

# JCCC

Johnson  
County  
Community  
College



**Catalog of Courses  
and General Information**

**1990-1992**

### **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, handicap or veteran status. The administration further extends its commitment to fulfilling and implementing the federal, state and local 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, KS 66210-1299, (913) 469-8500, or The Director, Office of Civil Rights, HHS, Washington, D.C. 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 – State Board of Nursing and National League for Nursing; Paralegal – American Bar Association; Respiratory Therapy – American Medical Association and 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 is effective July 1, 1990, to June 30, 1992.**

This catalog is for information only and does not constitute a contract. This catalog is accurate at the time of printing. However, 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 this catalog.



# JCCC

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Johnson  
County  
Community  
College

Johnson County Community College  
12345 College at Quivira  
Overland Park, Kansas 66210-1299

## Table of Contents

<b>Mission of Johnson County Community College</b> .....	<b>3</b>
<b>Message from the President</b> .....	<b>4</b>
<b>Board of Trustees</b> .....	<b>5</b>
<b>Academic Calendar</b> .....	<b>6</b>
<b>Admission</b> .....	<b>9</b>
Admission Policies .....	10
Admission Procedures – Credit .....	10
Programs with Selective Admission .....	12
Admission Procedures – Non-credit .....	15
<b>Registration, Tuition and Fees</b> .....	<b>17</b>
Registration Procedures .....	18
Adding and Dropping a Class .....	19
Tuition and Fees .....	19
Refunds .....	20
Textbook Costs.....	20
<b>Student Financial Services</b> .....	<b>21</b>
Application for Financial Assistance .....	22
Types of Financial Assistance.....	22
Satisfactory Academic Progress.....	24
<b>Student Support Services</b> .....	<b>27</b>
Adults Unlimited Program .....	28
Alumni Association.....	28
Athletics, Intercollegiate and Intramural .....	28
Bookstore .....	28
Career Planning and Placement Center .....	28
Children’s Center .....	28
Clubs and Organizations .....	29
Counseling Center .....	29
Dental Hygiene Clinic .....	29
Drama .....	29
Food Service .....	29
Forensics .....	29
Instructional Support Services.....	29
Library .....	30
Music Organizations.....	30
Phi Theta Kappa .....	30
Special Services .....	30
Student Activities Program.....	31
Student Government.....	31
Student Housing .....	31
Student Publications .....	31
Testing/Assessment Center .....	31
<b>Academic and Student Policies and Procedures</b> .....	<b>33</b>
Academic Progress .....	34
Academic Records Retention .....	35
Academic Renewal.....	35
Access to Student Information .....	35
Advanced Standing Credit .....	36
Attendance .....	36
Auditing a Class .....	37
Classes by Arrangement.....	37
Credit Transferred from Other Colleges .....	37
Grading System .....	37
Pass/Fail Grading System.....	38
Grade Changes.....	38

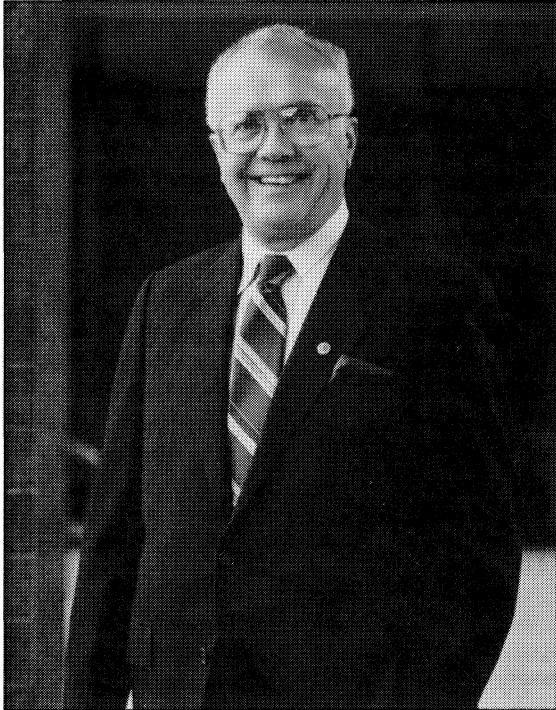
Grade Point Average .....	38
Honors .....	38
Parking .....	38
Records on Hold .....	39
Sexual Harassment of Students.....	39
Smoking Policy .....	39
Student Code of Conduct .....	40
Student Grievance .....	41
Student Health.....	41
Transcript Records .....	41
<b>Continuing Education and Community Services</b> .....	<b>43</b>
Adult Basic Education/ General Educational Development .....	44
Business and Industry Institute .....	44
Center for Continuing Professional Education.....	44
Center for Literary Culture.....	45
Citizens Forums .....	45
CLEAR Program .....	45
Community Chorus .....	45
Community School Program .....	45
Community Services Courses.....	45
Conferences and Workshops .....	46
Cultural Arts Programming.....	46
Extension Courses.....	46
Gallaudet University Regional Center.....	46
Lifetime Learning Institute .....	46
Speakers Bureau.....	46
Special Events .....	46
Sports Clinics for Youth .....	46
Tours.....	46
Youth Program .....	46
<b>Non-traditional Programs of Study</b> .....	<b>47</b>
Honors Program.....	48
International Education .....	49
Study Abroad .....	49
Television Courses .....	49
Travel for Credit .....	49
<b>Graduation, Degree and Certificate Programs</b> .....	<b>51</b>
Graduation Requirements .....	52
Graduation with Honors .....	52
Commencement Exercises.....	52
Associate Degrees .....	52
Associate of Arts Degree .....	53
Associate of Arts Core Curriculum .....	55
Transfer Programs .....	55
Transfer Information .....	57
Career Programs.....	57
Associate of Science Degree .....	58
Associate of Applied Science Degree .....	60
Certificate of Completion .....	62
Johnson County Area Vocational Technical School .....	62
Career Program Descriptions .....	62
<b>Course Prefix Listing</b> .....	<b>97</b>
<b>Courses by Division Listing</b> .....	<b>98</b>
<b>Academic Offerings</b> .....	<b>99</b>
Course Listings.....	100
<b>Staff</b> .....	<b>197</b>
<b>Index</b> .....	<b>215</b>

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## **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 high-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 help students benefit from academic programs;
- providing college credit and non-credit instructional programs and support services to meet the needs of special clientele, including the mentally and physically disabled, the gifted and 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 celebrates its 20th anniversary, it continues to be among only a handful of schools nationwide that set the standards for community colleges. 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. Johnson Countians support us with their tax dollars and, in ever-increasing numbers, as students and program participants. Of special importance are our efforts in lifelong learning and business services.

We also intend to play an increasingly prominent role in the county's cultural development with the opening in 1990 of the new Cultural Education Center, the county's first comprehensive performing arts center. A grand opening is scheduled for the fall of 1990 and a gala performance event is set for January 1991.

Other exciting projects have changed the look of the campus. In January 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 receive training at the ITC. The ITC also provides badly needed classroom and office space to help us meet our growing credit and non-credit enrollments.

In addition, a new 800-space parking structure is under construction and a new children's center was completed this year. Also, a renovation of the College Commons is under way, and additional recreation facilities are being built.

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. This said, it is important to note that our primary commitment remains providing excellent classroom learning opportunities. Good teaching is our most valuable asset. That's why we continue to stress the development of innovative approaches to traditional subjects such as English, mathematics, history and the social sciences.

Each year the Burlington Northern Foundation honors a number of our faculty members for their outstanding efforts in the classroom. Three receive cash awards of \$1,500. Each of the faculty award-winners and nominees undertakes exceptional classroom efforts to make sure his or her students excel. Their performance and results are outstanding. They and their many colleagues continue to be responsible for the acclaim JCCC receives from its peer institutions.

Managing a progressive educational institution such as 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.

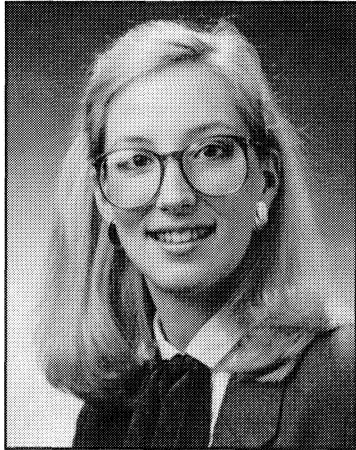
Sincerely,

Charles J. Carlsen, President

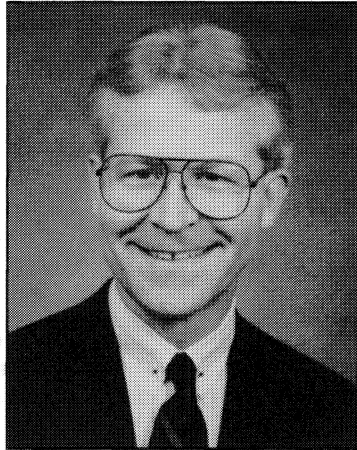


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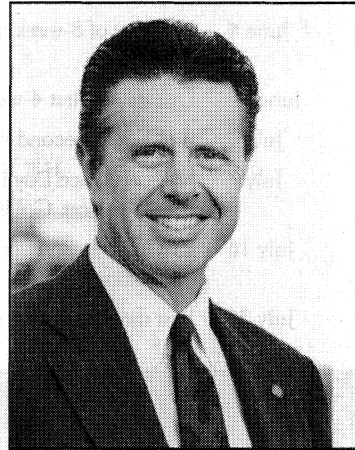
## Board of Trustees



Molly Baumgardner



Dr. Paul W. Brown



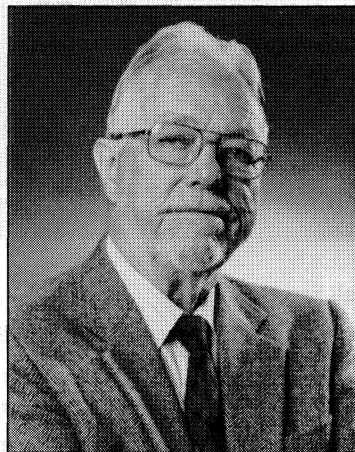
Dr. Robert Fry



Jean Hunter



Virginia Krebs



Dr. Hugh Speer

## Academic Calendar

Please check the current credit class schedule. Dates listed are subject to change.

### Summer Session 1990

- June 4 First day of 8-week and first 4-week classes.
- June 28 Last day of first 4-week classes.
- July 2 First day of second 4-week classes.
- July 4 Independence Day holiday. Classes not in session. College offices closed.
- July 16 Last day to apply for summer graduation.
- July 26 Last day of summer session.



### Fall Semester 1990

- Aug. 16 First day of fall credit classes.
- Sept. 3 Labor Day. Classes not in session. College offices closed.
- Nov. 1 Last day to apply for fall graduation.
- Nov. 22-25 Thanksgiving holiday. Credit classes not in session. College offices closed.
- Dec. 10 Last day to drop a 16-week class.
- Dec. 11-14 Final exams.
- Dec. 17 Last day of fall semester.
- Dec. 24-Jan. 1 Christmas and New Year's holiday. College offices closed.

**Note:** Saturday credit classes begin Aug. 18 and end Dec. 8. Saturday and Sunday classes will not meet Nov. 24 and 25.

### Spring Semester 1991

- Jan. 14 First day of spring credit classes.
- Feb. 18 President's Day holiday. Classes not in session. College offices closed.
- March 18-23 Spring break. Credit classes not in session. College offices open.
- April 1 Last day to apply for spring graduation.
- May 13 Last day to drop a 16-week class.
- May 14-17 Final exams.
- May 17 Commencement.
- May 20 Last day of spring semester.
- May 27 Memorial Day. Classes not in session. College offices closed.

**Note:** Saturday credit classes begin Jan. 19 and end May 11. Saturday and Sunday credit classes will not meet March 23 and 24.

### Summer Session 1991

- June 3 First day of 8-week and first 4-week classes.
- June 27 Last day of first 4-week classes.
- July 1 First day of second 4-week classes.
- July 4 Independence Day holiday. Classes not in session. College offices closed.
- July 15 Last day to apply for summer graduation.
- July 25 Last day of summer session.

### Fall Semester 1991

- Aug. 15 First day of fall credit classes.
- Sept. 2 Labor Day. Classes not in session. College offices closed.
- Nov. 1 Last day to apply for fall graduation.
- Nov. 28-31 Thanksgiving holiday. Credit classes not in session. College offices closed.
- Dec. 9 Last day to drop a 16-week class.
- Dec. 10-13 Final exams.
- Dec. 16 Last day of fall semester.
- Dec. 23-Jan. 1 Christmas and New Year's holiday. College offices closed.

**Note:** Saturday credit classes begin Aug. 17 and end Dec. 7. Saturday and Sunday classes will not meet Nov. 30 and Dec. 1.



### Spring Semester 1992

- Jan. 13 First day of spring credit classes.
- Feb. 17 President's Day holiday. Classes not in session. College offices closed.
- March 16-21 Spring break. Credit classes not in session. College offices open.
- April 1 Last day to apply for spring graduation.
- May 11 Last day to drop a 16-week class.
- May 12-16 Final exams.
- May 16 Commencement.
- May 18 Last day of spring semester.
- May 25 Memorial Day. Classes not in session. College offices closed.

**Note:** Saturday credit classes begin Jan. 18 and end May 9. Saturday and Sunday credit classes will not meet March 21 and 22.

### Summer Session 1992

- June 8 First day of 8-week and first 4-week classes.
- July 2 Last day of first 4-week classes.
- July 3 Independence Day holiday. Classes not in session. College offices closed.
- July 6 First day of second 4-week classes.
- July 15 Last day to apply for summer graduation.
- July 30 Last day of summer session.

This calendar is accurate at the time of printing. The JCCC board of trustees has the right to change the calendar without notice.

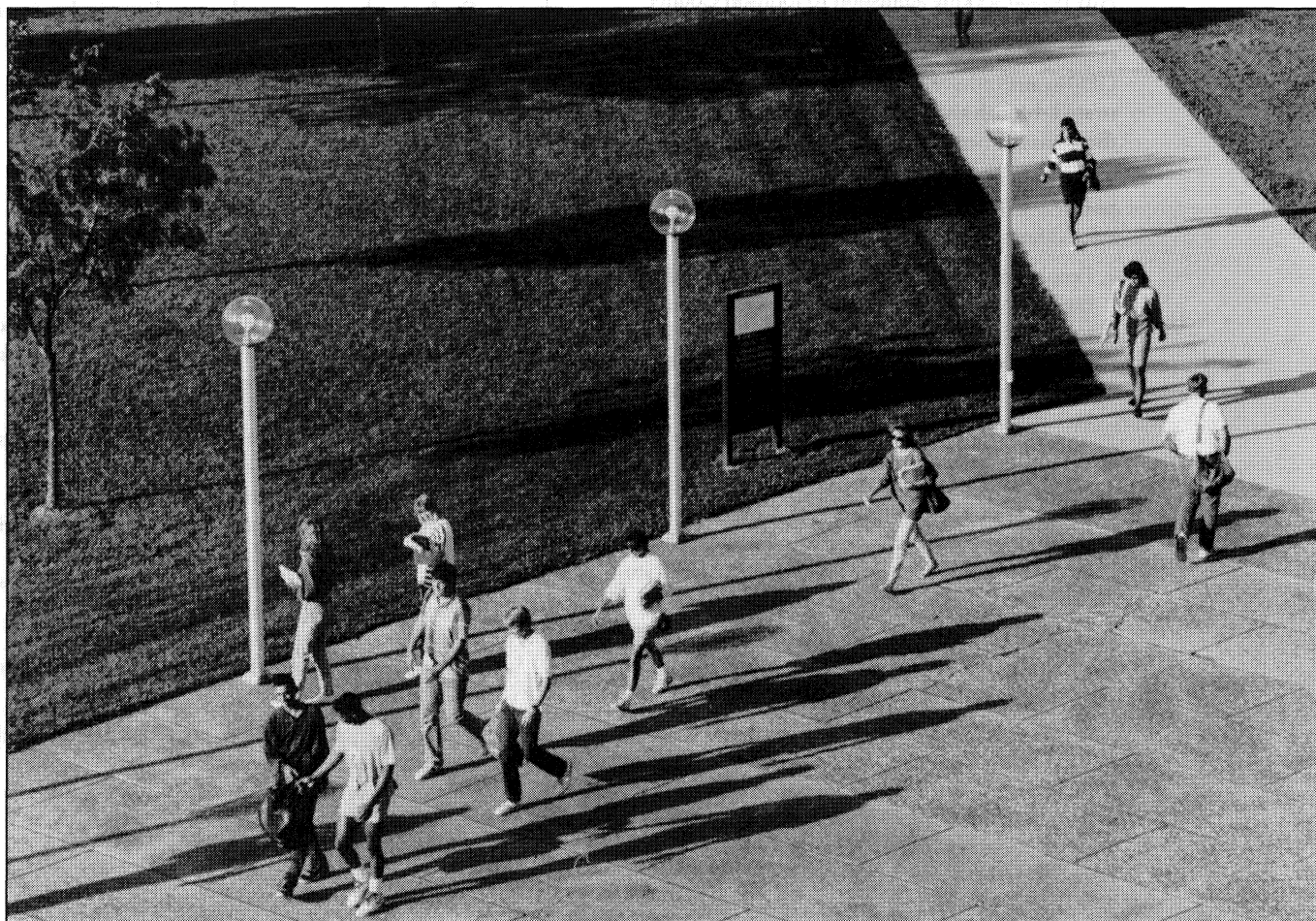


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## Admission



### Admission Policies

#### Admission Procedures – Credit

- New Students
- Former Students
- Students on Restricted Enrollment
- Affiliate Programs
- International Students
- Resident Aliens
- Foreign Students
- Visiting Foreign Students
- KRCHE
- College Credit Class Options for High School Students

#### Programs with Selective Admission

- Nursing
- Articulation of Licensed Practical Nurses
- Dental Hygiene
- Interpreter Training
- Mobile Intensive Care Technician
- Paralegal
- Respiratory Therapy

#### Admission Procedures – Non-credit

## Admission Policies

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

These individuals may be admitted with special student status as defined below. People in this category are considered non-degree seeking students.

1. People 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 high school units, 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.
2. People 18 or older who do not have a high school diploma or GED certificate, who have not completed the student assessment process and who are not degree seeking also may be admitted with special student status.

Priority for admission will be considered in this 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 interests 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 to JCCC for the first time, new students should follow these steps:

1. Complete an application form and return it to the Admissions and Records Office. Application forms are available from the Admissions and Records Office or in the credit class schedule.
2. Have official copies of transcripts sent to the Admissions and Records Office at JCCC.
  - a. Students must submit an official high school transcript, including final grades and graduation date, or the results of the GED exam. (Students who graduated more than five years ago or have 15 or more hours of college credit may disregard this requirement.)

- b. Students must submit an official transcript from each college or university they have attended. Students who are currently attending another institution should have their transcript sent at the end of the semester. (Students who have a bachelor's or higher degree and are not pursuing a degree at JCCC may disregard this requirement.)

The issuing institution must mail the official transcript to JCCC. Hand-carried copies are not acceptable. Students will not be allowed to re-enroll after one semester unless all outstanding transcripts are received.

