will study the relationship of structure to function in the organ systems of the human body. Emphasis will be on the location of anatomical features and their functions. 3 hrs. lecture, 4 hrs. lab/wk.

BIOL 146
GENERAL/HEAD
AND NECK ANATOMY (4CR)

The cells, tissues and organ systems of the body will be examined with emphasis on the head and neck. Students will discuss and analyze each system of the body and the embryology of the head and neck. 3 hrs. lecture, 3 hrs. lab/wk.

BIOL 150
BIOLOGY OF ORGANISMS (5CR)

Prerequisites: BIOL 120 or BIOL 122 and BIOL 123
Phyla of protista, plant and animal kingdoms will be presented with emphasis on life cycles, anatomy, physiology and ecology of the major groups. 4 hrs. lecture, 3 hrs. lab/wk.

BIOL 205
GENERAL GENETICS (3CR)

Prerequisite: BIOL 120 or equivalent
Heredity and variation of plants and animals will be studied including classical and molecular genetics. 3 hrs./wk.

BIOL 210
PATHOPHYSIOLOGY (4CR)

Prerequisites: BIOL 144 or BIOL 140 and BIOL 225
This introduction to the physiology of disease covers common disorders of the body from the cellular level to the systemic level. Topics include causes, symptoms, diagnostic tests and treatments of disease. 4 hrs./wk.

BIOL 225
HUMAN PHYSIOLOGY (4CR)

Prerequisites: CHEM 122, BIOL 140 or BIOL 146
The physical and chemical processes of human cells, tissues, organs and systems will be studied. Living organisms and physiological tools will be used to demonstrate the principles of general physiology. 3 hrs. lecture, 3 hrs. lab/wk.

BIOL 230
MICROBIOLOGY (3CR)

Prerequisite: CHEM 122 or one year of high school chemistry
The cell structure, physiology, antimicrobial agents, immunology and host-parasite relationships of microorganisms will be studied. 3 hrs./wk.



BIOL 231
MICROBIOLOGY LAB (2CR)

Prerequisite or Corequisite: BIOL 230
Students will grow and identify microorganisms and perform experiments to test the organisms' response to various environmental conditions. 4 hrs./wk.

BIOL 235
GENERAL NUTRITION (3CR)

Corequisite: BIOL 225 or equivalent
Students will study the source and purpose of essential nutrients, evaluate various diets and explore the role diet plays in preventing disease. 3 hrs./wk.

BIOL 240
GENERAL PHARMACOLOGY (3CR)

Prerequisite: BIOL 225
This is a study of drugs – how they work, what they do, what effects they cause. 3 hrs./wk.

BIOL 295
ALASKA: THE LAST FRONTIER (3CR)

This course is a study of Alaska, its history, culture and natural environment. Students will have an in-depth natural history experience in Denali National Park and the Kenai Peninsula to see glaciers and observe the fishing industry. Fifteen hours of classroom study followed by 16 days of travel.

BIOL 298**SPECIAL TOPICS IN BIOLOGY:
SOUTHWESTERN FIELD COURSE (4CR)**

Students will travel through varied environments of the southwestern United States to observe and study the field biology of each area. Course includes pre-trip lectures in addition to the two-week field trip.

BIOL 299**YUCATAN FIELD COURSE:
NATURAL HISTORY (3CR)**

This travel-for-credit course consists of on-campus pre-departure seminars as well as two weeks spent in Mexico. The class is an introduction to the natural history, flora and fauna of selected geographical locations of the Yucatan Peninsula. Course includes pre-trip lectures in addition to the two-week trip.

**BIOMEDICAL EQUIPMENT
TECHNOLOGY****BMT 210****BIOMEDICAL
EQUIPMENT TECHNOLOGY I (4CR)**

Prerequisite: BIOL 144

Corequisites: ELEC 225, ELEC 230

Topics include special electrical circuits used in biomedical equipment, use of electronics in the health care field, microshock and electrical safety testing. 3 hrs. lecture/demonstration, 3 hrs. lab/wk. Fall.

BMT 211**BIOMEDICAL
EQUIPMENT TECHNOLOGY II (3CR)**

Prerequisite: BMT 210

Corequisite: BMT 271

Students will have access to actual biomedical equipment as they study specific repair and maintenance problems. 2 hrs. lecture/demonstration, 3 hrs. lab/wk. Spring.

BMT 271**BIOMEDICAL INTERNSHIP (2CR)**

Corequisite: BMT 211

Each week students will work in an assigned hospital or in a related position. The institution's biomedical department in cooperation with JCCC's biomedical program coordinator will supervise and evaluate the students. 1 hr. lecture, 6 hrs. internship/wk.

BUSINESS ADMINISTRATION**BUS 120****MANAGEMENT ATTITUDES
AND MOTIVATION (3CR)**

With emphasis on self-improvement techniques, conflict resolution and respect for individual differences, students will take part in discussions, group projects and role-playing. Class meets for 48 hrs.

BUS 121**INTRODUCTION TO BUSINESS (3CR)**

Upon successful completion of this course, the student will be able to explain the basic principles of the American free enterprise economic system. In addition, the student will be able to explain the fundamentals of starting a business and the interrelation among the four functional areas: accounting, finance, management and marketing. 3 hrs./wk.

BUS 123**PERSONAL FINANCE (3CR)**

Upon successful completion of this course, the student will be able to define his or her role as a consumer in the economy, develop a basic financial plan, apply budgeting procedures in a daily and monthly spending plan, calculate principle and interest, define the types of consumer credit, identify the types of housing mortgages and explain the important considerations in buying, selling and renting. In addition, the student will be able to calculate individual insurance needs in the areas of life insurance, health insurance, property and liability insurance, automobile insurance and other types of special insurance, and be able to explain employee and retirement benefits, including tax-sheltered plans. 3 hrs./wk.

BUS 124**GENERAL INSURANCE (3CR)**

This course is designed for students who have had no college course(s) in Insurance and Risk. Upon successful completion of this course, the student will be able to explain the basic terminology and principles of risk and all basic types of insurance; to demonstrate the proper techniques in the insurance decision-making process; and to calculate minimal insurance needs in sample cases. 3 hrs./wk.

**BUS 125
SAVINGS AND INVESTMENTS (3CR)**

This course is planned to give the student an understanding of basic financial planning concepts and tax planning procedures. Students who successfully complete this course will be able to evaluate and determine which types of investments are desirable in setting up a personal financial plan based on personal objectives. 3 hrs./wk.

**BUS 126
TRANSPORTATION RATES I (3CR)**

Motor carrier tariffs and rates will be looked at in detail in this introduction to motor carrier transportation. 3 hrs./wk.

**BUS 127
TRANSPORTATION RATES II (3CR)**

Students will be introduced to Middlewest Freight Bureau Tariff 125 and MWB 226 (commodities). 3 hrs./wk.

**BUS 128
TRANSPORTATION RATES III (3CR)**

The course will focus on the Middlewest Motor Freight Bureau Tariff 129 (rule for discounts and allowances), MWB 600 local distribution, Rocky Mountain Motor 303 (class and commodity rates). 3 hrs./wk.

**BUS 130
INTRODUCTION TO
INTERNATIONAL BUSINESS (3CR)**

Upon successful completion of this course, the student will be able to explain the foreign economic, political and socio-cultural environments relevant to international trade and finance. In addition, the student will be able to explain the basic functions of a firm engaged in international trade (management, marketing and finance), and the international monetary system and foreign exchange. 3 hrs./wk.

**BUS 140
PRINCIPLES OF SUPERVISION (3CR)**

Upon successful completion of this course, the student will be able to define the supervisor's role within a company and identify the skills necessary to successfully fulfill that role. The student will determine the supervisor's role in supervising employees on an individual basis and as a group. In addition, the student will be able to apply the principles of supervision in simulated work situations. 3 hrs./wk.

**BUS 141
PRINCIPLES OF MANAGEMENT (3CR)**

Upon completion of this course, students will be able to state the basic functions of management, explain the nature of organizations and organizational theories and types, explain the importance of effective communications within the organizational structure, develop and define the techniques for directing and motivating employees, explain the effects of change on an organization and develop techniques for coping with its effects. In addition, students will be able to explain and discuss the application of business ethics in managerial decision-making. 3 hrs./wk.

**BUS 145
SMALL BUSINESS MANAGEMENT (3CR)**

Upon successful completion of this course, the student will be able to demonstrate an understanding of management techniques and to develop a philosophy unique to small business. The student should also be able to interpret and develop business plans, marketing options, managerial controls and a financial analysis, which would include a source list of capital. The student will receive detailed information on the initiation of a new venture and the management of its ongoing operation in terms of the opportunities and the limitations of the entrepreneur. 3 hrs./wk.

**BUS 150
BUSINESS COMMUNICATIONS (3CR)**

Prerequisite: ENGL 121

Upon successful completion of this course, the student will be able to read for efficient summarizing and outlining; demonstrate listening skills that help to improve retention rate; write correspondence and memos using the principles of correct writing style and format; explain the basic rules of report writing and apply these principles to a short report; and prepare an effective oral business presentation. 3 hrs./wk.

**BUS 221
PRINCIPLES OF INSURANCE (3CR)**

Prerequisites: BUS 121 and BUS 123

Upon successful completion of this course, the student will be able to state the objectives of and the steps involved in the risk management process; explain the life, health, property and liability exposures for a family; determine the property and liability needs and expenses for a business; explain the needs for both private and social insurance; state the factors included in insurance costs; and analyze current issues in insurance. 3 hrs./wk.

BUS 230**MARKETING (3CR)**

Upon successful completion of this course, the student will be able to explain the concepts of production, consumption and distribution in relation to our free-enterprise economy; list the basic channels of distribution available to the manufacturer of consumer and industrial products; explain and compare the distribution functions of the manufacturer, wholesaler and retailer; and state the procedures necessary to develop the total marketing plan for a given product, service or product line. In addition, the student will be able to discuss the fundamental principles of consumer behavior in the buying process and apply these principles to target market strategies. 3 hrs./wk.

BUS 243**PERSONNEL MANAGEMENT (3CR)**

Upon successful completion of this course, the student will be able to state the principles of human resource management; describe the human resource function as an integral part of management; differentiate between the roles of personnel and line manager in the management of personnel; define and evaluate personnel planning, recruitment, selection and training strategies; define the primary methods of human resource development; employ methods of personnel evaluation; and state the major components and coverages of the Equal Employment Opportunity Act and other personnel-related laws. 3 hrs./wk.

BUS 261**BUSINESS LAW I (3CR)**

The purpose of this course is to provide business students with sufficient knowledge of the law to conform business practices to legal requirements, to avoid legal problems and to know when to seek legal counsel. Upon successful completion of this course, the student will be able to describe the American legal system and identify and describe the basic principles of law as applied to business crimes, torts, contracts, sales and negotiable instruments. The student will also be able to apply basic principles of law to cases involving daily business operations. 3 hrs./wk.

BUS 263**BUSINESS LAW II (3CR)**

Prerequisite: BUS 261

The purpose of this course is to provide business students with sufficient knowledge of the law to conform business practices to legal requirements, to avoid legal problems and to know when to seek legal counsel. Upon successful completion of this course, the student will be able to describe the basic principles of law as ap-

plied to real and personal property, bailments, estate and trusts, secured transactions, bankruptcy, agency and business organizations. The student will also be able to apply basic principles of law to cases involving daily business operations. 3 hrs./wk.

BUS 271**MANAGEMENT SEMINAR (3CR)**

Prerequisite: BUS 141

The purpose of this course is to develop and define the student's management abilities through computerized and non-computerized simulation. Upon successful completion of this course, the student will be able to apply management decision-making principles to simulated management problems. 3 hrs./wk. Spring.

BUS 298**BUSINESS IN JAPAN (3CR)**

In this travel-for-credit course, students will take part in seminars on campus before traveling to Japan where they will visit Japanese factories and other business-related agencies. 52 lecture hours.

CHEMISTRY**CHEM 122****PRINCIPLES OF CHEMISTRY (5CR)**

This is an introduction to the fundamentals of chemistry. It will cover the general concepts of inorganic chemistry with some organic chemistry and biochemistry. 4 hrs. lecture, 3 hrs. lab/wk.

CHEM 124**GENERAL CHEMISTRY I LECTURE (4CR)**

Corequisite: CHEM 125 and MATH 160 or MATH 171

Students will relate atomic structure to chemical systems, calculate the amount of material used in chemical reactions, use the periodic table as an aid to understanding chemical systems and interpret chemical reactions. 4 hrs./wk. with prior chemistry background or 5 hrs/wk. with no prior chemistry background.

CHEM 125**GENERAL CHEMISTRY I LAB (1CR)**

Corequisite: CHEM 124

Experiments of qualitative and quantitative nature that support topics from General Chemistry I Lecture will be carried out. 3 hrs./wk.

CHEM 131
GENERAL CHEMISTRY II LECTURE (4CR)

Prerequisites: CHEM 124 and CHEM 125
Corequisite: CHEM 132

In this continuation of CHEM 124, topics include kinetics, acid-base chemistry, equilibrium, chemical thermodynamics and electro-chemistry. 4 hrs./wk.

CHEM 132
GENERAL CHEMISTRY II LAB (1CR)

Prerequisite: CHEM 124 and CHEM 125
Corequisite: CHEM 131

The laboratory consists of qualitative and quantitative experiments designed to parallel and support General Chemistry II Lecture. 3 hrs./wk.

CHEM 140
PRINCIPLES OF ORGANIC CHEMISTRY (5CR)

Prerequisite: CHEM 122 or CHEM 131

Nomenclature, theory and applications of basic organic chemistry will be covered. Functional group reactions will lead into a study of carbohydrates, proteins, lipids and other biochemical topics. 4 hrs. lecture, 3 hrs. lab/wk.

CHEM 220
ORGANIC CHEMISTRY I (5CR)

Prerequisites: CHEM 131 and CHEM 132

Electronic theories and reaction mechanisms of organic compounds will be the major focus of this course. Students will work on techniques in the lab and will prepare representative compounds. 9 hrs./wk. Fall.

CHEM 221
ORGANIC CHEMISTRY II (5CR)

Prerequisite: CHEM 220

In this continuation of Organic Chemistry I, organic qualitative analysis will be introduced. 9 hrs./wk. Spring.

CHEM 227
**INTRODUCTION TO
QUANTITATIVE ANALYSIS (5CR)**

Prerequisites: CHEM 131 and CHEM 132

This is an introduction to the concepts of acid-base, chromatography, coulometry, equilibrium, oxidation-reduction and spectro-photometry as they apply to quantitative chemical analysis. The lab will introduce modern quantitative experimental techniques. 3 hrs. lecture, 6 hrs. lab/wk.

COMMERCIAL ART

CA 130
REPRESENTATIONAL DRAWING I (3CR)

In this introduction to representational drawing, emphasis is on techniques of visual analysis and the accurate rendering of structure in terms of both line and value. 6 hrs./wk.

CA 131
REPRESENTATIONAL DRAWING II (3CR)

Prerequisite: CA 130

This course is a continuation of Representational Drawing I with emphasis on the creative application of acquired theory, perceptual skills and techniques. Compositional problems as well as techniques used in conveying emotional content will be explored. 6 hrs./wk.

CA 132
TYPOGRAPHY (3CR)

This is a study of the principles of contemporary typographic design focusing on such factors as size, form, contrast, color, spacing and design of the printed word and the printed page. 6 hrs./wk.

CA 134
LAYOUT I (3CR)

Prerequisite: CA 132

This course is a study of basic layout elements and skills emphasizing advertising and editorial grid systems, comp lettering and a variety of indication techniques. 6 hrs./wk.



**CA 141
GRAPHIC ART PROCESSES I (1CR)**

Prerequisites: ART 124 and ART 129

Students will explore a wide variety of non-photographic art products, tools, materials, techniques and processes and apply them in a series of simple graphic images. 2 hrs./wk.

**CA 142
GRAPHIC ART PROCESSES II (1CR)**

Prerequisite: PHOT 121

This graphic art process module will cover basic copy work in slide form. It will include the use of color and black and white reproduction materials with two-dimensional copy-stand, two-dimensional wall work and three-dimensional object setups. 2 hrs./wk.

**CA 143
GRAPHIC ART PROCESSES III (1CR)**

Prerequisite: PHOT 121

This graphic art process module will cover basic process camera work using photo mechanical transfer materials, use of stabilization processing and use of photo display typesetting. 2 hrs./wk.

**CA 144
GRAPHIC ART PROCESSES IV (1CR)**

Prerequisite: CA 143

This graphic art process module will cover extensive use of the process camera using orthochromatic films for line work, special effect screening and halftone screening. The course will also cover positive ortho film techniques, posterization and tone line conversion. 2 hrs./wk.

**CA 145
GRAPHIC ART PROCESSES V (1CR)**

Corequisite: CA 144

This graphic art process module will cover a variety of color proofing and comping techniques including color key, chromatec and screen printing. 2 hrs./wk.

**CA 230
ILLUSTRATION TECHNIQUES (3CR)**

Prerequisite: CA 131 and CA 141

This course will provide an understanding of the work of the professional illustrator. Processes involved in effective research, creative visual problem-solving and image production will be emphasized. 6 hrs./wk.

**CA 231
LAYOUT II (3CR)**

Prerequisite: CA 134

This course is a continuation of Layout I with emphasis on the effective composition of verbal and visual messages designed for publication. 6 hrs./wk.

**CA 235
PRODUCTION ART I (3CR)**

Prerequisite: CA 134 and CA 143

This is a study of the fundamentals of preparing art for reproduction. Emphasis is on practical exercises and the acquisition of skills relating to the production methods and techniques necessary for the preparation of camera-ready art. 6 hrs./wk.

**CA 236
PRODUCTION ART II (3CR)**

Prerequisites: CA 235 and CA 231

This course is a continuation of Production Art I with additional practical experience in the production of camera-ready art. It requires the application of production skills to problems of professional scope and complexity. 6 hrs./wk.

**CA 241
AIRBRUSH TECHNIQUES (3CR)**

Prerequisite: CA 230

This is an introduction to airbrush techniques and materials as used in both fine and commercial art. 6 hrs./wk.

**CA 244
VISUAL COMMUNICATIONS (3CR)**

Prerequisites: Completion of all third semester program courses

This course is an exploration of the scope and potential of graphic design as a vehicle for visual communication in contemporary society through signs and symbols as well as the communicative power of form and color. 6 hrs./wk.

**CA 245
GRAPHIC DESIGN (3CR)**

Prerequisite: Completion of all third semester program courses.

This course will focus on the utilization of the student's total design capability and technical knowledge in solving graphic design problems of professional scope and complexity. 6 hrs./wk.

CA 272

PROFESSIONAL PREPARATION (3CR)

Prerequisite: Permission of the division director based upon recommendation of the faculty following a review of the student's work and performance in the program.

This course will provide an increased understanding of the kind and quality of work done in a professional environment. Students will work an average of 15 hours a week in an approved professional studio or agency under institutional staff supervision. Students will prepare a professional portfolio and resume. 3 hrs./wk.

COMPUTERS: PERSONAL COMPUTER APPLICATIONS

**CPCA 105
INTRODUCTION TO
PERSONAL COMPUTING (1CR)**

Demonstration and hands-on experience in the basic operation of the personal computer system will be covered. Word processing, electronic spreadsheets and data base management are introduced.
6 hrs. lecture/demonstration/wk. for 3 wks.

* **CPCA 108** *These classes have different software pkgs. & will not be considered a repeat.*
WORD PROCESSING ON MICROCOMPUTERS I (1CR)

Concepts and use of word processing software will be covered. Functions such as editing, printing, merging, pagination, spelling check and centering will be included. 6 hrs. lecture/demonstration/wk. for 3 wks.

**CPCA 110
SPREADSHEETS
ON MICROCOMPUTERS I (1CR)**

Prerequisite: CPCA 105 or equivalent

Students will learn the concepts and uses of spreadsheet software. They will use a spreadsheet to solve a typical business application.
6 hrs. lecture/demonstration/wk. for 3 wks.

**CPCA 111
SPREADSHEETS ON
MICROCOMPUTERS II (2CR)**

Prerequisite: CPCA 110 or equivalent

Upon successful completion of this course, students should be able to use the advanced concepts of spreadsheets, including statistical, logical and financial functions, the creation and use of macros and programming logic, the use of data tables and database functions and the development of custom menus.
3 hrs. lecture/lab/wk.

**CPCA 112
PC COMMUNICATIONS (1CR)**

Prerequisite: CPCA 105 or equivalent experience

Upon successful completion of this course, the student will be able to describe, define and use the terminology of PC communications topics in both written and spoken formats. Other basic competencies will include such skills as accessing bulletin boards, other systems and online databases to perform such operations as uploading and downloading files and sending and receiving electronic mail. 1 hr. lecture/wk.

**CPCA 114
DATABASES ON MICROCOMPUTERS I (1CR)**

Prerequisite: CPCA 105

Students will learn the concepts and uses of database software. Functions such as building, loading, entering, changing, deleting, sorting and reporting will be used. Students will use a database to solve typical business applications. 6 hrs. lecture/demonstration/wk. for 3 wks.

**CPCA 120
MICROCOMPUTER
BASIC PROGRAMMING (3CR)**

This beginning course in BASIC covers elementary programming topics up through subscripted variables, two-dimensional arrays and the use of a printer. Some sections will be taught on the IBM PC, other sections will be on the Apple Computer. 2 hrs. lab/wk.

**CPCA 125
WORD PROCESSING
ON MICROCOMPUTERS II (1CR)**

Prerequisite: CPCA 108

Upon completion of this course, students will be able to use the advanced concepts and application of word processing software. The applications will include: mailing labels, form letters, use of data files, find/replace, spelling check, footnotes, skeleton formats, merging files, print controls, envelopes and creating indexes.
6 hrs./wk. for 3 wks.

**CPCA 128
INTEGRATED SOFTWARE – IBM (3CR)**

Prerequisite: CPCA 105

Students will attain a proficiency in the use of the word processor, the spreadsheet and the database modules of an integrated software package. In addition, they will be able to utilize the integration features of each module with the rest of the modules of that software package. 3 hrs./wk. Lab by arrangement.

CPCA 130
MICROCOMPUTER BASIC
PROGRAMMING WITH DATA FILES (4CR)

This beginning course in BASIC covers all the topics included in CPCA 120 plus a study of sequential and random access files. 3 hrs. lecture, 2 hrs. lab/wk.

CPCA 135
PC DOS (1CR)

Prerequisite: CPCA 105

At the completion of this course, students will be expected to know the major commands of the IBM PC Disk Operating System and the means of formatting and backing up both floppy and hard disks. Directories and subdirectories, various DOS messages, and the creation of batch files to customize disk startup procedure and to automate other repetitive sequences of commands will also be topics of study. 6 hrs. lecture/demonstration/wk. for 3 wks.

CPCA 200
ADVANCED MICROCOMPUTER
BASIC PROGRAMMING (3CR)

Prerequisite: CPCA 120 or CPCA 130, or equivalent

Data files and menu programming will be emphasized in the first part of the course. Then several project programs will be assigned on an individual basis. 2 hrs. lecture, 2 hrs. lab/wk.

COMPUTER SCIENCE

CS 180
INTRODUCTION TO
ARTIFICIAL INTELLIGENCE (3CR)

Prerequisite: A computer programming course or the equivalent.

Upon successful completion of this course, the student should be able to use a computer to program introductory exercises in an object-oriented language and to build a small expert system, define terms and application areas of the field and to describe knowledge representation and problem-resolution techniques used in artificial intelligence. 3 hrs. lecture/wk.

CS 200
PASCAL (4CR)

Prerequisite: DP 134 or equivalent

This course will cover the use of PASCAL programming language in solving typical problems. Emphasis will be on the function and use of statements in writing structured code. 3 hrs./wk. Lab by arrangement.

CS 210
DISCRETE STRUCTURES I (3CR)

Prerequisite: MATH 171 or both MATH 116 and DP 134

This course offers an introduction to the topics of discrete structures, including switching circuits, Boolean algebra, logic, set theory and mathematical induction. 3 hrs. lecture/wk.

CS 211
DISCRETE STRUCTURES II (3CR)

Prerequisite: CS 210

This course provides continued study of topics in discrete structures, including relations, functions, partitions, orderings, graphs and techniques of proving theorems. 3 hrs. lecture/wk.

CS 250
BASIC PROGRAMMING STRUCTURES (4CR)

Prerequisites: CS 200

Corequisite: CS 210 for students transferring to most four-year computer science programs

This course covers advanced programming topics using the Pascal language. Files, recursion, data structures and large program organization will be used in projects. Students will write programs using the concepts covered in lecture. 3 hrs. lecture/wk.

Lab by arrangement.

COMPUTER
SYSTEMS TECHNOLOGY

CST 260
COMPUTER SYSTEMS (5CR)

Prerequisites: DP 134, ELEC 230, and ELEC 245.

In this course complete systems including peripherals are studied. The course also includes a study of disk drives, tape drives, monitors, terminals, printers, interface standards and interface devices. System maintenance techniques are studied and practiced on a microcomputer system. 3 hrs. lecture, 6 hrs. lab/wk.

CST 271
COMPUTER SYSTEMS
COOPERATIVE EDUCATION I (3CR)

Prerequisite: Approval of division director

This cooperative education course provides advanced students with on-the-job training under the supervision of professionals in the industry. The work experience will be developed cooperatively with area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

CST 272
COMPUTER SYSTEMS
COOPERATIVE EDUCATION II (3CR)

Prerequisite: CST 271 and division director approval

This course for the advanced student provides supervised on-the-job learning. Course must not duplicate course work offered at JCCC. Job experiences will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.

CORRECTIONAL SERVICES

KADJ 185
PRINCIPLES OF CORRECTIONS (3CR)

Prerequisite: Approval of division director.

Topics include the development and philosophy of corrections; ancient codes; medieval justice; and development of parole, probation and community treatment. 3 hrs./wk.

KADJ 186
CORRECTIONAL PSYCHOLOGY (3CR)

Prerequisite: Approval of division director.

In this class, students will study psychological theories of crime and delinquency, diagnostic approaches used in correctional settings, psychopathology, classification procedures and individual and group counseling. 3 hrs./wk.

KADJ 188
PRINCIPLES OF
RESIDENTIAL YOUTH CARE (3CR)

Prerequisite: KADJ 185 and approval of division director.

The role of the youth case worker will be explored in this course along with basic theory of treatment, organizational structure and problem-solving skills. 3 hrs./wk.

KADJ 191
CORRECTIONS IN THE COMMUNITY (3CR)

Prerequisite: KADJ 185 and approval of division director.

This course will cover community correctional programs, diversion, half-way programs, pre-release centers, group homes, probation and parole. The community support for these programs also will be discussed. 3 hrs./wk.

KADJ 192
CORRECTIONAL ADMINISTRATION (3CR)

Prerequisite: KADJ 185 and approval of division director.

This survey of management patterns in correctional agencies covers management by objectives and accountability; public relations; training, budgeting; record-keeping, and custody and treatment classifications. 3 hrs./wk.

KADJ 193
COMMUNICATION AND
MANAGEMENT TECHNIQUES
WITH CHILDREN AND YOUTH (3CR)

Prerequisite: KADJ 188

Methods of teaching and guiding children and youth in residential care centers or community programs will be explored. The theory and application of techniques dealing with problem behavior as well as listening and communication skill development will be covered. 3 hrs./wk.

KADJ 194
HUMAN SERVICES PRACTICUM I (3CR)

Prerequisite: KADJ 185 and approval of division director.

This course offers initial field experience in social services, corrections, juvenile treatment, mental health or other community services. It requires a minimum of 10 hours a week or 160 hours during the semester in placement.

KADJ 261
HUMAN SERVICES PRACTICUM II (3CR)

Prerequisite: KADJ 194 and approval of division director.

This course provides continued field placement or second placement in social services, corrections, juvenile treatment, mental health or other community services. A minimum of 160 hours during the semester in placement plus an evaluation of agency effectiveness are required.

DATA PROCESSING

DP 110
INTRODUCTION TO COMPUTERS (2CR)

This television course features a survey of electronic data processing, computer hardware and software systems and developments that will provide the student with a background in information processing. 2 hrs. lecture/wk.

DP 124**BUSINESS DATA PROCESSING (3CR)**

In this non-technical course, students study computer concepts, terminology and applications. Students will use a microcomputer, word processing and data base packages and write elementary BASIC programs. 3 hrs./wk.

DP 132**BASIC FOR ENGINEERING TECHNOLOGY (3CR)**

Corequisite: MATH 133

Students will become acquainted with computer capabilities. The class presents BASIC language using the computer to solve academic and non-academic problems in science and engineering. 2 hrs. lecture/wk. Lab by arrangement.

DP 134**PROGRAMMING FUNDAMENTALS (4CR)**

This technical course focuses on the skills students need to enroll in any programming language course. Topics include computer concepts and applications, flowcharting, number systems, and writing and running BASIC programs on a microcomputer. 3 hrs./wk. Lab by arrangement.

DP 137**ADVANCED BASIC (4CR)**

Prerequisite: DP 132 or DP 134 or CPCA 120

Students will review introductory techniques and explore menus, multidimensional arrays, subroutines, advanced branching techniques, graphics and file accessing techniques including sequential, random and indexed access methods. Emphasis will be on systematic approaches to solving problems using BASIC. 3 hrs./wk. Lab by arrangement.

DP 140**EDITOR (1CR)**

In this introductory course, students will focus on using an editor to create and manipulate files on a computer. They also will submit a computer program for execution. 3 hrs./wk. for 3 wks.

DP 145**ASSEMBLER LANGUAGE FOR MICROCOMPUTERS (4CR)**

Prerequisite: DP 134 or DP 132

Students will study the use of assembler language for a microcomputer in solving typical problems. Emphasis will be on assembler statements, hardware architecture and system services and the use of microcomputers in assembling, linking and executing programs. 3 hrs. lecture/wk. Lab by arrangement.

DP 148**COBOL I (4CR)**

Prerequisites: DP 134 and DP 140. DP 140 may also be taken as a corequisite.

Students will study the use of COBOL programming language. Emphasis will be on the function and use of statements in the four divisions of ANSI COBOL. 3 hrs./wk. Lab by arrangement.

**DP 150****ASSEMBLER LANGUAGE I (4CR)**

Prerequisites: DP 134 and DP 140. DP 140 may be taken as a corequisite. It is recommended that this class be taken after COBOL I.

Students will use Assembler language to solve typical problems on an IBM mainframe. 3 hrs./wk. Lab by arrangement.

DP 156**RPG II BEGINNING (4CR)**

Prerequisite: DP 134

Students will look at the use of various approaches to RPG II problem solving. Topics include defining, coding, testing, debugging and documenting RPG II programs, control levels and subroutines using an IBM System/36 PC. 3 hrs./wk. Lab by arrangement.

DP 158**FORTRAN (4CR)**

Prerequisites: MATH 116 and DP 140. DP 140 may be taken as a corequisite.

The course focuses on the use of FORTRAN programming language to solve typical problems. Emphasis is on the vocabulary and grammar of ANSI FORTRAN. 3 hrs./wk. Lab by arrangement.

DP 162**dBASE III PROGRAMMING (4CR)**

Prerequisite: DP 134 or equivalent.

Students will have the opportunity to learn how to use dBASE III to create, maintain and manipulate databases. The use of command level dBASE III programming language to custom design business reports and/or selectively retrieve information using single or multiple databases will also be studied. 3 hrs. lecture/wk. Lab by arrangement.

DP 168**COBOL ON MICROS (2CR)**

Prerequisite: DP 148

Students will review the COBOL language elements and structure as used by the major microcomputer COBOL compilers. Interactive COBOL programming techniques for micros, screen handling with the Accept, Display, and Screen Sections of COBOL, and uploading and downloading COBOL programs on micros will also be topics of study, as will the use of the Declarative Section. 1 hr. lecture, 1 hr. lab/wk.