### Notes:

1. Kansas law requires individuals to live in the state six months prior to the first day of the semester or session in order to be eligible for resident tuition rates. The six-month requirement may be waived, upon appeal to the director of admissions and records, for students who were transferred or recruited by a Kansas company as full-time employees to work in the state and who have established a residence in Kansas. Non-residents, foreign and visiting international students at JCCC must pay out-of-state tuition and fees. Address changes that result in a change in Kansas residency may require validation through a residency appeal. Students should contact the Admissions and Records Office for details.
2. Students are encouraged – but not required – to submit American College Testing scores. Students planning to submit scores should take the ACT test as early as possible and request that scores be sent to JCCC.

### Former Students

Students who have attended JCCC in the past but who did not enroll the previous semester must file a new application for admission with the Admissions and Records Office. Students must provide official transcripts of all college credits earned since they last attended JCCC.

### Students on Restricted Enrollment

Students who do not make satisfactory academic progress after one semester on restricted enrollment will be subject to dismissal from JCCC for one fall or one spring semester (whichever comes first). Students must file a new application for admission and meet with a counselor to review and revise their program plan before re-enrolling at JCCC. Students will be allowed to enroll only with a release form from a counselor and will have academic warning status until such time as their G.P.A. reaches the required level of academic progress.

### **Affiliate Programs (Cooperative Programs)**

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

### **International Students**

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

1. Resident aliens are international students who have been granted permanent resident status by Immigration and Naturalization Services.
2. Foreign students are international students who are applying for an I-20 from JCCC to obtain a student "F" visa.
3. Visiting foreign students are international students who currently hold a valid visa.

### **Resident Aliens**

Resident aliens must meet all college admission policies in addition to the following requirements:

1. Provide a "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. The issuing institution must send the transcript directly to the JCCC Admissions and Records Office. 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 the JCCC assessment test **during the times specified for international students.**
  - b. Discuss course selection, based on assessment results, with a JCCC counselor. Have the counselor sign the Assessment and Advisement Verification Form (received in the Testing/Assessment Center). Course selection may be restricted because of JCCC assessment test results.

- c. Submit the signed Assessment and Advisement Verification Form to the Admissions and Records Office. Students will be allowed to enroll in classes after this form is on file.

Students who want their foreign credits evaluated should submit transcripts from all foreign postsecondary institutions to Educational Credential Evaluators Inc. in Wisconsin. **Note:** This is not required for admission to JCCC. Applications for Educational Credential Evaluators Inc. are available from the Admissions and 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 requirements:

1. Complete a Foreign Student Application Packet. The packets are available from the Admissions and Records Office.
2. Submit to the director of admissions and records 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. Specific information concerning application deadlines and other admission requirements is in the packet.

If a student is accepted for admission, the JCCC assessment process as described above under "Resident Aliens" must be completed before enrollment in classes. Course selection may be restricted because of 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 until they have satisfactorily completed one semester of credit courses at JCCC.

### **Visiting Foreign Students**

Visiting foreign students must meet all college admission policies in addition to the following requirements:

1. Present a current passport and visa to the director of admissions and 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 because of JCCC assessment test results.

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

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

### **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 KRCHE colleges and universities.

Johnson County Community College full-time students may take one course a semester at any one of these colleges at the JCCC tuition rate. This program provides a rich resource for different courses and programs, especially if students are interested in developing a creative academic program. For more information, students should consult the current credit class schedule.

### **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:

- **College Now** – This program is for high school students enrolled in selected honors or advanced placement classes for which college credit equivalency has been established. Instruction is provided on the high school campus. High school transcripts are not required at the time of enrollment. Approval from a high school principal or counselor is necessary. A schedule of College Now classes and registration forms will be available early each semester at participating high schools.
- **Quick Step** – This program is for high school students who have completed at least 15 high school units. Instruction is provided by JCCC faculty on the college campus. Students must provide high school transcripts at the time of enrollment and have their principal's or counselor's approval 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 and Records Office.



### **Programs with Selective Admission**

Admission to the college does not guarantee enrollment in any specific course or program.

#### **Nursing**

The college selects a maximum of 55 individuals for admission to the Nursing Program each year. Applications for admission to the program must be submitted to the Admissions and Records Office on or before Feb. 1 of each year to be considered for admission the following fall. All applicants must submit a high school transcript or GED certificate, transcripts of all 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. Applicants are ranked according to interview results, academic criteria and residency status. Non-residents of Johnson County will not be admitted to the program until all Johnson County residents have been considered. Final selection will be made before May 15.

Applicants accepted into the program 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 and Records Office in writing on or before June 1 of his or her intention not to accept a position in the class. 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 of Licensed Practical Nurses**

The college will provide the mechanism for articulation of licensed practical nurses into the associate degree program. Advanced standing credit may be granted to qualified applicants based on successful completion of the written challenge examination and the performance evaluation of clinical skills. Applicants must have successfully completed all supporting courses required in the first year of the nursing curriculum. 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.

Applications for admission to the program must be submitted to the Admissions and Records Office on or before Jan. 15 of each year to be guaranteed consideration for the following fall. Applicants for admission are ranked according to academic criteria, interview results and challenge exam scores. The number of applicants selected is limited to the spaces available in the second-year nursing class.

### **Dental Hygiene**

The college selects a maximum of 24 individuals for admission to the Dental Hygiene Program each year. New students entering the program begin their clinical courses 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 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 also will be required to submit residency verification. All applicants who meet the minimum academic standards will be scheduled for a personal interview.

Final selection will be made before May 15 based on the applicants' ranking. The interview results, academic criteria and residency status contribute to this process. All Johnson County residents will have bonus points applied to their ranking. County residency must be established six months before the date the application is filed in the Admissions and Records Office. State residency also is 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 a position in the program will be required to pay a \$125 tuition deposit. The deposit will be refunded if a student notifies the Admissions and Records Office in writing on or before June 1 of his or her intention not to accept a position in the class. No refunds will be made after June 1.

After May 15, all remaining qualified applicants will be reranked 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.

### **Interpreter Training**

The college selects a maximum of 26 full-time students for admission to the Interpreter Training Program each year. New students entering the program begin their coursework during the fall semester. Students must complete their interpreter training admission file on or before June 1 of each year to be considered for the following fall semester. Because final selection is based on chronological completion of the file, it is to the student's advantage to complete an application file as soon as possible during the spring semester.

Applicants must submit to the Admissions and Records Office residency verification, official high school transcripts or results of the GED exam, official college transcripts and a current audiogram. The audiogram must show sufficient hearing for students to function as interpreters. Specifically, normal hearing (0-25DB) in the speech range of 500HZ, 1000HZ and 2000HZ is required. The diagnostic hearing evaluation must include pure tone air conduction, bone conduction, speech reception threshold and speech discrimination ability.

With the exception of three spaces reserved for affiliate students from the Metropolitan Community College District, non-residents of Johnson County will not be admitted to the program until all county residents have been considered. Once their interpreter training admission file is complete, applicants will be considered on a chronological basis and will be notified by June 15 of their status in the program.

Students then have 10 days to confirm acceptance of a position in the program by paying a \$125 deposit, which will be applied to their first semester's tuition. The deposit will be refunded only if students notify the Admissions and Records Office in writing by July 1 of their intention not to accept a position in the program. No refunds will be made after July 1.

Students not initially admitted to the program will be on a waiting list. If applicants who were admitted to the program initially decide not to accept their positions, those on the waiting list will be moved into vacated positions, again on a chronological basis. Students accepting a position in the program after July 1 will be required to submit a non-refundable \$125 deposit, which will be applied to their first semester's tuition.

### **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 to be considered for admission the following spring. All applicants must submit a high school transcript or the equivalent, previous college transcripts, completed health forms, completed service-related forms, a photocopy of a current driver's license, and evidence of completion or current enrollment in an emergency medical science 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. The interview results, academic criteria and residency status will contribute to this process. Johnson County residents are given priority in admission.

### **Paralegal**

The college selects a maximum of 50 individuals for admission to the Paralegal Program each fall and spring semester (beginning spring 1991). New students accepted into the program may enter during either the fall or spring semester. Students planning to enter the program in spring 1991 must complete all program prerequisite courses during fall 1990 to be eligible for admission. Both degree and certificate options are available. Complete information on each program as well as specific admission information is in the application packet. Final acceptance is contingent on the student completing the prerequisite courses (with a minimum 2.0 G.P.A.) before the semester he or she plans to enroll in this program.

Applications for admission to the program must be submitted to the Admissions and Records Office on or before Feb. 1 for consideration for the following fall and Oct. 1 for the following spring semester. All applicants must submit by the deadline date a high school transcript or results of the GED, previous college transcripts and the results of the required tests outlined in the ap-

plication packet. Each applicant also will be required to submit residency verification. All applicants who meet the minimum academic standards will be scheduled for a personal interview with the selection committee.

Final selection prior to May 15 for the fall semester and Dec. 10 for the spring semester will be based on the ranking of applicants. The interview results, academic criteria and residency status will contribute to the ranking process. Non-residents of Johnson County will not be admitted to the program until all Johnson County residents have been considered. Applicants ranking high enough 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 and Records Office in writing of his or her intention not to accept a position in the class on or before Jan. 5 for spring and June 1 for the fall semester. No refunds will be made after the payment deadline.

After Dec. 10 and May 15, all remaining qualified applicants will be reranked for admission to the program without regard to residency. Students accepting a position in the program after Jan. 5 or June 1 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 complete the application requirements on or before Oct. 15 to be considered for admission to the clinical courses that begin the following summer. All students must have completed a minimum of 32 hours of prerequisite coursework before they can begin the clinical respiratory therapy courses in the summer session. All applicants must submit an application for admission, a high school transcript or the results of the GED, official college transcripts, two letters of reference, a completed academic criteria assessment form and an academic criteria worksheet. The last two items are in the admission packet. Applications received after Oct. 15 will not be considered until Feb. 15 for any positions remaining for the clinic year.

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 for the clinical portion of the curriculum. An overall college G.P.A. of 2.5 or greater and an ACT composite score greater than 18 is preferred. Prerequisite courses may not be repeated more than once to achieve the 2.0 G.P.A. required. All applicants who successfully meet the academic standards will be scheduled for an interview. Each applicant will be asked to bring an outline or description of his or her knowledge of respiratory care to the interview.

Final selection will be made before Dec. 20 for the Oct. 15 applicants and before May 15 for any remaining positions. Selection will be based on the ranking of applicants, with the interview results and the academic criteria contributing to the process. The 15 top-ranking Johnson County residents will be considered for 15 of the open positions. Five positions will be filled by five top-ranking Metropolitan Community College students. The program director reserves the right to fill any or all open positions with the highest-ranking qualified individuals without residency consideration if JCCC or the Metropolitan Community Colleges are unable to fill their reserved positions.

Accepted applicants will be given 10 days to accept or deny their position. All applicants who accept a position in the program will be required to pay a \$125 tuition deposit. The deposit will be refunded if a student notifies the Admissions and Records Office in writing on or before June 1 of his or her intention not to accept a position in the program. No refunds will be made after June 1.

Applicants are required to return a confirmation notice of their intent to enter the clinical year. If anyone in the first group does not accept or if someone accepts and then withdraws before the beginning of classes, the vacancy will be offered to the next highest ranking applicant. Final acceptance to the program will be contingent upon the satisfactory completion of any prerequisite coursework taken during the spring semester. In addition, accepted students will need to submit a completed health form to the program director.

Students with advanced standing status must satisfactorily complete any challenge testing and any prerequisite courses by the fall semester. Arrangements should be made as soon as possible with the program director.

## 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.







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## Registration, Tuition and Fees



### Registration Procedures

- Counseling
- Assessment
- Scheduling Classes
- Student Course Load
- Early Telephone Registration
- On-campus Registration
- Late Registration
- Registration for Late-start Classes

### Adding and Dropping a Class

- Adding a Credit Class
- Dropping a Credit Class
- Adding and Dropping Credit Classes
  - Effect on Tuition and Fees
- Adding a Non-credit Class
- Dropping a Non-credit Class

### Tuition and Fees

- Credit Class Tuition
- Returned Check Policy
- Non-credit Class Tuition

### Refunds

- Credit Class Refunds
- Non-credit Class Refunds

### Textbook Costs

## Registration Procedures

### Counseling

Degree-seeking students are required to meet with their JCCC counselor. Counselors will work with students to identify their educational and career interests in order to create an educational plan. Counselors also will inform students about course prerequisites, the transferability of courses and the sequence in which courses should be taken.

When their questions have been answered and their educational plan developed, students are ready to register. The exact time and day to register will be listed in the credit class schedule available each semester at the Admissions and Records Office.

### Assessment

As part of JCCC's philosophy of assisting students to successfully achieve their academic goals, all students who enroll in credit classes are required to participate in the assessment process with the following exceptions:

- 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 administrator and the dean of instruction.)

For the following students, 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 for 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 that their educational objective is "personal interest or self-improvement" or "improving skills for present job" 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 own classes. Counselors are available to assist. 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

For the fall or spring semester, students enrolled in 12 credit hours or more are considered full-time; those enrolled in nine to 11 credit hours are three-quarter-time; those enrolled in six to eight credit hours are half-time. In the summer session, students enrolled in six credit hours or more are considered full-time students; those enrolled in fewer than six credit hours are part-time students.

Students wishing to enroll in more than 18 semester hours of credit for a fall or spring semester or more than nine hours of credit in the summer must receive written permission from a counselor before enrolling.

### Early Telephone Registration

Early telephone registration is open to students who have submitted an admission application or who are currently enrolled. During early registration, students may register over the telephone at times specified in the credit class schedule. New and re-admitted students must submit the application for admission to the Admissions and Records Office at least two days before registration.

### On-campus Registration

On-campus registration takes place before the beginning of the semester. Specific dates, times and locations are listed each semester in the credit class schedule.

### Late Registration

Students may register for classes after the semester begins at times specified in the credit class schedule. A \$10 late registration fee will be assessed students who initially register for the semester or session during late registration.

### Registration for Late-start Classes

Students may register for classes listed in the "Late-start Classes" section of the credit class schedule up until the day before the beginning of the class. A late fee of \$10 is charged for registration after the class begins.

See the current credit class schedule for detailed registration procedures for:

- Auditing a Class
- Affiliate Classes
- College Credit Options for High School Students
- KCRCHE Opportunities

## Adding and Dropping a Class

### Adding a Credit Class

Students may add a credit class through the first week of classes during a fall or spring semester, the first two 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.

### Dropping a Credit Class

**16-week Class:** A student may drop a class up until the day before the final examination week begins. Specific dates are listed in the credit class schedule.

**Eight-week Class:** A student may drop a class up to three days before the last day of an eight-week session.

**Four-week Class:** A student may drop a class up to two days before the last day of a four-week session.

**Classes Less than Four Weeks:** A student may drop a class up to one day before the last day of the session.

A "W" grade is recorded on the student's permanent record if a course is dropped after one quarter of the semester or session has passed. A student who withdraws from all courses at any time during the semester will not be considered currently enrolled for that semester.

**Note:** Students whose records are on "hold" will not be allowed to drop a class. See the "Records on Hold" policy.

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 with the same number of credit hours that are dropped and added simultaneously will be treated as an even exchange of tuition and fees during the refund period of each semester or session. For courses with different total credit hours that are dropped and added simultaneously, students will receive the appropriate refund percentage for the dropped course and pay the total tuition and fees for the added course. Students who drop a class on one day and add a class on another will be required to pay for the added class.

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 administrator 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 refund period, the student will be required to pay the additional tuition. If the class is dropped after one-fourth of the semester or session has passed, the student will be given a "W" for the course.

### Adding a Non-credit Class

A student may add a non-credit class any time up to the first day of the class.

### 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 a semester credit hour
Commons and	
Student User Fee .....	\$4.00 a semester credit hour
Student Activity Fee .....	\$2.00 a semester credit hour
<b>Total per Credit Hour .....</b>	<b>\$28.00</b>

#### *Out-of-state,*

#### *Foreign and Visiting International Students:*

Tuition .....	\$87.50 a semester credit hour
Commons and	
Student User Fee .....	\$4.00 a semester credit hour
Student Activity Fee .....	\$2.00 a semester credit hour
<b>Total per Credit Hour .....</b>	<b>\$93.50</b>

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 credit class schedule each semester.

For students who register early by telephone, tuition and fees are due by the date listed in the credit class schedule. For students who register on-campus, late or to audit a class, tuition and fees are due the day they register.

The college has no deferred or partial payment policy. Students will not be allowed to attend classes, enroll in classes, graduate or have a transcript issued until all tuition, fees and past-due obligations are paid.

### **Returned Check Policy**

If a student's check for tuition and fees is returned by the bank, the student will be dropped from all classes. If the student wishes to reregister, a late registration fee of \$10 and a returned check fee of \$10 will be assessed. If any check is returned by the bank, the student's records will be put on hold until he or she pays the amount of the check plus a \$10 charge. Students who have returned checks must pay all future tuition charges in cash.

If students are dropped from classes for non-payment or for a returned check and wish to be reinstated in open classes, they must reregister and pay in full within one week from the date they are dropped.

### **Non-credit Class Tuition**

Fees for non-credit classes are determined on an individual class basis. Check the Community Education Non-credit Bulletin for specific class 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. Students may apply for a refund by completing a drop form in the Admissions and Records Office. Students who have completed registration and want to withdraw from a class or classes in which they are enrolled will receive the following refund:

- 100 percent of tuition and fees if the withdrawal is processed by the Admissions and Records Office before – but not on – the first day of the semester or session.
- 80 percent of tuition and fees if the withdrawal is processed by the Admissions and Records Office
  - within two weeks after the beginning of classes for the 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 registration changes made after the specified calendar days listed in the credit class schedule. The only exceptions are if the class is canceled by the college or it is necessary to revise the class schedule, 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 and Records Office, 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. Appeals may not be considered after half of a course has been completed.

### **Non-credit Class Refunds**

A full refund will be made if the college exercises its right to cancel a class or if the class is full when a registration is received. A request for refund will be honored if a written request is received in the JCCC Admissions and Records Office 48 hours before the class begins. Exceptions to this policy may be authorized by the dean of student services.

## **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.

Procedures for obtaining refunds for textbooks and for textbook buy-back are listed in the student handbook.

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## **Student Financial Services**



### **Student Financial Services**

#### **Application for Financial Assistance**

#### **Types of Financial Assistance**

Need-based Assistance

Other Financial Assistance

### **Satisfactory Academic Progress**

Financial Aid Warning

Terms of the Financial Aid Warning

Financial Aid Exclusion

Conditions for Reinstatement  
of Financial Assistance

Appeal Process

## Student Financial Services

JCCC makes available grants, scholarships and loans to both full-time and half-time students. Some part-time employment opportunities also are 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 can be 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. Specific application and program information is given in the Student Financial Services Handbook, which is available from the Student Financial Services Office.

The information on financial aid given here is subject to change without notice. Please contact the Student Financial Services Office for details.

## Application for Financial Assistance

Students must complete an application for admission to JCCC. If applying for federal aid or other need-based assistance, the student also must complete a federal aid application. If the application is selected for verification by the federal government, signed copies of tax forms may be requested to verify information. If applying for aid not based on need, the student needs to submit only the JCCC aid application to the JCCC Student Financial Services Office. The forms are available from the JCCC Student Financial Services Office.

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 for the next academic year by **May 1**. Applications received after that date will be considered if funds remain available.

A written notification of financial assistance will be sent to the applicant as soon as all requested or required forms and verification documents have been received and reviewed and eligibility has been determined.

Financial aid will be used to pay tuition and fees; students may also request a book voucher. **Financial aid funds will not be disbursed directly to students before the fifth week of classes**, with the exception of the Stafford Loan, which is 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 all enrollment expenses, the student must pay the balance no later than the published due date.