DP 174**TELEPROCESSING (3CR)**

Prerequisite: DP 134

Teleprocessing is a form of information handling in which a data processing system utilizes communication equipment. This class will be concerned with that part of the system external to the central computer. 3 hrs./wk.

DP 215**OS/VIS JOB CONTROL LANGUAGE (3CR)**

Prerequisite: DP 148 or DP 150

Students will study the use of OS/VIS JCL and typical applications. Emphasis will be on Rules of Coding JCL, optimizing resources, use of symbolic parameters and overriding statements. An IBM mainframe will be used in the application of JCL and utilities. 3 hrs./wk.

DP 230**DATA COMMUNICATIONS FOR MICROCOMPUTERS (3CR)**

Prerequisite: DP 132 or DP 134

Students will be exposed to the concepts and technical vocabulary used in data communications. Instruction in operation and programming of modems, UARTS and RS232 through lecture, demonstration, and hands-on experience is included. Computers used will be IBM or IBM compatible MS-DOS systems. 3 hrs./wk.

DP 235**PROGRAMMING IN C (4CR)**

Prerequisite: CS 200

This course uses advanced programming topics using the C language. Emphasis is on input-output facilities, data structures, bit-oriented instructions and construction of general purpose functions. Students will write programs within the UNIX operating environment using concepts covered in lecture. 3 hrs. lecture/wk. Lab by arrangement.

DP 242**INTRODUCTION TO SYSTEM DESIGN AND ANALYSIS (3CR)**

Prerequisite: One semester of a computer language beyond an introduction to BASIC

Students will study basic philosophy and techniques of developing and using business information systems. Emphasis will be on the human involvement necessary in systems design and implementation. The course addresses the use of specific technical approaches available in relation to information processing. 3 hrs./wk.

DP 245**MICROCOMPUTER OPERATING SYSTEMS (3CR)**

Prerequisite: DP 145 or DP 150 or ELEC 225.

This course covers basic concepts and principles of microcomputer operating systems. Several case studies will be included. 3 hrs. lecture/wk.

DP 248**COBOL II (4CR)**

Prerequisite: DP 148

In this advanced COBOL programming class, students will use ANSI COBOL to solve problems with data on a direct access device. They will work on methods for building, maintaining and using files in a sequential, random and indexed manner. They also will study sort and report writer features. 3 hrs./wk. Lab by arrangement.

DP 250**ASSEMBLER LANGUAGE II (4CR)**

Prerequisite: DP 150

Advanced features of Assembler Language for IBM 370 will be covered. Topics include macros, subprograms, table handling, file access and complete set of ALC instructions. 3 hrs./wk. Lab by arrangement.

DP 253
CUSTOMER INFORMATION CONTROL
SYSTEM COMMAND LEVEL COBOL (4CR)

Prerequisite: DP 248

This is an introduction to command level CICS using COBOL language. The class will cover the basic CICS commands and their uses as well as CICS management modules and their functions, including program control, terminal control, basic mapping support, file control, temporary storage and transient data. Debugging on the transaction level will be discussed.

3 hrs./wk. Lab by arrangement.

DP 256
RPG II ADVANCED (4CR)

Prerequisite: DP 156

The advanced features of the RPG II language will be explored. Topics include disk file techniques, disk utilities, tables and array methodology and sequential, indexed and direct access methods. An IBM System/36 PC is used in compiling and executing programs.

3 hrs./wk. Lab by arrangement.

DP 258
OPERATING SYSTEMS (3CR)

Prerequisite: DP 150 or DP 148

The basic concepts and principles of a digital computer operating system are explained. Also explored through a study of a typical digital computer operating system are the relationships between hardware and software.

3 hrs./wk.

DP 260
DATA BASE MANAGEMENT (4CR)

Prerequisites: DP 248 or DP 250. DP 242 offers useful background and is recommended prior to taking DP 260.

Students will focus on the academic and commercial applications of three data base models. Discussion will cover underlying theories and commercially available examples of each model and its query/data manipulation language. Students will use SQL on the IBM 4381 mainframe. 3 hrs./wk. Lab by arrangement.

DP 264
APPLICATION PROGRAMMING:
DATA PROCESSING TOPICS (3CR)

Prerequisite: DP 148 or program director approval

This course is designed to further prepare the data processing student for the marketplace. It provides information about firms and data processing positions in the local area. Various career-related skills are

emphasized. The student has an opportunity to complete (with minimal supervision) a typical data processing project. 3 times/wk.

DP 270
DATA PROCESSING INTERNSHIP (1CR)

Prerequisite or co-requisite: DP 248 and program director approval

Students will work in an approved training situation under instructional supervision. The internship is designed to give the student the opportunity to use the skills learned in data processing courses. 15 hrs. on-the-job training/wk.

DENTAL HYGIENE

DHYG 121
CLINICAL DENTAL HYGIENE I (6CR)

Prerequisites: Admission to Dental Hygiene Program, and CHEM 122, ENGL 121, SOC 122 (minimum 2.0 GPA)

Corequisites: BIOL 146, DHYG 125, PSYC 130

This course includes an introduction to the dental hygiene profession, dental hygiene techniques, the principles of instrumentation, patient evaluation, patient education and primary preventive treatment, auxiliary procedures, aseptic techniques and the wellness concept. 2 hrs. lecture, 12 hrs. lab/wk.

DHYG 125
DEVELOPMENTAL DENTISTRY (3CR)

Corequisites: BIOL 146, DHYG 121, PSYC 130

This course includes a study of embryology; oral histology; developmental disturbances of the face, oral cavity and related structures; and, the study of dental morphology and occlusion. 3 hrs. lecture, 1 hr. lab/wk.

DHYG 140
CLINICAL DENTAL HYGIENE II (5CR)

Prerequisite: DHYG 121

Corequisites: DHYG 142, DHYG 146, DHYG 148, BIOL 225, BIOL 230 and no grade below a "C" in DHYG courses.

Focus will be on the clinical application of dental hygiene techniques, instrumentation skills, oral health products, patient motivation and education techniques, and ultrasonic scalers. Procedures for medical and dental emergencies in the dental office also will be covered as well as an introduction to selected dental specialties. 2 hrs. lecture, 8 hrs. clinic/wk.



**DHYG 142
DENTAL RADIOLOGY (2CR)**

Prerequisites: DHYG 121 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 140, BIOL 225, BIOL 230, DHYG 146, DHYG 148

This class concentrates on the theory and clinical practice of exposing, processing, mounting and evaluating oral radiographs with emphasis on radiation protection for patient and operator. 1 hr. lecture, 3 hrs. lab/wk.

**DHYG 146
PERIODONTICS (1CR)**

Prerequisites: DHYG 121 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 140, BIOL 225, BIOL 230, DHYG 142, DHYG 148

This course includes an in-depth study of the inflammation process, its relationship to periodontal disease and recognition of the etiology, signs and symptoms of periodontal disease. 1 hr. lecture/wk.

**DHYG 148
DENTAL HEALTH EDUCATION (1CR)**

Prerequisites: DHYG 121 and no grade below a "C" in DHYG courses.

Corequisites: BIOL 225, BIOL 230, DHYG 140, DHYG 142, DHYG 146

Students will study health and apply education methods for individuals and groups, with special emphasis on psychological, social and economic factors. 2 hrs. lab/wk.

**DHYG 221
CLINICAL DENTAL HYGIENE III (7CR)**

Prerequisites: DHYG 140, BIOL 235 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 225, DHYG 230, DHYG 235, DHYG 240.

Students will continue to work on clinical techniques, including preparation and application of dental hygiene treatment plans. Advanced instrumentation, expanded functions and current advances in dental hygiene services will be addressed. 2 hrs. lecture, 16 hrs. clinic.

**DHYG 225
PATHOLOGY AND PERIODONTOLOGY (3CR)**

Prerequisites: DHYG 140, BIOL 235 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 221, DHYG 230, DHYG 235, DHYG 240

Included in this course is a description of periodontal treatment and therapy with emphasis on root planing and soft tissue curettage. Also covered will be basic pathological processes and identification of common oral conditions, their etiology and treatment. 3 hrs. lecture/wk.

**DHYG 230
DENTAL THERAPEUTICS (3CR)**

Prerequisites: DHYG 140, BIOL 235 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 221, DHYG 225, DHYG 235, DHYG 240

This course introduces the basic principles of drug actions, emphasizing dental-related therapeutics and drugs associated with common system disorders; information on the selection of professional products; and, principles necessary in administering local anesthesia. 3 hrs. lecture/wk, 1 hr. lab/wk. for 8 wks.

**DHYG 235
DENTAL MATERIALS (2CR)**

Prerequisites: DHYG 140, BIOL 235 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 221, DHYG 225, DHYG 230, DHYG 240

This course deals with specific dental materials relative to the dental hygiene profession. Instruction will include procedures, properties and manipulation of these dental materials. 1 hr. lecture, 3 hrs. lab/wk.

DHYG 240**COMMUNITY DENTAL HEALTH (2CR)**

Prerequisites: DHYG 140, BIOL 235 and no grade below a "C" in DHYG courses.

Corequisites: DHYG 221, DHYG 225, DHYG 230, DHYG 235

Topics include public health agencies, statistical procedures in critiquing scientific literature, identifying dental needs of different groups and planning dental health education programs. Preventive techniques, wellness, health promotion, consumer advocacy and the role of dental hygienist in public health will be emphasized. Field experience included. 1 hr. lecture, 3 hrs. lab/wk.

DHYG 250**CLINICAL DENTAL HYGIENE IV (7CR)**

Prerequisites: DHYG 221 and no grade below a "C" in DHYG courses.

This course offers continued development of proficiency in clinical techniques and current procedural practices of the dental hygienist with emphasis on self evaluation. Topics include ethics, jurisprudence, office management, current dental hygiene issues and preparation courses for board exams. 2 hrs. lecture, 16 hrs. clinic/wk. 1 hr. board review for 8 wks.

DRAFTING TECHNOLOGY**DRAF 115****INTRODUCTION TO COMPUTER GRAPHICS SYSTEMS (3CR)**

This course offers an introduction to computer graphics systems with an opportunity for students to get "hands-on" exposure to several computer graphics software packages. Emphasis will be placed on developing an understanding of the applications for which each package is best suited. Students will also be exposed to various hardware peripherals necessary for the support of computer graphics varying from the programming of line vectors to the use of menu-controlled color packages. 2 hrs. lecture, 3 hrs. alternative delivery/wk.

DRAF 120**BASIC DRAFTING (2CR)**

The emphasis is on lettering, metric and U.S. measure, visualization, geometric construction, orthographic projection and drafting standards. 1 hr. lecture, 3 hrs. lab/wk.

DRAF 121**TECHNICAL ILLUSTRATION (3CR)**

Prerequisite or Corequisite: ENGR 131 or approval of division director

Students will work on techniques used by technical illustrators. Topics include conversion of engineering drawings to three-dimensional isometric, dimetric, trimetric and perspective views. 2 hrs. lecture, 3 hrs. lab/wk.

DRAF 122**INDUSTRIAL DRAFTING (3CR)**

Prerequisite or Corequisite: ENGR 131 or approval of division director

Students will produce basic engineering drawings in the civil, machine and electrical fields. Repro-drafting timesaving techniques will be studied with topics in systems drafting and photomechanical processes. 2 hrs. lecture/demonstration, 3 hrs. lab/wk.

DRAF 123**INTERPRETING MACHINE DRAWINGS (2CR)**

Students will work on reading machine drawings from actual production drawings. Topics covered in this course include orthographic projection, dimensioning, geometric form and tolerancing. 2 hrs. lecture/wk.

DRAF 127**BUILDING****CONSTRUCTION ESTIMATING I (3CR)**

Prerequisite: DRAF 129 or competency in reading building drawings

This is an introduction to the principles of taking-off quantities and cost accounting of building materials as required by construction contractors using working drawings, reference books, tables and C.S.I. Format to perform estimates. 3 hrs./wk.

DRAF 128**BUILDING****CONSTRUCTION ESTIMATING II (3CR)**

Prerequisite: DRAF 127 or approval of division director

This course provides in-depth study and applications in making complete building cost estimates using professional resource materials. Actual working drawings, estimate forms and computerized software will be used. 3 hrs. lecture/wk.

**DRAF 129
INTERPRETING
ARCHITECTURAL DRAWINGS (2CR)**

This beginning course explains the fundamentals of interpreting architectural type drawings (blueprints). 2 hrs. lecture/wk.

**DRAF 150
ELECTRICAL DRAFTING (3CR)**

Prerequisites or Corequisites: DRAF 122, MATH 133 or approval of division director

Drafting techniques will be applied to lighting, motor controls, power distribution and generation. Emphasis will be on use of tables, catalogs and computer applications as aids, as well as decision making required on electrical drawings. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 160
PROCESS PIPING (3CR)**

Prerequisites or Corequisites: DRAF 122 or approval of division director

Students will become familiar with symbols, terminology, specifications, piping fittings and valving relating to process pipe drawings. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 175
ELECTRONICS DRAFTING (3CR)**

*Prerequisite: ENGR 131
Corequisite: DRAF 122*

This course emphasizes the design and drafting techniques involved in the production of electronics industry equipment for consumer and commercial use. Topics include: block diagrams, schematic diagrams, component identification, logic diagrams and printed wiring board drawings. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 180
ARCHITECTURAL/
STRUCTURAL DRAFTING (4CR)**

Prerequisites or Corequisites: DRAF 122, MATH 134 or approval of division director

In this study of commercial architectural structures, students will become familiar with residential construction, structural components, terminology, fabrication and erection drawings. 2 hrs. lecture, 6 hrs. lab/wk.

**DRAF 222
MACHINE DRAFTING (4CR)**

Prerequisites: DRAF 122, MATH 134, MFTG 121 or approval of division director

Emphasis is on development of skills necessary to enter drafter positions in manufacturing industries. Topics

covered include interpreting machine drawings, using jigs, fixtures, gearing and clamping. 2 hrs. lecture, 6 hrs. lab/wk.

**DRAF 225
CARTOGRAPHY AND
LAND SURVEYING (3CR)**

Prerequisites or Corequisites: MATH 133 and DRAF 122 or equivalent or approval of division director

This is an introduction to map drafting and methods of land surveying used by engineering firms. Topics include profiles, map plotting and layout from notes, equipment, record keeping, field problems and computer applications. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 227
PIPING DESIGN (3CR)**

Prerequisite: DRAF 160, MATH 172, or approval of division director

Concepts necessary for designing and analyzing pipe systems will be covered. Topics will include ASTM and ANSI standards, routing, flexibility, insulation, supporting and estimating. 3 hrs. lecture/wk.

**DRAF 230
INTRODUCTION TO COMPUTER-
AIDED DRAFTING 2-D (3CR)**

Prerequisite: ENGR 131 or approval of division director

Students will focus on computer-aided drafting equipment including graphics terminal digitizer, plotter, microcomputer and drafting tools. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 231
COMPUTER-AIDED DRAFTING 3-D (3CR)**

Prerequisite: DRAF 230

In this continuation of Computer-Aided Drafting 2-D, students will work on expanding their understanding of two-dimensional drafting into three-dimensional drafting and modeling. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 232
COMPUTER-AIDED
DRAFTING APPLICATIONS (3CR)**

Prerequisite: DRAF 231

Students will develop skills and concepts used in 3-D CAD through an in-depth study of the selected software available in architectural, electrical and mechanical fields. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 233
ADVANCED CAD APPLICATIONS (3CR)**

Prerequisite: DRAF 232

This course will emphasize the advanced aspects of CAD (computer-aided design) based systems. Topics covered will be graphics control routines, custom menus and database translators. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 261
GRAPHIC COMMUNICATIONS
FOR INTERIOR DESIGN (3CR)**

This course is provided for people interested in developing competencies in the following areas: interpreting architectural drawings, floor planning, interior design presentation boards, perspective drawings and design considerations. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 264
CAD: INTERIOR DESIGN (3CR)**

Prerequisite: ITMD 122 or division director approval

An introduction to the use of computer-aided drafting (CAD) as used in the field of interior design. Students will use their knowledge of drafting and interior design to draw and lay out interior spaces on the computer and will learn how to operate a CAD system to draw floor plans and furniture and to do space planning. Students will receive instruction on the operation of the computer hardware and software needed for these graphics. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 271
DRAFTING
COOPERATIVE EDUCATION I (3CR)**

Prerequisite: Approval of division director

This course provides advanced students with on-the-job training under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

**DRAF 272
DRAFTING
COOPERATIVE EDUCATION II (3CR)**

Prerequisite: DRAF 271 and approval of division director

This course provides the advanced student with supervised on-the-job learning. The course must not duplicate course work offered at JCCC. Job experiences will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.

ECONOMICS

**ECON 130
BASIC ECONOMICS (3CR)**

This course is designed for students planning to take only one economics course and for those who want a non-technical introduction to the subject. Upon successful completion of this course, the student will be able to explain and discuss, using economic terminology and concepts, selected current local, national and international issues. 3 hrs./wk.

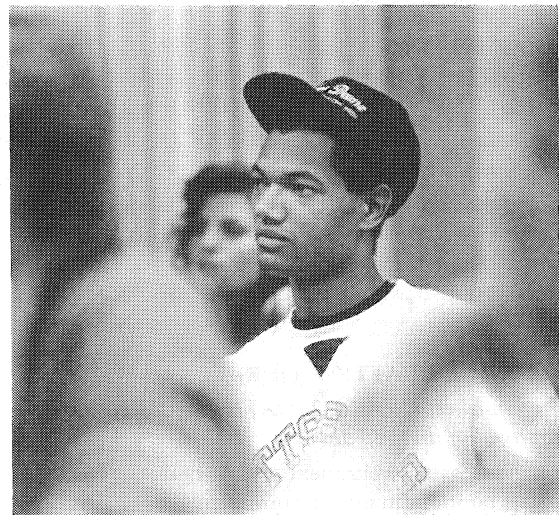
**ECON 230
ECONOMICS I (3CR)**

Upon successful completion of this course, the student will be able to use economic terminology and principles to explain and discuss basic macro-economic concepts. These concepts include supply of and demand for products, national income determination, money and banking, and monetary and fiscal policy. Students enrolling in this course should have successfully completed one year of high school algebra or the equivalent. (Macro) 3 hrs./wk.

**ECON 231
ECONOMICS II (3CR)**

Prerequisite: ECON 230

Upon successful completion of this course, the student will be able to use economic terminology and principles to explain and discuss basic micro-economic concepts. These concepts include extended analysis of product supply and demand, theory of the firm, product and resource market structures. Students enrolling in this course should have successfully completed one year of high school algebra or the equivalent. (Micro) 3 hrs./wk.



EDUCATION

EDUC 121

INTRODUCTION TO TEACHING (3CR)

Teaching concepts and practices as they apply to today's elementary and secondary schools will be introduced. Topics include the roles and responsibilities of the teacher, various modes of instruction, specialized areas in teaching and professional requirements and concerns. 20 hrs. observation in a school setting required. 3 hrs. lecture/wk.

EDUC 220

SURVEY OF THE EXCEPTIONAL CHILD (3CR)

This is a survey of the exceptionalities now being served in public schools and their characteristics. Included will be mental retardation, learning disabilities, behavior and communication disorders, hearing, visual, physical and health impairments, and giftedness. 3 hrs./wk.

EDUC 222

BASIC STRATEGIES FOR SPECIAL EDUCATION PARAPROFESSIONALS I (1CR)

The education of disabled people – from kindergarten through adulthood – will be surveyed. The role of the paraprofessional in various helping situations will be emphasized. One six-hr. session. Outside readings and a 12-hour practicum are required.

EDUC 223

BASIC STRATEGIES FOR SPECIAL EDUCATION PARAPROFESSIONALS II (1CR)

Prerequisite: EDUC 222

Emphasis is on defining the responsibilities and role of the paraprofessional in special education programs. Outside readings and a 12-hour practicum are required. One six-hr. session.

ELECTRONICS

ELEC 110

ELECTRONICS / ROBOTICS I (5CR)

Prerequisite: MATH 116 or appropriate score on math assessment test or corequisite MATH 133

This course will familiarize the student with laboratory electronic test equipment and basic theory. Topics covered will include electronics terminology, schematic symbols, electronics components, simple electronic circuits, electronic calculators, basic operation and maintenance of industrial robots. Various learning strategies techniques will be presented throughout the course. 10 hrs. lecture lab/wk.

ELEC 115

ELECTRONICS / ROBOTICS II (5CR)

Prerequisite: ELEC 110

Students will have the opportunity to become familiar with laboratory procedures to construct and test electronic circuits and with the additional theory necessary to perform circuit analysis on complex resistive circuits. These techniques will be applied to analog as well as digital circuits. Emphasis will be placed on basic trigonometric functions and the four basic operations in the complex number system. Students will also be required to make extensive use of computer-controlled interactive video equipment supplemented by classroom lecture. 10 hrs. lecture lab/wk.

ELEC 120

INTRODUCTORY ELECTRONICS (3CR)

Topics include laboratory instruments, circuit components, basic measurement techniques, basic circuits. 2 hrs. lecture, 4 hrs. lab/wk.

ELEC 121

BASIC TELEPHONY (3CR)

In this detailed investigation of telephony, students will be exposed to the history, basic concepts and technical vocabulary of telephone systems and the equipment involved in those systems. The student will have the opportunity to develop an understanding of telephones, telephone systems, central offices, PBXs and networks needed to function in a telephony environment. 3 hrs. lecture/wk.

ELEC 122

CIRCUIT ANALYSIS I (3CR)

Corequisites: ELEC 120 and MATH 133

Topics include fundamental DC circuit concepts such as Kirchoff's Laws, Ohm's Law, Thevenin's Theorem, Norton's Theorem, Superposition Theorem and nodal analysis. 3 hrs. lecture/wk.

ELEC 123

ELECTRONIC KEY SYSTEMS (3CR)

Prerequisite: ELEC 121 or three years of industry experience and division director approval

This course offers a comprehensive study of the evolution of the electronic key telephone system. Students will have the opportunity to learn the industry standard definition of electronic key system features, installation techniques, programming procedures, and final check-out procedures to insure a satisfied customer and quality installation. 3 hrs. lecture/lab wk.

ELEC 125
DIGITAL ELECTRONICS I (3CR)

Corequisite: ELEC 120

This is the first in a three-semester series in digital electronics. It includes study of binary numbers and codes, binary arithmetic, logic circuits, arithmetic circuits, flip-flops and counters. 2 hrs. lecture, 3 hrs. lab/wk.

ELEC 130
ELECTRONIC DEVICES I (3CR)

Prerequisite: ELEC 122

This course covers resistive circuits in which electronic devices are employed and offers an introduction to volt-ampere characteristics and physics of diodes, transistors and practical circuits using these devices. 2 hrs. lecture, 3 hrs. lab/wk.

ELEC 140
CIRCUIT ANALYSIS II (3CR)

Prerequisite: ELEC 122

Corequisite: MATH 134

This class focuses on fundamental concepts of AC circuit analysis and transient circuit analysis as applied to circuits containing resistors, capacitors and inductors. 3 hrs. lecture/wk.

ELEC 225
DIGITAL ELECTRONICS II (3CR)

Prerequisite: ELEC 125

This is the second in a three-course series in digital electronics. It includes a study of registers, counters, memories, computer architecture and computer instructions. 2 hrs. lecture, 3 hrs. lab/wk.

ELEC 230
ELECTRONIC DEVICES II (3CR)

Prerequisite: ELEC 130

This course covers AC analysis of transistor amplifier circuits for both small signal and power amplifiers. Bipolar, field effect transistors and operation of amplifiers are considered. 2 hrs. lecture, 3 hrs. lab/wk.

ELEC 240
ELECTRONIC COMMUNICATION SYSTEMS (4CR)

Prerequisite: ELEC 230

This class concentrates on electronic communication systems including AM and FM radio receivers and transmitters, antennas, broadcast stations, television and microwave. 4 hrs. lecture/wk. Spring.

ELEC 245
MICROPROCESSORS (3CR)

Prerequisite: ELEC 225

This course offers an introduction to microprocessors and microcomputers. Topics include machine language programming, microcomputer architecture, microcomputer hardware, and troubleshooting techniques for microcomputers. 2 hrs. lecture, 3 hrs. lab/wk.

ELEC 271
ELECTRONICS COOPERATIVE EDUCATION I (3CR)

Prerequisite: Approval of division director

This cooperative education course provides advanced students with on-the-job training under the supervision of college staff and professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

ELEC 272
ELECTRONICS COOPERATIVE EDUCATION II (3CR)

Prerequisite: ELEC 271 and approval of division director

This course provides advanced students with supervised on-the-job learning. The course must not duplicate course work offered at JCCC. Job experiences will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.

EMERGENCY MEDICAL SCIENCE

EMS 121
CPR I-BASIC RESCUER (1CR)

This class represents an in-depth study of the techniques, rationale and background material related to basic life support procedures. Successful completion of both the didactic and practical portions of this class will lead to American Heart Association certification in basic life support at the Basic Rescuer level. A certification fee is required. This class is taught by the Emergency Medical Technology Program. Students will have the advantage of being trained by instructors who are educated and experienced in pre-hospital care procedures. This course will meet the one hour of physical education requirement needed for graduation. 2½ hrs. lecture, lab/wk. for 8 wks.

EMS 125**CPR II-BASIC CPR INSTRUCTOR (1CR)**

Prerequisite: Successful completion of EMS 121 and current certification by AHA as Basic Rescuer

This class includes review of EMS 121 (Basic Rescuer) techniques, designing and implementing CPR courses, demonstration of mastery performances and mini-lectures. Upon successful completion of this class, students will be certified by the American Heart Association as a BCLS instructor. A certification fee is required. This class is taught by the Emergency Medical Technology Program. 2½ hrs. lecture, lab/wk. for 8 wks.

EMS 130**EMERGENCY MEDICAL TECHNICIAN (6CR)**

This class represents an in-depth study of the techniques, rationale and background material necessary to perform duties as an Emergency Medical Technician. Classroom instruction covers medical terminology, anatomy and physiology, patient assessment, and recognition and treatment of various types of medical emergencies. An extrication session will give students hands-on experience with auto accident situations. Upon instructor recommendation, students will participate in clinical observation in a hospital setting. Students successfully completing this course will be allowed to sit for the Kansas EMT State Certification Examination, which is administered by the Bureau of Emergency Medical Services. 3½ hrs. lecture, 3½ hrs. lab/wk. Students are also required to attend approximately six Saturday sessions lasting approximately four hours each. (These Saturday dates and times will be announced during the first class session.)

EMS 140**BASIC CARDIOLOGY AND EKG RECOGNITION (2CR)**

Prerequisite: Permission of program director

Topics include basic anatomy, physiology, electro-physiology of the cardiac system, recognition of EKG tracings and an overview of coronary artery disease. 2 hrs./wk. Class limited to 30.

MOBILE INTENSIVE CARE TECHNICIAN**EMS 220****MICT I (10CR)**

Prerequisite: Admission to the MICT program

This fundamental course covers roles and responsibilities, medical terminology, anatomy and physiology as they apply to the MICT. Other topics include diagnostic signs and assessment of patients, biomedical communication, venipuncture, medication administra-

tion techniques, advanced airway management, managing the cardiac patient and ECG interpretation. 24 hrs. lecture/wk.

EMS 225**MICT II (10CR)**

Prerequisite: EMS 220 with a minimum grade of "C"

This fundamental course covers diagnosis, etiology and field treatment of victims of respiratory emergencies and of hypertensive, vascular, diabetic, OB, endocrine and environmental emergencies. Also covered will be treatment of victims experiencing overdoses or poisoning; chest, neurological and abdominal trauma; fracture and shock. 24 hrs. lecture/wk., 48/hrs./mo. field observation

EMS 230**MICT III CLINICALS (12CR)**

Prerequisite: EMS 225 with the minimum grade of "C"

The student will practice diagnostic and treatment skills under supervision in an emergency department, critical care unit, surgery/recovery room, labor/delivery room and a pediatrics unit. Some field experience included. 32 hrs. clinical lab/wk., 16 hrs./mo. lecture, 48 hrs. field lab/mo.

EMS 271**MICT IV FIELD INTERNSHIP (15CR)**

Prerequisite: EMS 230 with a minimum grade of "C"

The student will act as an MICT under supervision with an existing, advanced life-support ambulance service. The student also will present case histories, analyze systematic medical care and evaluate medical care using pre-hospital protocols. 54 hrs. field lab/wk., 16 hrs. lecture, lab./mo.

ENERGY TECHNOLOGY**ENER 105****PLUMBING****INSTALLATION PRACTICES I (3CR)**

Apprentice/students will be introduced to the basic elements of plumbing, plumbing applications and sciences in safety. Basic hand and power tools in the trade will be discussed, as will the nature of the role of the apprentice/student in the plumbing industry. 3 hrs. lecture/wk.

ENER 108**HVAC TECHNICAL SERVICE I (2CR)**

Topics in this introductory course will include refrigeration and heating, electric diagram symbols, three-phase wye and Delta, transformer phasing, Ohms Law, series-parallel circuits, voltage imbalance, compressors and why compressors fail. Also included will be gas furnace controls, capacity control condensers and evaporators, aluminum coil repair, properties of gas, metering devices, gas combustion, and gas burners ventilation combustion air. 2 hrs./wk.

ENER 111**INTRODUCTION TO HVAC I (4CR)**

Prerequisite: MATH III or appropriate score on math assessment test

Upon successful completion of this course, the student should be able to demonstrate an understanding of brazing, evacuating and charging refrigeration systems. As an introduction to the basic elements of refrigeration, topics include heat laws, refrigeration cycles and typical system components. Lab work will include designing, assembling and operating a working system. 3 hrs. lecture/wk., 7 hrs. lab/wk.

ENER 114**INTRODUCTION TO HVAC II (5CR)**

An introductory course in the relationship of components and the various repair and troubleshooting techniques, this course would be especially useful for service technicians who have limited background in electricity. Topics include the relationship of components and the various repair and troubleshooting techniques, ranging from basic electrical theory to troubleshooting complete dual-compressor split systems. Students will also have the opportunity to apply electrical theory and practice the interconnection of air conditioning and refrigeration systems components. 3 hrs. lecture/wk., 7 hrs. lab/wk.

ENER 121**BASIC PRINCIPLES OF HVAC (4CR)**

This class introduces the student to the basic elements of refrigeration systems. Topics include heat laws, refrigeration cycles and typical system components. In the lab, the student designs, assembles and operates a working system. Competencies include brazing, evacuating and charging the system. 3 hrs. lecture, 3 hrs. lab/wk.

ENER 123**ELECTROMECHANICAL SYSTEMS (3CR)**

This is an introductory electrical course dealing with the components and circuits used in HVAC systems.

The students will interpret schematic wiring diagrams. In the lab students will assemble 36 different projects including motor starting, time delay and refrigeration defrost circuits. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 124**RESIDENTIAL HVAC ESTIMATING (3CR)**

Prerequisite: ENER 121

Students will interpret drawings and specifications for various homes and properly size heating and cooling systems. Topics include load calculations, duct sizing, system design, and step-by-step instruction for laying out of patterns and fabrication of sheet metal fittings and ducts are included in the lab. 2 hrs. lecture/wk., 3 hrs. lab/wk.

ENER 125**ENERGY ALTERNATIVES (3CR)**

This class compares the relative merits, liabilities and practicalities of various energy options. The primary emphasis is on conventional fossil and nuclear fuels as well as renewable resources such as solar, wind and geothermal energies. 3 hrs. lecture/wk.