If the student has not received the written official notification of financial assistance, the student will be responsible for payment of tuition and fees.

Financial assistance may still be awarded after tuition has been paid. In that instance, the award will 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 \$2,300 an academic year at JCCC. The grant can be applied toward any education-related expenses.
- **The Supplemental Educational Opportunity Grant** is a government grant that ranges from \$100 to \$1,000 an academic year and can be applied toward any education-related expense.
- **Need-based Board of Trustees Grants** are financial awards that range from \$175 to \$700 an academic year made to JCCC students who have a 3.0 cumulative G.P.A. and demonstrate need. Only Johnson County residents are eligible. Funds are limited and competitive.
- **Foundation Grants (need-based)** are restricted to students who have completed a federal needs analysis. Each grant has unique qualifications. For a list of these grants and their qualifications, students should refer to the student financial assistance handbook.
- **The Kansas State Scholarship** is limited to students designated as Kansas High School Scholars who have financial needs as defined by the state of Kansas. The student must apply by completing an ACT Family Financial Statement and sending this information directly to the Kansas Board of Regents.
- **Vocational Rehabilitation** supports a student's educational costs through the student's area vocational rehabilitation office. Students should contact that office to determine their eligibility. 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. 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**, a 5 percent federal government loan, is processed through JCCC. The loan ranges from \$200 to \$1,500 a year. A student may borrow a cumulative maximum of \$4,500 while he or she is enrolled at JCCC. The loan is interest-free while the student is enrolled in at least six credit hours. Repayment and interest begins nine months after leaving school.
- **Stafford Loan** funds are provided by a participating bank, savings and loan or credit union of the student's choice. Eligibility for this loan is determined by the JCCC Student Financial Services Office. A JCCC student may borrow up to \$2,625 a year (if eligible). This loan is interest-free while the student is enrolled in at least six credit hours. The student must begin repaying the loan six months after leaving school. The loan is subject to lender and guarantee fees that 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** that ranges from \$175 to \$700 an academic year is awarded to students who were graduated from a Johnson County high school the previous year and were National Merit finalists or semifinalists.
- **Academic Board of Trustees Grants** are financial awards that range from \$175 to \$700 an academic year made to JCCC students who have a 3.5 cumulative G.P.A. Only Johnson County residents are eligible. Funds are limited and competitive.
- **Talent Board of Trustees Grants** that range from \$175 to \$700 an academic year require a faculty recommendation and a 2.0 cumulative G.P.A. Only Johnson County residents are eligible. Funds are limited and competitive.

- **JCCC Athletic Grants** will pay only for tuition and books. Eligibility for athletic grants is based on academic standards established by the National Junior College Athletic Association. Awards are made upon the recommendation of the physical education department. Eligible applicants must enroll in a minimum of 12 credit hours each semester.
- **Notetaker Stipends** are available for students who wish to take notes for hearing-impaired students in their classes. This stipend will reimburse the student the tuition and activity fees for that class at the end of the semester. Students should contact Special Services for additional information.
- **The Vocational Education Scholarship** provided by the state of Kansas will award \$500 a year for up to two years to 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 in March.
- **The Paul Douglas 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 high ACT scores. The application deadline is May 1 through the Kansas Board of Regents.
- **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, which are 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 only for those courses specifically listed or indicated on each individual program plan. Participants must maintain formal enrollment 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.

VA benefit pay rates are based on the following enrollment schedule:

<b>Credit Hours Enrolled*</b>	<b>Eligibility Rate</b>
12 or more semester hours	full-time benefits
9-11 semester hours	3/4 time benefits
6-8 semester hours	1/2 time benefits

\* Fewer hours are needed to be eligible for veterans benefits during the summer session.

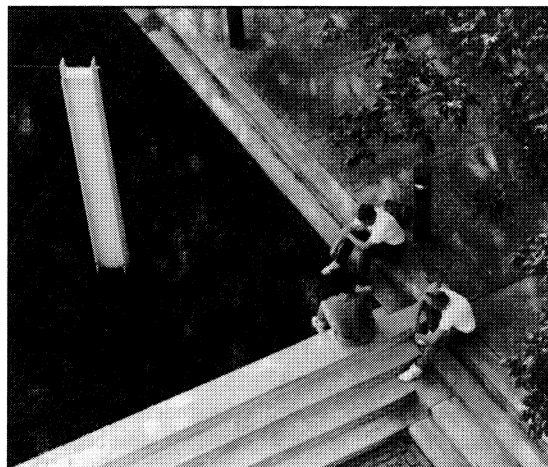
- **Corporate Billing** is available to students whose tuition is paid by their employer. The student must provide written authorization from the employer or agency verifying eligibility and specifying the terms and amount the employer agrees to pay before the date tuition is due.
- **Supplemental Loans for Students/Parent Loans 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 addition to any amount borrowed under the Stafford 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 allow repayment to be delayed while continuous school enrollment is maintained. However, interest will accumulate and periodically will be added to the balance due. This will increase the amount of the outstanding balance owed. Interest will be charged against the increased balance when actual repayment begins.
- **Many employment opportunities**, both on-campus and in the community, are available to students while they attend JCCC. Information concerning on-campus employment is available from the JCCC Human Resources Office, 252 GEB. Assistance in locating off-campus employment is available through the JCCC Career Planning and Placement Center, 155 GEB.

## Satisfactory Academic Progress

Federal and JCCC regulations require that a student must be making "satisfactory academic progress" in a certificate, degree or transfer program leading to a bachelor's degree in order to be eligible to receive aid from any federal or institutional aid or entitlement program (this includes veterans educational benefits).

Minimum standards of satisfactory academic progress are:

1. The determination of satisfactory academic progress for each student who requests financial assistance at JCCC is based on an academic transcript review of all previous enrollments at JCCC, including enrollment periods when financial aid was not requested or received.



2. Students must successfully complete 66 percent (2/3) of all credit hours attempted 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 based on the number of credit hours completed.

<i>Number of Successfully Completed Hours</i>	<i>Minimum Cum. G.P.A.</i>
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. 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.)
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 who 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 or cumulative grade points earned will automatically be issued a financial aid warning for one semester.

A student who is issued a 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 an evaluation of the student's previous academic record at JCCC.

## Terms of the 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.
2. If the student is not yet meeting the minimum standards of progress, but did complete all attempted credit hours (a minimum of six hours attempted) with grades of "C" or above, the financial aid warning period will be renewed. (Grades of "W" and "I" count as hours attempted.)
3. If neither of the preceding terms are met, the student will be placed on financial aid exclusion.

## Financial Aid Exclusion

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.

Students who attempt more than 97 hours will automatically be placed on financial aid exclusion (with the exception of Veterans Benefit recipients).

Students who do not meet the conditions or terms of financial aid warning also will be placed on financial aid exclusion.

A student placed on financial aid exclusion will be notified in writing by the Student Financial Services Office as soon as possible. However, **notice of financial aid exclusion may be retroactively issued based on an evaluation of the student's previous academic record at JCCC.**

Financial aid exclusion does not mean a student will be prohibited from attending JCCC. Such students may attend JCCC, but they 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 (a 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. (Grades of "W" and "I" count as hours attempted.) If this condition is satisfied, the student may have aid reinstated with a financial aid warning.
3. The student's written appeal is approved by the Student Affairs Committee.

## Appeal Process

Students placed on financial aid exclusion may appeal. The appeal must be submitted to the Student Financial Services Office in writing within 30 calendar days of the notice of aid termination. The appeal must be submitted on the Satisfactory Progress Appeal form available from the Student Financial Services Office. Appropriate supporting documentation such as medical bills, police reports, letters from counselors with program plans and letters from employers also should be included.

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 the student provides. 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.



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## Student Support Services



**Adults Unlimited Program**

**Alumni Association**

**Athletics, Intercollegiate and Intramural**

**Bookstore**

**Career Planning and Placement Center**

**Children's Center**

**Clubs and Organizations**

**Counseling Center**

**Dental Hygiene Clinic**

**Drama**

**Food Service**

**Forensics**

**Instructional Support Services**

Academic Achievement Center

Learning Strategies Program

Math Resource Center

Writing Center

**Library**

**Music Organizations**

**Phi Theta Kappa**

**Special Services**

Disabled Students

Hearing Impaired Program

**Student Activities Program**

**Student Government**

**Student Housing**

**Student Publications**

**Testing/Assessment Center**

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## **Adults Unlimited Program**

Adults returning to school may receive assistance with educational, career and personal decision making and goal setting through the Adults Unlimited Program. Counseling, information and referral services also are 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.

## **Alumni Association**

The JCCC Alumni Association is an organization for graduates and people who have taken at least one year of credit courses at JCCC. Graduates and others interested in joining the Alumni Association should call the JCCC Foundation Office. They will be able to meet with fellow alumni, participate in college programs and plan the future of the organization.

## **Athletics, Intercollegiate and Intramural**

Intercollegiate and intramural athletics play an important role at 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.

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 and the Kansas Jayhawk Community College Conference. Students must meet NJCAA and conference eligibility rules to compete in intercollegiate activities.

## **Bookstore**

Textbooks, classroom supplies and many miscellaneous items are available for purchase in the JCCC Bookstore. Bookstore hours of operation are listed each semester in the credit class schedule and the non-credit bulletin of classes.

## **Career Planning and Placement Center**

The center helps students explore career options and conduct job searches. The center's staff provides counseling in career/life planning and job search skills for individuals or groups. In addition, the resource center provides tools for learning the skills necessary for a job search, information on more than 20,000 occupations, corporate information and job listings.

Hundreds of current job openings are listed for students and for others. Placement services are available to Johnson County Community College students and/or alumni upon registration with the center. Extensive community and corporate files provide additional information for an effective job search. Students also may 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.

## **Children's Center**

Children may attend the Children's Center while their parent is in class or on campus for other school activities. The service is designed especially for the children of JCCC students and employees. Licensed by the state of Kansas, the center maintains a qualified staff that provides programs for children between the ages of 18 months and 10 years.

At the center, children will participate in developmentally appropriate activities that will contribute to their physical, social, emotional and intellectual growth. A rich and varied environment creates many opportunities for children to learn through individual, small- and large-group experiences. The center's staff also strives to meet each child's needs while fostering his or her positive self-image.

Parents may arrange care for their children on a regular or occasional basis by contacting the Children's Center. Early enrollment is recommended because the center is licensed to serve a limited number of children.



## Clubs and Organizations

Recognized clubs and organizations at JCCC have the approval of the Student Senate and the Student Activities Office. 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 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 be used only for club activities that are open to all club or organization members.

## Counseling Center

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

- **New student orientation.** A Counseling Center orientation session provides important academic information that students find helpful before they consult with a counselor and enroll in classes. Individual and group sessions are available.
- **Academic advising.** At Johnson County Community College, academic advising plays a significant role in the total process of educating students. Advising at JCCC is conducted in the Counseling Center and is performed by professional counselors. The counselor serves as a facilitator of communication and a coordinator of learning experiences through course, career planning and academic progress review. The counselor/advisee relationship involves making decisions in which students realize their maximum educational potential by exchanging information with a counselor. The process is ongoing, multifaceted and the responsibility of both student and counselor.
- **Academic advising that is developmental in nature.** Developmental academic advising means that a counselor helps students clarify their life and career goals and develop an educational plan for the realization of those goals.
- **Current transfer information.** The Counseling Center maintains over 100 transfer sheets with more than 20 colleges and universities. Students planning to transfer should consult a counselor to be sure that courses they enroll in will transfer.
- **Help in solving personal problems.** A counselor can provide guidance in evaluation of attitudes, goals and values. Community referrals also are available.

## Dental Hygiene Clinic

At the 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. Dental hygiene students, supervised by licensed dentists and dental hygienists, will provide these services and explain proper oral care. Students should call the clinic to make an appointment.

## Drama

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

## Food Service

The cafeteria is 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 Saturday. Hours of operation are listed each semester in the credit class schedule. In addition, vending machines are in each of the buildings on campus.

## Forensics

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

## Instructional Support Services

### Academic Achievement Center

The Academic Achievement Center helps students 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 on 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 successful students who want to improve their learning efficiency and those who feel overwhelmed by the demands of college coursework. The information learned in each of the Learning Strategies courses will improve students' performance in the other courses they are taking. For more information, students should contact the Learning Strategies instructors.

### **Math Resource Center**

The Math Resource Center offers individualized instruction and personal assistance to help students develop math 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, students should come to the Math Resource Center.

### **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 proofreading, researching, writing sentences, composing paragraphs or other areas that need improvement. An instructor is available to help students. For more information, students should contact the Writing Center.

### **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 to help students find and use the resources.

Currently, the library houses 70,000 books, 600 current periodicals, 300,000 documents on microfiche and hundreds of slides, videotapes and audio recordings. The catalog of these materials is maintained and made available to the public through interactive computer terminals.

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

Reference books, most audiovisual material, and all magazines and newspapers must be used in the library. A coin-operated photocopier is available if copies are needed.

Books are due 21 days from the day they are checked out. No fines will be assessed for overdue books, but students who fail to return library materials 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.

Occasionally, instructors may place materials on reserve and specify a loan period. Students will be charged 25 cents an hour for each reserve item kept past the loan period or \$5, whichever is less. Registration and transcript privileges will be restricted until all library obligations are met.

### **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.

### **Phi Theta Kappa**

Phi Theta Kappa is an honorary society that 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 of 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.

### **Special Services**

#### **Disabled Students**

Disabled students at JCCC have access to a variety of support services including reading, notetaking, tutoring and other services that allow disabled students to participate fully in classes. Equipment especially designed for the visually impaired and the physically disabled (such as speech synthesizers and a braille printer) also is available to students with disabilities. On campus, the buildings are equipped with ramps, elevators and restrooms designed to accommodate wheelchairs. Parking areas convenient to the buildings are reserved for disabled students. Students who need more information about services, activities and facilities available to disabled students should contact the Disabled Student Services supervisor.

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## 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, notetaking), developmental courses (English, reading, manual communication) and a summer preparatory program for incoming freshmen.

## Student Activities Program

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

Activities are planned and implemented entirely by students for students through the committee structure of the Campus Activities Board. Activities include films (feature, captioned, specialty and recent releases), travel (trips during winter and spring break, 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).

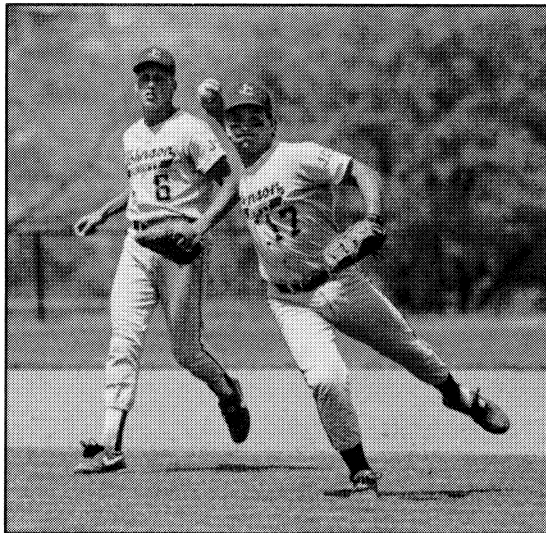
More information can be obtained from the Student Information Desk in the Commons Building.

## Student Government

The Student Activities Office also works with the Student Senate, which acts as a sounding board for student issues. The Student Senate is involved in various activities and campus issues and participates with the faculty and administration in formulating appropriate policies. Elections for senate positions are held in early fall, and committee membership is open throughout the year.

## Student Housing

The Student Activities Office will help students obtain housing in the Johnson County area. A computerized list 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 some of the services offered. JCCC does not maintain on-campus student housing, but will provide referrals and information for students.



## 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 in the lower level of the Commons building.

## Testing/Assessment Center

The Testing/Assessment Center provides a variety of services including administration of the assessment policy for all students enrolled in credit courses. Placement assessments include study skills, math and English. The English assessment includes components for both reading and writing skills.

Other services include career testing, proficiency examinations, telecourse testing and instructional make-up testing for students who have missed regularly scheduled exams. In addition, the center administers standardized tests such as the ACT, CLEP, GED and others.

JCCC students who have developed an educational plan in the Counseling Center may seek credit for life experience through the Assessment of Prior Learning Program, which is administered through the Testing/Assessment Center. Students interested in taking a proficiency exam in lieu of normal course completion should contact the Testing/Assessment Center for more information.



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## Academic and Student Policies and Procedures



### **Academic Progress**

- Academic Alert
- Academic Warning
- Restricted Enrollment
- Appeal Process

### **Academic Records Retention**

### **Academic Renewal**

### **Access to Student Information**

### **Advanced Standing Credit**

- Assessment of Prior Learning
- Military Credit
- National Standardized Tests
- Proficiency Examinations

### **Attendance**

### **Auditing a Class**

### **Classes by Arrangement**

- Independent Study
- Self-paced Study

### **Credit Transferred from Other Colleges**

### **Grading System**

### **Pass/Fail Grading System**

### **Grade Changes**

### **Grade Point Average**

### **Honors**

### **Parking**

- Handicapped Parking
- Handicapped Lot Violation
- Bicycle Racks
- Emergency Parking or Loading
- Accidents

### **Records on Hold**

### **Sexual Harassment of Students**

### **Smoking Policy**

### **Student Code of Conduct**

### **Student Grievance**

### **Student Health**

### **Transcript Records**

## Academic Progress

JCCC has implemented an academic progress policy to identify students who have problems successfully completing courses and to prescribe practices that may help students succeed. All JCCC students will be subject to the academic progress policy with the following exceptions:

1. Students who plan to enroll in courses offered through contract arrangements between JCCC and an outside agency.
2. Students who plan to enroll in courses that have been especially designed for specific populations.

To be considered as making satisfactory academic progress, students must maintain a minimum grade point average based on the total number of credit hours they have completed, as shown in the chart below. If students transfer from another postsecondary institution, they must enroll with a G.P.A. that meets these guidelines:

<i>Number of Hours Successfully Completed</i>	<i>Cumulative G.P.A.</i>
1-8 credit hours	1.0
9-16 credit hours	1.2
17-24 credit hours	1.4
25-32 credit hours	1.6
33-40 credit hours	1.7
41-48 credit hours	1.8
49-56 credit hours	1.9
57-64 credit hours	2.0

In addition, students must complete two-thirds of all credit hours attempted once they have attempted 15 or more credit hours. This applies both to credit hours earned at JCCC and those earned at another postsecondary institution.

### Academic Alert

When a student fails to meet the guidelines for academic progress, he or she will automatically be placed on academic alert. This status will not be documented on official transcripts, but will result in the following actions:

1. At the beginning of the next semester, students will be notified in writing of their academic alert status and directed to see a JCCC counselor as soon as possible.
2. The academic records of any student on academic alert will be placed on hold. The student will not be allowed to enroll for subsequent semesters until this is revoked.
3. After seeing a JCCC counselor, the student must submit to the Admissions and Records Office a release form showing the counselor's recommendation to revoke the academic alert and allow enrollment.

### Academic Warning

Students identified as not making satisfactory academic progress a second time will be placed on academic warning. Academic warning status will result in the following actions:

1. At the beginning of the next semester, students will be notified in writing of their status and directed to see a JCCC counselor as soon as possible.
2. The academic records of any student on academic warning will be placed on hold. The student will not be allowed to enroll for subsequent semesters until this is revoked.
3. The student and counselor will develop a program plan designed to enhance the student's capacity to succeed academically. The plan will identify the exact number of credit hours and the specific courses the student will be allowed to enroll in the subsequent semester.
4. After seeing a JCCC counselor, the student must submit to the Admissions and Records Office a release form showing the counselor's recommendation to revoke the academic warning and allow enrollment.

### Restricted Enrollment

Students identified as not making satisfactory academic progress a third time will be placed on restricted enrollment, based on the program plan designed by the student and a JCCC counselor.

1. Students on restricted enrollment will not be allowed to enroll in any courses not specifically listed on the program plan.
2. Students who do not make satisfactory academic progress after one semester on restricted enrollment will be subject to dismissal from JCCC for one fall or one spring semester, whichever comes first. Before re-enrolling at JCCC, students must meet with a counselor to review and revise the program plan. Students will be allowed to enroll only with a release form from a counselor and will be placed on academic warning status until such time as their G.P.A. reaches the required level of satisfactory academic progress.

### Appeal Process

Students identified as not making satisfactory academic progress and subjected to any of the actions described above may appeal in writing through the office of the dean of student services. All appeals will be reviewed by the Student Affairs Committee. In the written appeal, students must provide data explaining and documenting their reasons for asking that the academic alert, academic warning, restricted enrollment or temporary dismissal status be revoked.



After reviewing the appeal and documentation, the Student Affairs Committee will make a determination. Written results will be mailed to the student. The decision of the Student Affairs Committee is final and is not subject to challenge.

## Academic Records Retention

An application file is created for each student who applies for admission to JCCC. This file contains academic transcripts, academic program plans and various other documents. This file is maintained in the Admissions and Records Office as long as the student maintains continuous enrollment. One year after the student is no longer enrolled, all records are microfilmed.

If a student applies for admission but does not enroll within one year after the application is filed, the original application is destroyed.

More information is available from the Admissions and Records Office.

## Academic Renewal

Students who perform poorly during their first year or two at college often return to school later to resume their education. However, their previous academic record may present a major obstacle to their overall G.P.A. and, hence, their overall success.

People who want an opportunity for a new undergraduate start at Johnson County Community College, without the handicap of their previous academic record, may apply for academic renewal.

A student must petition the Student Affairs Committee for academic renewal following these guidelines:

1. All credits taken more than five years ago from all colleges or universities must be dropped.
2. Coursework to be disregarded must have been completed at least five years before applying for academic renewal.
3. At least 12 semester credits must have been completed at JCCC within the last two years. The G.P.A. for all coursework 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 coursework will continue to appear on the transcript. However, the dropped coursework will not be included in the student's JCCC cumulative G.P.A.

7. This policy applies only to the records at JCCC. 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 and Records Office.

## 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:

1. Provide students the opportunity to inspect their educational records. Students who wish to see their records should contact the JCCC Admissions and Records Office.
2. Provide students the opportunity to challenge through a hearing the content of their educational records if they believe the records contain information that is inaccurate, misleading or in violation of the right of privacy. (Grades are not subject to challenge.)
3. 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 an athletic team member
- Date of attendance
- Degrees
- Awards received
- Most recent previous educational institution the student attended

*doesn't state "authorized individual"*  
*\* I've learned a message for a student - don't pay anything but to have that person call you back name with*

A student who objects to the disclosure of any of the information listed above may notify the Admissions and Records Office in writing of the items that 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 and 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. Students should send complaints to:

FERPA, Department of Education  
Room 514 E  
200 Independence Avenue SW  
Washington, D.C. 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.

## 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 will not count toward satisfying the 15-credit-hour residency requirement. Advanced standing credit, with the exception of transfer credit, will be included on the student's permanent record after one class has been completed in residence at the college. Credit will not be awarded if:

1. A student has received a grade for college classes representing the same content (advanced standing credit cannot be used to repeat classroom credit).
2. A student has been awarded credit through other non-traditional programs in areas representing the same content.

The Testing/Assessment Center coordinates all programs leading to advanced standing credit.

## Assessment of Prior Learning

Credit may be granted to a student who, through prior learning experiences, has acquired knowledge and skills equivalent to that obtained in college classes. Credit may be awarded only in subject areas in which JCCC offers comparable classes. A fee will be charged for each class.

## 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, 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, through national standardized testing programs, can demonstrate knowledge and skill equivalent to that obtained in undergraduate college classes. Credit will be awarded only in subject areas in which JCCC offers comparable classes. 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.

## Proficiency Examinations

Credit by proficiency examination may be granted for certain JCCC classes for 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.

## Attendance

Students who do not attend at least one session of each class in which they are enrolled by the end of the second week of classes (prorated for classes less than 16 weeks in duration) will automatically be dropped with no refund of tuition and fees.

Students will be notified by mail if they are dropped and will have six working days to appeal for reinstatement. Students will be reinstated only if an administrative error was made. Appeals for reinstatement must be signed by the appropriate division administrator and submitted to the Admissions and Records Office. Questions on this policy should be directed to the Admissions and Records Office.

Students are responsible for regularly attending the classes and laboratory sessions in which they are enrolled. There is no policy that permits grades to be lowered 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 students in writing at the beginning of the semester.

Students are responsible for making up any class work or assignments if they are absent from class. Students receiving benefits from a government agency must follow any policies the specific agency stipulates.

## Auditing a Class

Auditing a course means that a student attends a class regularly without being required to take exams, complete assignments or perform other tasks required by the instructor. Students receive no credit for courses completed by auditing. Registering to audit a class does not constitute continuous enrollment for graduation purposes. Credit registration cannot be converted to audit status at any time.

Tuition and fees for audited classes will be assessed at the same rate as that charged for enrolling in credit courses. Financial aid will not pay for courses completed by auditing.

Students may enroll to audit a class, if space is available, on the following days:

16-week classes – second week of classes

Eight-week classes – third, fourth and fifth day of class

Four-week classes – second and third day of class

Less than four-week classes – second day of class only

## Classes by Arrangement

JCCC classes by arrangement are for students who find it impossible or undesirable to attend regular classes on campus. These students may complete a class by arrangement out of the classroom according to a schedule set up with the instructor. Before enrolling in a class by arrangement, students should contact the instructor (or the division administrator if the instructor is unavailable) to find out how much instructor contact is required and how performance is measured.

### Independent Study

By enrolling in independent study, students may explore in depth an area not covered in the regular curriculum. Students must show above-average performance in the area to be eligible. For details, students should contact the division administrator for the area in which they are interested.

### Self-paced Study

Classes are offered on a self-paced schedule of study that allows students to enroll in the class at any time during the semester and take up to one calendar year to complete class requirements. With self-paced study, students

may set their own pace of learning to complete the class 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 class.

Enrollment requires completion of a self-paced study contract, which may be obtained in the division office listed for the class, and of a registration form in the Admissions and Records Office. Students are required to meet with the sponsoring instructor to complete the contract and obtain class materials.

Although one year is allotted to complete a self-paced class, the credit hours are counted only for the semester in which the student registered for the class. The credits will be listed on the student's transcript for the semester of initial enrollment, not the semester of completion. For additional information, students should contact the appropriate division office.

## Credit Transferred from Other Colleges

Transfer credits will be accepted from colleges and universities starting from the year that they 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 and 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 G.P.A. 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 uses the following grades to indicate the level at which a student has achieved the educational objectives of a class:

- 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 the student's G.P.A.)
- 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 classes 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 a 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 and 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 class. Arrangements must be made before semester grades are submitted, and the student must sign a contract agreeing to complete the class requirements. All class requirements must be completed by the end of the following 16-week semester. An "I" will be changed to an "F" if the instructor does not initiate a grade change by the end of the semester following the grading period in which the "I" was given. During the semester the student is completing the "I" contract, the student cannot re-enroll in the class and is not considered currently enrolled on the basis of the "I" contract. A student may not withdraw from a course in which an "I" has been assigned.

**R – repeated class**

When a student repeats a class, only the latter grade earned will be used to compute the student's cumulative G.P.A. An "R" as well as the original grade for the class will be shown on the transcript. A "W" cannot be changed to an "R." A student cannot use advanced standing credit to repeat a class.

**X – audit status (no credit awarded)**

### Pass/Fail Grading System

Students may choose a pass/fail option if they want to explore classes outside their range of subject matter. A student will be allowed to enroll in only one class each semester under this option. Students receive a "P" if their assigned grade is A, B, C or D.

A counselor's approval is required before a student may choose the pass/fail option. If this option is chosen, the student must meet with a counselor, complete the appropriate form and submit it to the Admissions and Records Office before the eighth week of the fall and spring semesters, the fourth week of the eight-week summer session or the first week of a mini-session. Once this option has been filed in the Admissions and Records Office, it may not be changed back to the "A"-"F" system. Appeals to this policy should be submitted in writing to the director of admissions and records.

**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 penalize the student.

### Grade Changes

Grade changes and withdrawal appeals must be submitted to the Admissions and Records Office within one 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 and records. Additional information and forms may be obtained in the Admissions and Records Office.

### Grade Point Average

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

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

### 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 3.50 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 4.00 will appear on the President's List.

### Parking

Each year more and more students attend JCCC, which means more cars in the parking lots and in some cases a longer walk to class. Students should allow extra time.

The college provides free parking. 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 visitor or staff and faculty parking. Students may not park in handicapped parking areas unless they obtain a permit.

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

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.

Students' vehicles will be immobilized if they receive three tickets. A fee will be charged to remove the immobilizer.

### **Handicapped Parking**

Individuals who are permanently or temporarily disabled may obtain a parking permit 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.

### **Handicapped Lot Violation**

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

### **Bicycle Racks**

Bicycle 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.

### **Accidents**

Students involved in an accident on campus should notify the Security Office immediately and file an accident report.

### **Records on Hold**

If a student's records have been placed on hold for any reason (for example – but not limited to – an unsubmitted official transcript, a financial obligation to JCCC, or library books due), the student will not be allowed to do any of the following until the hold is removed:

1. Drop or add any class during the semester.
2. Enroll in courses in subsequent semesters.
3. Obtain a transcript.
4. Receive a diploma or certificate.

Students may contact the Admissions and Records Office for more information.

### **Sexual Harassment of Students**

Harassment of any student on the basis of sex shall be considered a violation of 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 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 has established and promulgated a procedure for resolving sexual harassment complaints. A copy of these procedures may be obtained from the dean of student services.

### **Smoking Policy**

Smoking is prohibited in all enclosed areas of Johnson County Community College unless a sign is specifically posted designating the area 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 Code of Conduct

The students and staff of Johnson County Community College constitute a special community engaged in the educational process. The college assumes that students will demonstrate personal conduct 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 interests 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. Conduct that threatens 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. Conduct that inflicts damage to college equipment or facilities.
5. Conduct that violates 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 at any college-sponsored event. Such conduct 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. Such conduct 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 a conference, the student will be advised of the nature and extent of the alleged offenses. If the student denies having committed such offenses, 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 the 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 college student discipline committee 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 protect students 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. The student will submit a written grievance to the dean of student services and request a conference.
  - b. The dean will notify the college's affirmative action/Title IX officer 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 the 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 a student by any member or representative of the administration for filing a grievance.

## Student Health

The college does not provide on-campus medical services, nor does it assume responsibility for injuries students incur 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.

Because of the potential spread of various communicable diseases, the dean of student services may require the submission of a physician's statement of health once a student has contracted and been treated for a communicable disease.

Students may be required to submit verification of health when living in college-arranged housing or engaged in 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, students should contact the Student Activities Office.

## Transcript Records

The Admissions and Records Office will maintain a student's academic record of coursework completed at the college. Transcripts will be released only after receipt of a written request signed by the student. Transcripts issued to the student will be marked "Issued to Student."

Transcripts will not be released for students whose records are on hold. (See the "Records on Hold" policy.)

Official transcripts from other institutions cannot be released to any individual or institution. Copies designated "for JCCC staff use only" may be released to a JCCC counselor for advising purposes.



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## **Continuing Education and Community Services**



**Continuing Education and  
Community Services**

**ABE/GED Program**

**Business and Industry Institute**

**Center for Continuing Professional Education**

**Center for Literary Culture**

**Citizens Forums**

**CLEAR Program**

**Community Chorus**

**Community School Program**

**Community Services Courses**

**Conferences and Workshops**

**Cultural Arts Programming**

**Extension Courses**

**Gallaudet University Regional Center**

**Lifetime Learning Institute**

**Speakers Bureau**

**Special Events**

**Sports Clinics for Youth**

**Tours**

**Youth Program**

## Continuing Education and Community Services

### Non-credit Courses/Special Events

JCCC offers busy people of all ages and backgrounds short-term courses on hundreds of topics in a friendly, informal atmosphere at convenient hours and locations. It's all part of "learning for life" at the college. Interested individuals may register for courses by phone, mail or in person.

## Adult Basic Education/ General Educational Development

### (ABE/GED) Program

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

Individualized instruction is provided on a no-fee, open-enrollment basis at Project Finish, JCCC's community-based learning centers located throughout Johnson County.

English for Speakers of Other Languages classes also are offered for beginning, intermediate and advanced students.

## 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 are:

- **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 meet the specifications of individual businesses.
- **Business Skills Training.** Skill-oriented seminars and workshops are available both on-campus and on-site at company locations for small business, CPA, CPS, office skills, travel agent and real estate training.

- **Economic Development.** The institute is active in helping local new and expanding industries obtain state and federal funding to pay for training, applicant testing and job skills development.
- **Management and Supervisory Training.** Professional, skill-oriented management and supervisory seminars and workshops are offered both on-campus and on-site at company locations.
- **Microcomputer Training Center.** The center trains more than 4,500 students each year in business applications using much of today's best-selling software. With clearly written manuals and concentrated hands-on experience, the courses significantly reduce the time required for employees to become productive. The training labs are continuously upgraded with the latest equipment and the newest versions of software.
- **Professional Resources.** Assistance in defining and solving company training, equipment and manpower problems is available.
- **Small Business Development Center.** JCCC's Small Business Development Center offers a wide range of small business services, including training programs, counseling, applied research and a library for small business owners and potential owners in Johnson County. There is no charge for the counseling service, and results are strictly confidential.
- **Technical Training.** Hands-on technical and quality improvement training is available through customized courses, seminars, workshops and teleconferences. Code review classes also are offered for state licensure preparation.

## Center for Continuing Professional Education

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

- **Education.** Early childhood teachers, preschool through grade three; primary and secondary educators.
- **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.

- **Insurance.** Professionals in life, health, casualty and other areas related to insurance.
- **Law.** Attorneys and paralegals.
- **Public Safety.** Law enforcement, fire services and emergency medical services personnel.
- **Others.** Real estate professionals, engineers, professional groundskeepers and other occupations requiring relicensure or recertification.

## 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

JCCC invites interested citizens to contribute to development, stabilization and change in the community by attending discussions on:

- Proposed amendments to the state constitution.
- Candidates for political office.
- Problems and opportunities related to youth, women, single adults, the elderly and minority groups.
- Health services, land use, water and the environment.
- Great Decisions discussion groups focusing on foreign policy decisions.
- Today's trends in ethics and economics.
- The search for values affecting individuals and society.

## 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. Special Services at JCCC offers complete information.

## Community Chorus

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 School Program

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

## Community Services Courses

The stimulation of talented instructors and classmates who share common interests, whether it be personal enrichment, physical fitness or just the pleasure of learning, is available in JCCC's community services courses. These classes, workshops, lectures, seminars and other learning activities are for those to whom academic credit is not a priority. No tests, grades or required homework is involved.

Continuing education students are representatives of the community: employers and employees, homemakers, retirees, parents, youngsters, office and construction workers, business people and professionals. 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	House and Garden
Arts and Crafts	Lifetime Learning Institute
Aviation	Literature and Writing
Career Planning and Placement	Money Management
Communications	Office Skills
Computers	Personal Development
Creative Writing	Photography
Culinary Arts	Practical Know-how
Cultural Education	Science
Developmental Education	Sign Language
English for Speakers of Other Languages	Singles
Ethnic Dining	Special Interests
Exercise and Fitness	Sports and Recreation
Family Life	Stitch and Style
Finance	Tours and Travel
Foreign Language	Youth Program
Home Improvement	Youth Sports Clinics

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## 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. JCCC's cultural education program helps residents enjoy them. Programming includes classes, lectures, films, concerts and tours on a variety of subjects – architecture, antiques, anthropology, art, dance, 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.

## Extension Courses

The college provides off-campus courses for college credit. Most credit courses the college offers can be taught at any location if there are enough participants and the environment is conducive to learning. Students should contact the dean of instruction for more information.

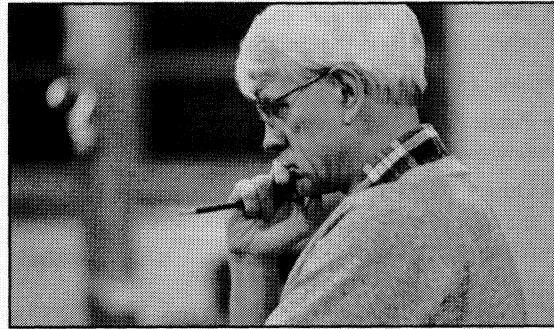
## Gallaudet University Regional Center

JCCC has 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. The center's mission is to provide educational opportunities for deaf adults; develop an awareness of deafness in the hearing community; offer technical assistance to area agencies and services; and train parents, professionals, deaf adults and other interested people. More information is available from the Gallaudet Center.

## Lifetime Learning Institute

The Lifetime Learning Institute at JCCC gives senior adults opportunities to meet friends, have fun and be intellectually challenged in a friendly atmosphere. Classes are offered at convenient locations throughout Johnson County, and many are scheduled during the day. Some programs and events are free, while others have a basic fee. In some cases, there may be additional charges for textbooks, course materials or food service.



## Speakers Bureau

JCCC's Speakers Bureau provides guest speakers for various community organizations. The organization picks the topic, and JCCC makes the arrangements.

## Special Events

Special events attract thousands of people to the JCCC 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 with the college, bring speakers of international stature to the community, help educate citizens and make the county a more interesting, stimulating place to live.

## Sports Clinics for Youth

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

## Tours

Each semester, JCCC offers several day trips to nearby communities of historical 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 also are available. In addition, foreign travel is available on a credit and non-credit basis.

## Youth Program

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



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## Non-traditional Programs of Study



### **Honors Program**

Honors Contracts  
Honors Forum  
Interdisciplinary Courses  
Admission  
Scholarships

### **International Education**

Study Abroad  
Television Courses  
Travel for Credit

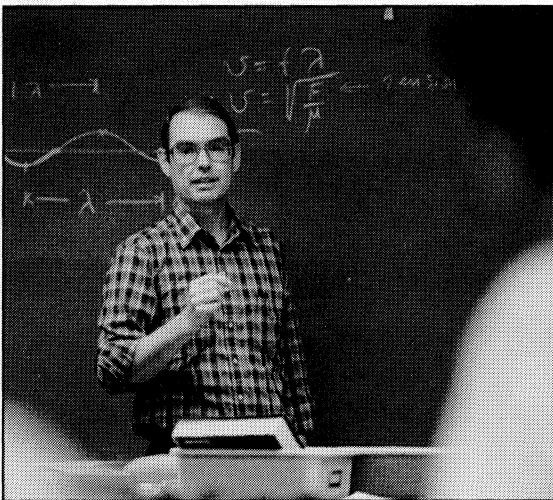


## Honors Program

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

### Honors Contracts

Each academic division at Johnson County Community College will offer preselected courses that can be taken for honors on a contract basis. These contracts will permit students to earn one or two hours of additional credit for performing additional work. 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 will focus on a current issue that affects the local, national and global communities. It will complement other courses in the curriculum by combining an emphasis on both specific content and skill development in interaction, analysis, synthesis and conflict resolution. In the forum, the process of reflecting, researching, analyzing and evaluating will be as important as the content. As they develop points of view concerning the issue, the students must articulate and defend those points as they are challenged by others and make judgments among alternative options. Regionally and nationally recognized speakers will interact specifically with students from this course as well as present seminars or 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 G.P.A. or a 3.5 college G.P.A. for the most recent year of college. Other proofs of academic excellence may be a 25 composite on the ACT test, a 1110 composite on the SAT, or an 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 G.P.A. 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 G.P.A. G.P.A./credit hours guidelines will be used to determine continuing eligibility for the program.