ENER 126**RESIDENTIAL HVAC SYSTEMS (3CR)**

Prerequisites: ENER 121 and ENER 123

The main emphasis of this course is installing, maintaining and repairing home HVAC systems. Hands-on competencies include measuring air flow, evacuation and charging, combustion testing and diagnosing electrical failures. Emphasis is placed on high efficiency equipment and heat pumps. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 128**INSTRUMENTATION AND CONTROL DEVICES (3CR)**

Prerequisites: ENER 121 and ENER 123

The student will study residential control systems. The course focuses on controls used in central air conditioning systems. Specific devices include thermostats, aquastats, limit switches, sequencing and primary controls. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 129**DOMESTIC SOLAR SYSTEMS (3CR)**

This course deals with the practical design and installation of home heating and hot water heating via active solar systems. Basic components, typical systems, control and integration into existing heating systems are covered both in class and through lab projects. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 130**PASSIVE SOLAR FUNDAMENTALS (3CR)**

This course deals chiefly with structural designs that optimize the passive use of heating and cooling residences. Topics include sun spaces, solariums, greenhouses, trombe walls and direct and indirect gain. Students calculate the heat output of various solar additions for given sun angles and building materials. 3 hrs. lecture/wk.

ENER 132**BASIC ELECTROMECHANICAL CONTROLS (1CR)**

Prerequisite: ENER 123 or approval of division director

Introduction to two-position and proportional control systems. Topics covered in this course are low voltage and line voltage controls, sensor types, electronic vs. pneumatic systems, enthalpy controls, valves and modulating motors. Lab demonstrations include wiring of controls to simulate various operating systems and review the operation of feedback control systems. Scheduled to meet individual needs.

ENER 134**CENTRA CONTROL SYSTEMS (1CR)**

Prerequisite: ENER 123 or approval of division director

This course offers an analysis of the Centra series of controls designed to save energy in various heating and cooling applications. Series of controls includes two-, three-, and four-way valves as well as two-position and proportional control of the valves. Various analog integrating devices include inputs from supply and return temperatures, outside environmental sensors including solar, temperature and wind, and indoor temperatures including setback limits. Scheduled to meet individual needs.

ENER 136**ELECTRONIC CONTROL SYSTEMS (1CR)**

Prerequisite: ENER 123 or equivalent

This course offers an analysis of specific electronic controls designed to save energy in various HVAC applications. This is accomplished by modulating equipment output to match energy demand, schedule equipment usage, utilize outside air for "free" cooling, and to optimize the starting and stopping of equipment without sacrificing occupant comfort. Both analog and digital systems are covered. Scheduled to meet individual needs.

ENER 138**FLAME SAFEGUARD CONTROLS (1CR)**

Prerequisite: ENER 123 or equivalent

This course is a study of the controls that start, supervise and shut down the operation of burners in commercial boiler applications. The course focuses on flame detectors, gas valves, firing rate, and primary and programming controls. Lab demonstrations include wiring controls to operating equipment. Scheduled to meet individual needs.

ENER 143**READING BLUEPRINTS AND LADDER DIAGRAMS (2CR)**

This course covers every type of industrial plant blueprint. Students will also discuss machine parts and machine drawings and the structure of ladder logic diagrams, terminology, and symbols for diagram components. Logic, or decision-making functions, are presented, along with practice in creating ladder logic diagrams. 2 hrs./wk.

ENER 160**PLUMBING SYSTEMS I (3CR)**

Prerequisite: MATH 111, or appropriate score on math assessment test, or division director approval

An introduction to the basic elements of plumbing, topics including plumbing fixtures, valves and piping, water, drain, vent and gas systems, and various health aspects. 3 hrs. lecture/wk.

ENER 221**COMMERCIAL SYSTEMS: AIR CONDITIONING (4CR)**

Prerequisite: ENER 121 and ENER 123

This course covers large cooling systems used in commercial, institutional and industrial applications. Types of equipment include reciprocating and centrifugal chillers, absorption systems and cooling towers. Topics also include psychrometrics, pressure-enthalpy diagrams and commercial load calculations. 3 hrs. lecture, 3 hrs. lab/wk.

ENER 222**ADVANCED CONTROL SYSTEMS (4CR)**

Prerequisite: ENER 123

This course covers four basic types of control systems: pneumatic, electronic, electromechanical and digital as applied to fans and air handlers. Classroom lectures center on components, blueprints and wiring diagrams. Laboratory competencies include using modular control motors, sequencing controls, analog to digital converters and motor starters. 3 hrs. lecture, 3 hrs. lab/wk.

ENER 223
COMMERCIAL SYSTEMS: HEATING (4CR)

Prerequisite: ENER 123

This course covers large heating systems used in commercial, institutional and industrial applications. Types of equipment include hot water and low pressure steam boilers, auxiliary, safety and flame safeguard controls, steam traps, and condensate return and water treatment systems. 3 hrs. lecture, 3 hrs. lab/wk.

ENER 224
DIAGNOSIS AND SERVICE PROCEDURES (3CR)

Prerequisites: ENER 121 and ENER 123

The main focus of this course is the systematic approach to locate and repair HVAC system malfunctions. Classroom topics include electrical, lubrication, evacuating, charging, and air and water flow problems. Laboratory experience simulates typical service procedures as students troubleshoot and repair faulty equipment. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 226
ENERGY MANAGEMENT (3CR)

This course studies how energy is consumed in commercial and industrial buildings and how energy usage may be reduced. Topics include building design, load management, improving equipment efficiency, improved lighting systems, utility rate structures, and energy management control systems. 2 hrs. lecture, 3 hrs. lab/wk.

ENER 271
ENERGY COOPERATIVE EDUCATION I (3CR)

Prerequisite: Approval of division director

This course provides advanced students with on-the-job training under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

ENER 272
ENERGY COOPERATIVE EDUCATION II (3CR)

Prerequisite: ENER 271 and division director approval

This course provides the advanced students with supervised on-the-job learning. Course must not duplicate course work offered at JCCC. Job experiences will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.

ENER 281
SOLAR PROJECT (4CR)

For individuals wishing to pursue an in-depth aspect of solar design and/or solar construction, this course allows an independent study approach. Topical research is assigned to the student and laboratory projects are scheduled in cooperation with instructors. 2 hrs. lecture, 6 hrs. lab/wk.

ENGINEERING

ENGR 105
CONSTRUCTION METHODS I (3CR)

This course is an introduction to construction industry terminology, methods, procedures, equipment, sequences of operation, and types of construction and planning. 3 hrs./wk.

ENGR 107
CONSTRUCTION METHODS II (3CR)

Prerequisite: ENGR 105

This course covers estimating procedures, scheduling processes, bid preparation and construction drawings. 3 hrs./wk.

ENGR 121
ENGINEERING ORIENTATION (1CR)

In this introduction to several engineering disciplines, students will have the opportunity to meet with professional engineers and engineering faculty members at regional universities. The class includes presentations, field trips, information about current transfer requirements and scholarships. 1 hr./wk.

ENGR 131
ENGINEERING GRAPHICS I (3CR)

Prerequisites: High School Geometry & Trigonometry; or DRAF 120; or appropriate score on Drafting Assessment Test; or permission from division director

The principles of graphics and design processes will be introduced in this class. Topics include interpretation of drawings; interrelation of points, lines and planes; intersections and developments; graphical solutions by charts and graphs; orthographic projection; and computer-aided operations and computations. Emphasis will be on visualization. 2 hrs. lecture, 3 hrs. lab/wk.

ENGR 132
ENGINEERING GRAPHICS II (3CR)

Prerequisite: ENGR 131

Students will study and apply techniques in detail and assembly drawing, dimensioning, auxiliary view, sectioning and developments. Emphasis will be on creative design processes and visualization.

2 hrs. lecture, 3 hrs. lab/wk.

ENGR 171
PROGRAMMING FOR
ENGINEERING AND SCIENCE (3CR)

Prerequisites: MATH 171

Students will study and use FORTRAN programming language to develop programming techniques for solving scientific and engineering problems on digital computers. 2 hrs. class/wk. Minimum of 3 hrs. lab/wk. by arrangement.

ENGR 180
ENGINEERING LAND SURVEYING I (3CR)

Prerequisite or corequisite: MATH 172 or MATH 134 or equivalent

This class explains the basic applications of plane surveying procedures, measurement of horizontal distances, directions, angles, leveling, traversing, curves, stadia coordinates; computations with the aid of a computer; and topographical property and construction surveying. Students will take part in field operations using such equipment as auto levels, theodolites and EDM. 2 hrs. lecture, 3 hrs. lab/wk.

ENGR 211
TECHNICAL STATICS AND MECHANICS (3CR)

Prerequisite: MATH 134 or MATH 172

A study of the force systems in equilibrium, centroids, moment of inertia, trusses, frames and fraction. The topics of elastic stress and strain, torsion and beam and column behavior also will be covered. Computer applications will be discussed. 3 hrs. lecture/wk.

ENGR 222
CIRCUIT THEORY I (3CR)

Prerequisites: MATH 243 and PHYS 220 and competence in computer programming

Corequisites: MATH 244 and PHYS 221

This course is the first of a two-semester sequence dealing with electrical circuit theory. Students will analyze linear passive electrical circuits. 3 hrs. lecture/wk.

ENGR 231
THERMODYNAMICS (3CR)

Prerequisites: MATH 242, PHYS 220 and CHEM 124 and competence in computer programming

This course is an introduction to the thermodynamic principles and their application to the analysis of energy systems, which include various power and refrigeration cycles. 3 hrs. lecture/wk.

ENGR 251
STATICS (3CR)

Prerequisite: MATH 242

Corequisite: PHYS 220

This class covers vectors, force systems, friction, centroids and moments of inertia. Computer applications will be included. 3 hrs. lecture/wk.

ENGR 252
MECHANICS OF MATERIALS (3CR)

Prerequisite: ENGR 251 and competence in computer programming

Students will study the theory of simple stress and strains in elastic materials, torsion, beams and columns. Computer applications included. 3 hrs. lecture/wk.

ENGR 254
DYNAMICS (3CR)

Prerequisite: ENGR 251 and computer programming competence

Topics include unbalanced force systems and the resulting motion, work and energy, impulse, momentum and impact. Computer applications will be included. 3 hrs. lecture/wk.

ENGR 258
STRUCTURAL ANALYSIS AND DESIGN (5CR)

Prerequisite: ENGR 211

This course is an introductory course for the analysis and design of simple structural systems with investigation of structural members and systems composed of steel, reinforced concrete and wood with regard to strength and structural behavior. Design standards including AISC, ACI, AITC and UBC, and computer analysis of structures will be introduced. 4 hrs. lecture, 3 hrs. lab/wk.

ENGR 285
PROJECT LABORATORY (3CR)

Prerequisite: Permission of division director

Students will construct and possibly design equipment as agreed upon with the instructor. By arrangement.

ENGLISH

DEVELOPMENTAL COURSES

The following courses are designed to assist students develop foundational writing skills. These courses do not fulfill degree requirements.

ENGL WRITING STRATEGIES (1-3CR)

This course is designed to assist students in developing their skills in various aspects of writing, including recognizing and using correct grammar and usage; understanding sentence structure and variety; composing short writing assignments; proofreading; gathering and documenting information. Emphasis is placed on the unique needs of each student. Various instructional materials, including handouts, self paced texts and computer programs are available. Instructional materials are also available for special audiences, including those whose first language is not English, hearing impaired and adults returning to college who may have job related needs. Specific course numbers will be listed in the schedule of classes published prior to the beginning of each semester. For more detailed information, stop by or call the Writing Center, located in 225 EMC (469-8500, ext. 3439).

ENGL 106 INTRODUCTION TO WRITING (3CR)

Prerequisite: ENGL 102 or appropriate placement test score.

In this introductory writing course, students will begin with a review of sentence skills then move into writing paragraphs, emphasizing topic selection, organization, development and editing. The course concludes with an introduction to the essay. 3 hrs./wk.

ENGL 121 COMPOSITION I (3CR)

Prerequisite: ENGL 106 or appropriate placement test score.

This standard freshman English I course concentrates on invention, paragraph development, essay format and an introduction to the research paper. Students will practice developing form and content of clear, interesting compositions. 3 hrs./wk.

ENGL 122 COMPOSITION II (3CR)

Prerequisite: ENGL 121

This standard freshman English II course emphasizes organization and development of essays written in response to assigned readings. Related research projects will be assigned. 3 hrs./wk.

ENGL 123 TECHNICAL WRITING I (3CR)

Prerequisite: ENGL 121

Emphasis will be on written communication related to manufacturing and engineering including short reports, letters and resumes. 3 hrs./wk.

ENGL 210 TECHNICAL WRITING II (3CR)

Prerequisite: ENGL 123

Upon successful completion of this course, the student should be familiar with writing techniques appropriate for technology, industry and business. The student will also have the opportunity to develop skills in the preparation of technical communiques including forms, plans, summaries, newsletter articles, press releases, memorandums and letters, as well as short and long reports. 3 hrs. lecture/wk.

ENGL 222 ADVANCED COMPOSITION (3CR)

Prerequisite: ENGL 122

Students will write expository and argumentative essays, practicing subject selection, development, organization and style. 3 hrs./wk. Fall.

ENGL 223 CREATIVE WRITING (3CR)

Prerequisite: ENGL 122

Students will study and practice poetry and short story writing. Topics include writing verse and fiction effectively; marketing; and narrative forms such as the play, novel and autobiographical sketch. Students will prepare projects in poetry and narrative writing for submission to professional editors. 3 hrs./wk.

ENGL 224 CREATIVE WRITING WORKSHOP (3CR)

Prerequisite: ENGL 223

Students with serious writing aspirations will get advanced practice in writing the short story, novel, non-fiction narrative, play and poetry. Students will critique each other's work. 3 hrs./wk. Spring.

**ENGL 230
INTRODUCTION TO FICTION (3CR)**

Prerequisite: ENGL 122

This introduction to fiction from different countries and eras will emphasize fictional techniques and themes in selected novels and short stories. Students will read, discuss and write about the assigned fiction. 3 hrs./wk.

**ENGL 231
AMERICAN PROSE (3CR)**

Prerequisite: ENGL 122

Students will read complete works of selected American writers and be assigned related writing projects. The course focuses on important works of various writers and the relationships between their lives and times and their art. 3 hrs./wk.

**ENGL 232
CHILDREN'S LITERATURE (3CR)**

Prerequisite: ENGL 122

Students will look at children's literature, both past and present. Topics include children's needs, criteria for selecting books, types of children's literature and the best authors and illustrators. 3 hrs./wk.

**ENGL 233
THE DEAF IN LITERATURE (2CR)**

The portrayal and function of deaf characters in selected works will be examined. Students will read, discuss and write about the assigned selections. 2 hrs./wk.

**ENGL 241
BRITISH WRITERS (3CR)**

Prerequisite: ENGL 122

British writers – their lives, their times and their works – will be examined. Students will read selected works by major British writers and be assigned related writing projects. 3 hrs./wk. Fall.

**ENGL 243
THE LITERATURE
OF SCIENCE FICTION (3CR)**

Prerequisite: ENGL 122

The themes and myths of major science fiction writers will be presented and major science fiction movies and short subjects will be reviewed. Class includes group presentations, simulations, guest speakers and related reading and writing assignments. 3 hrs./wk. Fall.

**ENGL 245
WRITING LITERATURE FOR CHILDREN (3CR)**

Prerequisite: ENGL 232

A continuation of Children's Literature, focusing primarily on writing literature for children – how to do it and how to market it. The course covers proper research, technique and form, emphasizing the best methods to produce quality prose, poetry and drama for young readers. 3 hrs./wk.

**ENGL 250
WORLD MASTERPIECES (3CR)**

Prerequisite: ENGL 122

Students will read complete works of selected influential Western World writers. Course focuses on important works of various writers and traces their influence on later writers. Writing projects will be assigned. 3 hrs./wk. Spring.

**ENGL 254
MASTERPIECES OF THE CINEMA (3CR)**

Prerequisite: ENGL 122

Major American and foreign films will be shown and discussed with video and film shorts added for variety and interest. Class features group presentations, written film critiques and related reading assignments. 3 hrs./wk. Spring.

**ENGL 256
AMERICAN POETRY (3CR)**

Prerequisite: ENGL 122

This course is a study of the poetry written in America from colonial times until the present, with emphasis on the relationship between the poetry and the lives and cultural milieu of the poets. Students will participate in class discussions, write essays, take examinations and make oral presentations. 3 hrs./wk.

EQUINE

**EQUUS 120
STABLE MANAGEMENT I (4CR)**

The caretaking of horses – feeding, grooming, barn sanitation and management of health problems will be studied. 2 hrs. lecture, 8 hrs. practical exercises in the stable/wk.

**EQUUS 124
EQUINE ANATOMY AND PHYSIOLOGY (4CR)**

This course is designed to provide a general knowledge of the structure and function of the body parts of the horse. From this foundation it is hoped the student will become more proficient in the care, management and use of the horse. 4 hrs./wk.

**EQUUS 128
EQUITATION I (4CR)**

Prerequisite: Concurrent enrollment in EQUUS 120

This course offers instruction in dressage. It includes correct application of the riding aids, terminology and rules for competition. 2 hrs. lecture, 4 hrs. lab/wk.

**EQUUS 132
EQUINE HEALTH, DISEASE,
NUTRITION AND DISORDERS (4CR)**

Prerequisite: EQUUS 124

This is a course to familiarize the student with common health problems of the horse. Preventive health, parasites, toxicology, infectious diseases and disorders of individual body systems will be covered. Nutrition and its related disorders also will be discussed. 4 hrs./wk.

**EQUUS 134
TECHNIQUES OF
RIDING INSTRUCTION I (3CR)**

Prerequisite: EQUUS 128, EQUUS 154

Students who intend to specialize in riding instruction can participate in this class. It features demonstrations of teaching methods, skills development and oral presentations. 4 hrs./wk.

**EQUUS 135
TECHNIQUES OF
RIDING INSTRUCTION II (3CR)**

Prerequisite: EQUUS 134

Areas covered in this course include planning safe camp programs and public lessons, rider problems, maintenance of the school horse and practice in planning and teaching at the elementary and intermediate levels of riding. 4 hrs./wk.

**EQUUS 140
STABLE MANAGEMENT II (4CR)**

Prerequisite: EQUUS 120

This course covers fitting and presentation of horses for show and sale, loading and hauling, and judging both as a professional and for the purchase of stock for prospective use in various areas. 2 hrs. lecture, 8 hrs. lab/wk.

**EQUUS 142
TECHNIQUES OF
TRAINING AND CONDITIONING (4CR)**

Prerequisite: EQUUS 140

This advanced cooperative work experience class allows students to increase their understanding of horse training by working in a professional setting. 4 hrs./wk.

**EQUUS 154
EQUITATION II (4CR)**

Prerequisites: EQUUS 128 and concurrent enrollment in EQUUS 140

This course offers instruction in saddleseat equitation, with emphasis on position of rider, control of horse and basic movement. Topics include tests often required in shows, equipment for correcting faults and the form for mounts according to breed and type. 2 hrs. lecture, 4 hrs. lab/wk.

**EQUUS 220
STABLE MANAGEMENT III (4CR)**

Prerequisite: EQUUS 140

This is a continuation of EQUUS 140 emphasizing horse handling and training. It covers handling, conditioning and training for horses of all ages. Topics covered will include variation in training methods for different breeds and types of horses. 2 hrs. lecture, 8 hrs. lab/wk.

**EQUUS 222
EQUINE BREEDING
AND MANAGEMENT (4CR)**

Prerequisite: EQUUS 124

Topics covered in this course include anatomy, reproductive physiology, genetics, breeding diseases, congenital and hereditary problems, selection and management of breeding stock. 4 hrs./wk.

**EQUUS 240
STABLE MANAGEMENT IV (4CR)**

Prerequisite: EQUUS 220

Students will study business functions related to stable management, human relations and supervisory techniques. 2 hrs. lecture, 8 hrs. lab/wk.

**EQUUS 260
ADVANCED EQUITATION (4CR)**

Prerequisites: EQUUS 128 and EQUUS 154

This course will provide students an opportunity to further their riding skills and knowledge in their preferred areas of equitation. 1 hr. lecture, 5 hrs. lab/wk.

**EQUUS 281
ADVANCED EQUITATION PROJECT (2CR)**

Prerequisite: Approval of program coordinator

Under the supervision of an instructor, the student will develop an individual project stressing skills not fostered in the equine program courses. Projects must have clearly stated objectives and be approved by program coordinator. 4 hrs./wk.

FASHION MERCHANDISING

FASH 121

FASHION FUNDAMENTALS (3CR)

Successful completion of this course will expose students to all facets of the fashion industry – from the production of raw fabrics to the distribution of finished goods to the consumer. The focus is on understanding today's fashion, the development of the industry, the design process, production and merchandising of fashion and its application to today's fashion consumer. 3 hrs./wk.

FASH 125

VISUAL MERCHANDISING (3CR)

Upon completion of this course, students will have experience in display facets as applicable to window and interior implementation including practical application of window and interior conceptualization, mannequin usage, propage, theme development and signage. 3 hrs./wk.

FASH 130

FASHION ILLUSTRATION I (3CR)

Upon completion of this course, students will be able to create fashion illustrations for their portfolios. Beginning with basic structure, students will explore and experiment with color, mood and detail as well as figure in various media. 3 hrs./wk.

FASH 132

MARKETING COMMUNICATIONS (3CR)

Fashion promotion – including publicity, special events, fashion shows, and advertising will be explored in this course. 3 hrs./wk.

FASH 135

IMAGE MANAGEMENT (1CR)

Upon successful completion of this course student will know the concepts necessary for the development of a professional self-image. The course begins with an extensive wardrobe inventory and progresses through an examination of men's and women's personal grooming, principles and elements of design, fabrics and accessories. It will culminate with the development of an individual professional wardrobe plan. 1 hr. lecture/wk.

FASH 140

GARMENT DESIGN I (3CR)

Prerequisite: FASH 130 and/or program coordinator approval

Upon successful completion of this course, students should be able to translate their garment ideas from color sketches (croquis), continue the design process

through fabric selection, pattern drafting, figuring yardage and notions, figuring wholesale cost and constructing finished garment. Such skills would prove useful in courture, design for manufacturing, entrepreneurship and personalized garments. 6 hrs. lecture, lab/wk.

FASH 150

TEXTILES (3CR)

Upon successful completion of this course, students will learn how to select fabrics or yarns for application according to their assets and performance. Textiles is an extensive study of both natural and man-made fibers – their identification, properties and method of manufacturing. This course will cover construction methods through the various finishing processes including weaving, knitting, felting, printing and dyeing. 3 hrs./wk.

FASH 220

FASHION IN SOCIETY (3CR)

As an interdisciplinary study of clothing upon successful completion of this course the student will relate clothing to the cultural, social, psychological, physiological and economic aspects and practices of chosen individuals and cultural groups. Examples for study will come from current Western and Eastern dress as well as historical examples. 3 hrs./wk.

FASH 224

HISTORY OF COSTUME (3CR)

Upon successful completion of this course, students will be able to identify the forces behind the styles of Western costume worn by women, men and children from Egyptian time to present. Emphasis is placed on political, economic, technological and cultural trends that affect these changing silhouettes of each period. 3 hrs./wk. Spring.

FASH 230

FASHION ILLUSTRATION II (3CR)

Prerequisite: FASH 130

Upon completion of this course, students will have developed a portfolio geared to their individual illustration goals. This is an in-depth study of fashion illustration with emphasis on development of personal style, study of fashion figure drawing style, fabric renderings and layout design and use of more advanced media. 3 hrs./wk.

FASH 231
MERCHANDISING STRATEGIES (3CR)

Prerequisite: FASH 121

Upon completion of the course, students will understand the role of profitable fashion buying as it pertains to the planning and controlling of budgets and decisions involved in merchandise assortments as well as the ability to compute business operations related to the fashion industry. 3 hrs./wk. Fall.

FASH 242
MERCHANDISE EVALUATION (3CR)

Upon successful completion of this course students will have gained sufficient product knowledge and the ability to evaluate textile and non-textile products ranging from lingerie to china. Students will prepare and present research projects on a selected product. 3 hrs./wk. Spring.

FASH 268
FIELD STUDY:
THE MARKET CENTER (3CR)

Prerequisite: FASH 121 and/or program coordinator approval

Upon successful completion of this course, students should understand national and regional market centers, multiple apparel manufacturers and auxiliary services, international fashion review and major and local retail centers. Lectures and field visits will center on wholesale and retail marketing methods in the Kansas City area and in a major market city. 3 hrs./wk.

FASH 272 (2CR)
FASHION SEMINAR: HUMAN RELATIONS

Upon successful completion of this course, the student will be able to identify individual components that affect human relations in the workplace including individual behavior, group behavior and communication and organization in formal and informal relations. Through discussion and case studies the students will apply this knowledge to the role of leadership. 2 hrs./wk.

FASH 275 (2CR)
FASHION SEMINAR:
SUPERVISORY DEVELOPMENT

Upon successful completion of this course, the student will have studied the supervisor's role in the management of human relations. The importance of planning, organizing, motivating and controlling will be apparent. Understanding group process, communication and leadership are clearly skills every supervisor must possess. The course will include case studies and decisions related to hiring, training, disciplinary action and performance appraisal. 2 hrs./wk.

FASH 277 (2CR)
FASHION SEMINAR: CAREER OPTIONS

Upon completion of this course, students will have identified individual career goals after thorough examination of five career areas within the fashion industry. Class will address career options through a research project, guest speakers, field trips, lectures and class discussions. 2 hrs./wk.

FASH 280 (2CR)
FASHION SEMINAR: MARKET RESEARCH

Upon successful completion of this course, students will understand the concepts consumer behavior including both theory and measured behavior. Attention will be given to market research methods that are used in the study of human behavior. The course includes research projects, lectures, guest speakers and student discussions. 2 hrs./wk.

FASH 283
FASHION INTERNSHIP I (1CR)

Prerequisite: Admission to Fashion Merchandising Program

This course offers work experience in an approved training situation under instructional supervision designed to provide practical experience in the fashion industry. A minimum of 15 hours each week on-the-job training.

FASH 284
FASHION INTERNSHIP II (1CR)

Prerequisite: Admission to Fashion Merchandising Program

This course offers work experience in an approved training situation under instructional supervision designed to provide practical experience in the fashion industry. A minimum of 15 hours each week on-the-job training.

FASH 285
FASHION INTERNSHIP III (1CR)

Prerequisite: Admission to Fashion Merchandising Program

This course offers work experience in an approved training situation under instructional supervision designed to provide practical experience in the fashion industry. A minimum of 15 hours each week on-the-job training.

FASH 286**FASHION INTERNSHIP IV (1CR)***Admission to Fashion Merchandising Program*

This course offers work experience in an approved training situation under instructional supervision designed to provide practical experience in the fashion industry. A minimum of 15 hours each week on-the-job training.

FASH 298**EUROPEAN FASHION EMPHASIS (3CR)**

This class offers a comparison of American and European retail merchandising, advertising and visual presentation on site in European cities.

**FIRE PROTECTION/
FIRE PREVENTION
AND FIRE ADMINISTRATION****FIRE 121****FUNDAMENTALS OF
FIRE PREVENTION (3CR)**

This class covers the organization and function of fire prevention, inspections, surveying and mapping, recognizing life and fire hazards, eliminating fire hazards and public relations. 3 hrs. lecture/wk.

FIRE 125**BUILDING CONSTRUCTION
FOR FIRE SERVICE (3CR)**

Students will explore how to classify buildings by occupancy and types of construction. Emphasis is on fire protection features, including building equipment, facilities, fire-resistive materials and high-rise considerations. 3 hrs. lecture/wk.

FIRE 130**FIRE INVESTIGATION (3CR)**

How to determine the cause of the fire will be explained in this introductory course. The course does not deal with arson investigation except as it relates to determining the cause of a fire. 3 hrs. lecture/wk.

FIRE 132**ARSON INVESTIGATION (3CR)**

Prerequisites: FIRE 130

Arson investigation techniques and procedures – will be covered in this class for advanced students. Topics include evidence preservation, interviewing and courtroom procedures. 3 hrs. lecture/wk.

FIRE 135**BUILDING AND FIRE CODES (3CR)**

Advanced students will study how to read and interpret codes and ordinances, especially the Life Safety Codes which are used extensively in fire prevention. 3 hrs. lecture/wk.

FIRE 137**EXTINGUISHING, DETECTION
AND ALARM SYSTEMS (3CR)**

This introductory course for advanced students will cover types of extinguishing, detection and alarm systems and how they operate. This course does not include in-depth discussions on fire sprinkler and stand-pipe systems. 3 hrs./wk.

FIRE 140**RECOGNITION AND IDENTIFICATION
OF HAZARDOUS MATERIALS (1CR)**

This course is a study of the recognition of hazardous material, incidents and methods of identification of the substances involved. 1 hr. lecture/lab wk.

FIRE 143**PROPERTIES AND CHARACTERISTICS
OF HAZARDOUS MATERIALS (1CR)**

Prerequisite: FIRE 140

This course is a study of the general properties and characteristics of hazardous materials. 1 hr. lecture/lab wk.

FIRE 145**FIRE DEPARTMENT INITIAL RESPONSE –
HAZARDOUS MATERIALS (1CR)**

Prerequisite: FIRE 143

This course is a study of the techniques and methods initially employed by the fire department to manage hazardous materials incidents. 1 hr. lecture/lab wk.

FIRE 150**INTRODUCTION TO FIRE SCIENCE (3CR)**

Topics covered in this course include career opportunities, history of fire protection, fire loss analysis, public, quasi-public and fire protection services, specific fire protection functions, fire chemistry and physics. 3 hrs. lecture/wk.

FIRE 159**FIRE SERVICE HYDRAULICS (4CR)**

This course includes a study of hydraulic principles and formulas. Hydraulic experiments emphasize fire service applications. 5 hrs./wk.



**FIRE 160
FIRE APPARATUS AND EQUIPMENT (3CR)**

Fire apparatus design, specifications, capabilities and use in emergencies will be discussed. 3 hrs. lecture/wk.

**FIRE 162
FIRE TACTICS AND STRATEGY (3CR)**

Fire control through manpower, equipment and extinguishing agents will be explored in this second-year course. 3 hrs. lecture/wk.

**FIRE 169
RESCUE TECHNIQUES (4CR)**

This course offers a study of rescue techniques. The student discusses and participates in simulated rescue situations.

**FIRE 170
SPRINKLER AND STANDPIPE SYSTEMS (3CR)**

This advanced course explains the types of sprinkler and standpipe systems used in fire protection and how they operate. 3 hrs. lecture/wk.

**FIRE 175
ESSENTIALS OF FIREFIGHTING (4CR)**

This first-year class will explain basic firefighting skills with emphasis on the theory of fire protection and on identifying and using equipment safely. This course meets NFPA 1001 minimum qualifications for Fire Fighter I certification. 3 hrs. lecture, 3 hrs. lab/wk.

**FIRE 220
FIRE ADMINISTRATION (3CR)**

Techniques and methods used in managing fire departments will be explored in this second-year class, including budgeting processes, administrative functions and types of political systems that affect a fire department. 3 hrs. lecture/wk.

**FIRE 222
FIRE SCIENCE LAW (3CR)**

The law as it pertains to the fire service will be explained along with tort law and business law in this class for advanced students. 3 hrs. lecture/wk.

**FIRE 224
EMERGENCY
MANAGEMENT OPERATIONS (3CR)**

Disaster control, disaster management, communications for disaster management and types of disasters will be covered in this class. This is a course in basic incident command. 3 hrs. lecture/wk.