### Scholarships

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



## 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.

## 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 that focus on liberal arts, business, performing and visual arts. Eligibility and fees vary with the country. The application deadline for the spring semester is Nov. 1. For the fall semester, applications are due in March. For additional information, students should contact the coordinator of international education.

## Television Courses

Each semester, JCCC offers telecourses that make it possible to earn college credit in the home. Non-credit telecourses also are offered. Each lesson is shown several times a week – students pick the most convenient time. If students miss a lesson, they can view it on a videotape in the JCCC library or check out videotape cassettes (VHS only) 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. In most cases, these credits will transfer to other colleges. Students may be either full- or part-time. 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 students 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.

## 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. The travel for credit courses offered each semester are listed in the credit class schedule.



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## **Graduation, Degree and Certificate Programs**



### **Graduation Requirements**

#### **Graduation with Honors**

#### **Commencement Exercises**

#### **Associate Degrees**

Implementation

#### **Associate of Arts Degree**

#### **Associate of Arts Core Curriculum**

#### **Transfer Programs**

Individual Transfer Program

University Transfer Program for  
Undecided Students

University Transfer Programs for  
Specific Majors

### **Transfer Information**

#### **Career Programs**

#### **Associate of Science Degree**

#### **Associate of Applied Science Degree**

#### **Certificate of Completion**

#### **Johnson County Area**

#### **Vocational Technical School**

#### **Career Program Descriptions**

## 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 Admission and 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 and records in the form of a written appeal.

A student must earn a minimum of 15 semester hours of credit in residence at Johnson County Community College and earn a cumulative G.P.A. of 2.0 or better on all coursework. Advanced standing credits will not count toward satisfying the 15 credit hours residency requirement. Prerequisite courses that needed to be completed before enrollment in college-level courses will not count toward fulfilling degree requirements.

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.

## Graduation with Honors

A student who earns a cumulative grade point average of 3.5 or higher in all completed college credit courses 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 completed degree or certificate requirements in previous semesters or terms will be invited to participate in commencement exercises.

## 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.

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:

1. Minimum proficiency in reading and writing, either at the original assessment, a subsequent assessment or in courses that address these competencies prior to enrollment in degree-specific courses.
2. Minimum proficiency in computational skills, either at the initial assessment, a subsequent assessment or in courses that address these competencies prior to enrollment in degree-specific mathematics courses.
3. The college is committed to integrating computers into its curriculum on an institution-wide basis. Information 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 associate of applied science degree requirements became effective for all new students in the fall 1985 semester. Students enrolled 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., do not withdraw 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

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. The program is individually approved by a counselor.

Most students transferring to four-year colleges and universities earn an associate of arts degree.

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

Communication.....	9 hours
Humanities and/or Arts.....	6 hours (History is included in this category)
Social Science and/or Economics.....	6 hours
Science and Mathematics .....	9 hours (Must include one course from a lab 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:

- I. Communications – 9 hours
  - A. English Composition – 6 hours
 

ENGL 121	Composition I .....	3
ENGL 122	Composition II .....	3
COM 125	Oral/Written Communications * + .....	6
  - B. Oral Communication – 3 hours
 

SPD 120	Interpersonal Communications.....	3
SPD 121	Public Speaking.....	3
SPD 125	Personal Communication .....	3
COM 125	Oral/Written Communications * + .....	6

\* Satisfies both Communication I and Oral Communication requirements.

## II. Humanities/Arts – 6 hours

No more than one course from each of the five areas may count toward the six required hours.

### A. Literature/Theater

ENGL 230	Introduction to Fiction .....	3
ENGL 231	American Prose.....	3
ENGL 241	British Writers.....	3
ENGL 250	World Masterpieces.....	3
ENGL 254	Masterpieces of the Cinema.....	3
ENGL 256	American Poetry .....	3
THEA 120	Introduction to Theater.....	3

### B. Foreign Language

FL 178	Intermediate Russian I .....	3
FL 179	Intermediate Russian II.....	3
FL 220	Intermediate German I .....	3
FL 221	Intermediate German II.....	3
FL 230	Intermediate Spanish I.....	3
FL 231	Intermediate Spanish II .....	3
FL 240	Intermediate French I .....	3
FL 241	Intermediate French II.....	3

### C. History

HIST 120	Local/Kansas History.....	3
HIST 124	Community Life/Values + .....	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 151	World History I: The Traditional World.....	3
HIST 152	World History II: The Modern World.....	3
HIST 160	Modern Russian History .....	3

### D. Humanities/Arts

HUM 122	Introduction to Humanities.....	3
HUM 133	Comparative Cultures.....	3
HUM 136	The Human Experience + .....	3
HUM 144	Introduction to Art History.....	3
HUM 147	Modern Art History.....	3
HUM 164	Civilisation.....	3
MUS 121	Introduction to Music Listening.....	3
MUS 125	Introduction to Jazz Listening....	3
PHOT 140	History of Photography.....	3
PHOT 141	Issues of Contemporary Photography .....	3

### E. Philosophy

PHIL 121	Introduction to Philosophy.....	3
PHIL 132	Logic.....	3
PHIL 143	Ethics.....	3

PHIL 154	History of Ancient Philosophy ..3
PHIL 165	Philosophy of Current Civilization.....3
PHIL 176	Philosophy of Religion.....3
III.	Social Science/Economics – 6 hours
	No more than one course from each of the five areas may count toward the six required hours.
A.	Anthropology
ANTH 125	Cultural Anthropology .....3
ANTH 126	Physical Anthropology.....3
ANTH 130	World Cultures.....3
ANTH 210	Peoples of the World + .....3
B.	Economics
ECON 130	Basic Economics.....3
ECON 230	Economics I .....3
ECON 231	Economics II.....3
IDSP 175	Global Resources from Geologic and Economic Viewpoints .....3
C.	Political Science
POLS 122	Political Science.....3
POLS 124	American National Government.....3
POLS 126	State and Local Government.....3
POLS 130	Political Economics: Power in Society + .....3
POLS 132	Introduction to Comparative Government.....3
POLS 135	International Relations.....3
D.	Psychology
PSYC 121	Applied Psychology.....3
PSYC 130	Introduction to Psychology.....3
E.	Sociology
SOC 122	Sociology.....3
SOC 125	Social Problems.....3
SOC 131	Marriage and the Family .....3
SOC 160	Social Power: Motivation and Action + .....3
IV.	Science and/or Mathematics – 9 hours
	Must include one course from a lab science and one from mathematics.
A.	Life Science
BIOL 122/3	Principles of Biology/Lab .....3/1
BIOL 125	General Botany .....5
BIOL 127	General Zoology.....5
BIOL 130/1	Environmental Science/Lab ...3/1
BIOL 140	Human Anatomy .....4
BIOL 144	Human Anatomy/Physiology.....5
BIOL 150	Biology of Organisms .....5
BIOL 225	Human Physiology .....4
BIOL 230/1	Microbiology/Lab.....3/2
B.	Physical Science
CHEM 122	Principles of Chemistry.....5
CHEM 124/5	General Chemistry I/Lab .....4/1
CHEM 131/2	General Chemistry II/Lab.....4/1

CHEM 140	Principles of Organic Chemistry.....5
CHEM 227	Introduction to Quantitative Analysis .....5
IDSP 175	Global Resources from Geologic and Economic Viewpoints .....3 (Non-lab science)
PSCI 120	Physical Science.....4
PSCI 122	Astronomy.....4
PSCI 130	General Geology .....5
PSCI 132	Historical Geology .....5
PSCI 140/1	Physical Geography/Lab .....3/2
PHYS 130	General Physics I.....5
PHYS 131	General Physics II .....5
PHYS 220	Engineering Physics I .....5
PHYS 221	Engineering Physics II.....5
SCI 121	Science: A Dynamic Process + ..4
C.	Mathematics
MATH 165	Finite Math: A Cultural Approach + .....3
MATH 171	College Algebra .....3
MATH 172	Trigonometry.....3
MATH 175	Discrete Math and Its Applications + .....3
MATH 181	Statistics .....3
MATH 231	Calculus I .....3
MATH 241	AG/Calculus I .....5
V.	Health and/or Physical Education – 1 hour
HPER	Any Activity Course.....1
EMS 121	CPR I – Basic Rescuer.....1
HLT 260	Lifetime Wellness + .....3
HMEC 151	Nutrition and Meal Planning ...3
HPER 200	First Aid/CPR.....2
HPER 202	Personal/Community Health.....3
HPER 205	Individual Lifetime Sports .....2
HPER 210	Fundamentals of Athletics.....2
HPER 240	Lifetime Fitness .....1
HPER 255	Introduction to Physical Education .....3
EQUUS	Riding Course

VI. Electives (33 hours)

+ JCCC Core Curriculum

**Note:** The associate of arts degree is designed as a transfer curriculum. Students also should refer to the transfer program sheets in the Counseling Center.

The following is an example of a first-year program plan for an undecided transfer student. Students interested in a specific major or degree should talk with a JCCC counselor.



<b>First Semester</b>	<b>CR</b>
Composition I.....	3
Social Science Elective .....	3
Math/Natural Science Elective.....	3-5
Humanities Elective.....	3
General Elective.....	3
TOTAL CREDIT HOURS.....	15-17

<b>Second Semester</b>	<b>CR</b>
Composition II .....	3
Oral Communication Elective.....	3
Math/Natural Science Elective.....	3-5
Social Science/Humanities Elective .....	3
General Elective.....	3
TOTAL CREDIT HOURS.....	15-17

## Associate of Arts Core Curriculum

Students may satisfy the requirements for the associate of arts degree by completing the Alternative General Education Core Curriculum. This group of related courses, which extends over the freshman and sophomore years, provides a more coherent and purposeful program than is generally available to community college students. Designed specifically to accomplish JCCC's aims of general education, the courses in the core will give students new perspectives on the basic fields of knowledge and insights into areas essential to contemporary life.

Students may declare themselves "core majors" and pursue the entire 41 credit hours, or they may take selected courses individually. Each of the courses has been approved to satisfy degree requirements in the categories specified for all three of the college's degrees.

The Core Curriculum courses are listed in the order they should be taken by part-time students. Some courses have prerequisites, so students should check the course descriptions when planning their course selections.

COM	125	Oral and Written Communications .....	6
MATH	165	Finite Math, A Cultural Approach .....	3
MATH	175	Discrete Math and Its Applications .....	3
SCI	121	Science: A Dynamic Process .....	4
BIOL	122/3	Principles of Biology/Lab .....	3/1
		Or	
PSCI	120	Physical Science .....	4
POLS	130	Political Economy: Power in Society ...	3
SOC	160	Social Power: Motivation and Action .	3
HIST	124	Community Life and Values .....	3
HUM	136	The Human Experience.....	3
ANTH	210	Peoples of the World.....	3
TECH	220	Technological Literacy .....	3
HLT	260	Lifetime Wellness: A Personal Goal.....	3
		TOTAL .....	41

An additional 23 credits of elective courses, one of which must be ENGL 122, Composition II, are required to complete the associate of arts degree.

In the traditional format of a four-semester sequence, the program for the Core Curriculum would be:

<b>First Semester</b>	<b>CR</b>		
COM	125	Oral and Written Communications .....	6
MATH	165	Finite Math, A Cultural Approach .....	3
SCI	121	Science: A Dynamic Process .....	4
POLS	130	Political Economy: Power in Society ...	3
		TOTAL CREDIT HOURS.....	16

<b>Second Semester</b>			
ENGL	122	Composition II.....	3
MATH	175	Discrete Math and Its Applications .....	3
BIOL	122/3	Principles of Biology/Lab.....	3/1
		Or	
PSCI	120	Physical Science .....	4
SOC	160	Social Power: Motivation and Action .	3
HIST	124	Community Life and Values .....	3
		TOTAL CREDIT HOURS.....	16

<b>Third Semester</b>			
HUM	136	The Human Experience.....	3
ANTH	210	Peoples of the World.....	3
		Electives.....	10
		TOTAL CREDIT HOURS.....	16

<b>Fourth Semester</b>			
TECH	220	Technological Literacy .....	3
HLT	260	Lifetime Wellness: A Personal Goal.....	3
		Electives .....	10
		TOTAL CREDIT HOURS.....	16

## 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 they take 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 Students and the University Transfer Program.

**Individual Transfer Program**

Students who plan to attend a four-year college or university that is not local or who choose a major not listed under local university transfer programs may work with a counselor to develop their own individual transfer program.

**University Transfer Program for Undecided Students**

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 below and under the associate of arts degree requirements.

Generally, a total of 124 to 128 hours are required for most four-year degrees.

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

**University Transfer Programs for Specific Majors**

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
- Liberal Arts and Sciences
  - Anthropology
  - Astronomy
  - Biological Sciences
  - Chemistry
  - Computer Science
  - Economics
  - English
  - Foreign Language
  - Geography

**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)	Humanities	Social Science	Mathematics	Science (Lab)	Electives

**Junior-Senior Year**

Remaining 60-64 hours are taken at a 4-year school	Courses taken in major field			Upper division courses not in major field			Electives

Geology  
German  
History  
Humanities  
Mathematics  
Philosophy  
Physics  
Political Science  
Psychology  
Sociology  
Spanish  
Speech  
Theater

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 also are available in the Counseling Center.

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

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

Since the four-year schools occasionally change degree requirements, students are encouraged to check for updates periodically 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. 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 – students should 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

## 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 usually 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 students to gain valuable work experience in the community while taking the career program courses.

Students interested in a career program should 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.

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, A.A.S.
- Administration of Justice, A.A.
  - Corrections Option
  - Law Enforcement Option
- Automotive Technology, A.A.S.
- Aviation Maintenance Technology, A.A.S.
  - Airframe Option
  - Powerplant Option
- Biomedical Equipment Technology, A.S.
- Business Administration, A.A.S.
- Chef Apprenticeship, A.A.S.
- Civil Engineering Technology, A.S.
- Commercial Art, A.A.S.
- Computer Systems Technology, A.S.
- Data Processing, A.A.S.
- Dental Hygiene, A.S.
- Drafting Technology, A.S.
  - Civil Option
  - Machine Option
- Electronic Engineering Technology, A.S.
- Emergency Medical Science, A.S., A.A.S.
- Equine Studies, A.A.S.
- Fashion Merchandising, A.A.S.
- Fire Protection and Public Safety
  - Fire Prevention, A.S.
  - Fire Protection, A.S.
  - Fire Protection Administration, A.A.S.
- Heating, Ventilation and
  - Air Conditioning Technology, A.A.S.
- Hospitality Management, A.A.S.
- Information/Word Processing, A.A.S.
- Interior Merchandising, A.A.S.
- Interpreter Training, A.A.S.
- Marketing and Management, A.A.S.
- Medical Records Technology, A.A.S.
- Nursing, A.A., A.S.
- Occupational Therapy Assistant, A.A.S.
- Office Careers, A.A.S.
  - Administrative Office Management Option
  - Administrative Secretary Option
  - Legal Secretary Option
  - Medical Secretary Option
- Paralegal, A.A.
- Physical Therapy Assistant, A.A.S.

- Radiologic Technology, A.A.S.
- Respiratory Therapy, A.S.
- Science Technology, A.S.
  - Chemical Specialty Option, A.A.S.
- Veterinary Technology, A.A.S.

The degrees obtained in most JCCC career programs are the associate of science and the associate of applied science. 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. The general education distribution requirements for each of these degrees are listed below.

## 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 Arts.....3 hours
  - Science and Mathematics .....12 hours
  - Health and/or Physical Education .....1 hour
- Specific courses that meet the associate of science degree requirements are:

- I. Communications – 6 hours
  - A. ENGL 121 Composition I .....3  
Or  
COM 125 Oral and Written  
Communications \*+ .....6
  - B. Communications Elective – 3 hours  
(one of the following)
    - ENGL 122 Composition II .....3
    - ENGL 123 Technical Writing I.....3
    - BUS 150 Business Communications .....3
    - SPD 120 Interpersonal  
Communications.....3
    - SPD 121 Public Speaking.....3
    - SPD 125 Personal Communication .....3

\* Satisfies both Communications I and Oral Communication requirements.

- II. Humanities and/or Arts – 3 hours  
One course from any of the following categories may count toward the three required hours.
  - A. Literature/Theater
    - ENGL 230 Introduction to Fiction .....3
    - ENGL 231 American Prose .....3
    - ENGL 241 British Writers.....3
    - ENGL 250 World Masterpieces.....3
    - ENGL 254 Masterpieces of the Cinema.....3
    - ENGL 256 American Poetry .....3
    - THEA 120 Introduction to Theater.....3

B. Foreign Language			
FL	178	Intermediate Russian I.....	3
FL	179	Intermediate Russian II.....	3
FL	220	Intermediate German I.....	3
FL	221	Intermediate German II.....	3
FL	230	Intermediate Spanish I.....	3
FL	231	Intermediate Spanish II.....	3
FL	240	Intermediate French I.....	3
FL	241	Intermediate French II.....	3
C. History			
HIST	120	Local/Kansas History.....	3
HIST	124	Community Life/Values + .....	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	151	World History I: The Traditional World.....	3
HIST	152	World History II: The Modern World.....	3
HIST	160	Modern Russian History.....	3
D. Humanities/Arts			
HUM	122	Introduction to Humanities.....	3
HUM	133	Comparative Cultures.....	3
HUM	136	The Human Experience + .....	3
HUM	144	Introduction to Art History.....	3
HUM	147	Modern Art History.....	3
HUM	164	Civilisation.....	3
MUS	121	Introduction to Music Listening.....	3
MUS	125	Introduction to Jazz Listening....	3
PHOT	140	History of Photography.....	3
PHOT	141	Issues of Contemporary Photography.....	3
E. Philosophy			
PHIL	121	Introduction to Philosophy.....	3
PHIL	132	Logic.....	3
PHIL	143	Ethics.....	3
PHIL	154	History of Ancient Philosophy.....	3
PHIL	165	Philosophy of Current Civilization.....	3
PHIL	176	Philosophy of Religion.....	3
III. Social Science and/or Economics – 3 hours			
One course from any of the following categories may count toward the three required hours.			
A. Anthropology			
ANTH	125	Cultural Anthropology.....	3
ANTH	126	Physical Anthropology.....	3
ANTH	130	World Cultures.....	3
ANTH	210	Peoples of the World + .....	3
B. Economics			
ECON	130	Basic Economics.....	3
ECON	230	Economics I.....	3
ECON	231	Economics II.....	3
IDSP	175	Global Resources from Geologic and Economic Viewpoints.....	3
C. Political Science			
POLS	122	Political Science.....	3
POLS	124	American National Government.....	3
POLS	126	State and Local Government....	3
POLS	130	Political Economics: Power in Society + .....	3
POLS	132	Introduction to Comparative Government.....	3
POLS	135	International Relations.....	3
D. Psychology			
PSYC	121	Applied Psychology.....	3
PSYC	130	Introduction to Psychology.....	3
E. Sociology			
SOC	122	Sociology.....	3
SOC	125	Social Problems.....	3
SOC	131	Marriage and the Family.....	3
SOC	160	Social Power: Motivation and Action + .....	3
IV. Science and Mathematics – 12 hours			
Must include one course in mathematics and one in a lab science.			
A. Mathematics			
The mathematics requirement will be satisfied by any mathematics course except Fundamentals of Mathematics and Introduction to Algebra.			
B. Science			
The laboratory science requirement will be satisfied by any of the following:			
1. Life Science			
BIOL	122/3	Principles of Biology/Lab...3/1	
BIOL	125	General Botany.....	5
BIOL	127	General Zoology.....	5
BIOL	130/1	Environmental Science/ Lab.....	3/1
BIOL	140	Human Anatomy.....	4
BIOL	144	Human Anatomy/ Physiology.....	5
BIOL	150	Biology of Organisms.....	5
BIOL	225	Human Physiology.....	4
BIOL	230/1	Microbiology/Lab.....	3/2
2. Physical Science			
CHEM	122	Principles of Chemistry.....	5
CHEM	124/5	General Chemistry I/Lab...4/1	
CHEM	131/2	General Chemistry II/Lab..4/1	
CHEM	140	Principles of Organic Chemistry.....	5

CHEM	227	Introduction to Quantitative Analysis.....	5
IDSP	175	Global Resources from Geologic and Economic Viewpoints.....	3
		(Non-lab science)	
PSCI	120	Physical Science .....	4
PSCI	122	Astronomy .....	4
PSCI	130	General Geology.....	5
PSCI	132	Historical Geology.....	5
PSCI	140/1	Physical Geography/Lab.....	3/2
PHYS	125	Technical Physics I.....	4
PHYS	126	Technical Physics II.....	3
PHYS	130	General Physics I.....	5
PHYS	131	General Physics II.....	5
PHYS	220	Engineering Physics I.....	5
PHYS	221	Engineering Physics II.....	5
SCI	121	Science: A Dynamic Process +.....	4

Any remaining hours for this requirement beyond the one math and one lab science requirement may be satisfied by taking additional courses from the approved math and lab science courses with the addition of Pathophysiology and General Nutrition or Energy Alternatives (a technology option).

V. Health and/or Physical Education – 1 hour			
HPER		Any Activity Course.....	1
EMS	121	CPR – Basic Rescuer.....	1
HLT	260	Lifetime Wellness + .....	3
HMEC	151	Nutrition and Meal Planning .....	3
HPER	200	First Aid/CPR .....	2
HPER	202	Personal/Community Health.....	3
HPER	205	Individual Lifetime Sports .....	2
HPER	210	Fundamentals of Athletics.....	2
HPER	240	Lifetime Fitness.....	1
HPER	255	Introduction to Physical Education .....	3
EQUUS		Riding Course	

+ JCCC Core Curriculum

Additional programs may offer the associate of science degree in the future. Students should consult a counselor with questions about degree requirements for particular programs.

## 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 Arts.....	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:

I. Communications – 3 hours			
ENGL	121	Composition I.....	3
Or			
COM	125	Oral and Written Communications *+ .....	6

\* Satisfies both the Composition I and Oral Communication requirements.

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

A. Literature/Theater			
ENGL	230	Introduction to Fiction.....	3
ENGL	231	American Prose.....	3
ENGL	241	British Writers .....	3
ENGL	250	World Masterpieces .....	3
ENGL	254	Masterpieces of the Cinema..	3
ENGL	256	American Poetry.....	3
THEA	120	Introduction to Theater .....	3
B. Foreign Language			
FL	178	Intermediate Russian I.....	3
FL	179	Intermediate Russian II .....	3
FL	220	Intermediate German I.....	3
FL	221	Intermediate German II.....	3
FL	230	Intermediate Spanish I .....	3
FL	231	Intermediate Spanish II.....	3
FL	240	Intermediate French I.....	3
FL	241	Intermediate French II.....	3
C. History			
HIST	120	Local/Kansas History .....	3
HIST	124	Community Life/Values + .....	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	151	World History I: The Traditional World.....	3
HIST	152	World History II: The Modern World.....	3
HIST	160	Modern Russian History .....	3
D. Humanities/Arts			
HUM	122	Introduction to Humanities ..	3
HUM	133	Comparative Cultures.....	3
HUM	136	The Human Experience + .....	3
HUM	144	Introduction to Art History..	3
HUM	147	Modern Art History.....	3
HUM	164	Civilisation .....	3
MUS	121	Introduction to Music Listening .....	3
MUS	125	Introduction to Jazz Listening .....	3

PHOT	140	History of Photography.....3
PHOT	141	Issues of Contemporary Photography.....3
E. Philosophy		
PHIL	121	Introduction to Philosophy ..3
PHIL	132	Logic.....3
PHIL	143	Ethics .....3
PHIL	154	History of Ancient Philosophy .....3
PHIL	165	Philosophy of Current Civilization .....3
PHIL	176	Philosophy of Religion.....3
III. Social Science and/or Economics – 3 hours One course from any of the following categories may count toward the three required hours.		
A. Anthropology		
ANTH	125	Cultural Anthropology.....3
ANTH	126	Physical Anthropology .....3
ANTH	130	World Cultures .....3
ANTH	210	Peoples of the World + .....3
B. Economics		
ECON	130	Basic Economics .....3
ECON	230	Economics I .....3
ECON	231	Economics II .....3
IDSP	175	Global Resources from Geologic and Economic Viewpoints .....3
C. Political Science		
POLS	122	Political Science .....3
POLS	124	American National Government.....3
POLS	126	State and Local Government.....3
POLS	130	Political Economics: Power in Society + .....3
POLS	132	Introduction to Comparative Government.....3
POLS	135	International Relations.....3
D. Psychology		
PSYC	121	Applied Psychology .....3
PSYC	130	Introduction to Psychology ..3
E. Sociology		
SOC	122	Sociology.....3
SOC	125	Social Problems.....3
SOC	131	Marriage and the Family.....3
SOC	160	Social Power: Motivation and Action + .....3
IV. Science and Mathematics – 12 hours		
A. Mathematics		
Any mathematics course except Fundamentals of Mathematics or Introduction to Algebra will satisfy this requirement.		
B. Science		
The science requirement will be satisfied by any of the following courses.		

1. Life Science		
BIOL	122/3	Principles of Biology/ Lab.....3/1
BIOL	125	General Botany .....5
BIOL	127	General Zoology.....5
BIOL	130/1	Environmental Science/ Lab.....3/1
BIOL	140	Human Anatomy .....4
BIOL	144	Human Anatomy/ Physiology .....5
BIOL	150	Biology of Organisms .....5
BIOL	230/1	Microbiology/Lab.....3/2
2. Physical Science		
CHEM	122	Principles of Chemistry.....5
CHEM	124/5	General Chemistry I/ Lab.....4/1
CHEM	131/2	General Chemistry II/ Lab.....4/1
CHEM	140	Principles of Organic Chemistry .....5
CHEM	227	Introduction to Quantitative Analysis.....5
IDSP	175	Global Resources from Geologic and Economic Viewpoints .....3 (Non-lab science)
PSCI	120	Physical Science.....4
PSCI	122	Astronomy .....4
PSCI	130	General Geology .....5
PSCI	132	Historical Geology .....5
PSCI	140/1	Physical Geography/Lab ..3/2
PHYS	125	Technical Physics I.....4
PHYS	126	Technical Physics II .....3
PHYS	130	General Physics I .....5
PHYS	131	General Physics II .....5
PHYS	220	Engineering Physics I.....5
PHYS	221	Engineering Physics II.....5
SCI	121	Science: A Dynamic Process + .....4
V. Health and/or Physical Education – 1 hour		
HPER		Any Activity Course.....1
EMS	121	CPR I – Basic Rescuer.....1
HLT	260	Lifetime Wellness + .....3
HMEC	151	Nutrition and Meal Planning ....3
HPER	200	First Aid/CPR.....2
HPER	202	Personal and Community Health .....3
HPER	205	Individual Lifetime Sports .....2
HPER	210	Fundamentals of Athletics.....2
HPER	240	Lifetime Fitness .....1
HPER	255	Introduction to Physical Education .....3
EQUUS		Riding Course
+ JCCC Core Curriculum		



## 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 have successfully completed an approved certificate program with a cumulative grade point average of 2.0 or better. The student must complete a minimum of 50 percent of required coursework at JCCC. 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 certificate requirements. An application to complete certificate requirements must be filed in the Admissions and 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 and records in the form of a written appeal.

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  
Automotive  
Computer Applications Technology  
Data Processing Mini/Micro  
Emergency Medical Technician  
Mobile Intensive Care Technician  
Office Automation Technology  
Office Careers

### Postsecondary Certificates

Emergency Services Dispatcher  
Fire Prevention  
Fire Protection  
Heating, Ventilation and Air Conditioning  
Hospitality Management  
Metal Fabrication  
Paralegal Options  
Respiratory Therapy  
Sales and Customer Relations

## Johnson County Area Vocational Technical School

The Johnson County Area Vocational Technical School maintains 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, KS 66061  
(913) 782-2456

Shawnee Mission Center  
6701 W. 83rd St.  
Shawnee Mission, KS 66204  
(913) 642-3130

Johnson County Community College  
12345 College at Quivira  
Overland Park, KS 66210-1299  
(913) 469-3863

## 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.

## Accounting

Accounting is a crucial part of every business operation. The job outlook in accounting, according to the U.S. Bureau of Labor Statistics, is better than average. Two-year graduates may find jobs as bookkeepers and accounting clerks.

The associate of applied science degree program is designed for the student with no plans to transfer to a four-year institution. The 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.

Students interested in transferring to a four-year institution in an accounting program or beginning the associate of applied science degree program should contact a JCCC counselor.

### Associate of Applied Science Degree

<i>First Semester</i>		<b>CR</b>
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
	<b>TOTAL CREDIT HOURS.....</b>	<b>17</b>

**Second Semester**

ACCT 122 Accounting II .....3
BUS 150 Business Communication.....3
BUS 261 Business Law I.....3
Business Electives .....3
Humanities and/or Arts Elective.....3
TOTAL CREDIT HOURS .....15

**Third Semester**

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 Human Relations Seminar .....2
CPCA 110 Spreadsheets on Microcomputers I .....1
Business Electives .....7
TOTAL CREDIT HOURS .....15

**Fourth Semester**

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 Accounting Seminar .....3
CPCA 114 Databases on Microcomputers I .....1
Business Electives .....6
TOTAL CREDIT HOURS .....17
TOTAL PROGRAM
CREDIT HOURS.....64

Note: Business electives are any course with the "BUS" prefix.

**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**

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
PHIL 143 Ethics .....3
ADMJ 141 Criminal Law \*\*\* .....3
SPD 120 Interpersonal Communication.....3
Science and/or Mathematics
Elective \*\* .....6
TOTAL CREDIT HOURS .....18

**Fourth Semester**

Humanities Course .....3
(Cannot be a philosophy course)
Science and/or Mathematics
Elective \*\* .....3
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

\* Students 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

\*\* Students must complete a minimum of nine hours in math and science. Students should see a counselor for more information.

\*\*\* Students certified under the Kansas Law Enforcement Training Act are eligible to receive assessment of prior learning credit for some or all of these courses.

### Correctional Services Option

*Offered at Longview Community College*

Through a cooperative agreement with Longview Community College, students may take all or some of their nine program elective credits in Correctional Services. The following courses are taught at Longview. Students should 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

\* Students who can demonstrate a proficiency of 35 w.p.m. corrected may substitute another course.

## Automotive Technology

The two-year associate of applied science degree concentrates on a theoretical background in diagnosis and tune-up; chassis, electrical/electronic and hydraulic systems; automatic transmissions; engines; and emissions. Students work on developing the 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 is emphasized as well as welding; diagnosis and tune-up; chassis, electrical/electronic and hydraulic systems; automatic transmissions; engines (including diesels); air conditioning; and emission controls.

### Associate of Applied Science Degree

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

<i>Second Semester</i>		
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

<i>Third Semester</i>		
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

<i>Fourth Semester</i>		
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
		<b>TOTAL PROGRAM</b>
		<b>CREDIT HOURS .....64-65</b>

**Technical Electives**

AUTO	271	Auto Technology Internship I.....	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 designed 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 the repair required for dealership service personnel. If the student completes the course(s) with a grade of C or higher, 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, which will enable them to qualify for technical positions in service repair.

Prior to admission to the Automotive Vocational Certificate Program, a student must have had MATH 111, Fundamentals of Math, or an appropriate score on the math assessment test and

AUTO	125	Introduction to Auto Shop Practices.....	3
		Or	
		Completion of a basic auto course	
		Or	
		One year of basic experience in the automotive field.	

**Required Courses**

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; students must apply and be accepted into the program by both JCCC and Maple Woods. 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.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

**Associate of Applied Science Degree**

*Awarded by Maple Woods Community College*

**Airframe Option**

<b>First Semester</b>		<b>CR</b>	
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**

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 Institutions Option * .....	3
		TOTAL CREDIT HOURS.....	24.5
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>79.5</b>

## Associate of Applied Science Degree

Awarded by Maple Woods Community College

### Powerplant Option

<i>First Semester</i>		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	101 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 Institutions Option * .....	3
TOTAL CREDIT HOURS .....		24
<b>TOTAL PROGRAM CREDIT HOURS .....</b>		<b>81</b>

\* All graduates from Maple Woods Community College must meet the American Institutions requirement. Students should see a 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 is 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 is issued by the local FAA office.

## Biomedical Equipment Technology

A biomedical equipment technician may work for a hospital, medical equipment manufacturer or medical

equipment service firm or as a field technician selling, maintaining and installing specialized electronic systems used in the health field.

The Biomedical Equipment Technology Program is devoted to the fundamentals of electronics, natural sciences and related mathematics. During their last semester in the program, students participate in an internship in which six hours each week are spent in an assigned hospital or related area working on equipment found in the field. Successful completion of this 67-credit-hour program leads to an associate of science degree.

### Associate of Science Degree

<i>First Semester</i>		CR
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

### 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

BIOL	144 Human Anatomy and Physiology .....	5
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(Can be taken any semester before the third semester)

### Third Semester

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

### Fourth Semester

BMT	211 Biomedical Equipment Technology 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
<b>TOTAL PROGRAM CREDIT HOURS .....</b>		<b>67</b>

\* Offered in the fall semester only.

\*\* Offered in the spring semester only.

## Business Administration

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

JCCC's career program focuses on the development of these skills – the ability to make decisions; familiarity with the functions of management including planning, organizing, directing and controlling; and familiarity 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>		<b>CR</b>
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
	<b>TOTAL CREDIT HOURS.....</b>	<b>16</b>

### *Second Semester*

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
	<b>TOTAL CREDIT HOURS.....</b>	<b>18</b>

### *Third Semester*

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

### *Fourth Semester*

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
	Or	
IDSP	175 Global Resources from Geologic and Economic Viewpoints.....	3
	<b>TOTAL CREDIT HOURS.....</b>	<b>15</b>
	<b>TOTAL PROGRAM</b>	
	<b>CREDIT HOURS.....</b>	<b>64</b>

## 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 and have a high school diploma or the equivalent. Students must successfully complete all entry-level examinations as prescribed by the Apprenticeship Committee of the 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 such skills as baking, menu planning, food purchasing, beverage control and food preparation. After job placement, graduates of the program may apply to join the American Culinary Federation Educational Institute for registered apprentice membership. Likewise, they may register with the Department of Labor, and individuals will be officially indentured to supervising chefs and the sponsoring American Culinary Federation affiliate chapter. The program consists of 67 to 70 credit hours and leads to an associate of applied science degree.

### Associate of Applied Science Degree

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

### *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
	<b>TOTAL CREDIT HOURS.....</b>	<b>11</b>

### *Summer*

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

### *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
	<b>TOTAL CREDIT HOURS.....</b>	<b>11</b>

**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
		Elective Course in Oral Communication	3
HMGT	288	Culinary Practicum VI	2
		TOTAL CREDIT HOURS	11
		<b>TOTAL PROGRAM CREDIT HOURS</b>	<b>70</b>

**Civil Engineering Technology**

Civil engineering technicians apply theory and practical application in planning, designing, constructing and maintaining structures such as bridges, treatment plants and roadways. The civil engineering technician has the responsibility of maintaining communication between engineers and drafters. Employment growth in this occupation is predicted to be faster than average over the next 10 years.

JCCC's Civil Engineering Technology Program offers a broad base of learning in mathematics, physical science, surveying and graphics. It qualifies graduates for a variety of entry-level positions in the field and helps prepare them for the individual certification examination of the National Institute for Certification in Engineering Technology. Successful completion of 65 to 67 hours from the civil engineering curriculum leads to an associate of science degree.

**Associate of Science Degree**

<b>Prior to beginning the first semester</b>				<b>CR</b>
MATH	133	Technical Mathematics I	4	
		Or		
MATH	116	Intermediate Algebra	3	
		Or		
MATH	134	Technical Mathematics II	5	
		Or		
		Appropriate score on the 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
PHYS	126	Technical Physics II	3
		Technical Elective from approved list	3
		TOTAL CREDIT HOURS	16

**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 and/or Economics Elective	3
		Technical Electives from approved list	5-6
		TOTAL CREDIT HOURS	16-17
		<b>TOTAL PROGRAM CREDIT HOURS</b>	<b>65</b>

**Approved Programming Electives**

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

**Approved Communication Electives**

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

**Approved 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 freelance positions. There is a demand for artists with above-average talents and graphic art skills. Opportunities in the field range from entry-level paste-up and layout 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 students develop a comprehensive portfolio. Their work will be critiqued by a team of professionals. These professionals working in the field, along with full-time faculty, will help develop the students' 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 leads to an associate of applied science degree.

### Associate of Applied Science Degree

<b>First Semester</b>		<b>CR</b>
ART	124 Design 2-D	.....3
ART	129 Design Color	.....3
CA	130 Representational Drawing I	.....3
PHOT	121 Fundamentals of Photography	.....3
CA	132 Typography	.....3
ENGL	121 Composition I	.....3
TOTAL CREDIT HOURS		.....18

### Second Semester

CA	131 Representational Drawing II	.....3
ART	127 Design 3-D	.....3
CA	134 Layout I	.....3
CA	140 Graphic Processes	.....3
CPCA	105 Introduction to Personal Computers – Mac	.....1
CPCA	155 Desktop Publishing – Mac	.....1
	Humanities and/or Art Elective	.....3
TOTAL CREDIT HOURS		.....17

### Third Semester

PHOT	123 Commercial Photography	.....3
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		.....15

### 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 **	.....3
	Or Studio Elective	.....3
TOTAL CREDIT HOURS		.....16
<b>TOTAL PROGRAM CREDIT HOURS</b>		<b>.....66</b>

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

### Part-time Students

Students wishing to enroll on a part-time basis (fewer than 12 hours) should enroll in the following courses in the sequence listed or consult the program director or a JCCC counselor.