**FIRE 250
FIRE SERVICE
INSTRUCTIONAL METHODOLOGY (5CR)**

Prerequisite: division director approval

This course is designed to provide a potential fire service instructor with the instructional skills and knowledge necessary to develop, conduct and evaluate formalized training courses. This course meets NFPA 1041, Standard for Fire Service Instructor Professional Qualifications, at Instructor Level II. 5 hrs. lab/wk.

**FIRE 281
DIRECTED STUDIES
FOR THE FIRE SERVICE (2CR)**

Prerequisite: Division director approval

Students will conduct research and study in their individual areas of interest. The instructor and student will decide on a topic to be researched. The student will report the results of the research in a written report, reflecting the recognized form and style of writing. By arrangement.

FOREIGN LANGUAGE

**FL 116
ELEMENTARY LATIN I (3CR)**

Students will have the opportunity to learn the basic vocabulary and structural patterns, or grammar, of Latin. Emphasis will be placed on fundamental grammar concepts, extensive word study for English vocabulary growth, and the lasting contributions made by Roman society to Western Civilization. 3 hrs./wk.

FL 120**ELEMENTARY GERMAN I (5CR)**

This course presents the sounds, vocabulary and basic structural patterns of German, focusing on the development of listening comprehension, speaking, reading and writing skills. Cultural material is integrated into the course. 5 hrs./wk.

FL 121**ELEMENTARY GERMAN II (5CR)**

Prerequisite: FL 120 or one year of high school German

This course continues the presentation of the vocabulary and basic structural patterns begun in Elementary German I with continued emphasis on the development of listening comprehension, speaking, reading and writing skills. 5 hrs./wk.

FL 130**ELEMENTARY SPANISH I (5CR)**

In this basic course, students will study Spanish grammar, conversation, composition and the culture of Spanish-speaking countries. 5 hrs./wk.

FL 131**ELEMENTARY SPANISH II (5CR)**

Prerequisite: FL 130 or one year of high school Spanish

This course continues the presentation of the material introduced in Elementary Spanish I. Graded reading selections are added as a basis for conversation and composition in discussion periods. 5 hrs./wk.

FL 140**ELEMENTARY FRENCH I (5CR)**

Areas covered in this basic course include vocabulary building, grammar study, conversation and an introduction to French culture and civilization. The emphasis is on conversation. 5 hrs./wk.

FL 141**ELEMENTARY FRENCH II (5CR)**

Prerequisite: FL 140 or one year of high school French

This course continues the presentation of the material introduced in Elementary French I. Graded reading selections will be used as the basis for conversations. 5 hrs./wk.

FL 150**ELEMENTARY RUSSIAN I (5CR)**

In this course, students will study the sounds, vocabulary and basic structural patterns of Russian. Focus will be on listening comprehension, speaking, reading and writing skills. Cultural material will be included. 5 hrs./wk.

FL 151**ELEMENTARY RUSSIAN II (5CR)**

Prerequisite: FL 150 Elementary Russian I

This course completes the presentation begun in Elementary Russian I, with further practice and development of listening comprehension, speaking, reading and writing skills. 5 hrs./wk.

FL 160**ELEMENTARY ITALIAN I (5CR)**

Students will be introduced to the sounds, vocabulary and basic structural patterns of Italian, with a primary focus on the development of listening comprehension and speaking, reading and writing skills. Integrated throughout the course will be an introduction to the culture of Italy. 5 hrs./wk.

FL 161**ELEMENTARY ITALIAN II (5CR)**

Prerequisite: FL 160 or one year of high school Italian

A continuation of the presentation of the vocabulary and basic structural patterns of Italian, this course places continued emphasis on the development of listening comprehension, speaking, reading and writing skills. Cultural material is also integrated into the course. 7 hrs. lecture/wk.

FL 165**ELEMENTARY CHINESE I (5CR)**

This course is an introduction to the sounds, vocabulary, grammar and usage, characters and readings of the Chinese language. An emphasis will be placed on developing basic conversational skills. Cultural materials will be included. 7 hrs. lecture/wk.

FL 166**ELEMENTARY CHINESE II (5CR)**

Prerequisite: FL 165

This course offers a continuation of Elementary Chinese I, emphasizing the sounds, vocabulary, grammar, usage, characters and readings of the Chinese language. The emphasis will be on developing more advanced conversational skills and cultural understanding. 7 hrs. lecture/wk.

FL 170**ELEMENTARY JAPANESE I (5CR)**

This course is an introduction to the sounds, vocabulary, grammar, usage and readings of the Japanese language. Emphasis will be placed on developing basic conversational skills. Cultural materials will be included. 7 hrs. lecture/wk.

FL 171**ELEMENTARY JAPANESE II (5CR)**

Prerequisite: FL 170

A continuation of Elementary Japanese I, this course emphasizes the sounds, vocabulary, grammar, usage and readings of the Japanese language. The emphasis is on developing more advanced conversational skills and cultural understanding. 7 hrs. lecture/wk.

FL 178**INTERMEDIATE RUSSIAN I (3CR)**

Prerequisite: FL 151

This course emphasizes vocabulary development and more advanced study of Russian grammar. It gives students practice in reading, listening comprehension, speaking and writing. 3 hrs. lecture/wk.

FL 179**INTERMEDIATE RUSSIAN II (3CR)**

Prerequisite: FL 178

Emphasis is on a study of the Russian language and culture that would prepare students to travel in a Russian-speaking country and engage in simple conversation with the citizens of that country. 3 hrs. lecture/wk.

FL 220**INTERMEDIATE GERMAN I (3CR)**

Prerequisite: FL 121 or two years of high school German

This class emphasizes vocabulary building and grammar review primarily through extensive reading of German texts. There will be additional practice in listening comprehension, speaking and writing. 3 hrs./wk.

FL 221**INTERMEDIATE GERMAN II (3CR)**

Prerequisite: FL 220 or three years of high school German

This class further expands the mastery of German vocabulary and structure through extensive reading of more advanced texts with additional practice in listening comprehension, speaking and writing. 3 hrs./wk.

FL 223**CONVERSATIONAL GERMAN (2CR)**

Prerequisite: FL 220

This course is a continuation of the presentation of the vocabulary and structural patterns of German, with an emphasis on speaking and writing skills to build a spontaneous speaking ability and writing fluency. Topics concerning everyday life situations and current events will be discussed. 2 hr./wk.

FL 230**INTERMEDIATE SPANISH I (3CR)**

Prerequisite: FL 131 or two years of high school Spanish

This is a reading course designed to build vocabulary, increase understanding of Hispanic culture and increase speaking fluency. The course includes composition and conversation. 3 hrs./wk.

FL 231**INTERMEDIATE SPANISH II (3CR)**

Prerequisite: FL 230 or three years of high school Spanish

Extensive study of Hispanic literature is included in this class along with advanced reading and grammar review. 3 hrs./wk.

FL 240**INTERMEDIATE FRENCH I (3CR)**

Prerequisite: FL 141 or two years of high school French

Students will work on building vocabulary and comprehension and increasing speaking ability. The emphasis is on conversation and composition. A grammar review of Elementary French I and II also is included. 3 hrs./wk.

FL 241**INTERMEDIATE FRENCH II (3CR)**

Prerequisite: FL 240 or three years of high school French

Students will study newspaper articles from *Match*, *Elle*, and *L'Express* in this advanced reading course. A complete review of grammar, conversation and composition are included. 3 hrs./wk.

FL 243**CONVERSATIONAL FRENCH (2CR)**

Prerequisite: FL 141 or two years of high school French

This course is designed to build spontaneous speaking ability. Everyday life situations and current events are discussed in class. 2 hrs./wk.

**FL 298
FRENCH CULTURE AND CIVILIZATION (3CR)**

In this travel-for-credit course to France, students will experience French culture as they visit Paris and most of the sites and places of historical significance in France. Summer.

**HEALTH, PHYSICAL
EDUCATION & RECREATION**

**HPER 100
BASKETBALL (BEGINNING)(1CR)**

Students will have an opportunity to learn fundamental basketball skills through demonstration and discussion of the strategies necessary for team play. Emphasis will be on individual participation. 2 hrs./wk.

**HPER 101
BASKETBALL (INTERMEDIATE)(1CR)**

Prerequisite: HPER 100

Students will learn the advanced skills and strategies necessary for team play. 2 hrs./wk.

**HPER 103
TOUCH/FLAG FOOTBALL (1CR)**

An introduction to recreational football, this course will cover fundamental skills, techniques and strategies through both discussion and demonstration. 2 hrs./wk.

**HPER 105
BOWLING (BEGINNING)(1CR)**

The fundamentals of bowling will be introduced along with the history of the sport and the selection, care and proper use of equipment. 2 hrs./wk.

**HPER 107
BOWLING (INTERMEDIATE)(1CR)**

Prerequisite: HPER 105

Advanced skills of league bowling will be introduced and terminology, etiquette and scoring reviewed. 2 hrs./wk.

**HPER 110
RACQUETBALL (BEGINNING)(1CR)**

A brief history of rules and terminology will be followed by instruction and actual practice of the fundamentals. 2 hrs./wk.

**HPER 112
RACQUETBALL (INTERMEDIATE)(1CR)**

Prerequisite: HPER 110

Advanced skills, strategy and patterns of plays will be introduced. 2 hrs./wk.

**HPER 115
SOCCER (1CR)**

The basics, some advanced skills and tactics of the game will be introduced. 2 hrs./wk.

**HPER 117
POWER VOLLEYBALL (BEGINNING) (1CR)**

The basic skills of volleyball will be taught including the forearm pass, overhead set, serve and spike. Elementary offense and defense will be covered. 2 hrs./wk.

**HPER 118
POWER VOLLEYBALL (INTERMEDIATE) (1CR)**

Prerequisite: HPER 117

Intermediate and advanced skills of power volleyball are the focus of this class. Emphasis is on refinement of skills. Multiple offenses and advanced defenses will be explained. 2 hrs./wk.

**HPER 122
WHEELCHAIR BASKETBALL (2CR)**

Specifically designed for students in wheelchairs, this course will provide students with the opportunity to learn the fundamental skills, rules and strategies of wheelchair basketball. Emphasis will be on the developing the basic skills of dribbling, passing, shooting and team play. 3 hrs./wk.

**HPER 123
BASIC STRENGTH
FITNESS PRINCIPLES (2CR)**

The fundamental skills necessary to plan, implement and maintain a program for lifelong fitness will be taught. Topics will include general fitness planning, strength training, proper use of equipment, general human anatomy, and injury prevention and rehabilitation. 3 hrs./wk.

**HPER 126
BASEBALL (BEGINNING)(1CR)**

Students will have an opportunity to learn the basic skills, techniques and strategies which are fundamental to individual and team play performance. 2 hrs./wk.

**HPER 128
BASEBALL (INTERMEDIATE)(1CR)**

Prerequisite: HPER 126

Students will have an opportunity to learn techniques of hitting and throwing a baseball through detailed analysis emphasizing the identification and correction of mistakes and poor habits in approach. 2 hrs./wk.

HPER 130
RUNNING AWARENESS AND EXERCISE (1CR)

Cardiovascular fitness can be improved in this course. Topics include the proper mechanics of running and training, exercise benefits, fitness programs, warm-ups and cool-downs. 2 hrs./wk.

HPER 134
WEIGHT TRAINING (BEGINNING)(1CR)

Muscular strength and endurance will be developed in this class. A directed workout program will be implemented. The muscular system and basic terminology and theory will be addressed. 2 hrs./wk.

HPER 135
WEIGHT TRAINING (INTERMEDIATE)(1CR)

Prerequisite: HPER 134

This is a continuation and expansion of HPER 134 Weight Training (Beginning). Individual workout programs will be designed. Basic physiology of muscular activity will be addressed. 2 hrs./wk.

HPER 137
TENNIS (BEGINNING)(1CR)

Students will get individualized instruction in this course on the rules, fundamentals and history of tennis. 2 hrs./wk.

HPER 138
TENNIS (INTERMEDIATE)(1CR)

Prerequisite: HPER 137

Students can work on the fundamentals of the game and various patterns of play. 2 hrs./wk.

HPER 140
MODERN DANCE (BEGINNING)(1CR)

This is a planned, progressive fitness program designed to improve muscle tone, body contour and flexibility through modern dance. 2 hrs./wk.

HPER 142
MODERN DANCE (INTERMEDIATE)(1CR)

Prerequisite: HPER 140

In this course, students will concentrate on longer and more difficult dance combinations as they work on muscular control and strength. 2 hrs./wk.

HPER 145
CHEERLEADING (BEGINNING)(1CR)

This class focuses on working together, timeout cheers, chants for sideline cheers and pom-pom routines. Cheerleaders will represent the college at community activities. 4 hrs./wk. October-March.

HPER 147
CHEERLEADING (INTERMEDIATE)(1CR)

Prerequisite: HPER 145

Cheerleaders will make up original cheers and present them to the group. They also will work with the instructor in planning and coordinating activities. 4 hrs./wk. October-March.

HPER 150
AEROBICS (BEGINNING)(1CR)

Motor skills, jogging and dance steps are combined in this exercise program designed to improve muscle tone and cardiovascular fitness. 2 hrs./wk.

HPER 152
AEROBICS (INTERMEDIATE)(1CR)

Prerequisite: HPER 150

Motor skills, jogging and dance steps are performed at a faster pace for a longer period of time than in Rhythmic Aerobics (Beginning). 1 hr. lecture, 1 hr. lab/wk.

HPER 155
BALLET (BEGINNING)(1CR)

The fundamentals of ballet will be introduced as well as terminology and skills. 2 hrs./wk.

HPER 157
BALLET (INTERMEDIATE)(1CR)

Prerequisite: HPER 155

In this continuation of Beginning Ballet, students will work on advanced skills, terminology and participation. 2 hrs./wk.

HPER 160
ICE SKATING (BEGINNING)(1CR)

Students will study the fundamental skills and techniques of ice skating. 2 hrs. lab/wk.

HPER 162
TEACHING ELEMENTARY DANCE (2CR)

Upon the completion of this course, students should be able to organize and develop a dance program within a primary level physical education curriculum. Proper class formation, body position, kinetic awareness, count sequences and movement combinations are some of the topics that will be covered. Students will also have the opportunity to participate in creating class activities to analyze the components of the activities, and to create their own. 3 hrs./wk.

**HPER 163
BALLROOM DANCE (BEGINNING)(1CR)**

An introduction to Ballroom Dance with emphasis on basic patterns and fundamental steps in waltz, fox trot, swing, polka and cha-cha. Common rules of dance courtesy and a brief overview of ballroom dance history will be included. Music or dance background is not necessary. 2 hrs./wk.

**HPER 165
KARATE (BEGINNING) (1CR)**

The fundamentals of karate will be introduced as well as its history, basic punches, blocks, kicks and self-defense techniques. 2 hrs./wk.

**HPER 166
KARATE (INTERMEDIATE) (1CR)**

Prerequisite: HPER 165

Students will put the techniques of karate to practice in this class, which also covers combination and defense techniques. 2 hrs./wk.

**HPER 170
WRESTLING (1CR)**

This class offers individualized instruction in the rules, fundamentals and history of wrestling. Practice area scheduled by arrangement.

**HPER 172
TRACK AND FIELD (BEGINNING)(1CR)**

An introduction to track and field activities, students will have an opportunity to learn the fundamental skills, techniques and strategies necessary for participation in such events. Emphasis will be placed on both discussion and demonstration. 2 hrs./wk.



**HPER 174
COACHING & OFFICIATING
OF TRACK AND FIELD (2CR)**

Students will have the opportunity to learn the fundamentals of coaching and officiating track and field events. Upon successful completion of the course, students will be prepared for TAC Level 1 certification. 2 hrs. lecture/wk.

**HPER 175
FENCING (1CR)**

This class offers individualized instruction in the rules, fundamentals and history of fencing. 2 hrs./wk.

**HPER 182
SWIMMING (BEGINNING) (1CR)**

This course is intended for those students who have little or no previous swimming experience. Students will practice beginning swimming strokes and will have the opportunity to learn basic safety skills. 1 hr./wk.

**HPER 183
SWIMMING (INTERMEDIATE) (1CR)**

Prerequisite: HPER 182 or equivalent.

This course is designed to improve a student's skill, knowledge and endurance in swimming. A student who completes this course successfully will be able to swim continuously using a variety of strokes. 1hr./wk.

**HPER 185
ARCHERY (1CR)**

Students will get individualized instruction in the rules, fundamentals and history of archery. A survey of the origin of archery and the selection and care of equipment also will be included. 2 hrs./wk.

**HPER 190
GOLF (1CR)**

Students will get individualized instruction in the rules, fundamentals and history of the sport. Proper use of clubs and courtesies of the game also will be covered. 2 hrs./wk.

**HPER 194
PLYOMETRICS (BEGINNING)(1CR)**

Plyometrics, a set of training drills used to produce an overload on muscle tissue, develops the eccentric (stretching) phase of muscle contraction. A variation of different types of jumping, stretching and speed drill movements, these drills will help develop and improve the reaction ability in nerve-muscle coordination, bridging the gap between strength and producible power so that acceleration can be gathered more quickly after the body mass has been placed in motion. 3 hr. lecture/wk.

**HPER 197
PLYOMETRICS (INTERMEDIATE)(1CR)**

Prerequisite: HPER 194

A continuation of the study of plyometrics with emphasis not only on exercise performance but also on developing the ability to design drills for specific sports activities and to interpret results. 3 hrs. lecture/wk.

**HPER 200
FIRST AID CPR (2CR)**

This class will cover cause, prevention and first aid care of common emergencies. American Red Cross certification can be earned in standard first aid and personal safety and in cardiopulmonary resuscitation. 2 hrs./wk.

**HPER 202
PERSONAL AND COMMUNITY HEALTH (3CR)**

Students will discuss the maintenance of good health. Discussion topics will include exercise and fitness, drug abuse, emotional health, proper nutrition, alcohol, tobacco, chronic and communicable disease, human sexuality and consumer health. The relationship between the individual and community health will be emphasized. 3 hrs./wk.

**HPER 204
CARE AND PREVENTION
OF ATHLETIC INJURY (3CR)**

Corequisite: HPER 200 or BIOL 140

This introduction to athletic training techniques is for student athletic trainers and for coaches and athletes at all levels. The course will cover prevention of sports injuries, rehabilitation and taping techniques and proper nutrition. 3 hrs./wk.

**HPER 205
INDIVIDUAL LIFETIME SPORTS (2CR)**

In a group, students will participate in badminton, racquetball, golf, tennis and bowling. History, rules and strategy will be presented for each lifetime sport. 3 hrs./wk.

**HPER 208
PHYSIOLOGY OF LIFETIME FITNESS (3CR)**

An introduction to the physiological approach to fitness and health. The physiology of aerobic exercise, muscular exercise, and exercise metabolism will be studied with an emphasis on preparing students to successfully prescribe individual exercise programs. 3 hrs./wk.

**HPER 210
FUNDAMENTALS OF ATHLETICS (2CR)**

The importance of sports in society, career opportunities and other sports issues will be discussed. 3 hrs./wk.

**HPER 212
BASIC LEGAL ASPECTS OF SPORT (2CR)**

This course is an introduction to the various legal aspects of sport. The roles of those involved in athletics and their responsibilities for prevention of and

protection against potential injury will be discussed in terms of legal liabilities. Actual court cases will be discussed, as will forecasts of future legal developments in the field. 2 hrs./wk.

**HPER 217
COACHING AND
OFFICIATING OF BASKETBALL (2CR)**

With an emphasis on the rules governing basketball and the mechanics of officiating, students will have the opportunity to learn how to organize and plan daily practice sessions. 2 hrs./wk.

**HPER 218
COACHING AND
UMPIRING OF BASEBALL (2CR)**

With an emphasis on the rules governing baseball and the mechanics of officiating, students will have the opportunity to learn how to organize and plan daily practice sessions. 2 hrs./wk.

**HPER 220
SPORTS OFFICIATING (3CR)**

The rules and practical applications of sports officiating for flag football, volleyball, soccer, softball, track, swimming/diving, weightlifting and wrestling will be covered. 3 hrs./wk.

**HPER 222
INTRODUCTION TO
RECREATIONAL SERVICES (3CR)**

The historical and philosophical foundations of leisure and recreational activities will be explored. Emphasis will be on socioeconomic movements, the economic importance of recreation and social institutions that provide recreational services. 3 hrs./wk.

**HPER 224
OUTDOOR RECREATION (3CR)**

The history and development of trends in outdoor recreation will be discussed. The course also contains outdoor field study. 3 hrs./wk.

**HPER 228
RECREATION LEADERSHIP
AND SUPERVISION (3CR)**

Prerequisite: HPER 222

This course is concerned with the process and techniques of leadership and supervision. Emphasis will be put on the common and distinguishing features of recreation leadership. Students will develop guiding principles for their leadership from their philosophies for living and for recreation. 3 hrs./wk.

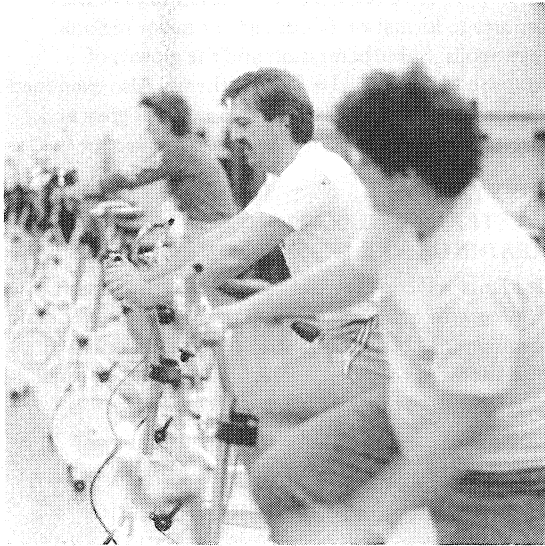
**HPER 230
RECREATIONAL FIELD STUDY (3CR)**

In this class, students will work as recreation leaders in a local agency, hospital or institution. 1 hr. class, a minimum of 15 hrs. supervised laboratory by arrangement/wk.

**HPER 234
RECREATION PROGRAMMING (3CR)**

Prerequisite: HPER 222

This course is concerned with recreational programming in various types of settings. This would include planning areas and facilities, personnel management, recreational financing and leadership. 3 hrs./wk.



**HPER 240
LIFETIME FITNESS I (1CR)**

A study of the various components of total lifetime fitness and the implications for each of lifelong health and fitness. Lectures and laboratory sessions will be centered on practical knowledge and experiences designed to help each person incorporate various types of physical activity into their lifestyle for both health and recreation. The topics discussed include exercise and the heart, exercise and weight control, tension and relaxation, fads and fallacies in physical fitness and aerobics. 2 hrs./wk.

**HPER 241
LIFETIME FITNESS II (1CR)**

Prerequisite: HPER 240

This course is a continuation and expansion of Lifetime Fitness I. Students will receive additional beneficial information. 2 hrs. lecture/lab wk.

**HPER 242
LIFETIME FITNESS III (1CR)**

Prerequisite: HPER 241

This course is a continuation and expansion of Lifetime Fitness II. 2 hrs. lecture/lab wk.

**HPER 243
LIFETIME FITNESS IV (1CR)**

Prerequisite: HPER 242

This course is a continuation and expansion of Lifetime Fitness III. The goal of this process is to develop in each student the desire and challenge to continue a daily fitness plan. 2 hrs. lecture/lab wk.

**HPER 245
ELEMENTARY PHYSICAL EDUCATION (3CR)**

Elementary teachers will work on planning and evaluating physical education programs. The class covers basic skills development and locomotion patterns, the nature of play and elementary physical education curriculum planning. 3 hrs./wk.

**HPER 255
INTRODUCTION TO
PHYSICAL EDUCATION (3CR)**

Here is an introduction to physical education, its history, philosophy, theory and practice. 3 hrs./wk.

HEARING IMPAIRED

**HRIM 100
BASIC ENGLISH FOR
HEARING IMPAIRED PERSONS I (HIP) (3CR)**

Students will work on basic skills in written communication including sentence structure, and the system of language, its characteristics and functions. Vocabulary and the effect of words will be emphasized. 5 hrs./wk.

**HRIM 101
BASIC ENGLISH FOR HIP II (3CR)**

Prerequisite: HRIM 100

In this continuation of HRIM 100, emphasis is on clear, written communication: grammar, organization, idiomatic usage, spelling and vocabulary. 5 hrs./wk.

**HRIM 102
BASIC ENGLISH FOR HIP III (3CR)**

Prerequisite: HRIM 101

Students will practice expression through writing compositions. Emphasis is on organization, clarity of expression and style. 5 hrs./wk.

**HRIM 105
ADJUSTMENTS INTO
ADULT LIVING (HIP) (3CR)**

This class teaches the daily living skills students need to become part of the mainstream in college including study habits, money management and employer-employee relationships. Also included will be an introduction to college facilities and support services, career exploration and clarification of personal values. 3 hrs./wk.

**HRIM 107
SPEECH THERAPY (3CR)**

This program is designed to meet the student's needs. It will cover communication disorders related to hearing loss, disfluency, resonance, voice and articulation problems. 3 hrs./wk.

**HRIM 110
DEVELOPMENTAL READING FOR
THE HEARING IMPAIRED I (2CR)**

The hearing impaired student can work on reading skills in these small group sessions. The course emphasizes reading comprehension and vocabulary development through selected readings, current affairs readings, discussion and vocabulary building. 3 hrs./wk.

**HRIM 111
DEVELOPMENTAL READING FOR
THE HEARING IMPAIRED II (3CR)**

Prerequisite: HRIM 110

The hearing impaired student can continue to develop reading skills in these group sessions. Emphasis is on reading comprehension and vocabulary development through selected readings. Line 21 decoder, discussion and vocabulary building. 3 hrs./wk.

**HRIM 115
FUNDAMENTALS OF MATH (HIP) (3CR)**

This class focuses on a review of fractions, decimals and whole numbers, numeration, practical applications of percent, dimensions and linear equations. 3 hrs./wk.

**HRIM 121
BASIC MANUAL COMMUNICATIONS (3CR)**

In this course on Basic American Sign Language (ASL) and Pidgin Signed English (PSE), students will work on developing visual perception, body language skills and basic ASL/PSE communication skills. 3 hrs./wk.

**HRIM 123
INTERMEDIATE
MANUAL COMMUNICATIONS (3CR)**

Prerequisite: HRIM 121

This continued study of American Sign Language (ASL) and Pidgin Signed English (PSE) emphasizes signed vocabulary in context, body and facial grammatical markers, and facial expressions. 3 hrs./wk.

HISTORY

**HIST 120
LOCAL AND KANSAS HISTORY (3CR)**

This course will trace the development of local community life from trailhead and frontier days in the 19th century to formation of our current major regional metropolis. Suburbanization and the growth of Johnson County will be a major theme. Also examined will be how Kansas City area communities grew and how they reflected national trends. 3 hrs. lecture/wk.

**HIST 125
WESTERN CIVILIZATION:
READINGS AND DISCUSSION I (3CR)**

Students will consider ideas in Western civilization dealing with man's relationship to the environment and speculations about the nature of God. Students will read the works outside of class and take part in small group discussions every other week.

**HIST 126
WESTERN CIVILIZATION:
READINGS AND DISCUSSION II (3CR)**

Important ideas in Western civilization dealing with social, economic, political and ethical relations will be explored. Students will read the works outside of class and take part in small group discussions every other week.

**HIST 130
EUROPEAN HISTORY FROM 1750 (3CR)**

Significant trends in Europe from the period of the Industrial Revolution through today will be examined. Topics include industrialization, nationalism and World Wars I and II. 3 hrs./wk.

**HIST 135
EASTERN CIVILIZATION (3CR)**

This course is an introduction to the societies and cultures of Asia. Through lectures, readings and discussions, the course focuses on aspects of the history, politics, art, literature and economics of China, Japan and India. The major traditional themes and concepts of these civilizations are stressed. 3 hrs./wk.

HIST 140**U.S. HISTORY TO 1877 (3CR)**

This survey course in U.S. history emphasizes developments and trends in American society from the early period of discovery and settlement through Reconstruction. Topics include the Colonial era, the Revolutionary period, the Federalist era, expansion of the Republic during the mid-19th century and the Civil War and Reconstruction. The emphasis is on analysis and interpretation of these developments. 3 hrs./wk.

HIST 141**U.S. HISTORY SINCE 1877 (3CR)**

This survey course emphasizes developments and trends in American society from the 1870s to the late 20th century. Topics include the Reconstruction era, industrialization, immigration, reform movements, World Wars I and II, social and cultural trends, and foreign policy. Emphasis is placed on analysis and interpretation of these developments. 3 hrs./wk.

HIST 160**MODERN RUSSIAN HISTORY (3CR)**

This course focuses on the social, economic, political and cultural forces that have shaped this important world power since the reign of Peter the Great. 3 hrs./wk.

HOME ECONOMICS**HMEC 131****FAMILY COMMUNICATIONS (3CR)**

Strategies for coping with stressful situations, the adult and family life cycle and current issues involving families such as drugs, violence and divorce will be examined. 3 hrs./wk.

HMEC 142**HOME MANAGEMENT (3CR)**

A systems approach to management, especially of the dual-career family, will be examined. Topics include goal setting, planning, decision making and the management of time, energy and money. 3 hrs./wk.

HMEC 151**NUTRITION AND MEAL PLANNING (3CR)**

Emphasis will be on basic food groups – their use in meal planning, their functions and their nutritional values. Current trends in eating, diet and exercise as well as fad diets and life cycle nutritional needs will be considered. Students will evaluate their own diets. 3 hrs./wk.

HONORS PROGRAM**HON 250****HONORS FORUM:****IN SEARCH OF SOLUTIONS (3CR)**

This course will focus on a current issue that affects the local, national and global communities. It will emphasize both specific content and skill development in interaction, analysis, synthesis and conflict resolution. As points of view concerning the issue are developed, students will be required to articulate and defend them as they are challenged by others, thereby making judgments between alternative options. 3 hrs./wk in addition to attendance of scheduled forum presentations.

HORTICULTURE**HORT 115****HOME HORTICULTURE (2CR)**

This is an introduction to the management of a home lawn, garden and trees. Students will review the horticulture industry, look at career opportunities and practice in the lab techniques studied in class. 1 hr. lecture, 2 hrs. lab/wk.

HORT 125**HORTICULTURE I (5CR)**

Prerequisite: BIOL 125

Students will examine the classification, taxonomy, nomenclature and growth of horticultural plants. 3 hrs. lecture, 4 hrs. lab/wk.

**HOSPITALITY
MANAGEMENT****(CHEF APPRENTICESHIP)****HMGT 121****HOSPITALITY****MANAGEMENT FUNDAMENTALS (3CR)**

This is an overview of the organization of the food service and public lodging industries and departmental functions, positions of the industries in the American economic system, and functions and limitations of the types of establishments. 3 hrs./wk.

HMGT 123**BASIC FOOD PREPARATION (3CR)**

Upon completion of this course, the student will have attained skills in grilling, frying, broiling, sauteing, recipe conversion, salad preparation and the production of the five basic sauces. Students will be able to operate the food service equipment used in commercial kitchens. 3 hrs./wk.

HMGT 126
FOOD MANAGEMENT (4CR)

Prerequisite: HMGT 123, HMGT 230, HMGT 277 and admission to the Hospitality Management program

This course emphasizes menu planning and meal service for all phases of food service and various occasions, buffet service, and French, Russian and American service. Students will take part in the operation of the campus restaurant and will be involved in sales promotion, purchasing and costing. 6 hrs./wk.

HMGT 128
SUPERVISORY MANAGEMENT (3CR)

Basic supervisory management skills, management styles, motivation with emphasis on human relations, delegation training, evaluation and communication are among the topics covered. 3 hrs./wk.

HMGT 130
HOSPITALITY LAW (1CR)

This course offers an overview of product and dram shop liability, as well as the various areas of federal and state legislation that regulate the hospitality industry. Emphasis will be on familiarizing the hospitality manager with ways to avoid costly and time-consuming lawsuits. A manager's or owner's legal rights and responsibilities will also be discussed. 1 hr./wk.

HMGT 219
HOTEL-MOTEL OPERATIONS (3CR)

The management of public lodging establishments will be the focus of this course. Topics include front office procedures, rental of rooms, reception of guests, handling reservations, guest requests and complaints, convention and meeting procedures, guest records, mail and other routine procedures. 3 hrs./wk.

HMGT 221
DESIGN TECHNIQUES (3CR)

Prerequisites: HMGT 123 and HMGT 271

Food service design – including the menu, the location and the type of clientele expected – will be studied in detail. Topics include layout, design and equipment specifications. 3 hrs./wk.

HMGT 223
FUNDAMENTALS OF BAKING (3CR)

Topics include ingredients, measurements, mixing, proofing, baking and final presentation. Students also will study various types of baking equipment. Class includes lecture and participation. 3 hrs./wk.

HMGT 226
**FOOD SPECIALTIES –
GARDE-MANGER (3CR)**

Prerequisite: HMGT 123

Upon successful completion of the course, students will be able to prepare force meats such as pates, terrines, galantines, ballotines, pate en croute, hors d'oeuvres and canapes. In addition, they will have attained the skills necessary to produce vegetable carvings, ice carvings, platter layout and design as well as cold sauce production such as aspics and chaud-froid sauces. 3 hrs./wk.

HMGT 228
**ADVANCED
HOSPITALITY MANAGEMENT (3CR)**

Prerequisites: HMGT 121, HMGT 123, HMGT 128, HMGT 273

Students will have the opportunity to apply their skills in menu planning, food service, supervision, design and beverage control. This class focuses on managerial responsibility. 3 hrs./wk.

HMGT 230
INTERMEDIATE FOOD PREPARATION (3CR)

Prerequisite: HMGT 123

This course is designed to help the student's transition from basic to intermediate food skills. Students will study secondary sauces as well as the entire range of American regional cuisine. The course consists of lecture, demonstration and participation in food preparation. 3 hrs./wk.

HMGT 231
ADVANCED FOOD PREPARATION (4CR)

Prerequisites: HMGT 230

In this course, students with intermediate food skills can concentrate on the advanced skills necessary for preparing international cuisine. 4 hrs./wk.

HMGT 240
ADVANCED BAKING (4CR)

Prerequisites: HMGT 123 and HMGT 223

An opportunity for acquiring a working knowledge of the preparation of specialty bakery products, this course will focus on lecture demonstrations and student participation in advanced baking procedures. Student lab projects will cover specialty yeast and rich dough products, baked and chilled desserts, sugar cooking and display pieces. 4 hrs. lecture, lab/wk.

HMGT 244**SCHOOL FOOD
SERVICE DEVELOPMENT (1CR)**

In a hands-on practical approach to cafeteria operations, the class will cover productivity and planning, purchasing, preparation and service. 1 hr./wk.

HMGT 271 (3CR)**SEMINAR IN
HOSPITALITY MANAGEMENT: PURCHASING**

Prerequisite: Admission to the Hospitality Management program

Students will study purchasing techniques and specification writing for items used in the industry. This training takes place in a supervised work situation in an approved area of hospitality industry. 2 hrs. class, 15 hrs. minimum of on-the-job training/wk.

By arrangement.

HMGT 273 (3CR)**SEMINAR IN
HOSPITALITY MANAGEMENT: ACCOUNTING**

Prerequisite: Admission to the Hospitality Management program and MATH 120

This training takes place in a supervised work situation in an approved area of the hospitality industry. Students will prepare operation statements for food service operators, inventories and control systems. Areas of concentration will be food cost controls, labor cost controls and profit production. 3 hrs./wk.

HMGT 275**SEMINAR IN HOSPITALITY
MANAGEMENT INTERNSHIP (3CR)**

Prerequisite: Admission to the Hospitality Management program

This class consists of supervised work experience in an approved area of the hospitality field. By arrangement. Summer.

HMGT 277 (3CR)**SEMINAR IN MENU
PLANNING AND SALES PROMOTION**

Prerequisite: HMGT 123

This course covers menu planning for every type of service and facility. Topics include menu layout, selection and development, price structures and the theory of menu design. 2 hrs. class, a minimum of 15 hrs. on-the-job training by arrangement/wk.

HMGT 279**BEVERAGE CONTROL (3CR)**

In this course on beverage control in all types of operations, topics include the history of wines, their use and storage procedures. Students will take part in an in-depth study of spirits, internal control systems and local and state alcoholic beverage control laws. 3 hrs./wk.

HMGT 281**CULINARY ARTS PRACTICUM I (2CR)**

Prerequisite: Acceptance into the American Culinary Federation Chef Apprenticeship Training Program.

A qualified chef will supervise this on-the-job apprentice training. Students will study and apply food preparation and presentation techniques, gaining experience in all phases of food service operation.

HMGT 282**CULINARY ARTS PRACTICUM II (2CR)**

Prerequisite: HMGT 281

This is a continuation of Culinary Arts Practicum I.

HMGT 285**CULINARY ARTS PRACTICUM III (2CR)**

Prerequisite: HMGT 282

This is a continuation of Culinary Arts Practicum II.

HMGT 286**CULINARY ARTS PRACTICUM IV (2CR)**

Prerequisite: HMGT 285

This is a continuation of Culinary Arts Practicum III.

HMGT 287**CULINARY ARTS PRACTICUM V (2CR)**

Prerequisite: HMGT 286

This is a continuation of Culinary Arts Practicum IV.

HMGT 288**CULINARY ARTS PRACTICUM VI (2CR)**

Prerequisite: HMGT 287

This is a continuation of Culinary Arts Practicum V.

HUMANITIES**HUM 122****INTRODUCTION TO THE HUMANITIES (3CR)**

This interdisciplinary study begins with a look at artistic and technical elements of several art forms including painting, music and drama. The major themes expressed in these art forms also are examined. 3 hrs./wk.

HUM 133
COMPARATIVE CULTURES (3CR)

This course traces the development of the humanities in classical Greece, Medieval Europe, and a selected Asian culture. 3 hrs./wk.

HUM 144
INTRODUCTION TO ART HISTORY (3CR)

This historical study of art traces its development from prehistoric times to the 18th century. 3 hrs./wk.

HUM 147
MODERN ART HISTORY (3CR)

In this advanced art history course, students will study 18th, 19th and 20th century American and European art. 3 hrs./wk.

HUM 155
CLASSICAL MYTHOLOGY (3CR)

A systematic examination of the origins and cycles of myths and their survival and metamorphosis in Roman, medieval, Renaissance, baroque, and modern cultures. Sources studied include both literature and the visual arts. 3 hrs./wk.

HUM 164
CIVILISATION (3CR)

This course, based upon the Time-Life television series of the same name and narrated by the art historian, Kenneth Clark, covers the major ideas and events which have shaped Western Civilization from the period of the Fall of the Roman Empire to the twentieth century. By arrangement.

HUM 297
CLASSICAL GREECE (3CR)

Study of classical Greek culture and its beginnings in the Minoan and Mycenaean period. Fifteen hours of classroom study will explore the architectural and artistic treasures of ancient Greece. Students will visit important archaeological sites and museums in Greece. 1 hr. lecture/wk. and 15 travel days.

**INFORMATION/
WORD PROCESSING**

IWP 121
WORD PROCESSING APPLICATIONS I (3CR)

Prerequisite: SEC 122

This is an introduction to the basic function of shared logic word processing and stand-alone equipment utilizing WANG word processing software. Students will be required to schedule lab time each week. 3 hrs. lecture, 2 hrs. lab/wk.

IWP 131
OFFICE AUTOMATION CONCEPTS (3CR)

This is an introduction to the terminology and procedures common to word processing systems in an organization. The operations, applications and administration of word processing will be discussed. 3 hrs. lecture/wk.

IWP 132
WORD PROCESSING APPLICATIONS II (3CR)

Prerequisite: IWP 121

This course is designed to enhance students' ability to perform basic functions (keyboarding, editing, storage and retrieving) and to introduce them to advanced functions on shared logic and stand-alone word processing equipment utilizing WANG word processing software. 3 hrs. lecture/wk and a lab.

IWP 241
**WORD PROCESSING
DIRECTED EXPERIENCE I (1CR)**

Prerequisite: IWP 121

This course is designed to give students the opportunity to apply the skills they have acquired in word processing specialty courses. Students will work in approved training situations under instructional supervision. Class meets by arrangement.

IWP 250
**WORD PROCESSING
DIRECTED EXPERIENCE II (1CR)**

Prerequisite: IWP 241

Designed to give students the opportunity to apply the skills they have acquired in word processing specialty courses. Students will work in approved training situations under instructional supervision. Class meets by arrangement.

INTERDISCIPLINARY STUDY

IDSP 175
**GLOBAL RESOURCES FROM GEOLOGIC
AND ECONOMIC VIEWPOINTS (3CR)**

This interdisciplinary course examines the interdependence of geology and economics in the development, production and use of the world's geologic resources. Land, water, mineral and energy resources form a structure which students can use to gain a perspective on the interrelationships between resources and economics to synthesize their knowledge into intelligent and logical conclusions about past, present and future resource problems. 3 hrs./wk.

INTERIOR MERCHANDISING

ITMD 121 INTERIOR DESIGN I (3CR)

This basic course in interior design emphasizes the elements and principles of design, color and color theory, the basics of space planning and the practical application of materials in today's home. 3 hrs./wk.

ITMD 122 INTERIOR DESIGN II (3CR)

Prerequisite: ITMD 121

Students with basic interior design skills have the opportunity to increase and apply their knowledge in this class. 3 hrs./wk.

ITMD 132 INTERIOR PRODUCTS (3CR)

This is an in-depth study of the materials used in interiors. Topics covered include floors, wall and window coverings, and furniture. Students also become familiar with new trends and ideas in housing through field trips and observations. 3 hrs./wk. Spring.

ITMD 133 FURNITURE AND ORNAMENTATION / ANTIQUITY TO RENAISSANCE (3CR)

The history of interior design and furniture design from antiquity through the Middle Ages into the Renaissance period will be studied. Emphasis on furniture design and ornamentation while considering other interior elements and influencing factors related to specific art periods. 1 hr./wk. Fall.

ITMD 140 DRAPERIES, TREATMENTS AND CONSTRUCTION (1CR)

Prerequisite: ITMD 121

This course offers a concentrated study of window treatments and drapery construction. Textiles, selection techniques and practical applications will be emphasized. 1 hr. lecture/wk.

ITMD 145 UPHOLSTERY CONSTRUCTION (1CR)

Prerequisite: ITMD 121

This course offers a concentrated study of upholstery. Textiles, frame construction and selection techniques, and practical applications will also be examined, both in the classroom and in an upholstery workroom. 1 hr. lecture/wk.

ITMD 148 FURNITURE AND ORNAMENTATION / ORIENTAL (3CR)

This course is a study of furnishings of the Near and Far East from antiquity to modern times. Students can develop an awareness of oriental furniture, ornamentation and design of specific periods of art. 3 hrs. lecture/wk.

ITMD 223 CONTRACT DESIGN (3CR)

Prerequisite: ITMD 122

This course is a study of interior merchandising concentrating on the solutions of problems encountered in contract design. Students will be assigned five problems each semester. 1 hr. lecture/wk., 3 hrs. lab/wk. Fall.

ITMD 224 BARRIER-FREE DESIGN (3CR)

Prerequisite: ITMD 122

This course is an advanced study of interior design for physically disabled people in home and community environments. 1 hr. lecture/wk., 3 hrs. lab/wk. Spring.

ITMD 231 FURNITURE AND ORNAMENTATION / RENAISSANCE TO 20TH CENTURY (3CR)

This course is a continuation of the history of interior design and furniture design beginning with Baroque Italy and continuing through modern America. The emphasis is on furniture design and ornamentation and the factors influencing specific periods of art. 3 hrs./wk. Spring.

ITMD 234 KITCHEN PLANNING AND DESIGN (1CR)

Prerequisite: DRAF 261 and ITMD 121

Upon successful completion of this course, the student should be able to measure existing kitchens for remodeling, design functional and aesthetic kitchens, use architectural symbols and kitchen design language appropriately, and design and draft kitchens for new homes. 1 hr./wk.

ITMD 273 (2CR) INTERIOR MERCHANDISING SEMINAR: PRACTICES AND PROCEDURES

Prerequisite: ITMD 121

Students will study interior product business formations, contracts, papers and procedures necessary for effective business management. The class also includes a discussion of job opportunities and business ethics. 2 hrs. class. Fall.

ITMD 275 (2CR)**INTERIOR MERCHANDISING SEMINAR:
BUDGET AND ESTIMATING**

Prerequisite: ITMD 121

The focus of this course will be on residential and commercial jobs requiring specification writing and cost control, with emphasis on accurately measuring materials and figuring actual costs. 2 hrs. class. Spring.

ITMD 282**INTERIOR
MERCHANDISING PRACTICUM I (1CR)**

Prerequisite: ITMD 121

This course is designed to give students the opportunity to apply the skills acquired in interior merchandising specialty courses. Students will work in approved training situations under instructional supervision. Class meets by arrangement. A minimum of 15 hrs. on-the-job training/wk.

ITMD 284**INTERIOR
MERCHANDISING PRACTICUM II (1CR)**

Prerequisite: ITMD 121

This course is designed to give students the opportunity to apply the skills acquired in interior merchandising specialty courses. Students will work in approved training situations under instructional supervision. Class meets by arrangement. A minimum of 15 hrs. on-the-job training/wk.

ITMD 295**FIELD STUDY:
MARKETING AND MANAGEMENT (3CR)**

Prerequisite: ITMD 121 and approval of program coordinator

With an emphasis on various methods of wholesale and retail marketing to the wholesale buyer in both the Kansas City area and in a major market area, this travel-for-credit course will explain manufacturing processes in upholstery and casegoods. The students will compare, contrast and evaluate these presentation methods and manufacturing techniques during visits to manufacturing plants, a market showroom and a merchandise mart in a major market city. Summer.

INTERPRETER TRAINING**INTR 110****CONVERSATIONAL SIGNED ENGLISH I (2CR)**

An introduction to signed English, this class will help students develop basic conversational skills. 4 hrs. lab/wk.

INTR 111**CONVERSATIONAL SIGNED ENGLISH II (2CR)**

Prerequisite: INTR 110

This course offers a continued development of signed English skills, leading to the development of conversational skills. 4 hrs. lab/wk.

INTR 115**CONVERSATIONAL ASL I (2CR)**

This is an introduction to American Sign Language, leading to the development of basic conversational skills. 4 hrs. lab/wk.

INTR 116**CONVERSATIONAL ASL II (2CR)**

Prerequisite: INTR 115

This is an introduction to American Sign Language, leading to the development of intermediate conversational skills. 4 hrs. lab/wk.

INTR 125**AMERICAN SIGN LANGUAGE I (ASL) (5CR)**

This class will focus on the development of beginning communication skills. Comprehension skills and linguistic features of the language taught in context will be emphasized. 1 hr. lecture, 9 hrs. lab/wk.

INTR 130**ORIENTATION TO INTERPRETING (3CR)**

In this overview of interpreting as an occupation, topics include interpersonal skills, professional ethics, parameters of responsibilities of the interpreter, community resources and legal ramifications. 3 hrs./wk.

INTR 132**AMERICAN SIGN LANGUAGE II (ASL) (5CR)**

Prerequisite: INTR 125

Students will work on developing intermediate communication skills, concentrating on comprehension and production skills. Linguistic and cultural features will be presented in the context of language learning experiences. 1 hr. lecture, 9 hrs. lab/wk.

INTR 135**THEORY OF
AMERICAN SIGN LANGUAGE (3CR)**

Prerequisite: INTR 125

Students will examine the structural and grammatical principles of ASL in this introduction to linguistic problems of equivalency in English and ASL. 3 hrs./wk.

INTR 140
AMERICAN SIGN LANGUAGE III (5CR)

Prerequisite: INTR 132

Students will continue to develop ASL skills in this class. Emphasis will be on comprehension and production skills. Linguistic and cultural features will be presented in the context of language learning experiences. 1 hr. lecture, 9 hrs. lab/wk.

INTR 142
FINGERSPELLING I (3CR)

Students will work on developing beginning expressive and receptive fingerspelling skills based on word and phrase recognition principles. 2 hrs. lecture, 3 hrs. lab/wk.

INTR 145
DEAF CULTURE (3CR)

Corequisite: INTR 125

Students will compare middle-class American values, beliefs and institutions with those of the deaf community in the United States. 3 hrs./wk.

INTR 181
INTERPRETING PRACTICUM I (1CR)

Prerequisite: INTR 130

Students will observe skilled interpreters in various interpreting situations in a variety of settings during the semester. 2 hrs. lab, field work/wk.

INTR 225
PHYSICAL AND PSYCHOLOGICAL ASPECTS OF INTERPRETING (2CR)

Prerequisite: INTR 181

Corequisite: INTR 250

Discussion will focus on the physical and mental stress interpreting can bring about and on therapeutic exercises for preventing negative physical effects. 2 hrs./wk.

INTR 230
AMERICAN SIGN LANGUAGE IV (4CR)

Prerequisite: INTR 140

Students will continue to develop ASL skills at an advanced level. Emphasis will be on comprehension and production skills. Additional linguistic and cultural features will be presented in the context of language learning experiences. 1 hr. lecture, 7 hrs. lab/wk.

INTR 242
FINGERSPELLING II (2CR)

Prerequisite: INTR 142

This course focuses on continued development of expressive and receptive fingerspelling skills based on

word and phrase recognition and expression. 1 hr. lecture, 2 hrs. lab/wk.

INTR 246
ENGLISH EQUIVALENTS FOR ASL (3CR)

Prerequisite: INTR 140 or permission of division director and proficiency in ASL.

Students will study the many English equivalents for ASL discourse, enhancing the written English skills of deaf students and interpreting skills of hearing students. 3 hrs./wk.

INTR 250
INTERPRETING I (6CR)

Prerequisite: INTR 130

Corequisite: INTR 140

In this introduction to interpreting principles, emphasis is on English-to-ASL and ASL-to-English skills. Students will participate in sequential drills and apply these skills in class. 2 hrs. lecture, 8 hrs. lab/wk.

INTR 255
INTERPRETING II (6CR)

Prerequisite: INTR 250

This is an advanced course concentrating on continued English-to-ASL, ASL-to-English and transliteration skills development. Students will have the opportunity to use these skills as they role-play employment situations. 2 hrs. lecture, 8 hrs. lab/wk.

INTR 261
SPECIAL TOPICS (3CR)

Prerequisite: Depends on topics

Current trends and topics in interpreting is the focus of this course. Topics may include medical/mental health interpreting, deaf-blind interpreting, oral interpreting, educational interpreting and trends in the field. These topics will be offered on an "as needed" basis and the course may be repeated for up to eight credits. Lecture-lab hours vary from 1-4 hours depending on topic and number of lecture-lab hours needed.

INTR 281
INTERPRETING PRACTICUM II (3CR)

Prerequisite: INTR 181

Corequisite: INTR 255

Students will observe and interpret at assigned places as well as discuss current literature in the field. The field work totals 96 hours a semester. 6 hrs. lab, field work/wk.

JOURNALISM AND MEDIA COMMUNICATIONS

JOUR 120 MASS MEDIA AND SOCIETY (3CR)

This course examines the forms of mass media students are exposed to daily, including newspapers, magazines, radio, television, films, cable and new video technologies. The purpose of this course is to enable students to understand these various media, to become better critics of media messages, and to understand the influence that the media has on their lives, decisions, goals and beliefs. 3 hrs./wk.

JOUR 122 INTRODUCTION TO NEWSWRITING (3CR)

Prerequisite: Basic typing skills or concurrent enrollment in SEC 110.

This course is structured for students interested in writing news and gathering information, and especially for students desiring to develop the basics of journalistic style writing. Basic newswriting and news style principles will be emphasized, with a focus on interviewing techniques. Practical application will be gained through writing for the campus newspaper. 3 hrs./wk.

JOUR 125 FUNDAMENTALS OF ADVERTISING (3CR)

This course is designed to introduce students to the basics of advertising principles by familiarizing them with the forms of advertising and the types of media available. The functions and roles that both print and broadcast advertising play in business and for consumers are included. 3 hrs./wk.

JOUR 127 INTRODUCTION TO BROADCASTING (3CR)

This course serves as a general introduction to radio and television broadcasting, and includes a study of the industry's development, program formats, personnel, equipment function, FCC codes and regulations and cable. Class time will also include discussion of current trends and issues in broadcasting, with the objective of developing a critical understanding of this medium. 3 hrs./wk.

JOUR 130 PRINCIPLES OF PUBLIC RELATIONS (3CR)

This course offers an overview, presenting the function, purpose, procedures and practices of public relations — its roots in history, its role in society, business, government, and its potential as a career field. Primary emphasis is on theory, practice and criticism, supplemented with written and verbal exercises in applica-

tion of public relations techniques. Discussion will center on the tools and media used in communicating with the public. 3 hrs. lecture/wk.

JOUR 202 BROADCAST PERFORMANCE (3CR)

Prerequisite: JOUR 127

Interviewing, commercial announcing, and radio and television news are some of the topics that will be covered in this course. Students will have the opportunity to learn how to improve their speaking voices and their body language as they are taught the techniques necessary for communicating messages through basic announcing performances in the college's television studio. 3 hr./wk.

JOUR 222 NEWS REPORTING (3CR)

Prerequisite: JOUR 122

This is an advanced news gathering and reporting course designed to sharpen writing skills. Practice in writing in-depth news features, editorials, profiles and advance and follow-up stories will be included with an emphasis on editing and newspaper layout. Students will gain experience writing for the campus newspaper. 3 hrs./wk. Spring.

JOUR 225 ADVERTISING COPYWRITING (3CR)

Prerequisite: JOUR 125 or equivalent

This course is for students who want to learn to develop copy for products, services and ideas. It will emphasize how to determine advertising appeals, copy structure, copy style and develop advertising campaigns. The importance of coordinating marketing goals, advertising goals and campaign strategy will also be stressed. 3 hrs./wk.

JOUR 271 JOURNALISM FIELD STUDY (3CR)

Prerequisite: Approval of division director

Field study permits a student to gain work experience at an approved training center under staff supervision. Emphasis is placed on the application of writing techniques needed to produce print news, broadcast news, and/or advertising or public relation's promotional copy or production. On-the-job training involves a minimum of 12 hours per week by arrangement.

MANUFACTURING TECHNOLOGY

MFTG 110 INTERPRETING ELECTRICAL DRAWINGS (2CR)

This course covers methods of visualizing and interpreting views and dimensions of basic engineering drawings; interpretation of electrical symbols, types of circuits, and motor control diagrams.

MFTG 112 HYDRAULICS I (2CR)

Prerequisite: MATH 111

This self-paced course has been designed to teach students a basic understanding of hydraulic components, circuits, symbols, systems, maintenance and troubleshooting. Laboratory exercises will provide students with hands-on experience of hydraulics. 3 hrs. lecture, lab/wk.

MFTG 114 PNEUMATICS I (2CR)

Prerequisite: MATH 111

This self-paced course has been designed to teach students a basic understanding of pneumatic components, circuits, symbols and troubleshooting. Topics will include the mechanics of air flow and the treatment of compressed air. Laboratory exercises will provide students with hands-on experience of pneumatics. 3 hrs. lecture, lab/wk.

MFTG 116 INDUSTRIAL ELECTRONICS I – DC (2CR)

Prerequisite: MATH 111

Direct current and voltage will be described including the structure of matter, conductivity, charges and charged bodies. A description of resistors, resistor color code, circuit symbols and an introduction to schematics will also be included. This self-paced course will also introduce students to the volt-ohm-meter and will include discussion of series, parallel and series-parallel laws. Laboratory exercises and computer assisted instruction will aid the teaching process. 3 hrs. lecture, lab/wk.

MFTG 118 INDUSTRIAL ELECTRONICS II – AC (2CR)

Prerequisite: MATH 111

This self-paced course will introduce students to sine waves, covering capacitors and inductors, capacitive and reactive inductance, transformer descriptions, various AC circuits and calculations associated with

these circuits. Topics will also include RC, RL and RCL circuit configurations and calculations; troubleshooting of these various circuits; and resonance and resonant circuits. 3 hrs. lecture, lab/wk.

MFTG 120 INDUSTRIAL ELECTRONICS III – CIRCUITS (2CR)

Prerequisite: MATH 111

Students will have the opportunity to learn the names and functions of basic electronic components and use basic testing equipment to measure the performance of these components. The names and functions of common electronic circuits and their practical application will be studied. 3.5 hrs. alternative delivery/wk.

MFTG 121 MANUFACTURING PROCESSES AND TESTING (3CR)

This is an overview of manufacturing materials, processes and testing procedures used in industry. Students will examine the capabilities of press shop, machine tool, general fabrication, welding processes, robotics, cut-off equipment and other manufacturing processes and equipment. Destructive and non-destructive testing methods will be demonstrated. 3 hrs. lecture-demonstration/wk.

MFTG 122 ROBOTICS (2CR)

The basic concepts of operating and maintaining industrial robots will be covered. Class lectures will cover such topics as classification of robots, servocontrol, off-line programming and factors of alienation. Comparisons of servo vs. non-servo, electric vs. hydraulic vs. pneumatic, and various kinds of robots will be made. 1 hr. lecture, 2 hrs. self-paced instruction per week.

MFTG 123 CURRENT NUMERICAL CONTROL CONCEPTS (2CR)

This course offers an introduction to techniques in manufacturing technology used with numerically controlled machine tools. Advantages and disadvantages of numerical control (NC), computer NC, and direct NC techniques will be emphasized. Such terms as CAD (Computer Aided Design), CAM (Computer Aided Manufacturing), CIM (Computer Integrated Manufacturing) and FMS (Flexible Manufacturing Systems) will be brought into perspective as related to NC. 2 hrs. lecture/wk.

MFTG 124
ROBOTIC APPLICATIONS (2CR)

Corequisite: MFTG 122 or division director approval

Students will learn how to program an industrial robot. Hands-on programming in the lab will include welding, material handling and interfacing the robot with other equipment. 1 hr. lecture, 2 hrs. lab/wk.

MFTG 125
CNC CONTROL
CONCEPTS AND PROGRAMMING (3CR)

This course is an integrated laboratory to provide instruction on the operation and programming of various numerical control equipment. Students will be required to program and operate numerical control manufacturing equipment as well as develop, write and produce programs on a desk-top programmer. Project work will include part programs and exercise programs. Lectures will cover the same material as MFTG 123.

2 hrs. lecture, 2 hrs. lab/wk.

MFTG 126
MACHINE TOOL PROCESSES I (3CR)

The principles and practices of machining and the set-up and operation of machines will be explained. In the lab, students will use lathes, mills, drills, cut off and other types of equipment. 1 hr. lecture, 6 hrs. lab/wk.

MFTG 128
MACHINE TOOL PROCESSES II (3CR)

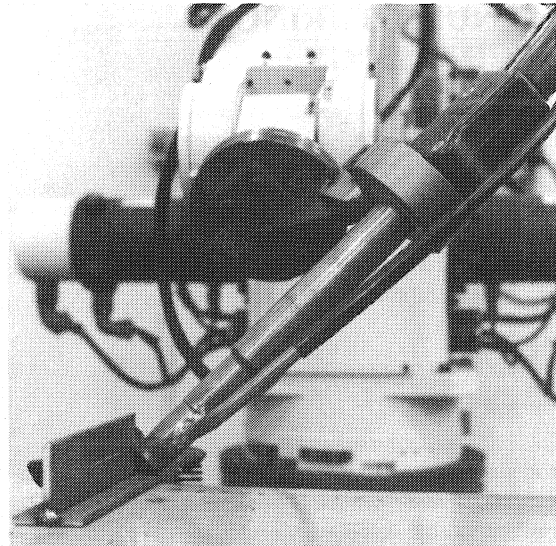
Prerequisite: MFTG 126 or division director approval

The set-up and operation of conventional machine tools and Computer Numerical Controlled machine tools will be discussed in this class. Students will study and use lathes, mills, drills, CNC trainers and a CNC mill. The CNC unit will cover conversational programming and "G" code or word address programming.

1 hr. lecture, 6 hrs. lab/wk.

MFTG 130
MECHANISMS (2CR)

Upon successful completion of this course, the student should be able to describe the characteristics and functions of basic mechanisms. The student should also be able to understand and identify gears, belt drive systems and the parts of various types of chain mechanisms. The types and functions of various bearings, the handling and reading of the vernier caliper and the micrometer, as well as the proper procedures for maintenance and installation of basic troubleshooting will also be covered. This course will be offered using an integration of lecture and laboratory in an alternative delivery format.



MFTG 132
METALLURGY (1CR)

This basic metallurgy course deals with iron and steel, properties of metals, types of classifications, heat treatment procedures and common processes of steel.

1 hr. lecture/wk.

MFTG 133
PROGRAMMABLE CONTROLLERS (2CR)

In this introduction to some of the applications and advantages of automatic control, students will have the opportunity to become familiar with the features, definitions and major components of a programmable controller. The basic structure of control system documentation, symbols of common control devices, ladder logic diagrams, basic programmable controller troubleshooting and monitoring methods will also be covered. 4 hrs. lecture, lab/wk.

MFTG 138
INTRODUCTION TO PHYSICAL
METALLURGY (3CR)

This course will cover general analytical methods used to evaluate the physical properties of materials such as tensile tests, impact tests, fatigue tests, hardness tests, fractography and photomicroscopy. The primary emphasis will be ferrous alloys including irons and carbon steels, with a brief survey of non-ferrous alloys. The iron-carbon phase diagram will be discussed as well as heat treatment for steels and surface treatments for steels. Other topics include non-destructive testing, powder metallurgy, foundry metallurgy, welding metallurgy, and machining of materials. 2 hrs. lecture, 1 hr. lab/wk.

MFTG 140
TRANSFORMATION OF AMERICAN
INDUSTRY – STATISTICAL
PROCESS CONTROL (3CR)

Prerequisite: Experience in a manufacturing environment and basic math skills.

This course offers a study of Basic Statistical Process Control (SPC). Topics covered include productivity, the trade deficit, and the quality of manufacturing processes. 2 hrs. lecture, 2 hrs. lab/wk.

MFTG 143
PRINCIPLES OF STATISTICAL
PROCESS CONTROL (1CR)

Students will work with several types of SPC charts, including attributes and variables charts; they will construct cause/effect diagrams; they will describe improvement strategies. Topics will include a brief history of the manufacturing process, an overview of the need for new manufacturing methods, and a description of various techniques available for statistically monitoring any process. 1 hr./wk.

MFTG 160
GENERAL PLASTICS (3CR)

This basic course covers thermoplastic and thermoset processing techniques and addresses their use in the plastics industry. Students will also be introduced to plastics terminology. 3 hr./wk.

MFTG 163
THERMOPLASTIC PROCESSING (3CR)

Prerequisite: MFTG 160

Thermoplastic processes include: injection molding, extrusion, thermoforming, blow molding and rotational molding, blown film, fastening techniques, and miscellaneous processes. Each will be studied in depth for an understanding of its significance and its place in the total thermoplastic processing picture. 3 hrs./wk.

MFTG 166
THERMOPLASTIC RESINS (3CR)

Prerequisite: MFTG 160

Topics covered will include: structure property relationship, rheology and compounding. The various families of resins will be studied in terms of their unique characteristics as well as their similarities to other plastic materials. 3 hrs./wk.