ENGL	121 Composition I	.....3
ART	124 Design 2-D	.....3
ART	129 Design Color	.....3
CA	130 Representational Drawing I	.....3
CA	132 Typography	.....3
PHOT	121 Fundamentals of Photography	.....3
	Humanities Elective	.....3
ART	127 Design 3-D	.....3
CA	131 Representational Drawing II	.....3
CA	134 Layout I	.....3
CA	140 Graphic Processes	.....3
CPCA	105 Introduction to Personal Computers – Mac	.....1
CPCA	155 Desktop Publishing – Mac	.....1
	Economics and/or Social Science Elective	.....3
PHOT	123 Commercial Photography	.....3
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 **	.....3
	Or Studio Elective	.....3
TOTAL PROGRAM CREDIT HOURS		<b>.....66</b>

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

## Computer Systems Technology

With microprocessors a crucial part of almost every business operation, the need for technicians to repair and maintain computers and equipment has grown. Job opportunities in the Kansas City area for entry-level through supervisory positions should grow throughout the 1990s.

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 entry-level positions. First-year courses are compatible with those required in JCCC's Electronics Engineering Program. This gives students the option of starting in the Electronics Engineering Program and transferring to the Computer Systems Technology Program.

The program's "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

<i>First Semester</i>		<b>CR</b>
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 .....		<b>16</b>

<i>Second Semester</i>		
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 .....		<b>17</b>

<i>Third Semester</i>		
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 .....		<b>16</b>

<i>Fourth Semester</i>		
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
<b>TOTAL CREDIT HOURS .....</b>	<b>15</b>
<b>TOTAL PROGRAM</b>	
<b>CREDIT HOURS.....</b>	<b>64</b>

\* Students may substitute approved CST 271.

## Data Processing

Industry is expected to have a favorable effect on the 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, also will increase.

JCCC's Data Processing Program focuses on the skills needed for entry-level programming and related positions. Students learn to code COBOL programs and programs in 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>		<b>CR</b>
DP	134 Programming Fundamentals.....	4
ACCT	121 Accounting I.....	3
ENGL	121 Composition I.....	3
MATH	116 Intermediate Algebra.....	3
Or		
MATH	171 College Algebra.....	3
Or		
Any calculus course		
Humanities and/or Arts Elective.....		3
(PHIL 132, Logic, is recommended.)		
TOTAL CREDIT HOURS .....		<b>16</b>

<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, is recommended.)		
Health and/or Physical Education		
Elective.....		1
TOTAL CREDIT HOURS.....		<b>15-16</b>

**Third Semester**

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

**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
		<b>TOTAL CREDIT HOURS.....</b>	<b>15-16</b>
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS.....</b>	<b>64</b>

Thirteen hours of data processing elective courses are to be selected from the following list. One elective must be a language course.

DP	137	Advanced BASIC.....	4
DP	145	Assembler Language for Microcomputers.....	4
DP	157	RPG III Beginning.....	4
DP	158	FORTRAN.....	4
DP	162	dBase Programming/Micro.....	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	257	RPG III 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 market. This program is for people seeking entry-level positions as well as those now employed who want to enhance their job skills. The certificate gives current or prospective employers tangible evidence of computer competency.

**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 Applications I may be substituted for CPCA 105, 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 Applications I.....	3
CPCA	132	Integrated Applications II.....	3
DP	230	Data Communications for Micros.....	3
DP	137	Advanced BASIC.....	4
DP	162	dBASE Programming/Micro.....	4
CS	200	Pascal.....	4
		<b>TOTAL CREDIT HOURS.....</b>	<b>15-16</b>

**Data Processing Mini/Micro Vocational Certificate**

Over the past several 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 give students the most critical skills required.

**Prerequisites**

Proficiency with computers is required before starting this program. The following courses must be completed before 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	145	Assembler Language for Micros	4
DP	162	dBASE Programming/Micros	4
DP	242	Introduction to System Design and Analysis	3
CPCA	128	Integrated Applications I	3

One of these two courses must be taken:

DP	230	Data Communications for Micros	3
		Or	
DP	245	Microcomputer Operating Systems	3

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

DP	157	RPG III Beginning	4
		And	
DP	257	RPG III 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
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS</b>	<b>25</b>

### Advanced Data Processing Vocational Certificate

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

### Prerequisites

Proficiency with computers is required before starting this program. The following courses or equivalent work experience must be completed before enrolling in 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

Four of the following courses, one of which must be a language course, must be completed:

DP	174	Teleprocessing	3
DP	235	Programming in C	4
DP	242	Introduction to System Design and Analysis	3
DP	250	Assembly Language II	4
DP	253	CICS	4
DP	258	Operating Systems	3
DP	260	Data Base Management	4

### TOTAL PROGRAM

**CREDIT HOURS** ..... 13-16

## 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. Dental hygienists earn a competitive salary and enjoy flexible work hours.

A preventive professional may function in many roles. Some of these might be working in a school system as a preventive educator, conducting oral screening in nursing homes, writing textbooks, serving as a salesperson for dental suppliers or providing preventive services in a private dental office.

JCCC dental hygiene students gain valuable practical experience in the college's dental hygiene clinic located on campus. Working under the supervision of a licensed dentist and registered dental hygienists, students develop efficiency in preventive dental hygiene techniques.

This challenging program is demanding and rewarding and requires full-time involvement. Enrollment in this program is limited; the deadline for fall semester applications is Feb. 1. Interested individuals may contact the Admissions and Records Office for an application packet, which includes deadlines, admission requirements and options for meeting academic criteria.

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, the program comprises five semesters and a summer session, totaling 81 credit hours, leading to an associate of science degree.

## Associate of Science Degree

### Summer

CR

Before 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	2
DHYG	148 Dental Health Education	1
TOTAL CREDIT HOURS		17

### Summer

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
Health and/or Physical Education Elective		1
TOTAL CREDIT HOURS		11
TOTAL PROGRAM CREDIT HOURS		81

## 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 students to use the latest surveying, computer-aided design manufacturing (CAD-CAM) equipment. Course projects and laboratory procedures are similar to those used in the industry. An associate of science degree is awarded upon the successful completion of 64 hours of credit.

## Associate of Science Degree

### Civil Option

#### First Semester

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

\* A three-credit 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	271	Drafting Internship I	3
DRAF	129	Interpreting Architectural Drawing	2

**Technical Electives**

HVAC	125	Energy Alternatives	3
ENGR	132	Engineering Graphics II	3

**Associate of Science Degree****Machine Option****First Semester****CR**

ENGR	131	Engineering Graphics I	3
MATH	133	Technical Math I	4
ENGL	121	Composition I	3
MFAB	121	Introduction to Welding	3
		Humanities and/or Arts Elective	3
		<b>TOTAL CREDIT HOURS</b>	<b>16</b>

**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	122	Composition II	3
ENGR	132	Engineering Graphics II	3
		Or	
		Technical Elective	3
		<b>TOTAL CREDIT HOURS</b>	<b>17</b>

**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
		<b>TOTAL CREDIT HOURS</b>	<b>17</b>

**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
		<b>TOTAL CREDIT HOURS</b>	<b>14</b>
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS</b>	<b>64</b>

\* A three-credit 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	180	Architectural/Structural Drafting	4
DRAF	225	Cartography and Land Surveying	3
DRAF	271	Drafting Internship I	3

**Technical Electives**

ELEC	120	Introduction to Electronics	3
ELEC	133	Programmable Controllers	3
HVAC	125	Energy Alternatives	2
HVAC	143	Reading Blueprints and	
		Ladder Diagrams	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 students comprehensive, theoretical and practical knowledge of electronics technology. Laboratory facilities give students the opportunity to diagnose circuits with equipment comparable to that used in industry. The program consists of 64 credit hours and leads to an associate of science degree.

**Associate of Science Degree****First Semester****CR**

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

**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
		<b>TOTAL CREDIT HOURS</b>	<b>17</b>

**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
<b>TOTAL CREDIT HOURS .....</b>	<b>16</b>

**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
<b>TOTAL CREDIT HOURS .....</b>	<b>15</b>
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>64</b>

**Approved Electronics Electives**

ELEC 121 Basic Telephony.....	3
ELEC 133 Programmable Controllers .....	3
ELEC 271 Electronics Internship I.....	3
DP 174 Teleprocessing.....	3
PHYS 126 Technical Physics II.....	3

**Emergency Medical Science**

In the Emergency Medical Science Program, students can opt for one of two tracks. The Emergency Medical Technician course and the Paramedic (MICT) Program 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 these career fields include compassion for victims in medical crises, the ability to act calmly and systematically in high stress environments and physical stamina and dexterity.

**EMT:** The six-credit-hour Emergency Medical Technician course, which is offered every spring and fall semester, has open enrollment. This class meets twice a week in the evenings and on six Saturdays. In this course, the basic skills taught include CPR, bandaging, splinting, childbirth assistance and extrication from autos as well as recognition of and prehospital treatment for medical emergencies such as heart attacks, strokes and diabetes. Upon instructor recommendation, students 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.

**EMT Vocational Certificate**

EMS 130 Emergency Medical Technician course.....	6
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>6</b>

**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.

This selective admissions program has limited enrollment. The deadline for applications is Oct. 15. Interested individuals should contact the Admissions and Records Office for an application packet. Accepted students enter the program beginning in the spring semester, attend summer and fall classes and conclude in December.

**MICT Vocational Certificate**

**Prerequisites**

Certified as Emergency Medical Technician  
College-level anatomy/physiology course

<b>Spring Semester</b>		<b>CR</b>
EMS 220 MICT I.....	10	
EMS 225 MICT II.....	10	
<b>TOTAL CREDIT HOURS .....</b>	<b>20</b>	

**Summer Session**

EMS 230 MICT III (clinical).....	12
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**Fall Semester**

EMS 271 MICT IV (field internship).....	15
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>47</b>

**Associate of Science Degree**

**Prior to beginning professional courses**

Certification as an emergency medical technician is required as a prerequisite to the MICT courses, or a student may enter in special cases with the approval of the division administrator.

BIOL 140 Human Anatomy.....	4
BIOL 225 Human Physiology.....	4
CHEM 122 Principles of Chemistry.....	5
<b>TOTAL CREDIT HOURS .....</b>	<b>13</b>

**First Semester (Spring)**

		<b>CR</b>
EMS 220 MICT I.....	10	
EMS 225 MICT II.....	10	
<b>TOTAL CREDIT HOURS .....</b>	<b>20</b>	

**Summer**  
 EMS 230 MICT III (Clinicals).....12

**Second Semester (Fall)**  
 EMS 271 MICT IV (Field Internship) .....15

**Third Semester**  
 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**  
 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**

Certification as an emergency medical technician is required as a prerequisite to the MICT courses, or a student may enter in special cases with the approval of the division administrator.

BIOL 144 Human Anatomy and Physiology .....5  
 Or  
 BIOL 140 Human Anatomy.....4  
 And  
 BIOL 225 Human Physiology.....4

**First Semester (Spring) CR**  
 EMS 220 MICT I .....10  
 EMS 225 MICT II .....10  
 TOTAL CREDIT HOURS .....20

**Second Semester (Summer)**  
 EMS 230 MICT III (Clinicals).....12

**Third Semester (Fall)**  
 EMS 271 MICT IV (Field Internship) .....15

**Fourth Semester**  
 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**

**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 ferrisers. 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 covers 64 credit hours, will improve students' 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  
 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

Although 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 in fashion merchandising requiring a minimum of 64 credit hours. The program focuses on merchandising, marketing and management in five areas of operation: textiles, apparel design, manufacturing, media and promotion, and retailing.

Field experience is an integral part of the program. Students are 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

<i>First Semester</i>		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	Retail Management.....	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: Industry Topics.....	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

\* ECON 230 is recommended only for students who intend to transfer to a baccalaureate degree program.

## 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 for an associate of science degree. A student also may earn a certificate upon successful completion of 30 credit hours and be ready to enter the job market.

Students are presumed to be in their first semester at the point where they enter the curriculum. For example, if someone starts in semester two, he or she will follow the scheduled courses through semesters three, four and one.

### Associate of Science Degree

<i>First Semester</i>		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
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>64</b>

**Technical Electives**

Any course in this section not required for the 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 Fundamentals of Photography.....	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
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>30</b>

**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 for an associate of science degree. A student may earn a certificate with 30 hours of credit and may then enter the job market.

Students are presumed to be in their first semester at the point where they enter the curriculum. For example, if someone starts in semester two, he or she 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 .....	17
<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>64</b>

**Technical Electives**

Any course in this section not required for the 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

<b>First Semester</b>			<b>CR</b>
FIRE	150	Introduction to Fire Science .....	3
FIRE	170	Sprinkler and Standpipe Systems.....	3
TOTAL CREDIT HOURS.....			6

<b>Second Semester</b>			
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
Health and/or Physical Education Elective .....			1
FIRE	159	Fire Hydraulics.....	4
TOTAL CREDIT HOURS.....			8

<b>Third Semester</b>			
FIRE	162	Fire Tactics and Strategy .....	3
FIRE	160	Fire Apparatus and Equipment .....	3
TOTAL CREDIT HOURS.....			6

<b>Fourth Semester</b>			
FIRE	169	Rescue Techniques .....	4
ENGL	121	Composition I.....	3
MATH	171	College Algebra.....	3
TOTAL CREDIT HOURS .....			10
<b>TOTAL PROGRAM</b>			
<b>CREDIT HOURS.....</b>			<b>30</b>

### Fire Protection Administration

Experienced firefighters often continue to study to improve their job performance and prepare themselves 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 to direct the activities of firefighters in their companies.

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 earns an associate of applied science degree.

Students are presumed to be in their first semester at the point where they enter the curriculum. For example, if someone starts in semester two, he or she will follow the scheduled courses through semesters three, four and one.

### Associate of Applied Science Degree

<b>First Semester</b>			<b>CR</b>
FIRE	162	Fire Tactics and Strategy .....	3
ENGL	121	Composition I.....	3
MATH	171	College Algebra or higher .....	3
FIRE	150	Introduction to Fire Science .....	3
Humanities and/or Art Elective .....			3
TOTAL CREDIT HOURS .....			15

<b>Second Semester</b>			
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

<b>Third Semester</b>			
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

<b>Fourth Semester</b>			
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 and/or Mathematics Elective.....			3
TOTAL CREDIT HOURS .....			18
<b>TOTAL PROGRAM</b>			
<b>CREDIT HOURS.....</b>			<b>64</b>

<b>Approved Electives</b>			
Any course in this section not required for the 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

## Heating, Ventilation and Air Conditioning Technology

Government researchers say graduates of training programs that emphasize hands-on experience will have a definite advantage when seeking employment in heating, air conditioning and ventilation technology. JCCC provides students the opportunity to work on actual equipment while pursuing a degree or certificate program.

The 65-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. The theory of operation as well as installation, service and repair of gas furnaces, electric furnaces, heat pumps, rooftop air conditioners and steam boilers are part of the curriculum.

### Associate of Applied Science Degree

<i>First Semester</i>		<b>CR</b>
HVAC	121 Basic Principles of HVAC.....	4
HVAC	123 Electromechanical Systems.....	3
HVAC	125 Energy Alternatives.....	2
HVAC	143 Reading Blueprint and Ladder Diagrams.....	2
MATH	133 Technical Math I.....	4
TOTAL CREDIT HOURS.....		<b>15</b>
<i>Second Semester</i>		
HVAC	126 Residential HVAC Systems.....	4
HVAC	128 Instrument and Control Devices.....	3
ENGL	121 Composition I.....	3
PHYS	125 Technical Physics I.....	4
	Social and/or Economics Elective.....	3
TOTAL CREDIT HOURS.....		<b>17</b>
<i>Third Semester</i>		
HVAC	124 Equipment Selection and Duct Design...4	
HVAC	222 Advanced Control Systems.....	4
HVAC	223 Commercial Systems: Heating.....	4
CPCA	105 Introduction to Personal Computing.....1	
	Health and/or Physical Education Elective.....	1
	Technical Electives.....	3
TOTAL CREDIT HOURS.....		<b>17</b>
<i>Fourth Semester</i>		
HVAC	221 Commercial Systems: Air Conditioning.4	
HVAC	224 Diagnosis and Service Procedures.....	3
HVAC	226 Energy Management.....	3
MFAB	121 Introduction to Welding.....	3
	Humanities and/or Art Elective.....	3
TOTAL CREDIT HOURS.....		<b>16</b>
<b>TOTAL PROGRAM CREDIT HOURS.....</b>		<b>65</b>

### Technical Electives

HVAC	130 Passive Solar Fundamentals.....	3
ELEC	120 Introduction to Electronics.....	3
ELEC	133 Programmable Controllers.....	3
DRAF	115 Introduction to Computer Graphics Systems.....	3
DRAF	120 Basic Drafting.....	2
DRAF	129 Interpreting Architectural Drawings.....	2
ENGR	105 Construction Methods I.....	3
ENGR	131 Engineering Graphics I.....	3
AUTO	121 Small Engine Service.....	3
AUTO	125 Introduction to Automotive Shop Practices.....	3
AUTO	230 Automotive Air Conditioning, Lighting and Power Accessories.....	4
HVAC	271 HVAC Internship I.....	3
HVAC	272 HVAC Internship II.....	3
HVAC	291 Independent Study.....	3

### 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. Students who elect the certificate option 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 students to seek employment as maintenance and service technicians in the heating/air conditioning trade.

### Required Courses

		<b>CR</b>
HVAC	121 Basic Principles of HVAC.....	4
HVAC	123 Electromechanical Systems.....	3
MATH	133 Technical Math I.....	4
HVAC	124 Equipment Selection and Duct Design...4	
HVAC	126 Residential HVAC Systems.....	4
ENGL	121 Composition I.....	3
	Technical Elective.....	3
TOTAL CREDIT HOURS.....		<b>25</b>

Eight credit hours from the following courses must be completed in addition to the courses listed above.

HVAC	221 Commercial Systems: Air Conditioning.....	4
HVAC	223 Commercial Systems: Heating.....	4
PHYS	125 Technical Physics I.....	4
TOTAL CREDIT HOURS.....		<b>8</b>
<b>TOTAL PROGRAM CREDIT HOURS.....</b>		<b>33</b>

### Technical Electives

HVAC	130 Passive Solar Fundamentals.....	3
HVAC	271 HVAC Internship I.....	3

HVAC	272	HVAC Internship II.....	3
HVAC	291	Independent Study.....	3
AUTO	121	Small Engine Service.....	3
AUTO	125	Introduction to Automotive Shop Practices.....	3
AUTO	230	Automotive A/C, Lighting and Power Accessories.....	4
DRAF	115	Introduction to Computer Graphics Systems.....	3
DRAF	120	Basic Drafting.....	2
DRAF	129	Interpreting Architectural Drawings.....	2
ELEC	120	Introduction to Electronics.....	3
ELEC	133	Programmable Controllers.....	3
ENGR	105	Construction Methods I.....	3
ENGR	131	Engineering Graphics I.....	3

## Hospitality Management

The Hospitality Management Program at JCCC is a comprehensive study of the food service and public lodging industries. It provides an overview of the various departmental functions, the position of the industries in the American economic system and the 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. The student is awarded an associate of applied science degree upon successful completion of 64 hours of credit in this career program.