MFTG 168
THERMOSET PROCESSING (3CR)

Prerequisite: MFTG 160

Thermoset processes include: compression, transfer, and injection molding, RIC, RIM, casting and laminating. Each will be studied in detail. 3 hrs./wk.

MFTG 169
THERMOSET RESINS (3CR)

Prerequisite: MFTG 160

Topics covered will include: structure property relationships, rheology and compounding. The various thermoset families will be studied in terms of their unique characteristics as well as their similarities to other plastic materials and their processing. 3 hrs./wk.

MFTG 211
INDUSTRIAL ELECTRONICS IV –
TROUBLESHOOTING I (2CR)

Prerequisite: MFTG 120 or division director approval

This course expands on troubleshooting electronic systems. The student will troubleshoot power supplies, linear circuits, microprocessors and peripherals. Overall troubleshooting approaches, as well as specific troubleshooting equipment, also will be covered and their appropriate use explained. 3.5 hrs. alternative delivery/wk.

MFTG 212
INDUSTRIAL ELECTRONICS V –
TROUBLESHOOTING II (2CR)

Prerequisite: MFTG 120 or division director approval

This course focuses on troubleshooting circuits to determine whether or not they are functioning properly. The student will use systems diagnosis to localize to a unit, isolate trouble to a circuit and locate the defective component. Soldering and desoldering techniques are covered, which are necessary to remove and replace defective equipment. 3.5 hrs. alternative delivery/wk.

MFTG 271
MANUFACTURING
COOPERATIVE EDUCATION I (3CR)

Prerequisite: Division director approval

This course provides advanced students with on-the-job training under the supervision of professionals in the industry. The work will be developed cooperatively among area employers, college staff and each student to provide a variety of job experiences directly related to the student's career goals. 1 hr. lecture, 12 hrs. min./wk.

MFTG 272
MANUFACTURING
COOPERATIVE EDUCATION II (3CR)

Prerequisite: MFTG 271 and division director approval

This course provides advanced students with supervised on-the-job learning. Course must not duplicate course work offered at JCCC. Job experience will be provided that will require competencies not previously required in JCCC curriculum. 1 hr. lecture, 12 hrs. min./wk.

MARKETING MANAGEMENT

MKT 121
RETAILING (3CR)

The organization and operation of a retail store, including location, layout, retail buying, human relations, employee supervision, pricing and merchandising, will be covered. 3 hrs./wk.

MKT 122
RETAIL ADVERTISING AND DISPLAY (3CR)

In this class on advertising and display techniques, emphasis will be on media selection and use, copywriting, ad layout and illustration, showcard writing, display techniques, sales promotion, budgeting and scheduling. 3 hrs./wk.

MKT 133
SALESMANSHIP (3CR)

Students will prepare presentations in specialty, wholesale and industrial areas of selling. Class includes projects, case problems and speakers. 3 hrs./wk.

MKT 134
CREATIVE RETAIL SELLING (3CR)

Students will analyze the techniques of the sale in this class. Case problems will highlight such areas as sales demonstrations and presentations, handling objections and customer complaints, suggestive selling and closing the sale. 3 hrs./wk.

MKT 221
SALES MANAGEMENT (3CR)

Prerequisite: MKT 134 or MKT 133

Managing the sales force is the topic of this class. Topics include recruitment and selection of salespeople, training, compensation and motivation. Sales forecasting, sales planning and ethics in different fields will be reviewed. 3 hrs./wk.

MKT 271
MARKETING AND MANAGEMENT SEMINAR:
ORGANIZATION AND OPERATION (3CR)

Prerequisite: Admission to the Marketing and Management Program.

Students will work under supervision in an approved business where they will complete a series of training reports based on employers' operation policies and internal organization and structure. 2 hrs. class, a minimum of 15 hrs. on-the-job training by arrangement/wk.

MKT 272
MARKETING AND MANAGEMENT SEMINAR:
MANAGEMENT DECISION MAKING (3CR)

Prerequisite: Admission to the Marketing and Management Program.

Students will work under supervision in an approved business concentrating on making managerial decisions regarding human relations and merchandising problems. They also will take part in sales and training meetings in marketing and management. 2 hrs. class, a minimum of 15 hrs. on-the-job training by arrangement/wk. Fall.

MKT 273
MARKETING AND MANAGEMENT SEMINAR:
MARKETING RESEARCH (3CR)

Prerequisite: Admission to the Marketing and Management Program.

Students will work under supervision in an approved business where they will conduct market research. Students will concentrate on identifying and determining the needs of individuals and organizations. 2 hrs. class, a minimum of 15 hrs. on-the-job training by arrangement/wk. Spring.

MKT 274
MARKETING AND MANAGEMENT
SEMINAR: MANAGEMENT (3CR)

Prerequisite: Admission to the Marketing and Management Program

Students will work under supervision in an approved business. 2 hrs. class, a minimum of 15 hrs. on-the-job training by arrangement/wk.

MATHEMATICS

DEVELOPMENTAL COURSES

MATH 111 and MATH 115 are designed to help students to develop basic math skills and use concepts relative to fundamental algebraic operations, fractions and graphs. Successful use of these skills will enable students to enroll in college-level math courses. These courses do not fulfill degree requirements.

MATH 111 FUNDAMENTALS OF MATH (1-3CR)

Prerequisite: Appropriate score on math assessment test

A course in basic math skills and concepts for those who need to improve or review their math training. The course includes computation, numeration and mathematical applications of whole numbers, integers, fractions, decimals, percent, square roots, measurement, geometry and linear equations. Some sections require students to use computer-assisted instruction in math lab. 3 hrs. lecture/wk.

MATH 115 INTRODUCTION TO ALGEBRA (3CR)

Prerequisite: MATH 111 or appropriate score on math assessment test

The class will cover fundamental algebraic operations, fractions, first- and second-degree equations, graphs, exponents and radicals. Some sections are taught with self-paced, computer-assisted instruction using interactive video. 3 hrs. lecture/wk.

MATH 116 INTERMEDIATE ALGEBRA (3CR)

Prerequisite: MATH 115 or appropriate score on math assessment test

Polynomials, rational expressions, exponents and radicals, equations and inequalities, graphing, relations, functions and systems of equations will be covered. 3 hrs. lecture/wk.

MATH 120 BUSINESS MATH (3CR)

Prerequisite: MATH 111 or appropriate score on math assessment test

A course for the student who needs specific skills in math to address business problems and applications in payroll, financial analysis, interest and money management. 3 hrs. lecture/wk.

MATH 122 MATHEMATICS IN OUR CULTURE (3CR)

Prerequisite: MATH 111 or appropriate score on math assessment test

This is a course about the extent, power and history of many interesting areas of mathematics. Topics include mathematical reasoning and recreation, calculator activities, computer literacy, mathematics in art and music, probability, statistics and topology. 3 hrs. lecture/wk.

MATH 125 MATH FOR MODERN LIVING (3CR)

Prerequisite: MATH 111 or appropriate score on math assessment test

A video course consisting of 34 30-minute cable TV programs with accompanying workbook/study guide and arranged sessions with instructor. The course provides a practical and relevant variety of mathematical topics such as logic, sets, equation solving, measurement, number sequences, use of calculators, graphing, computers, probability and statistics. 3 hrs. lecture/wk.

MATH 133 TECHNICAL MATHEMATICS I (4CR)

Prerequisite: MATH 111 or appropriate score on assessment test

This course introduces the mathematical background necessary in technical work. It focuses on the basics of algebra, geometry and trigonometry and their applications. Topics include polynomials, scientific notation, proportions, variation, linear equations, graphing, systems of equations, right and oblique triangles, vectors, and complex numbers. 4 hrs. lecture/wk.

MATH 134 TECHNICAL MATHEMATICS II (5CR)

Prerequisite: MATH 133 or equivalent

This course emphasizes technical applications of algebra and trigonometry. Topics include factoring, algebraic fractions, quadratic equations, exponents, radicals, inequalities, logarithmic and exponential functions, trigonometric graphs and identities. 5 hrs. lecture/wk.

MATH 160 ALGEBRA (3CR)

Prerequisite: MATH 116 or appropriate score on math assessment test

This course covers exactly the same topics as MATH 171 College Algebra but has more class time. The topics covered include polynomials, rationals, logarithmic and exponential functions, theory of equations, systems of equations, determinants, sequences and series, and the binomial theorem. 5 hrs. lecture/wk.

MATH 171
COLLEGE ALGEBRA (3CR)

Prerequisite: MATH 116 or appropriate score on math assessment test

This is a study of polynomials, rationals, exponential and logarithmic functions, theory of equations, systems of equations, determinants, sequences and series and the binomial theorem. 3 hrs. lecture/wk.

MATH 172
TRIGONOMETRY (3CR)

Prerequisite: MATH 160 or 171 or appropriate score on math assessment test

This is a study of trigonometric functions, identities, graphs, equations, inverse trigonometric functions, polar coordinates, complex numbers and applications. 3 hrs. lecture/wk.

MATH 181
STATISTICS (3CR)

Prerequisite: MATH 171 or appropriate score on math assessment test

Students will review and apply such concepts as descriptive statistics, probability, sampling, distributions, estimation, hypothesis testing, regression and correlation. 3 hrs. lecture/wk.

MATH 190
GEOMETRY (2CR)

Prerequisite or corequisite: MATH 115 or appropriate score on math assessment test

This intuitive approach to geometry is for students who did not take geometry in high school. Topics include lines, polygons, area, volume, circles, similarity, congruence and coordinate geometry. 2 hrs. lecture/wk.

MATH 231
CALCULUS I (3CR)

Prerequisite: MATH 160 or MATH 171 or appropriate score on math assessment test

This is the first course in a two-semester series on calculus. It will cover differentiation of algebraic, exponential and logarithmic functions used in business, biology and the social sciences. 3 hrs. lecture/wk.

MATH 232
CALCULUS II (3CR)

Prerequisite: MATH 231 and MATH 172 or concurrent enrollment in MATH 172

This is the second course in a two-semester series on calculus. It will cover techniques of integration, differentiation and integration of trigonometric functions, differential equations and functions of several variables. This information can be applied to business, statistics, biology and the social sciences. 3 hrs. lecture/wk.

MATH 241
ANALYTIC GEOMETRY-CALCULUS I (5CR)

Prerequisite: MATH 172 or appropriate score on math assessment test

This is the first course in a three-semester sequence on analytic geometry and calculus. Students will study and apply elements of plane analytic geometry and the differentiation and integration of algebraic and transcendental functions. 5 hrs. lecture/wk.

MATH 242
ANALYTIC GEOMETRY-CALCULUS II (5CR)

Prerequisite: MATH 241 or appropriate score on math assessment test

This is the second in a three-semester sequence on analytic geometry and calculus. Emphasis is on differentiation and integration of transcendental functions, polar coordinates, conics and applications. 5 hrs. lecture/wk.

MATH 243
ANALYTIC GEOMETRY-CALCULUS III (5CR)

Prerequisite: MATH 242 or appropriate score on math assessment test

This is the third course in a three-semester sequence on analytic geometry and calculus. Topics include vector-valued functions, functions of several variables, multiple integration, vector analysis, differential equations and matrices and linear algebra. 5 hrs. lecture/wk.

MATH 244
DIFFERENTIAL EQUATIONS (3CR)

Prerequisite: MATH 243 or appropriate score on math assessment test

Differential Equations covers standard types of ordinary equations, second and higher order linear equations, solutions by series, the Laplace transform numerical solutions and applications. 3 hrs. lecture/wk. Spring.

MATH 281
HONORS PROJECT IN MATHEMATICS (2CR)

Prerequisite: Approval of division director

Students will work on special-interest projects approved and monitored by an instructor and tailored to the abilities and interests of the student. Projects may involve computer work. 2-4 hrs. lab/wk.

MEDICAL RECORD TECHNOLOGY

KMRT 151 MEDICAL TERMINOLOGY FOR MEDICAL RECORDS (3CR)

This course is a study of the professional language of medicine. Medical terms are analyzed by learning word roots and combining forms. Disease processes and diagnostic and operative procedures are studied as they apply to each system of the body. Selected medical specialties are also presented. 3 hrs./wk.

KMRT 160 INTRODUCTION TO THE MEDICAL RECORD PROFESSION (2CR)

Prerequisite: Admission to the Medical Record Technology Program

This course offers an orientation to the medical record profession and the supporting professional organization. The history and evolution of health care delivery, health care facilities and practitioners are examined. Supervisory functions of the medical record department are presented. 2 hrs. lecture/wk.

KMRT 161 HEALTH RECORD SYSTEMS, ANALYSIS AND CONTROL (3CR)

This course is an in-depth study of the content, storage, retrieval, control and retention of medical records with special emphasis on hospital records. Forms design and control, microfilming and computer applications for medical record departments are also included. 3 hrs. lecture/wk.

KMRT 162 HEALTH STATISTICS AND RESEARCH METHODS (2CR)

Prerequisite: KMRT 161 or approval of PVCC

This course is designed to instruct the student regarding vital and health statistics, their uses and values. Abstracting and analysis of data from medical records and collection from other sources is studied as well as the methods of presenting the data. 2 hrs. lecture/wk.

KMRT 163 CLASSIFICATION SYSTEMS, NOMENCLATURES, INDEXES, AND REGISTERS I (3CR)

Prerequisites: KMRT 151 and BIOL 144

This course is a study of nomenclatures and classification systems used for coding and indexing diagnoses and procedures with special emphasis on ICD-9-CM. 3 hrs. lecture/wk.

KMRT 164 QUALITY ASSURANCE (3CR)

Prerequisite: KMRT 169 or approval of program coordinator

Quality assurance requirements of regulatory agencies are emphasized as well as methodology in assessing quality of care. 3 hrs. lecture/wk.

KMRT 166 CLINICAL EDUCATION I (2CR)

Prerequisite: KMRT 161

This course offers a supervised learning experience in a medical record department under the direction of an RRA or ART. A one-hour seminar is included for the supervised discussion of clinical experiences. Didactic material is reinforced by the performance of basic medical record department functions. 8 hrs. clinic arranged.

KMRT 167 CLINICAL EDUCATION II (2CR)

Prerequisite: KMRT 166

This course offers a supervised learning experience in a medical record department under the direction of an RRA or ART. Students will gain experience in a variety of procedures including coding and abstracting health information, medical transcription and release of information. A one-hour seminar is included for the supervised discussion of clinical experiences. 8 hrs. clinic arranged.

KMRT 168 CLINICAL EDUCATION III (2CR)

Prerequisite: KMRT 167

This course provides supervised learning experiences in the medical record department of a specialized health care facility under the direction of an RRA or ART. A one-hour seminar is included for the supervised discussion of clinical experiences. 8 hrs. clinic arranged.

KMRT 169 LEGAL ASPECTS OF MEDICAL REPORTS (2CR)

Prerequisite: KMRT 161 or approval of the program coordinator

This course is a study of the principles of the legal system applied to the field of health care. Confidentiality of the medical record, informed consent, the medical record as a legal document, release of clinical information, response to subpoena and testimony are studied. 2 hrs. lecture/wk.

**KMRT 175
SPECIALIZED HEALTH
RECORD SYSTEMS (3CR)**

Prerequisite: KMRT 161 or approval of the program coordinator

This course offers an overview of specialized health care systems with an emphasis on record maintenance, requirements of accrediting and regulating agencies and specialized health information registers.
3 hrs. lecture/wk.

**KMRT 180
CLASSIFICATION SYSTEMS,
NOMENCLATURES, INDEXES,
REGISTERS II (3CR)**

Prerequisite: KMRT 163

This course is a continuation of Classification Systems I, with emphasis on coding systems for specialized health care facilities and the impact of DRGs on the coding function of medical record departments.
3 hrs. lecture/wk.

**KMRT 184
MEDICAL TRANSCRIPTION (3CR)**

Prerequisite: KMRT 151 and typing 40 WPM

In this course, students are given an introduction to the transcription of medical record reports using correct terminology, punctuation and format.
3 hrs. lab/wk.

METAL FABRICATION

**MFAB 121
INTRODUCTION TO WELDING (3CR)**

This is a beginning course in oxy-fuel cutting, oxy-fuel welding and brazing, shielded metal arc welding (SMAW) and (MIG). The SMAW portion will cover all positions but will be limited to fillet welds. All welds will be tested according to industry standards.
1 hr. lecture, 6 hrs. lab/wk.

**MFAB 123
TRACK WELDING (3CR)**

Prerequisite: Approval of Burlington Northern training director and JCCC division director

This is a basic course in oxy-fuel cutting (OFC), shielded metal arc welding (SMAW), air carbon arc cutting (AAC) and special processes such as thermit welding. Processes will be limited to flat and horizontal positions of fillet and groove welds. Testing of welds will be done.
1 hr. lecture, 4 hrs. lab/wk.

**MFAB 125
ADVANCED GAS AND ARC WELDING (3CR)**

Prerequisite: MFAB 121 or approval of division director

The focus of this course is on the theory and practice of out-of-position oxy-fuel welding, oxy-fuel brazing, shielded metal arc welding (SMAW) of v-butt plate in five positions, basic air-arc cutting and gouging, and certification requirements with root and face bend tests being performed according to industry standards.
1 hr. lecture, 6 hrs. lab/wk.

**MFAB 127
WELDING PROCESSES (2CR)**

Prerequisite: division director approval

Students will have the opportunity to learn various welding processes used by railroad and industry. All standard shop and maintenance welding processes will be taught and demonstrated. Students will be required to participate.

**MFAB 130
MIG AND TIG I (3CR)**

Prerequisite: MFAB 121 or approval of division director

Students will explore the theory of gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), also known as MIG and TIG; GTAW on mild steel; GTAW on aluminum; and GMAW on steel. In the lab, students will use welding symbols, read blueprints and test welds. 1 hr. lecture, 6 hrs. lab/wk.

**MFAB 140
INTRODUCTION TO
METAL FABRICATION (3CR)**

Students will have the opportunity to learn basic welding procedures, sheet metal work and other metal trades and how they interrelate with other technologies. They also will study how to safely handle materials, the compatibility of materials and finish methods and how they work. 1 hr. lecture, 6 hrs. lab/wk.

**MFAB 230
MIG AND TIG II (3CR)**

Prerequisite: MFAB 130 or approval of division director

This course is a review of the theory of GMAW and GTAW, GTAW on stainless steel, flux cored arc welding (FCAW) on steel, GMAW on aluminum and GMAW on steel. 1 hr. lecture, 6 hrs. lab/wk.

MUSIC

MUS 121

INTRODUCTION TO MUSIC LISTENING (3CR)

Emphasis will be on listening in this survey of the development of music. Students will hear recorded medieval, Renaissance, Baroque, classical, Romantic and contemporary music including popular American forms. 3 hrs./wk.

MUS 123

INTRODUCTION TO MUSIC FUNDAMENTALS (2CR)

This class is for the elementary classroom teacher or music student without a background in theory. It will cover notation of melody, rhythm, meter and musical terminology, intervals, chords and very basic four-part writing. 2 hrs./wk.

MUS 125

INTRODUCTION TO JAZZ LISTENING (3CR)

Listening will be emphasized in this introduction to the history of jazz in America. Focus will be on trends, periods and styles. 3 hrs./wk.

MUS 131

SIGHT-SINGING AND EAR TRAINING I (2CR)

Students will combine aural and sight-reading skills in this course on the melodic, harmonic and rhythmic elements of music. 2 hrs./wk.

MUS 132

SIGHT-SINGING AND EAR TRAINING II (2CR)

Prerequisite: MUS 131

This is a continued study of the melodic, harmonic and rhythmic elements of music, integrating aural and sight-reading skills. 2 hrs./wk.

MUS 133

SIGHT-SINGING AND EAR TRAINING III (2CR)

Prerequisite: MUS 132

This is a continued advanced study of melodic, harmonic and rhythmic elements of music. 2 hrs./wk.

MUS 134

SIGHT-SINGING AND EAR TRAINING IV (2CR)

Prerequisite: MUS 133

In this advanced study, students will continue working on aural and sight-reading skills through melodic and harmonic dictation. 2 hrs./wk.

MUS 141

MUSIC THEORY: HARMONY I (2CR)

The fundamentals of music will be reviewed and melodic line construction, triads and the connection of chords in four-part music writing will be introduced. 2 hrs./wk.

MUS 142

MUSIC THEORY: HARMONY II (2CR)

Prerequisite: MUS 141

Students will continue their work with melodic line, triads and connection of chords in four-part music writing. The emphasis will be on inverted triads and seventh chords. Elementary modulation will be introduced. 2 hrs./wk.

MUS 143

MUSIC THEORY: HARMONY III (2CR)

Prerequisite: MUS 142

Students will continue working with modulation, non-harmonic tones and inverted triads in four-part music writing. The class introduces less common chord progressions, diatonic seventh chords, altered chords and borrowed chords with emphasis on original student composition. 2 hrs./wk.

MUS 144

MUSIC THEORY: HARMONY IV (2CR)

Prerequisite: MUS 143

Students will continue working with original compositions in this introduction to augmented triads; Neapolitan, French and German sixth chords; chords at ninth, 11th, 13th; advanced modulation and basic counterpoints. 2 hrs./wk.

MUS 151

MIXED VOCAL ENSEMBLE I (1CR)

Any student may participate in this class involving rehearsal and performance of vocal music. The ensemble will perform some contemporary jazz and pop music and occasionally perform with the chamber choir. 3 hrs./wk.

MUS 152

MIXED VOCAL ENSEMBLE II (1CR)

Prerequisite: MUS 151

This is a continuation of Mixed Vocal Ensemble I. 3 hrs./wk.

MUS 153

MIXED VOCAL ENSEMBLE III (1CR)

Prerequisite: MUS 152

This is a continuation of Mixed Vocal Ensemble II. 3 hrs./wk.

MUS 154
MIXED VOCAL ENSEMBLE IV (1CR)

Prerequisite: MUS 153

This is a continuation of Mixed Vocal Ensemble III. 3 hrs./wk.

MUS 161
CHAMBER CHOIR I (1CR)

Prerequisite: Audition

Students will study and rehearse a variety of vocal music and perform at student and community activities. 3 hrs./wk.

MUS 162
CHAMBER CHOIR II (1CR)

Prerequisite: MUS 161

This is a continuation of Chamber Choir I. 3 hrs./wk.

MUS 163
CHAMBER CHOIR III (1CR)

Prerequisite: MUS 162

This is a continuation of Chamber Choir II. 3 hrs./wk.

MUS 164
CHAMBER CHOIR IV (1CR)

Prerequisite: MUS 163

This is a continuation of Chamber Choir III. 3 hrs./wk.

MUS 171
APPLIED VOICE I (Class) (1CR)

This class offers instruction in singing from the beginning stages. 1 hr./wk.



MUS 172
APPLIED VOICE II(Class) (1CR)

Prerequisite: MUS 171

This is a continuation of Applied Voice I.

MUS 173
APPLIED VOICE III (Class) (1CR)

Prerequisite: MUS 172

This is a continuation of Applied Voice II.

MUS 174
APPLIED VOICE IV(Class) (1CR)

Prerequisite: MUS 173

This is a continuation of Applied Voice III.

MUS 176 (1CR)
EVENING JAZZ ENSEMBLE
MUS 181 (2CR)
STUDENT JAZZ ENSEMBLE I

Prerequisite: Audition

The ensemble will perform jazz and popular music at festivals, public concerts and college functions. 3-6 hrs./wk.

MUS 177 (1CR)
EVENING JAZZ ENSEMBLE
MUS 182 (2CR)
STUDENT JAZZ ENSEMBLE II

Prerequisite: MUS 176 or MUS 181

This class consists of continued performances of jazz and popular music at festivals, public concerts and college functions. 3-6 hrs./wk.

MUS 178 (1CR)
EVENING JAZZ ENSEMBLE
MUS 183 (2CR)
STUDENT JAZZ ENSEMBLE III

Prerequisite: MUS 177 or MUS 182

This class consists of continued performances of jazz and popular music at festivals, public concerts and college functions. 3-6 hrs./wk.

MUS 179 (1CR)
EVENING JAZZ ENSEMBLE IV
MUS 184 (2CR)
STUDENT JAZZ ENSEMBLE IV

Prerequisite: MUS 178 or MUS 183

This class consists of continued performances of jazz and popular music at festivals, public concerts and college functions. 3-6 hrs./wk.

MUS 187**JAZZ IMPROVISATION I (2CR)**

Prerequisite: High school playing experience

This is a fundamental approach to rhythm and melodic lines involved in creative improvisation. Basic procedures for analyzing chords and chord structures will serve as an outline for organized spontaneous playing. 2 hrs./wk.

MUS 188**JAZZ IMPROVISATION II (2CR)**

Prerequisite: MUS 187

This continuation of Jazz Improvisation I focuses on creative improvisation and procedures for analyzing chord structures as an outline for organized spontaneous playing. 2 hrs./wk.

MUS 191**BAND I (1CR)**

Prerequisite: High school playing experience

Concert band repertoire – especially early works and original contemporary selections – will be the basis of these performances. 3 hrs./wk.

MUS 192**BAND II (1CR)**

Prerequisite: MUS 191 or by permission

This is a continuation of Band I. 3 hrs./wk.

MUS 193**BAND III (1CR)**

Prerequisite: MUS 192 or by permission

This is a continuation of Band II. 3 hrs./wk.

MUS 194**BAND IV (1CR)**

Prerequisite: MUS 193 or by permission

This is a continuation of Band III. 3 hrs./wk.

MUS 201**CHAMBER ENSEMBLE I (1CR)**

Prerequisite: High school playing or equivalent

Students will study and perform standard literature for ensembles: brass, woodwind, jazz combo and percussion. 2 hrs./wk.

MUS 202**CHAMBER ENSEMBLE II (1CR)**

Prerequisite: MUS 201

This is a continuation of Chamber Ensemble I. 2 hrs./wk.

MUS 203**CHAMBER ENSEMBLE III (1CR)**

Prerequisite: MUS 202

This is a continuation of Chamber Ensemble II. 2 hrs./wk.

MUS 204**CHAMBER ENSEMBLE IV (1CR)**

Prerequisite: MUS 203

This is a continuation of Chamber Ensemble III. 2 hrs./wk.

MUS 211**ORCHESTRA I (1CR)**

Prerequisite: Audition

Students will rehearse and perform with the Overland Park Civic Orchestra. 2 hrs. (1 evening)/wk.

MUS 212**ORCHESTRA II (1CR)**

Prerequisite: MUS 211 or audition

This is a continuation of Orchestra I. 2 hrs.(1 evening)/ wk.

MUS 213**ORCHESTRA III (1CR)**

Prerequisite: MUS 212 or audition

This is a continuation of Orchestra II. 2 hrs.(1 evening)/ wk.

MUS 214**ORCHESTRA IV (1CR)**

Prerequisite: MUS 213 or audition

This is a continuation of Orchestra III. 2 hrs.(1 evening)/ wk.

MUS 216**APPLIED WOODWIND I (Class) (1CR)**

In this class, students will be instructed on the wind instrument of their choice. 1 hr./wk.

MUS 217**APPLIED WOODWIND II (Class) (1CR)**

Prerequisite: MUS 216

This course offers advanced instruction for those who have completed Applied Woodwind I. 1 hr./wk.

MUS 218**APPLIED WOODWIND III (Class) (1CR)**

Prerequisite: MUS 217

This course offers advanced instruction for those who have completed Applied Woodwind II. 1 hr./wk.

MUS 219**APPLIED WOODWIND IV (Class) (1CR)***Prerequisite: MUS 218*

This course offers advanced instruction for those who have completed Applied Woodwind III. 1 hr./wk.

MUS 221**APPLIED PIANO I (Class) (2CR)**

This class offers beginning group instruction in playing the piano. 2 hr./wk.

MUS 222**APPLIED PIANO II (Class) (2CR)***Prerequisite: MUS 221*

This course provides advanced group instruction for those who have completed Applied Piano I. 2 hr./wk.

MUS 223**APPLIED PIANO III (Class) (2CR)***Prerequisite: MUS 222*

This course provides advanced group instruction for those who have completed Applied Piano II. 2 hr./wk.

MUS 224**APPLIED PIANO IV (Class) (2CR)***Prerequisite: MUS 223*

This course provides advanced group instruction for those who have completed Applied Piano III. 2 hr./wk.

MUS 226**APPLIED GUITAR I (Class) (1CR)**

This class offers beginning instruction in playing the guitar. 1 hr./wk.

MUS 227**APPLIED GUITAR II (Class) (1CR)***Prerequisite: MUS 226*

Advanced group instruction in playing the guitar is offered in this course. 1 hr./wk.

MUS 228**APPLIED GUITAR III (Class) (1CR)***Prerequisite: MUS 227*

This course provides advanced group instruction in playing the guitar. 1 hr./wk.

MUS 229**APPLIED GUITAR IV (Class) (1CR)***Prerequisite: MUS 228*

This course offers advanced group instruction in playing the guitar. 1 hr./wk.

*** MUS 231****APPLIED VOICE I (Private) (1CR)**

This course offers private instruction in vocal music, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 232**APPLIED VOICE II (Private) (1CR)***Prerequisite: MUS 231*

This course offers advanced private vocal music instruction.

MUS 233**APPLIED VOICE III (Private) (1CR)***Prerequisite: MUS 232*

This course offers advanced private vocal music instruction.

MUS 234**APPLIED VOICE IV (Private) (1CR)***Prerequisite: MUS 233*

This course offers advanced private vocal music instruction.

MUS 236**APPLIED PIANO I (Private) (1CR)**

Students will be offered private instruction on the piano, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 237**APPLIED PIANO II (Private) (1CR)***Prerequisite: MUS 236*

Advanced private piano playing instruction is offered in this course.

MUS 238**APPLIED PIANO III (Private) (1CR)***Prerequisite: MUS 237*

Advanced private piano playing instruction is offered in this course.

MUS 239**APPLIED PIANO IV (Private) (1CR)***Prerequisite: MUS 238*

This course offers advanced private piano playing instruction.

MUS 241**APPLIED GUITAR I (Private) (1CR)**

Students will be offered private instruction on the guitar, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 242**APPLIED GUITAR II (Private) (1CR)**

Prerequisite: MUS 241

This course offers advanced private guitar playing instruction.

MUS 243**APPLIED GUITAR III (Private) (1CR)**

Prerequisite: MUS 242

This course offers advanced private guitar playing instruction.

MUS 244**APPLIED GUITAR IV (Private) (1CR)**

Prerequisite: MUS 243

This course offers advanced private guitar playing instruction.

MUS 246**APPLIED CLASSICAL GUITAR I (Private) (1CR)**

Students will be offered private instruction on classical guitar, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 247**APPLIED CLASSICAL GUITAR II (Private) (1CR)**

Prerequisite: MUS 246

This course offers advanced private classical guitar playing instruction.

MUS 248**APPLIED CLASSICAL GUITAR III (Private) (1CR)**

Prerequisite: MUS 247

This course offers advanced private classical guitar playing instruction.

MUS 249**APPLIED CLASSICAL GUITAR IV (Private) (1CR)**

Prerequisite: MUS 248

This course offers advanced private classical guitar playing instruction.

MUS 251**APPLIED BRASS I (Private) (1CR)**

Students will be offered private instruction on the brass instrument of their choice, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 252**APPLIED BRASS II (Private) (1CR)**

Prerequisite: MUS 251

Students are offered advanced private brass instrument playing instruction.

MUS 253**APPLIED BRASS III (Private) (1CR)**

Prerequisite: MUS 252

This course offers advanced private brass instrument playing instruction.

MUS 254**APPLIED BRASS IV (Private) (1CR)**

Prerequisite: MUS 253

Advanced private brass instrument playing instruction is offered in this course.

MUS 256**APPLIED PERCUSSION I (Private) (1CR)**

Students will be offered private instruction on the percussion instruments of their choice, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 257**APPLIED PERCUSSION II (Private) (1CR)**

Prerequisite: MUS 256

Advanced private percussion instrument playing instruction is offered in this course.

MUS 258**APPLIED PERCUSSION III (Private) (1CR)**

Prerequisite: MUS 257

This course offers advanced private percussion instrument playing instruction.

MUS 259**APPLIED PERCUSSION IV (Private) (1CR)**

Prerequisite: MUS 258

This course offers advanced private percussion instrument playing instruction.

MUS 261**APPLIED WOODWIND I (Private) (1CR)**

Students can choose their own woodwind instrument for this private instruction, ½ hr./wk. for 16 weeks by arrangement with an approved instructor.

MUS 262**APPLIED WOODWIND II (Private) (1CR)**

Prerequisite: MUS 261

This course offers advanced private woodwind instrument playing instruction.

MUS 263

APPLIED WOODWIND III (Private) (1CR)

Prerequisite: MUS 262

This course offers advanced private woodwind instrument playing instruction.

MUS 264

APPLIED WOODWIND IV (Private) (1CR)

Prerequisite: MUS 263

This course offers advanced private woodwind instrument playing instruction.



NURSING

NURS 121

**NURSING CARE OF THE INDIVIDUAL:
CONCEPTS OF HEALTH (8CR)**

Prerequisite: Admission to Nursing Program

Corequisites: BIOL 140, PSYC 130

The first in a series of four courses, this introduction to nursing emphasizes the assessment and maintenance of health in individuals of various ages. This course also examines the concepts and principles of basic nursing care, providing a foundation for subsequent nursing courses. Clinical laboratory experience is an important part of this course. 4 hrs. class, 12 hrs. lab/wk. Fall.

NURS 122

**NURSING CARE OF THE INDIVIDUAL:
ADAPTATION TO CHANGE (8CR)**

Prerequisite: NURS 121

Corequisites: BIOL 225 and PSYC 215

The second in a series of four courses, this course provides an opportunity for students to explore the impact of change on the individual and family and to apply the nursing process in meeting the needs of individuals. Clinical laboratory practice is an integral part of this course. 4 hrs. class, 12 hrs. lab/wk. Spring.

NURS 123

LPN-RN TRANSITION COURSE (6CR)

Prerequisite: Licensure as Vocational/Practical Nurse, minimum of six months clinical nursing experience in a hospital or nursing home setting, and admission with advanced standing to the nursing program

This is an orientation to the philosophy of the associate degree nursing program for LPNs entering with advanced standing. Topics include group process, relationships, the role of the associate degree graduate, communication skills and nursing process. Individual assessment and assistance will be emphasized. 18 hrs./wk. for 6 wks. Summer.

NURS 221

**NURSING CARE OF THE INDIVIDUAL:
SHORT-TERM HEALTH PROBLEMS (9CR)**

Prerequisites: NURS 122, BIOL 225 and PSYC 215

The third in a sequence of four courses, this course focuses on the individual whose well-being has been altered by a temporary, acute, disruptive problem that requires implementation of the nursing process. Pathophysiology and the application of basic scientific principles in the problem-solving process are stressed. The course includes an introduction to contemporary issues in nursing. Clinical laboratory experience in health care agencies is an important part of the course. 4-5 hrs. class, 15 hrs. lab/wk. Fall.

NURS 222

**NURSING CARE OF THE INDIVIDUAL:
LONG-TERM HEALTH PROBLEMS (9CR)**

Prerequisite: NURS 221

The fourth in a sequence of four nursing courses, this course focuses on the individual whose well-being has been altered by chronic, progressive, disruptive problems that require implementation of the nursing process. Emphasis is on rehabilitation, adaptation to a permanently-altered lifestyle and the development and/or reestablishment of independence. The role of the associate degree graduate seeking employment in the community is stressed. Clinical laboratory practice is an integral part of this course. 4 hrs. lecture, 15 hrs. clinical lab/wk. Spring.

OCCUPATIONAL THERAPY

KOT 100 INTRODUCTION TO OCCUPATIONAL THERAPY (2CR)

This class is a survey of the profession of occupational therapy and its relation to the health care system. The role and function of the registered occupational therapist and the certified occupational therapy assistant is presented through films, group discussion, reading assignments and guest lecturers who work in occupational therapy specialty areas. Six hrs. observation in occupational therapy clinics required. 2 hrs. class/wk.

KOT 101 OCCUPATIONAL THERAPY GROWTH AND DEVELOPMENT (3CR)

Prerequisites: KOT 100 and admission to program
Physical, perceptual, cognitive, social, intellectual and emotional development during normal growth from prenatal stages through death is presented. Students are required to observe normal states of growth at day care centers, community centers and work settings. 3 hrs./wk.

KOT 102 OCCUPATIONAL THERAPY IN MENTAL HEALTH (3CR)

Prerequisites: PSYC 130, KOT 100 and admission to the program

This course includes a survey of personality disorders, psychoses, adjustment reactions, brain dysfunctions, anxiety disorders, behavioral reactions and substance abuse. Various types of mental health settings and health care professionals are studied. 3 hrs./wk.

KOT 103 CLINICAL CONDITIONS (3CR)

Prerequisites: KOT 100 and admission to program
This course covers both physical and psychosocial dysfunctions commonly referred to and treated by occupational therapists. 2 hrs. lecture, 2 hrs. lab/wk.

KOT 104 THERAPEUTIC MEDIA I (2CR)

Prerequisite: KOT 100
The development of skills in basic craft, recreational and daily living activities used as therapeutic media in occupational therapy settings will be presented. 4 hrs./wk.

KOT 200 PRINCIPLES OF OCCUPATIONAL THERAPY (2CR)

Prerequisites: KOT 100 and admission to program
This course surveys principles and standards in the practice of occupational therapy. Topics presented include writing progress notes, program development and other indirect services. 2 hrs./wk.

KOT 201 OCCUPATIONAL THERAPY IN MENTAL HEALTH II (5CR)

Prerequisites: PSYC 130, KOT 102
This is a continuation of the study of occupational therapy in mental health settings. Discussion will cover evaluations, principles and techniques the occupational therapist uses in the psychiatric setting. The students will observe treatment methods under the supervision of a registered occupational therapist in various local hospitals. 2 hrs. lecture, 6 hrs. lab/wk.

KOT 202 OCCUPATIONAL THERAPY IN PHYSICAL DISABILITIES (5CR)

Prerequisites: KOT 100, KOT 101, KOT 103, BIOL 144
Areas covered in lab and lecture include occupational therapy treatment techniques, methods and adaptive equipment used with the physically disabled. Students will be assigned to various local hospital occupational therapy departments to observe treatment methods under the supervision of a registered occupational therapist. 2 hrs. lecture, 6 hrs. lab/wk.

KOT 203 SHOP PRACTICES/ORTHOTICS (2CR)

Prerequisites: KOT 100 and admission to program
This course includes demonstrations in the use and care of power and hand tools in the fabrication of equipment or devices used in occupational therapy. 4 hrs./wk.

KOT 204 THERAPEUTIC MEDIA II (3CR)

Prerequisites: KOT 104 and art elective
Students will study the characteristics, adaptability and therapeutic use of activities employed in occupational therapy. Instruction in the performance of teaching techniques as they apply to special conditions also will be included. 1 hr. lecture, 4 hrs. lab/wk.

KOT 205
FIELDWORK IN
OCCUPATIONAL THERAPY I (3CR)

Prerequisite: Successful completion of all theory courses with a minimum grade of "C" or approval of division director

This course consists of directed fieldwork experience in the practice of occupational therapy with clients with physical dysfunctions. 240 clock hours.

KOT 206
FIELDWORK IN
OCCUPATIONAL THERAPY II (3CR)

Corequisites: Concurrent enrollment in KOT 205 and minimum grade of "C" or approval of division director

This course consists of directed fieldwork experience in the practice of occupational therapy with clients with psychosocial dysfunctions. 240 clock hours.

KOT 207
CLINICAL SEMINAR (2CR)

Corequisites: KOT 205 and KOT 206 or approval of division director

The students will discuss professionalism as well as their experiences in the clinical areas. 2 hrs./wk.

PARALEGAL

PL 121
INTRODUCTION TO LAW (3CR)

This introductory study of the legal system covers the nature and functions of law and the operation and structure of state and federal court systems and administrative agencies. It surveys the major areas of substantive law. (Open to students with a general interest in the law and required of students enrolled in the Paralegal Program.) 3 hrs./wk.

PL 123
PARALEGAL PROFESSIONAL STUDIES (1CR)

Students will discuss the role of legal assistants in the practice of law. They also will review paralegal functions, types of employment, education, licensing, professional ethics, and the unauthorized practice of law. Class includes an introduction to paralegal skills. 1 hr./wk.

PL 131
LEGAL RESEARCH (3CR)

Prerequisites or corequisites: PL 121 and PL 123 or division director approval

This is a practical approach to legal research problems.

Through research projects, students will become familiar with legal publications and how to use them in solving legal problems. Methods and various forms of legal writing also will be discussed. 3 hrs./wk.

PL 132
LITIGATION I (3CR)

Prerequisites: PL 121, PL 123 and PL 131 or division director approval

This course emphasizes the study of various types of litigation: Kansas, Missouri and federal civil procedures; trial preparation; and, trial, post-trial and appellate matters. 3 hrs./wk. Spring.

PL 140
COMPUTERIZED
LITIGATION SUPPORT (1CR)

Prerequisite: PL 132 and DP 124, CPCA 128 or division director approval

Upon completion of this course, the student will be able to use a microcomputer and related software designed for an automated litigation support system. Students will also be able to solve problems common to such systems. 1 hr. lecture, lab/wk.

PL 152
REAL ESTATE LAW (3CR)

Prerequisites: PL 121 and PL 123 or division director approval

Real property and common types of real estate transactions and conveyances will be examined. The preparation of legal instruments such as deeds, contracts, leases, deeds of trust and mortgages will be studied. Students will be involved with projects and document retrieval and recording. 3 hrs./wk. Spring.

PL 162
FAMILY LAW (3CR)

Prerequisites: PL 121 and PL 123 or division director approval

Specific topics in family law covered in this class include adoption, guardianships, child custody and support, name changes, and contested and uncontested divorces. Emphasis will be on court forms, preparing pleadings and settlement agreements and using interviewing checklists. 3 hrs./wk. Spring.

**PL 171
LAW OFFICE SYSTEMS (2CR)**

Prerequisites: PL 121 or division director approval

This is a study of the internal function of the law office or legal department. It will address personnel matters, office systems including docketing and time controls, law library maintenance, filing systems, financial and accounting management and office equipment. 2 hrs./wk. Fall.

**PL 205
LEGAL WRITING (2CR)**

Prerequisite: PL 131

Legal Writing has been designed to acquaint students with specialized legal research and preparation of documents used in legal communications. Emphasis will be on preparing and writing a legal memorandum and other forms and documents related to legal practice. 32 hrs./semester.

**PL 212
BUSINESS ORGANIZATIONS (3CR)**

Prerequisites: PL 121 and PL 123 or division director approval

Business entities such as corporations, partnerships and sole proprietorships will be examined. The role of the lawyer and the legal assistant in forming these entities will be discussed along with the legal concepts applicable to each type of organization and the preparation of related documents. 3 hrs./wk. Fall.

**PL 221
COMMERCIAL TRANSACTIONS (1CR)**

Prerequisites: PL 121 and PL 123 or division director approval

Personal property contracts, especially documents and forms related to sales and credit transactions, will be explained. This class also will cover preparation of business and commercial documents and the application of Uniform Commercial Code provisions. 16 hrs./semester. Fall.

**PL 232
LITIGATION II (3CR)**

Prerequisite: PL 132 or division director approval

Emphasis will be on the practical aspects of civil litigation. The course will include in-depth preparation of pleadings and related documents. 3 hrs./wk. Fall.

**PL 241
WILLS, TRUSTS AND
PROBATE ADMINISTRATION (3CR)**

Prerequisites: PL 121 and PL 123 or division director approval

Included in this study of the administration of estates are techniques for fact gathering, inheritance and estate tax principles, use of trusts, will drafting and probate procedures. Emphasis will be on standard procedures used in assisting lawyers in these areas. 3 hrs./wk. Fall.

**PL 242
ESTATE PLANNING (3CR)**

Prerequisite: PL 241 or division director approval

The tax considerations involved in estate planning are reviewed. Topics include the preparation of federal estate tax forms, state inheritance forms, fiduciary income tax returns and drafting trust provisions. 3 hrs./wk. Spring.

**PL 261
RETIREMENT PLANS-QUALIFICATIONS
AND ADMINISTRATION (1CR)**

Prerequisite: PL 212 or division director approval

This study of qualified retirement plans will emphasize design, funding and operation. Topics will include preparing documents for qualification, administration and termination. IRAs and other retirement plans will also be discussed. 16 hrs./semester. Fall.

**PL 264
WORKERS' COMPENSATION (1CR)**

Prerequisites: PL 121 and PL 123 or division director approval

Emphasis in this in-depth study of workers' compensation will be on preparation of claims, benefits, adjudication and administrative procedures. 16 hrs./semester. Spring.

**PL 268
BANKRUPTCY (1CR)**

Prerequisites: PL 121 and PL 123 or division director approval

This in-depth study of bankruptcy law emphasizes the preparation of forms and bankruptcy proceedings. 16 hrs./semester. Spring.

PL 271**SEMINAR: LEGAL INTERVIEWING AND INVESTIGATION (2CR)**

Prerequisites: PL 121, PL 123 and 9 credits in other paralegal specialty courses

In this course, students will implement skills acquired in prerequisite courses and study in depth legal ethics. The course covers legal interviewing and investigation with emphasis on developing related skills. 2 hrs./wk.

PL 275**PARALEGAL INTERNSHIP I (1CR)**

Prerequisite or Corequisite: PL 271

Students will work in an approved training situation under instructional supervision. This internship is designed to give students the opportunity to apply the skills they acquired in paralegal specialty courses. By arrangement.

PL 276**PARALEGAL INTERNSHIP II (1CR)**

Prerequisite: PL 275

Students will work in approved training situations under instructional supervision. The internship is designed to give students the opportunity to apply the skills they acquired in paralegal specialty courses. By arrangement.

PL 298**LEGAL LONDON (2CR)**

The areas of London and the British government that relate directly to American law and government will be examined in this course. Spring.

PHILOSOPHY**PHIL 121****INTRODUCTION TO PHILOSOPHY (3CR)**

Students will examine basic issues of philosophy including the nature of being, methods of acquiring knowledge and the foundation of moral, religious and political beliefs. Emphasis is on the value of philosophical inquiry in today's society. 3 hrs./wk.

PHIL 132**LOGIC (3CR)**

In this study of informal and formal logic, emphasis is on the nature and structure of arguments, the requirements for evidence and validity and techniques for assessing the strengths of various argument forms. 3 hrs./wk.

PHIL 143**ETHICS (3CR)**

The great problems of ethics including free will and determinism, relativism and absolutism, the relationship between individuals and society will be examined. The instructor will explain traditional positions, helping students to understand contemporary social and moral issues. 3 hrs./wk.

PHIL 154**HISTORY OF ANCIENT PHILOSOPHY (3CR)**

Greek and Roman thought ranging from speculation about the universe and theories of natural selection and atomism to treatises about the nature of individual existence and society will be examined. Selections from ancient texts will be used with commentaries where appropriate. 3 hrs./wk.

PHIL 165**PHILOSOPHY OF CURRENT CIVILIZATION (3CR)**

This is a systematic and critical analysis of selected current issues in American civilization and the philosophies presupposed by these issues. Students will refer to philosophical articles and news media. 3 hrs./wk.

PHIL 176**PHILOSOPHY OF RELIGION (3CR)**

This course deals with the following general philosophical questions: What is religion? Do we need religion and, if so, why? What are the differences between the claims made by religion and science? All readings are from contemporary theological and philosophical sources. 3 hrs./wk.

PHOTOGRAPHY**PHOT 120****THE PHOTOGRAPHIC VISION: ALL ABOUT PHOTOGRAPHY (3CR)**

A television-based course for students with a general interest in photography as an art form. In this non-darkroom introduction to photography, 20 half-hour television programs combined with classroom instruction to provide an introduction to the basic mechanical skills of camera handling, the nomenclature of tools and materials, the history of photography, and the technical, artistic and commercial dimensions of this craft. 3 hrs./wk.

**PHOT 121
PHOTOGRAPHY I (3CR)**

In this introduction to the basic processes and principles of photography, emphasis is on becoming competent in the use of photographic materials and equipment including cameras, light meters, films, filters and chemicals. Students also will develop negatives, and print and present photographs. Students must provide their own cameras with adjustable focus, shutter speeds and aperture. 3 hrs. lecture, 3 hrs. lab/wk.

**PHOT 122
PHOTOGRAPHY II (3CR)**

Prerequisite: PHOT 121

Emphasis is on developing professional standards of photographic technique and image quality. Topics include exposure and development control using the "zone system," natural light photography, advanced darkroom techniques, chemistry and toning. Basic view camera techniques also will be introduced. 3 hrs. lecture, 3 hrs. lab/wk.

**PHOT 123
PHOTOGRAPHY III (3CR)**

Prerequisite: PHOT 121

This course emphasizes commercial and other forms of applied photography. The class includes view camera techniques and lighting techniques with emphasis on studio lighting, portrait, advertising and illustration photography. 3 hrs. lecture, 3 hrs. lab/wk.

**PHOT 134
COLOR TRANSPARENCIES (2CR)**

Prerequisite: PHOT 121

The materials, camera techniques, processing and various applications of color transparency film will be explained. Color transparencies used in audio-visual presentations, documentation, commercial illustration, travel photography and other communication will be emphasized. Each student must provide a 35mm camera with adjustable shutter, aperture and focus as well as film, slide mounts and carousel slide trays. 2 hrs. lecture, 2 hrs. lab/wk.

**PHOT 140
HISTORY OF PHOTOGRAPHY (3CR)**

In this survey of the history of photography from the 1830s through today, the technology and aesthetics of photography will be studied and related to art, culture and ideas. 3 hrs. lecture/wk.

**PHOT 141
ISSUES IN
CONTEMPORARY PHOTOGRAPHY (3CR)**

Current photography will be surveyed along with important contemporary photographers, new color photography, recent criticism and photography's relation to art. Photography is viewed in relation to important aspects of modern culture and thought. 3 hrs./wk.

PHYSICAL EDUCATION

Refer to Health/Physical Education and Recreation (HPER) for course descriptions.

PHYSICAL SCIENCE

**PSCI 120
PHYSICAL SCIENCE (4CR)**

This is a study of the fundamentals of physics, chemistry, astronomy and geology. Topics include energy, electricity, magnetism, modern physics and chemical bonding. 2 hrs. lecture, 2-6 hrs. lab/wk., flexible scheduling.

**PSCI 122
ASTRONOMY (4CR)**

This is a study of the universe from the moon, planets and stars as seen in the night sky to the most distant galaxies. Topics include quasars, black holes, origin of the universe and the possibility of life on other planets. 4 hrs./wk., 5 night-time telescope sessions.

**PSCI 130
GENERAL GEOLOGY (5CR)**

This course provides a survey of the earth and the processes that have shaped it. Lecture units consist of the solid earth, the atmosphere, the hydrosphere, resources and environmental geology. Laboratory units include identification of rocks and minerals and reading and interpretation of topographic maps. 4 hrs. lecture, 3 hrs. lab/wk.

**PSCI 132
HISTORICAL GEOLOGY (5CR)**

Prerequisite: PSCI 130

This class provides a survey of the geological development of North America and the processes, environments and tectonics that occurred during its formation. Topics include the inter-relationships of various rock strata, stratigraphic-geologic time, correlation, and interpretation of geologic maps and identification of fossils. 4 hrs. lecture, 3 hrs. lab/wk.

PSCI 140
PHYSICAL GEOGRAPHY (3CR)

This course is a survey of the physical and environmental topics of geography including the methods used to study them. The earth, its atmosphere, hydrosphere and surface features constitute the major units of study. Some additional topics include mapping, weather, climate, weathering, soils, rivers, deserts, mountains, topography and landforms. 3 hrs. lecture/wk.

PSCI 141
PHYSICAL GEOGRAPHY LAB (2CR)

Corequisite: PSCI 140 or equivalent

Students in this course will have the opportunity to broaden their knowledge of geography through identification of earth materials and the reading and interpretation of various maps and remote sensing photographs. 4 hrs. lab/wk.

PSCI 148
**SCIENCE PROBLEMS
ON THE COMPUTER (2CR)**

Prerequisite: One college-level physical science or life science course

Elementary skills in programming a microcomputer using BASIC language will be introduced. Problem-solving techniques will be developed. 1 hr. lecture, 2 hrs. lab/wk.

PSCI 295
OZARK GEOLOGY (3CR)

This travel-for-credit course provides a survey of the geology of the Ozark mountain region through field and classroom study. Field observations will be made at numerous locations during two six-day field trips in order to study the stratigraphy, structure, hydrology, mineralogy, landforms and economic geology of the region. Five 3 hr. pre-trip meetings will be held to provide students with the geologic knowledge necessary to make field observations.

PSCI 297
GEOLOGY OF THE HAWAIIAN ISLANDS (3CR)

This travel-for-credit course provides a survey of the geology and natural history of the Hawaiian Islands through field and classroom study. Field observations of concepts presented in five 3-hour pre-trip seminars will be made during a two-week field trip to the Hawaiian Islands. Topics to be studied and observed include a survey of volcanism, oceanography, meteorology, sedimentology, hydrology and structure of the Hawaiian Islands as well as important natural history sites.

**PHYSICAL
THERAPY ASSISTANT**

KPT 151
**INTRODUCTION TO
PHYSICAL THERAPY (2CR)**

The student will be introduced to the function of a physical therapist and physical therapist assistant as members of the health team, and their interaction with other health disciplines in the care of the patient. Medical terminology related to the specific discipline will be introduced. Field trips to local hospitals are included. 2 hrs. lecture/wk.

KPT 152
FUNDAMENTALS OF MODALITIES I (3CR)

Prerequisite: KPT 151

The student will learn basic medical terminology, description of modalities and therapeutic measures used in the physical treatment of various injuries and diseases. Emphasis is on department organization and orientation to position duties and job opportunities. During field trips, the student will be exposed to actual hospital and clinical facilities. A clinical lab will allow the student to be introduced to the practical application of all modalities used in the Physical Therapy clinic. 2 hrs. lecture, 2 hr. lab./wk

KPT 153
KINESIOLOGY (4CR)

Prerequisite: BIOL 120

Students will analyze muscles and their functions, biomechanics of human motion, activities of joints and functions of the musculoskeletal system. 4 hrs./wk.

KPT 154
APPLIED NEUROLOGY (1CR)

This course will present the student with the foundations of neuroscience necessary for practice as a P.T.A. The student will learn anatomy and function of the nervous system as well as begin to correlate clinical problem with pathology of the nervous system. 1 hr./wk.

KPT 155
REHABILITATION (4CR)

The student will be introduced to the philosophy underlying rehabilitation, and the theory and principles involved in normal and abnormal ambulation and mobility. Emphasis is on external supports used in teaching activities of daily living. Attention will be given to description, demonstration and practice with applications and devices necessary to assist the disabled. 2 hrs. lecture, 4 hrs. lab/wk.

KPT 158**THERAPEUTIC EXERCISE (4CR)**

Corequisites: KPT 159, KPT 170 and KPT 171

Students will be introduced to the theory and principles of mechanical appliances and equipment, shoulder wheels, pulleys, traction and exercise devices used by the disabled. Emphasis will be on muscle re-education, sensory stimulation, and safety precautions and exercise as treatment techniques.

3 hrs. lecture, 4 hrs. lab/wk.

KPT 159**CLINICAL PATHOLOGY (4CR)**

Corequisites: KPT 155, KPT 158, KPT 170 and KPT 171

Students will study general pathology with detailed emphasis on the study of diseases and disease processes.

3 hrs./wk.

KPT 161**FUNDAMENTALS OF MODALITIES II (5CR)**

The student will be introduced to the theory and practical application of electrotherapy, hydrotherapy and therapeutic massage with emphasis on techniques of application and indications and contraindications for use. The student also will observe practical application of therapeutic modalities in local hospital physical therapy departments and participate in the application of specific therapeutic modalities.

3 hrs. lecture, 4 hrs. lab/wk.

KPT 165**PHYSICS FOR THE PHYSICAL THERAPIST ASSISTANT (1CR)**

The student will be introduced to the properties of matter, energy, wave phenomena, electricity and the electromagnetic spectrum using a non-mathematical approach. Examples and illustrations applicable to physical therapy will be used to teach these physics principles. 2 hrs. lab, lecture/wk. for 8 weeks.

KPT 170**CLINICAL EXPERIENCE I (3CR)**

Prerequisite: KPT 161

Corequisites: KPT 158, KPT 159

The student will review practical application of principles learned in prior didactic seminars and take part in rotating internships in hospitals throughout greater Kansas City under the guidance of a registered physical therapist. 9 hrs. clinic/wk.

KPT 171**CLINICAL SEMINAR (1CR)**

Corequisites: KPT 158, KPT 159

While conducting student discussions, the program coordinator will evaluate the experience and programs of the students in Clinical Experience I.

1 hr. lecture/wk.

KPT 172**CLINICAL EXPERIENCE II (12CR)**

Prerequisites: KPT 155, KPT 158, KPT 170, KPT 171

The student will gain supervised clinical experience observing and applying techniques and procedures in all previous courses. Emphasis will be on assisting the physical therapist in the treatment procedures in a variety of clinical settings. 33 hrs. clinic/wk.

PHYSICS**PHYS 125****TECHNICAL PHYSICS I (4CR)**

Prerequisite: MATH 133 or MATH 143

An applied study of the concepts of force, work, rate, resistance and power in mechanical, fluidal, thermal and electrical energy systems. 3 hrs. lecture, 3 hrs. lab/wk.

PHYS 126**TECHNICAL PHYSICS II (3CR)**

Prerequisite: PHYS 125

This is a continuation of the applied study of concepts begun in Technical Physics I. Concepts studied include energy, force transformers, energy converters and vibrations and waves in mechanical, fluidal, electrical and thermal systems. 2 hrs. lecture, 3 hrs. lab/wk.

PHYS 130**GENERAL PHYSICS I (5CR)**

Prerequisite: MATH 160 or MATH 171

Selected topics in physics will be introduced: motion, energy, matter, thermodynamics and wave motion. 4 hrs. lecture, 3 hrs. lab/wk. Fall.

PHYS 131**GENERAL PHYSICS II (5CR)**

Prerequisite: PHYS 130

In this continuation of General Physics I, topics include electricity, magnetism, light, atomic and nuclear structure, quantum theory, relativity and particle physics. 4 hrs. lecture, 3 hrs. lab/wk. Spring.

PHYS 220
ENGINEERING PHYSICS I (5CR)

Corequisite: MATH 242

This is an introduction to physics for engineering and science students. Included will be mathematical approaches to the study of mechanics, wave motion and thermodynamics. 4 hrs. lecture, 3 hrs. lab/wk.

PHYS 221
ENGINEERING PHYSICS II (5CR)

Prerequisite: PHYS 220

Electricity and magnetism, light and topics in modern physics will be addressed. 4 hrs. lecture, 3 hrs. lab/wk.

POLITICAL SCIENCE

POLS 122
POLITICAL SCIENCE (3CR)

This course explores the interaction between political and economic ideas and institutions in the world political arena, and examines the role of communism, capitalism, fascism, and democracy in political science. 3 hrs./wk.

POLS 124
AMERICAN NATIONAL GOVERNMENT (3CR)

A survey of the politics of national policy making. Students will examine bureaucratic power, avenues of influence, political and economic assumptions, policy-making institutions, taxing and spending policies and the role individuals can play in national political policy. 3 hrs./wk.

POLS 126
STATE AND LOCAL GOVERNMENT (3CR)

This course offers a thorough look at the issues facing our state and local government. Students learn about the institutions and processes designed to address them. They will meet state and local decision-makers and visit the state legislature. Emphasis is on how to participate effectively in community government. 3 hrs./wk.

POLS 132
INTRODUCTION TO
COMPARATIVE GOVERNMENT (3CR)

This course is a study of the major world political systems. It compares and contrasts the resolution of key 20th century political, social and economic issues. 3 hrs./wk.

POLS 135
INTERNATIONAL RELATIONS (3CR)

This course analyzes the conflict and cooperation among nation-states. Students study contemporary issues and how they relate to power, war, terrorism, diplomacy, international organizations and the future of the nation-state system. 3 hrs./wk.

POLS 186
ISSUES 86: THE UNITED NATIONS (1CR)

Prerequisite: Successful completion of the Issues 86 program and completion of at least 15 high school units

This is an overview of both the structure of and current issues in the United Nations. Special emphasis centers on the role of the superpowers and their impact on the history and development of this international organization. 1 hr./wk.

POLS 295
CONTEMPORARY CHINA (3CR)

This travel course to the People's Republic of China explores the social and political developments in China since 1949. The major events of the post-revolutionary period including land reform, collectivization, the cultural revolution and the push for four modernizations will be studied. Continuing changes in the economy, political leadership, sex roles, education, crime and health care will be the focus of student projects. Class meetings on campus are supplemented by lectures and seminars while in China.

POLS 298
U.S. AND THE U.S.S.R.:
TRAVEL FOR CREDIT (3CR)

Through travel to the U.S.S.R., students will compare and contrast the historical, political, social and cultural traditions of this major world power with those of the United States. 15 hrs. lecture, 160 hrs. travel.

PSYCHOLOGY

PSYC 121
APPLIED PSYCHOLOGY (3CR)

How students can use psychological principles to better understand themselves and others will be the emphasis of this course. Topics include popular approaches to psychological problems, problem-solving techniques and the student's view of self, values and goals. The course also will show how psychology applies to other disciplines and social institutions. 3 hrs./wk.

**PSYC 124
HUMAN POTENTIAL SEMINAR (3CR)**

This is structured group experience designed to increase self-affirmation, self-motivation, self-determination and empathetic regard for others. It includes analysis of achieving satisfaction and success, clarification of personal values, acknowledgment of personal strengths and long-range goal setting. Regular attendance is imperative. 3 hrs./wk.

**PSYC 127
CAREER/LIFE PLANNING (3CR)**

This is a systematic approach to career and life planning. Students will focus on a process for making occupational decisions at any point in their lives. 3 hrs./wk.

**PSYC 130
INTRODUCTION TO PSYCHOLOGY (3CR)**

This is an introduction to general psychology. Topics include the biological aspects of behavior, the brain, consciousness, sensation, perception, motivation, emotion, stress, maturation and development, learning and memory, normal and abnormal personality, and social psychology. This course is a prerequisite for other courses in psychology. 3 hrs./wk.

**PSYC 210
METHODOLOGY IN THE
SOCIAL SCIENCES (3CR)**

Prerequisite: PSYC 130 or SOC 122 or ECON 230
This course involves active participation in the application of research strategies in the social and behavioral sciences. A wide range of data collection methods will be studied. Students will be expected to do an independent research project. 3 hrs./wk.

**PSYC 215
CHILD DEVELOPMENT (3CR)**

Prerequisite: PSYC 130
The psychological development of humans from conception through adolescence will be traced in this course. Students will study how genetic, biological, physiological and anthropological factors influence the psychological process. The role heredity and environment play in development will be analyzed. 3 hrs./wk, 20 hrs. practicum in a structured setting where children are present is required.

**PSYC 220
SOCIAL PSYCHOLOGY (3CR)**

Prerequisite: PSYC 130
Social psychology seeks to comprehend the nature and causes of individual behavior in social situations. It

identifies those factors that shape our feelings, overt actions and thought in social situations. Topics include social attitudes and prejudice, conformity, aggression and leadership. 3 hrs./wk.

**PSYC 225
EDUCATIONAL PSYCHOLOGY (3CR)**

Prerequisite: PSYC 130
The psychology of learning-teaching situations will be addressed. Areas covered include behavior, skills, memory, generalization of learning, assessment and measurement of learning, and intelligence. A practicum in a structured setting is required. 3 hrs./wk.

**PSYC 230
PERSONALITY THEORY (3CR)**

Prerequisite: PSYC 130
Three general viewpoints or paradigms in psychology will be studied with emphasis on each system's contribution to understanding human personality and its contribution to our response to everyday problems. 3 hrs./wk.

**PSYC 235
TRANSPERSONAL PSYCHOLOGY (3CR)**

Prerequisite: PSYC 130
Human potential and capacity beyond the usual state of consciousness will be explored in this class. Students will consider assumptions, consciousness, mystical experiences, spirit, interpersonal encounters, extrasensory phenomena, ultimate values and eternal meanings. 3 hrs./wk.

RADIOLOGIC TECHNOLOGY

**KRAD 169
MEDICAL AND RADIOLOGY TERMS (3CR)**

Prerequisite: Admission to the program
Students will study medical terminology, including technical terminology used in radiology procedures. 3 hrs./wk.

**KRAD 170
RADIOLOGICAL TECHNOLOGY I (3CR)**

Prerequisite: Admission to the program
Radiation biology, radiation protection and monitoring, professional attitudes and ethics are among the topics covered. Special attention will be paid to emergency procedures in the radiology department. 3 hrs./wk.

KRAD 171
RADIOGRAPHIC EXPOSURES I (3CR)

Prerequisite: Admission to the program

Radiographic image formation and the factors affecting or controlling it will be examined. Students will conduct related experiments. 4 hrs./wk.

KRAD 172
RADIOGRAPHIC POSITIONING I (3CR)

Prerequisite: Admission to the program

This is a study of anatomy and positioning for the abdomen, chest, upper and lower extremities, upper gastrointestinal track, colon, gallbladder/biliary tract and kidney. 4 hrs./wk.

KRAD 173
CLINICAL TRAINING I (2CR)

Prerequisite: Admission to the program

This class offers training in basic radiographic examinations and related tasks. The student will be expected to perform six examinations unassisted by the end of the term. 26 hrs. clinical/wk.

KRAD 174
RADIOGRAPHIC EXPOSURES II (3CR)

Prerequisite: KRAD 171

Topics include quality control of radiographic images, technique charts, calibration of equipment, standard exposure systems and special techniques and equipment used in producing radiographic images. 4 hrs./wk.

KRAD 175
CLINICAL TRAINING II (2CR)

Prerequisites: KRAD 169, KRAD 170, KRAD 171, KRAD 172, KRAD 173

This training focuses on upper and lower extremities, cervical, thoracic and lumbar spine, ribs, sternum, skull and mammographic examinations. The student must be able to perform six additional examinations unassisted by the end of the term. 26 hrs. clinical/wk.

KRAD 176
RADIOGRAPHIC POSITIONING II (3CR)

Prerequisite: KRAD 172

This class covers anatomy and positioning related to the upper and lower extremities, the vertebral column, thorax to include mammography. 4 hrs./wk.

KRAD 178
CLINICAL TRAINING III (1CR)

Prerequisites: KRAD 174, KRAD 175, KRAD 176

Training in this course continues with examination of the ribs, cervical, thoracic and lumbar spine,

gallbladder, biliary system and retrograde pyelograms and infusion pyelograms using tomography. Students will be assigned to 10 evening training sessions during the summer. Average 24 hrs./wk.

KRAD 278
RADIOLOGIC TECHNOLOGY II (3CR)

Prerequisites: BIOL 144, KRAD 170

This course studies disease processes of all organ systems, with an emphasis on pathology visualized on radiographs or through other image-producing modalities such as CAT scans or ultrasound exams. 3 hrs./wk.

KRAD 279
RADIOGRAPHIC POSITIONING III (3CR)

Prerequisite: KRAD 176

Students will study methods of positioning the trauma patient as well as anatomy and positioning for the skull, sinuses, facial bones and teeth. Emphasis is on special views of the skull. 3 hrs. lecture, 1 hr. lab/wk.

KRAD 280
CLINICAL TRAINING IV (2CR)

Prerequisite: KRAD 178

Students will examine the skeletal system in this class. Training opportunities in portable radiography, emergency room techniques and supervised fluoroscopy will be provided. By the end of the term, students will be expected to perform with limited supervision all the exams they have shown competence in as well as six new exams. 20 hrs./wk.

KRAD 281
PHYSICS OF X-RAY EQUIPMENT (4CR)

Prerequisites: PSCI 120, KRAD 174

Students will apply the principles of physics to the study of X-ray equipment and other diagnostic imaging devices used in the X-ray department. 5 hrs./wk.

KRAD 282
CLINICAL TRAINING V (2CR)

Prerequisites: KRAD 279, KRAD 280

Students will receive training in the areas in which they show need and will be expected to perform, under limited supervision, most department examinations. They also will begin rotation through specialty areas – CAT scan, nuclear medicine, ultrasound, vascular procedures and radiation therapy. 20 hrs./wk.

**KRAD 283
FINAL SEMINAR (3CR)**

Prerequisites: KRAD 278, KRAD 281, KRAD 282
Students will prepare for the National Registry examination by using tests and review materials designed to simulate the ARRT examinations. Completion of this course and all respiratory therapy courses with a "C" or better is required for qualification for the National Registry examination.

**KRAD 284
CLINICAL TRAINING VI (1CR)**

Prerequisites: KRAD 172, KRAD 281, KRAD 282
Students will be assigned training in areas of special need and will be evaluated on their specialty rotation areas. 24 hrs./wk.

**KRAD 285
SPECIAL PROCEDURES (3CR)**

Prerequisites: BIOL 144, KRAD 176, KRAD 279
This course covers anatomy, positioning, equipment and special tasks related to the circulatory, nervous and lymphatic systems. The role of the technologist will be stressed. 3 hrs./wk.

**KRAD 287
CLINICAL TRAINING VII (3CR)**

Prerequisites: KRAD 283, KRAD 284, KRAD 285
Students will complete evaluations for their remaining exams and skills and will make final preparation to enter the field as registered technologists. They also will be assigned to all areas of the department on a rotation basis. 39 hrs./wk.

**KRAD 288
SPECIALTY TRAINING (ELECTIVE) (9CR)**

Prerequisite: Approval of PVCC
This class offers additional training in one of the following: nuclear medicine, ultrasound, radiation therapy, thermography or computer-assisted tomography, or management/supervision. 1 hr. lecture, 16 hrs. lab/wk.

RECREATION LEADERSHIP
Refer to Health, Physical Education and Recreation (HPER) for course descriptions.

RESPIRATORY THERAPY

**RT 125
BEGINNING PRINCIPLES
OF RESPIRATORY THERAPY (4CR)**

Prerequisite: Admission to the Respiratory Therapy program

This is an introduction to respiratory therapy. Students will focus on basic anatomy, physiology, pathophysiology and respiratory therapy techniques needed in the care of pulmonary disease patients. Students will have contact with patients after two to three weeks of introductory material. Lab time also is scheduled. 6 hrs. lecture, 16 hrs. lab/wk. Summer.

**RT 130
RESPIRATORY THERAPY EQUIPMENT (4CR)**

Prerequisite: Admission to the Respiratory Therapy program

The equipment used in providing basic patient care will be introduced. Topics include equipment for oxygen therapy, humidity and aerosol therapy and IPPB. Students gain hands-on experience in the lab before actually treating patients. 6 hrs. lecture, 8 hrs. lab/wk. Summer.

**RT 135
CARDIOPULMONARY MEDICINE I (1CR)**

Prerequisite: Admission to the Respiratory Therapy program

This is the first of three courses in which the medical director of the program will lecture. This course is an introduction to the diagnostic procedures used by the pulmonary physician in evaluating patients with respiratory disease. The class also provides information on the pathology of disease states the student will encounter. 2 hrs. lecture/wk. Summer.

**RT 220
CLINICAL
CARDIOPULMONARY PHYSIOLOGY (2CR)**

Prerequisite: Successful completion of summer sequence of respiratory therapy courses

This is a comprehensive study of the physiology and pathophysiology of the pulmonary, cardiovascular and renal systems as they relate to respiratory therapy. 2 hrs. lecture/wk. Fall.



RT 230
CLINIC TOPICS AND PROCEDURES I (4CR)

Prerequisite: Successful completion of summer sequence of respiratory therapy courses

In this lecture and lab course, students will focus on basic care, emergency care and introductory material on mechanical ventilators and critical care. 3 hrs. lecture, 3 hrs. lab/wk. Fall.

RT 231
CLINIC TOPICS AND PROCEDURES II (4CR)

Prerequisite: Successful completion of the fall sequence of respiratory therapy courses

Critical care and more sophisticated aspects of respiratory therapy will be emphasized in this lab/lecture course. Medical ethics and department management will be covered. 3 hrs. lecture, 3 hrs. lab/wk. Spring.

RT 233
RESPIRATORY CARE OF CHILDREN (2CR)

Prerequisite: RT 230

Focus is on the respiratory care of neonatal and pediatric patients with emphasis on the management of cardiopulmonary disease states unique to children. Information is based on developmental anatomy and physiology, pathology, diagnostic/laboratory procedures, and equipment manipulation in acute, chronic, critical and emergency care settings. 2 hrs. lecture/wk. Spring.

RT 235
CARDIOPULMONARY MEDICINE II (2CR)

Prerequisite: Successful completion of summer sequence of respiratory therapy courses

This is a continuation of the series taught by the medical director of the program emphasizing disease states of the cardio-pulmonary system. Discussion covers the pathology, diagnosis and treatment of various diseases and the role of the respiratory therapist in the medical management of these patients. 2 hrs. lecture/wk. Fall.

RT 236
CARDIOPULMONARY MEDICINE III (2CR)

Prerequisite: Successful completion of the fall sequence of respiratory therapy courses

This is a continuation of the medical director's discussion of pulmonary diseases, their pathology and their treatment. 2 hrs. lecture/wk. Spring.

RT 240
RESPIRATORY PHARMACOLOGY (2CR)

Prerequisite: Successful completion of the summer sequence of respiratory therapy courses

This class presents all the pharmacology respiratory therapists provide. A general study of most of the drugs used in the care of patients with cardio-pulmonary problems is also included. Drugs administered during a code blue also are stressed. 2 hrs. lecture/wk. Fall.

RT 271
CLINICAL PRACTICE I (4CR)

Prerequisite: Successful completion of summer sequence of respiratory therapy courses

In the first eight-week period, students will give basic care to adults and children. In the second eight-week period, they will concentrate on critical care medicine giving treatments in the intensive care unit. Also during the semester students will learn to intubate under the guidance of anesthesia personnel, will go on rounds with the medical director of the program and will learn to perform arterial punctures. 24 hrs. clinic/wk. Fall.

RT 272
CLINICAL PRACTICE II (4CR)

Prerequisite: Successful completion of the fall sequence of respiratory therapy courses

Two eight-week quarters will emphasize critical care of adults and newborns. Students will participate in rehabilitation, department management, intubations and medical rounds rotations. 24 hrs./wk. Spring.

SECRETARIAL CAREERS

SEC 101 KEYBOARDING (1CR)

Students will learn to operate a computer keyboard using the touch-typing system and to build speed and accuracy in entering data. 17 hrs. instruction.

SEC 105 SHORTHAND REFRESHER: SHORT COURSE (1CR)

This course is designed as a review of Gregg shorthand. The student will review theory, brief forms and outlines, write shorthand and transcribe their notes to produce mailable copy. 1 hr./wk.

SEC 110 BEGINNING TYPING (3CR)

Students will develop speed and accuracy by learning to use the alphabetic, numeric and symbol keys by touch; identify and operate the basic machine parts and special purpose keys; and, format and type personal correspondence and business documents – letters, reports, tables and forms. Student will also learn correction techniques, word division and proofreading skills. 3 hrs. class, 2 hrs. lab/wk.

SEC 115 TYPING IMPROVEMENT (1CR)

Prerequisite: SEC 110 or equivalent

Students will use a diagnostic approach to develop typing speed and accuracy. 1 hr./wk.

SEC 122 INTERMEDIATE TYPING (3CR)

Prerequisite: SEC 110

Students will type business letters using standard letter styles, block, modified block and AMS; format letters with special features; center ruled or boxed tables; and, type memos, manuscripts, magazine articles, mailing labels, itineraries, agendas, financial statements and legal documents. Students will build speed and accuracy in keyboarding and production skills. 3 hrs. class, 2 hrs. lab/wk.

SEC 125 SHORTHAND I (3CR)

Prerequisite or corequisite: SEC 110

Students will learn the principles of Gregg shorthand theory, develop the ability to read and write brief form and outline symbols, write simple unpreviewed material and transcribe mailable copy by applying the skills of proofreading, error correction, letter placement, letter styles, word division, spelling and punctuation. 3 hrs. class, 2 hrs. lab/wk.



SEC 126 SHORTHAND II (3CR)

Prerequisite: SEC 125

The focus of this course is on reading and writing Gregg shorthand symbols at a faster rate. The student will write unpreviewed dictated material at higher rates of speed, construct outlines for unfamiliar words during dictation, transcribe mailable correspondence and handle simple problems of office style dictation. 3 hrs. class, 2 hrs. lab/wk.

SEC 128 ELECTRONIC TYPEWRITER (1CR)

Prerequisite: SEC 101

The student who successfully completes this course will be able to set margins, set tabs, use appropriate correction techniques, set typing formats, type tables, and use the memory, storage, and print options on an electronic typewriter and CRT display. 1 hr./wk.

SEC 130 STENOSCRIPT SPEEDWRITING SHORTHAND (3CR)

Prerequisite or co-requisite: SEC 110

The student will develop fluency in reading and writing notes in abbreviated longhand, develop the ability to construct outlines, take dictation, improve English, spelling and punctuation skills and transcribe notes into mailable copy. 3 hrs. class, 2 hrs. lab/wk.

SEC 131 STENOSCRIPT DICTATION TRANSCRIPTION (3CR)

Prerequisite: SEC 130

Students will review shorthand theory, increase shorthand vocabulary, take dictation at higher speeds for sustained periods of time, increase accuracy and speed in reading, writing and transcribing shorthand notes, and produce mailable transcripts. 3 hrs. class, 2 hrs. lab/wk.

SEC 135**ELECTRONIC CALCULATORS (1CR)**

Students will review basic arithmetic, operate the electronic calculator by touch building speed and accuracy, use basic calculator functions and operating controls and solve application problems. 1 hr. class, 1 hr. lab/wk.

SEC 136**RECORDS MANAGEMENT (3CR)**

Methods for developing and controlling an office records management program are discussed in this class. Selection of equipment for active, semiactive, and inactive records are covered along with procedures for document, card and special records; microrecords; mechanized and automated records; and, records storage, retention and transfer. Students will file documents using alphabetic, subject, consecutive numeric, terminal digit numeric, and geographic filing systems using requisition, charge out and transfer procedures. 3 hrs./wk.

SEC 142**LEGAL TRANSCRIPTION (3CR)**

Prerequisite: SEC 122

This course is a systematic approach to learning legal vocabulary. At the end of the course, students will be able to spell, define, pronounce, and use in proper context 750 legal terms. They will also learn to use legal reference sources and transcribe legal documents from shorthand notes or dictation using proper formats and typing rules. 3 hrs. class, 2 hrs. lab/wk. Spring.

SEC 184**MEDICAL TRANSCRIPTION (3CR)**

Prerequisite: SEC 122

In this study of medical transcription, the student will learn to spell, define, pronounce and use in proper context 1,000 medical terms. They will also learn to use medical reference books and transcribe medical case studies using proper formats and typing rules. 3 hrs. class, 2 hrs. lab/wk. Spring.

SEC 221**PRODUCTION TYPING (3CR)**

Prerequisite: SEC 122

Students will develop advanced typing skill by typing projects in specialized areas of business – insurance, banking, travel bureau, government, energy, electronics, legal and medical. Use storage, format and editing features to produce documents. Emphasis is on building production skills and techniques in editing, abstracting information, making decisions, setting

priorities, planning work flow, following directions and working under pressure. 3 hrs. class, 2 hrs. lab/wk.

SEC 223**MACHINE TRANSCRIPTION (3CR)**

Prerequisite: SEC 122

Students will learn to operate dictation and transcription equipment, review and apply English skills, use proofreading skills, and make style and formatting decisions to produce mailable documents – memo, letters, manuscripts, tables and specialized correspondence. 3 hrs. class, 2 hrs. lab/wk.

SEC 225**DICTATION AND TRANSCRIPTION (3CR)**

Prerequisites: SEC 122 and SEC 126

Students will develop speed, accuracy and endurance in reading, writing and transcribing Gregg shorthand symbols. They will increase vocabulary of shorthand outlines, construct new or unfamiliar words, increase dictation speed, and make correct spelling, capitalization and punctuation decisions when transcribing to produce mailable copy. 3 hrs. class, 2 hrs. lab/wk. By arrangement.

SEC 230**SECRETARIAL PROCEDURES I (3CR)**

Prerequisite or corequisite: SEC 122

This course is designed to enable students to identify sources for professional development, apply knowledge of organizational planning processes, use proper telephone techniques, apply business communication skills to produce routine correspondence, use efficient transcription procedures, process mail, coordinate business meetings, make travel arrangements, process mail and distribute information, and use time management and work organization techniques. 3 hrs./wk. Fall.

SEC 231**SECRETARIAL PROCEDURES II (3CR)**

Prerequisite: SEC 230

In this course, the student will select a secretarial, medical or legal specialty. Using an office simulation approach, students will take telephone messages, schedule or cancel appointments, compose routine correspondence, transcribe business documents using proper formats, set up files and file correspondence, and maintain client cards, tickler files and financial records. 3 hrs./wk. Spring.

**SEC 272 (2CR)
MANAGEMENT SEMINAR**

The focus of this course is on efficient utilization of human and material resources. The student will be able to describe and apply the five major management functions: planning, organizing, staffing and human resources, leading and interpersonal influence, and controlling. 2 hrs./wk. Offered every third semester.

**SEC 275 (2CR)
HUMAN RELATIONS SEMINAR**

This course introduces the student to the concepts of human relations in the work environment. The student will be able to identify and apply concepts of motivation, values, individual and group behavior, assertiveness, TA, communication, change, creativity and stress. 2 hrs./wk. Offered every third semester.

**SEC 277 (2CR)
ADMINISTRATIVE OFFICE
MANAGEMENT SEMINAR**

In this study of office management, students will learn to manage an office by applying the principles of office management to human resources, office systems and administrative services and operations. 2 hrs./wk. Offered every third semester.

**SEC 283
SECRETARIAL INTERNSHIP I (1CR)**

Prerequisite: Admission to Secretarial Careers Program

Students will gain work experience in an approved training situation under instructional supervision. The course provides practical experience in the use of skills acquired in secretarial specialty courses. 15 hrs. on-the-job training/wk.

**SEC 284
SECRETARIAL INTERNSHIP II (1CR)**

Prerequisite: Admission to Secretarial Careers Program

Students will gain work experience in an approved training situation under instructional supervision, providing practical experience in the use of skills acquired in secretarial specialty courses. 15 hrs. on-the-job training/wk.

**SEC 285
SECRETARIAL INTERNSHIP III (1CR)**

Prerequisite: Admission to Secretarial Careers Program

Students will gain work experience in an approved training situation under instructional supervision, pro-

viding practical experience in the use of skills acquired in secretarial specialty courses. 15 hrs. on-the-job training/wk.

SOCIOLOGY

**SOC 122
SOCIOLOGY (3CR)**

This overview of social life covers group structure and processes, social interaction and examination of major institutions. Theories, methods of study and uses of social research will be examined. 3 hrs./wk.

**SOC 125
SOCIAL PROBLEMS (3CR)**

Selected social problems from crime to racism will be analyzed. The history and development of each problem will be examined from a variety of perspectives, as well as possible solutions. 3 hrs./wk.

**SOC 131
MARRIAGE AND THE FAMILY (3CR)**

This is an examination of the institutions of marriage and family. It will emphasize changing roles, family formation, socialization, domestic conflict, interaction among family members and marriage partners, and the role of marriage and family in society. 3 hrs./wk.

**SOC 146
SOCIAL WELFARE (3CR)**

Social welfare and its relationship to other social systems in America will be introduced. The social, economic and political factors that foster inequality will be examined as well as social welfare as a response to social deprivation. 3 hrs./wk.

**SOC 147
SOCIAL WORK AND SOCIAL SERVICES (3CR)**

Students will study social work as a profession in this class. Origins, values, skills, fields of service and current issues in social work will be analyzed. 3 hrs./wk.

**SOC 152
PERSPECTIVES ON AGING (3CR)**

The social aspects of aging will be identified in this class. Areas of special interest include research themes and demographic trends, aging and its relationship to family, economy, politics, religion and education, the effect of cultural values on behavior, and the future of the elderly. 3 hrs./wk.

SPEECH

SPD 120 INTERPERSONAL COMMUNICATION (3CR)

In this basic speech course, students will study the principles of effective communication in one-to-one relationships and in small groups. They will apply these principles in a variety of learning exercises and situations. Individualized talks may be given, but everyday communication is stressed. 3 hrs./wk.

SPD 121 PUBLIC SPEAKING (3CR)

This fundamental speech course emphasizes speech organization, development of ideas, audience analysis and delivery. Students will deliver informative and persuasive speeches in the impromptu, extemporaneous and manuscript styles. 3 hrs./wk.

SPD 122 GROUP DISCUSSION (3CR)

Students will participate in small groups to study the principles of effective group dynamics and leadership skills and practice these principles in class. 3 hrs./wk.

SPD 125 PERSONAL COMMUNICATION (3CR)

An integration of interpersonal communication and public speaking, this course will focus on communication theory, listening, self-concept, language and perception. It will also discuss types of speaking including impromptu, informative and persuasive speaking. Emphasis will be placed on the natural relationship that exists between one-to-one and public communication. 3 hrs./wk.

SPD 128 BUSINESS AND PROFESSIONAL SPEECH (3CR)

Students will improve their verbal communications skills both formally and informally by studying interviewing techniques, making effective presentations, working in groups, negotiating skills, studying listening techniques, and recognizing verbal and nonverbal messages. The course is designed for the student presently working in business or planning to pursue a business degree. 3 hrs./wk.

SPD 130 ELEMENTARY DEBATE (3CR)

Theories of argumentation and debate will be introduced. Students will attend 2 to 8 weekend intercollegiate debate tournaments a semester. 3 hrs./wk.

SPD 132 INTERMEDIATE DEBATE I (3CR)

Prerequisite: SPD 130 or equivalent

This is a continuation of argumentation and debate theories. Students will attend 2 to 8 weekend intercollegiate debate tournaments a semester. 3 hrs./wk.

SPD 230 INTERMEDIATE DEBATE II (3CR)

Prerequisite: SPD 132 or equivalent

Intercollegiate debates will be stressed in this review of argumentation and debate theories. Students will attend 2 to 8 weekend debate tournaments each semester. 3 hrs./wk.

SPD 235 ADVANCED DEBATE (3CR)

Prerequisite: SPD 230 or equivalent

Students will participate on the senior level in intercollegiate debate, attending 2 to 8 debate tournaments a semester. 3 hrs./wk.

SPD 298 INTERCULTURAL COMMUNICATION: GREAT BRITAIN AND THE UNITED STATES (3CR)

In this travel-for-credit course, students will visit selected cities in Great Britain where they will compare British and U.S. languages, values and institutions. Offered periodically.

THEATER

THEA 120 INTRODUCTION TO THEATER (3CR)

Students will be introduced to a variety of theatrical experiences, read great plays and see live theater presentations. They will also discuss theater practices, dramatic literature and the history of the theater. 3 hrs./wk.

THEA 123 IMPROVISATION FOR THEATER (1CR)

Theater improvisation will be introduced in this class which emphasizes creative stage activities not requiring a written script. 1 hr./wk.

**THEA 125
THEATER FOR CHILDREN (3CR)**

Students with no acting experience can explore children's theater in this class. They will study the difference between theater for and by children and the adaptation of various forms of children's literature. Performances will be held at area grade schools. 3 hrs./wk. plus rehearsals and performances.

**THEA 130
ACTING I (3CR)**

The fundamentals of acting will be studied in this class. Emphasis will be on discovering and expanding creative potential through exercises in self-awareness, posture, movement, voice and personality projection. Students will take part in a final acting project performance. 3 hrs./wk. plus rehearsals and performances.

**THEA 133
THEATER PRACTICUM I (2CR)**

Students can gain practical experience in technical theater techniques in this class. 4 hrs. lab/wk.

**THEA 135
MAKEUP (1CR)**

Students will study and practice applying stage makeup. 1½ hr. lecture, 1½ hr. lab/wk. for 5 wks.

**THEA 137
LIGHTING (1CR)**

Students will study and practice handling stage lighting. 1½ hr. lecture, 1½ hr. lab/wk. for 5 weeks.

**THEA 140
BASIC STAGECRAFT (1CR)**

This course provides students with stagecraft theory as well as practical experience in building and painting stage scenery. 1½ hr. lecture, 1½ hr. lab/wk. for 5 wks.

**THEA 225
READER'S THEATER (3CR)**

Students will combine acting, interpretation and rhetoric as they analyze and perform prose, poetry and dramatic literature and present public performances. 3 hrs./wk. plus rehearsals.

**THEA 230
ACTING II (3CR)**

Prerequisite: THEA 130

This continuation of Acting I will focus on more in-depth character analysis and development, emphasizing the actor's responsibility in creating the character. 3 hrs./wk. plus rehearsals and performances.

**THEA 233
THEATER PRACTICUM II (2CR)**

Prerequisite: THEA 133

This class provides additional practice in technical theater techniques. 4 hrs. lab/wk.

**THEA 240
COSTUMING (1CR)**

Students will study casting and practice creating costumes. 1½ hr. lecture, 1½ hrs. lab/wk. for 5 wks.

**THEA 243
SET DESIGN (1CR)**

Students will study set design and practice designing stage sets. 1½ hr. lecture, 1½ hr. lab/wk. for 5 wks.

**THEA 258
THE SHAKESPEARE PLAYS (3CR)**

This course is an introduction to the plays of Shakespeare. Students will read and view on cable television selected plays.

**THEA 298
BACKSTAGE ON BROADWAY (2CR)**

In this travel-for-credit course, students will have a week of intensive study on professional New York theaters. The course will involve five 1-hour sessions on campus and five full days of study on location in New York City. Sessions on campus will cover such units as working in professional theaters, American theater history, writing theater criticism, and initiating theater research. While in New York, time will be spent in daily class sessions, doing theater research at special performing arts archives, touring professional theater facilities, seeing professional theater productions and visiting with various guest lecturers. Spring.



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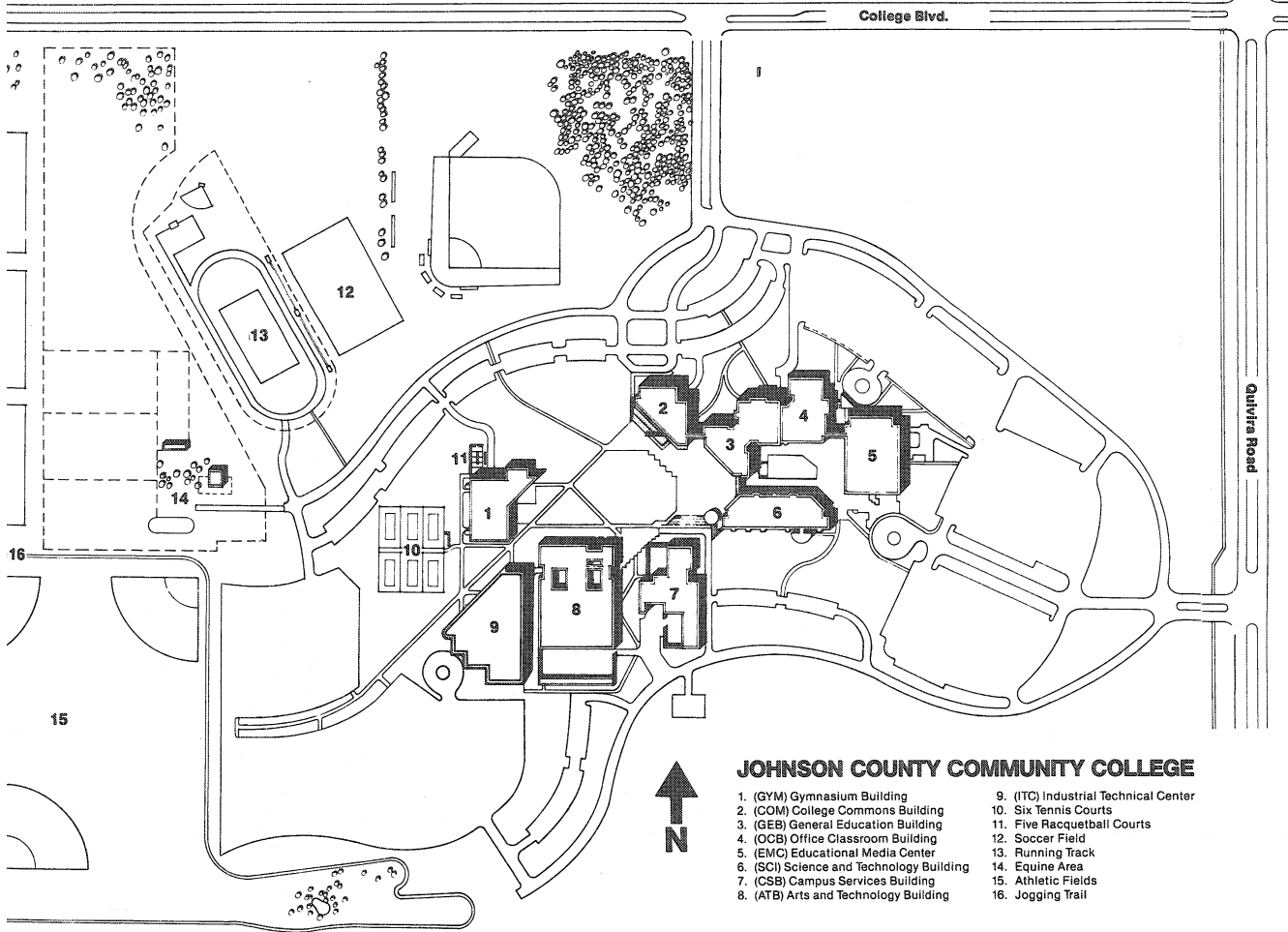
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- JOHNSON COUNTY COMMUNITY COLLEGE**
- | | |
|--|--------------------------------------|
| 1. (GYM) Gymnasium Building | 9. (ITC) Industrial Technical Center |
| 2. (CCM) College Commons Building | 10. Six Tennis Courts |
| 3. (GEB) General Education Building | 11. Five Racquetball Courts |
| 4. (OCB) Office Classroom Building | 12. Soccer Field |
| 5. (EMC) Educational Media Center | 13. Running Track |
| 6. (SCI) Science and Technology Building | 14. Equine Area |
| 7. (CSB) Campus Services Building | 15. Athletic Fields |
| 8. (ATB) Arts and Technology Building | 16. Jogging Trail |

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