### Associate of Applied Science Degree

<b>First Semester</b>		<b>CR</b>	
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

<b>Second Semester</b>			
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	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
		Oral Communications Elective.....	3
HMGT	223	Fundamentals of Baking.....	3
TOTAL CREDIT HOURS.....			15

### Fourth Semester

HMGT	126	Food Management.....	4
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
<b>TOTAL PROGRAM</b>			
<b>CREDIT HOURS.....</b>			<b>64</b>

### 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	Hospitality Management Internship.....	3
		Elective.....	3
TOTAL CREDIT HOURS.....			31

## Information/ Word Processing

The Information/Word Processing Program is based on a survey and extensive analysis conducted by JCCC's Institutional Research Office of the needs of more than 3,000 area businesses. Excellent job opportunities exist for skilled technicians in the field of information word processing.

The JCCC associate of applied science degree program prepares students to become successful employees in the rapidly changing field of office automation. Hands-on experience is obtained in word processing using the latest hardware and software. The program requires a minimum of 64 credit hours in a suggested sequence for the associate of applied science degree.

### Associate of Applied Science Degree

<b>First Semester</b>		<b>CR</b>	
ENGL	121	Composition I.....	3
SEC	136	Records Management.....	3
DP	124	Business Data Processing.....	3
MATH	120	Business Math or higher.....	3
		Technical Elective.....	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
		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
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS.....</b>	<b>64</b>

**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
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.

**Required Courses****CR**

IWP	121	Word Processing Applications I.....	3
IWP	132	Word Processing Applications II.....	3
IWP	131	Office Automation 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 Applications I – IBM may be substituted for CPCA 105, CPCA 110 and CPCA 114.....	3
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.....	<b>28-29</b>

**Interior Merchandising**

The Interior Merchandising Program 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 coursework and on-the-job training in the residential, commercial, wholesale and manufacturing areas of the industry. Students who successfully complete the two-year, 66-credit-hour curriculum earn the associate of applied science degree.

**Associate of Applied Science Degree****First Semester****CR**

ITMD	133	Furniture and Ornamentation/ Antiquity to Renaissance.....	3
ITMD	121	Interior Design I.....	3
DRAF	261	Graphic Communications I for Interior Design.....	3
MATH	120	Business Math or Higher.....	3
FASH	150	Textiles.....	3
ENGL	121	Composition I.....	3
		TOTAL CREDIT HOURS.....	<b>18</b>

**Second Semester**

DRAF	266	Graphic Communications II for Interior Design.....	3
ITMD	122	Interior Design II.....	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.....	<b>15</b>

### 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	130	Basic Economics	3
		Or	
ECON	230	Economics I *	3
ITMD	140	Draperies, Treatment and Construction	1
ITMD	145	Upholstery Construction	1
ITMD	147	Lighting Design and Planning	1
		TOTAL CREDIT HOURS	15

### Fourth Semester

BUS	140	Principles of Supervision	3
ITMD	234	Kitchen and Bath: Planning and Design	3
ITMD	239	Portfolio and Presentation for Interior Design	1
ITMD	275	Seminar: Budgeting and Estimating	2
ITMD	284	Interior Merchandising Practicum II	1
ITMD	148	Furniture and Ornamentation/ Oriental	3
DRAF	264	CAD: Interior Design	3
FASH	135	Image Management Health and/or Physical Education Elective	1
		TOTAL CREDIT HOURS	18
		TOTAL PROGRAM CREDIT HOURS	66

\* ECON 230 is recommended only for students who intend to transfer to a baccalaureate degree program.

## Interpreter Training

The employment outlook for sign language interpreters is 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 participate in a practicum class in which they interpret under supervision in a variety of situations at JCCC and in the community. Successful completion of this 64-credit-hour program leads to an associate of applied science degree.

This is a selective admission program with limited enrollment.

## Associate of Applied Science Degree

### First Semester

			<b>CR</b>
INTR	125	American Sign Language I	5
INTR	130	Orientation to Interpreting	3
INTR	145	Deaf Culture Health and/or Physical Education Elective	3
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
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
		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
		TOTAL CREDIT HOURS	16
		TOTAL PROGRAM CREDIT HOURS	64

## Marketing and Management

The field of marketing and management is large and competitive. People employed in this field work in marketing and advertising, as insurance agents/brokers, or as 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 for retail, wholesale or manufacturing sales; marketing research analysis; store management; buying; and service sales. On-the-job experience provides students with 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 leads to an associate of applied science degree.

## Associate of Applied Science Degree

<b>First Semester</b>		<b>CR</b>
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 Behavior.....3	
MATH	120 Business Math.....3	
	Health and/or Physical Education Elective.....1	
	<b>TOTAL CREDIT HOURS.....16</b>	
<b>Second Semester</b>		
BUS	140 Principles of Supervision.....3	
MKT	121 Retail Management.....3	
SPD	120 Interpersonal Communications.....3	
	Or	
SPD	121 Public Speaking.....3	
BUS	150 Business Communications.....3	
CPCA	105 Introduction to Personal Computers.....1	
MKT	272 Marketing and Management Seminar: Human Relations.....3	
	<b>TOTAL CREDIT HOURS.....16</b>	
<b>Third Semester</b>		
BUS	230 Marketing.....3	
BUS	261 Business Law I.....3	
	Humanities and/or Arts Elective.....3	
CPCA	108 Word Processing on Microcomputers I...1	
	Or	
CPCA	110 Spreadsheets on Microcomputers I.....1	
	Or	
CPCA	114 Databases on Microcomputers I.....1	
ECON	130 Basic Economics.....3	
	Or	
ECON	230 Economics I *.....3	
MKT	273 Marketing and Management Seminar: Marketing Research.....3	
	<b>TOTAL CREDIT HOURS.....16</b>	
<b>Fourth Semester</b>		
BUS	120 Management Attitudes and Motivation.3	
BUS	141 Principles of Management.....3	
CPCA	108 Word Processing on Microcomputers I...1	
	Or	
CPCA	110 Spreadsheets on Microcomputers I.....1	
	Or	
CPCA	114 Databases on Microcomputers I.....1	
MKT	221 Sales Management.....3	
MKT	274 Marketing and Management Seminar: Management.....3	
	Electives.....3	
	<b>TOTAL CREDIT HOURS.....16</b>	
	<b>TOTAL PROGRAM CREDIT HOURS.....64</b>	

## Recommended Electives

BUS	130 Introduction to International Business.....3
BUS	243 Personnel Management.....3
FASH	135 Image Management.....1
FASH	243 Merchandising Strategies.....3

\*ECON 230 is recommended only for students who intend to transfer to a baccalaureate degree program.

## Medical Record Technology

A medical record technician has the technical skills needed 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 66-credit-hour 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, students should request "Admissions Procedures" for the Medical Record Program from the Admissions and Records Office.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

## Associate of Applied Science Degree

*Degree granted by Penn Valley Community College*

<b>First Semester</b>		<b>CR</b>
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	
	<b>TOTAL CREDIT HOURS.....16</b>	



**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
		<b>TOTAL CREDIT HOURS .....</b>	<b>16</b>

**Summer**

SPD	120	Interpersonal Communications.....	3
		American Institution Requirements * .....	3
		<b>TOTAL CREDIT HOURS.....</b>	<b>6</b>

**Third Semester**

KMRT	164	Quality Assurance/Sel Health Records...	3
IWP	121	Word Processing Applications I.....	3
KMRT	163	Classification, Nom., Ind. and Reg. I.....	3
KMRT	167	Clinical Education II.....	2
ENGL	122	Composition II .....	3
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>

**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
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS.....</b>	<b>66</b>

Enrollees may be full-time or part-time students. The sequencing given above is required in order to complete the program in four semesters.

\* All graduates from Penn Valley must meet the American Institution requirements. Students should see a JCCC counselor about courses.

**Metal Fabrication**

Growth in population and income is expected to continue the demand for construction and small manufacturing that provides employment for welders. The rate of expansion in the industries that produce fabricated products will determine the increase in the number of welders needed. Many openings will arise because of the need to replace experienced welders who transfer to other occupations or retire.

JCCC provides well-equipped laboratories that enable students to receive hands-on instruction in metallurgy, oxyacetylene welding and cutting, stick-welding (SMAW), Heliarc (GTAW), metal fabrication and wire welding (GMAW-FCAW).

**Postsecondary Certificate Program**

**Required Courses**

**CR**

MFAB	121	Introduction to Welding .....	3
MFAB	125	Advanced Gas and Arc Welding.....	3
MFAB	130	MIG and TIG I.....	3
MFAB	230	MIG and TIG II .....	3
BUS	120	Management Attitudes and Motivation.....	3
DRAF	120	Basic Drafting .....	2
ELEC	133	Programmable Controllers .....	3
ENGL	121	Composition I.....	3
HVAC	108	HVAC Technical Service I .....	2
MATH	133	Technical Math I.....	4
MFTG	132	Metallurgy.....	1
QC	140	Quality Improvement .....	2

**Nursing**

As the 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 registered nurses 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 – the associate of science and the associate of arts degrees – accredited by the Kansas State Board of Nursing and the National League for Nursing. Both degrees focus on the biological, physical and behavioral sciences as well as on nursing. Because the difficult curriculum requires long hours of classroom, laboratory and independent study, students must meet certain academic requirements before enrolling in the program. Upon successful completion of either degree, students will be eligible to take the Registered Nurse Licensing Exam. The application deadline for JCCC's Nursing Program is Feb. 1.

Licensed practical nurses may wish to apply for admission with advanced standing. They must meet specific criteria to be eligible for admission to the program at this level. Additional information is available through the Admissions and Records Office. The deadline for application is Jan. 15.

**Associate of Science Degree**

<b>Summer</b>	<b>CR</b>
Before 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
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**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
TOTAL CREDIT HOURS .....	13
<b>TOTAL PROGRAM</b>	
<b>CREDIT HOURS.....</b>	<b>69</b>

**Associate of Arts Degree**

<b>Summer</b>	<b>CR</b>
Before 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 .....	16
<b>TOTAL PROGRAM</b>	
<b>CREDIT HOURS.....</b>	<b>75</b>

**Occupational Therapy Assistant**

The occupational therapy assistant assists the registered occupational therapist, helping people who have emotional and developmental limitations achieve more functional lives. The two-year Occupational Therapy Assistant Program is offered in cooperation with Penn Valley Community College. The support courses are held at JCCC and the clinical courses 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, students will be granted a certificate and identification number. Interested individuals should consult a JCCC counselor for additional information.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

**Associate of Applied Science Degree**

*Degree granted by Penn Valley Community College*

<b>First Semester</b>	<b>CR</b>
KOT 100 Introduction to Occupational Therapy *.....	2
LC 130 Medical Terminology.....	3
CHEM 122 Principles of Chemistry .....	5
PSYC 130 Introduction to Psychology .....	3
ENGL 121 Composition I.....	3
American Institutions ** .....	3
TOTAL CREDIT HOURS .....	19

**Second Semester**

KOT	101	Occupational Therapy Growth and Development .....	3
KOT	112	Basic Emergency Patient Care .....	1
BIOL	140	Human Anatomy.....	4
BIOL	225	Human Physiology.....	4
KOT	103	Clinical Conditions.....	3
KOT	106	General Treatment Procedures.....	2
KOT	203	Shop Practices/Orthotics.....	2
KOT	116	Level I Fieldwork.....	1
		TOTAL CREDIT HOURS .....	20

**Summer**

KOT	105	Occupational Therapy Gerontology .....	2
KOT	107	Occupational Therapy Kinesiology.....	2
SOC	122	Sociology .....	3
		TOTAL CREDIT HOURS.....	7

**Third Semester**

KOT	201	Occupational Therapy in Mental Health.....	4
KOT	202	Occupational Therapy in Physical Disabilities .....	4
KOT	204	Therapeutic Media .....	3
KOT	207	Clinical Seminar .....	2
KOT	211	Level I Fieldwork/Mental Health.....	1
KOT	212	Level I Fieldwork/Physical Disabilities ..	1
SPD	120	Interpersonal Communications.....	3
		TOTAL CREDIT HOURS .....	18

**Fourth Semester**

KOT	221	Level II Fieldwork/Mental Health .....	4
KOT	222	Level II Fieldwork/Physical Disabilities ..	4
KOT	230	Level II Fieldwork/Specialty Area (Elective).....	2
		TOTAL CREDIT HOURS.....	8-10
		<b>TOTAL PROGRAM CREDIT HOURS .....</b>	<b>72-74</b>

\* Enrollment in this course does not imply acceptance into the program.

\*\* All graduates from Penn Valley must meet the American Institutions requirement. Interested individuals should see a JCCC counselor about courses.

**Office 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. Although the 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 have the opportunity

to practice with a wide range of automated business machines in modern laboratories, using the latest in equipment and procedures. With a minimum of 64 credit hours, students may earn an associate of applied science degree in administrative office management, the administrative secretary option, the legal secretary option or the medical secretary option. Interested individuals should consult a JCCC counselor to plan the specific area of emphasis desired.

A student may earn a certificate in the secretarial program with the successful completion of 31 credit hours.

**Associate of Applied Science Degree**

**Administrative Secretary**

<b>First Semester</b>		<b>CR</b>	
BUS	121	Introduction to Business .....	3
SEC	150	Business Writing.....	3
SEC	122	Intermediate Typing .....	3
SEC	125	Shorthand I .....	3
		Or	
SEC	130	Speedwriting I .....	3
SEC	136	Records Management.....	3
		TOTAL CREDIT HOURS .....	15

**Second Semester**

MATH	120	Business Math.....	3
SEC	126	Shorthand II .....	3
		Or	
SEC	131	Speedwriting II .....	3
SEC	135	Electronic Calculators .....	1
SEC	223	Machine Transcription.....	3
SEC	283	Secretarial Internship I.....	1
SEC	275	Human Relations Seminar .....	2
ENGL	121	Composition I.....	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
DP	124	Business Data Processing.....	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**

BUS	150	Business Communications.....	3
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
		TOTAL CREDIT HOURS .....	16
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>65</b>

### Associate of Applied Science Degree

#### Administrative Office Management

<b>First Semester</b>		<b>CR</b>	
BUS	121	Introduction to Business .....	3
SEC	150	Business Writing.....	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
ENGL	121	Composition I.....	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
BUS	150	Business Communications.....	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
		TOTAL CREDIT HOURS .....	16
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>64</b>

#### Recommended Electives

CPCA	110	Spreadsheets on Microcomputers I.....	1
CPCA	114	Databases on Microcomputers I.....	1
SPD	122	Group Discussion.....	3

SOC	125	Social Problems .....	3
SEC	130	Speedwriting I .....	3
SEC	135	Electronic Calculators .....	1
BUS	120	Management Attitudes and Motivation.....	3

### Associate of Applied Science Degree

#### Medical Secretary

<b>First Semester</b>		<b>CR</b>	
SEC	122	Intermediate Typing.....	3
LC	130	Medical Terminology.....	3
SEC	150	Business Writing.....	3
SEC	125	Shorthand I .....	3
		Or	
SEC	130	Speedwriting I .....	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
ENGL	121	Composition I.....	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
BUS	150	Business Communications.....	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
		Electives.....	2
		TOTAL CREDIT HOURS .....	17
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>64</b>

**Recommended Electives**

CPCA 110 Spreadsheets on Microcomputers I .....1
CPCA 114 Databases on Microcomputers I .....1
SEC 126 Shorthand II .....3
Or
SEC 131 Speedwriting II .....3
DP 124 Business Data Processing .....3
PSYC 130 Introduction to Psychology .....3
BIOL 144 Human Anatomy/Physiology .....3
BUS 120 Management Attitudes and Motivation 3

**Associate of Applied Science Degree**

**Legal Secretary**

First Semester CR
SEC 150 Business Writing .....3
SEC 136 Records Management .....3
SEC 122 Intermediate Typing .....3
ECON 230 Economics I .....3
Or
ECON 130 Basic Economics .....3
Health and/or Physical Education
Elective .....1
PL 121 Introduction to Law .....3
TOTAL CREDIT HOURS .....16

**Second Semester**

PL 171 Law Office Systems .....2
SEC 142 Legal Transcription .....3
SEC 223 Machine Transcription .....3
ENGL 121 Composition I .....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 Speedwriting I .....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
BUS 150 Business Communications .....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
Humanities and/or Art Elective .....3
SEC 285 Secretarial Internship III .....1

SEC 277 Administrative Office Management
Seminar .....2
TOTAL CREDIT HOURS .....15
TOTAL PROGRAM
CREDIT HOURS .....64

**Office Careers Vocational Certificate Program**

SEC 122 Intermediate Typing .....3
MATH 120 Business Math .....3
SEC 230 Secretarial Procedures I .....3
SEC 231 Secretarial Procedures II .....3
SEC 150 Business Writing .....3
SEC 136 Records Management .....3
SEC 135 Electronic Calculators .....1
IWP 121 Word Processing Applications I .....3
Or
SEC 223 Machine Transcription .....3
ACCT 111 Small Business Accounting .....3
SEC 283 Secretarial Internship I .....1
SEC 284 Secretarial Internship II .....1

Students must take two of the following seminar courses:

SEC 272 Management Seminar .....2
SEC 275 Human Relations Seminar .....2
SEC 277 Administrative Office Management
Seminar .....2
TOTAL CREDIT HOURS .....31

**Paralegal**

The expanding role of the legal assistant in the delivery of legal services has created increased opportunities for paralegals. The private law firm continues to be the largest employer of legal assistants, but opportunities also are available in other organizations and institutions such as corporate legal departments, insurance companies, real estate and title firms, banks and government agencies.

Persons interested in entering this career field should be aware that while the number of jobs for trained paralegals is steadily rising, competition for these positions also is rapidly increasing. Moreover, the paralegal curriculum is a challenging one. The law is a complex subject, and comprehension of legal theories and concepts demands a high degree of analytical reasoning ability. The student must possess excellent communication skills, analytical ability and a high level of motivation in order to successfully complete the program.

The Paralegal Program at JCCC is approved by the American Bar Association. Beginning with the fall semester of 1990, selective admission to the program will be based on various academic and testing criteria.

**Paralegal Postsecondary Certificate  
Program Options**

**Option I** **CR**

Students must have completed a four-year degree and have satisfied JCCC general education requirements prior to admission.

The following courses must be completed with a minimum G.P.A. of 2.0 prior to application for admission to the Paralegal Program.

PL	121	Introduction to Law	.....3
PL	123	Paralegal Studies	.....1

**First Semester**

CPCA	128	Integrated Software – IBM	.....3
		Or	
CPCA	108	Word Processing on Microcomputers I	...1
		And	
CPCA	110	Spreadsheets on Microcomputers I	.....1
		And	
CPCA	114	Databases on Microcomputers I	.....1
		TOTAL CREDIT HOURS	.....7

**Second Semester**

Following admission to the Paralegal Program

PL	131	Legal Research	.....3
PL	132	Litigation	.....4
		Paralegal Electives	.....6
		TOTAL CREDIT HOURS	.....13

**Third Semester**

PL	205	Legal Writing	.....2
PL	275	Legal Ethics, Interviewing and Investigation	.....3
		Paralegal Electives	.....8
		TOTAL CREDIT HOURS	.....13
		<b>TOTAL PROGRAM CREDIT HOURS</b>	<b>.....33</b>

**Paralegal Electives**

PL	140	Computerized Litigation Support	.....2
PL	152	Real Estate Law	.....3
PL	162	Family Law	.....3
PL	171	Law Office Systems	.....2
PL	212	Business Organizations	.....3
PL	241	Will, Trusts and Probate Administration	.....3
PL	261	Employee Benefits Law	.....2
PL	264	Workers' Compensation	.....2
PL	268	Bankruptcy	.....2
PL	275	Paralegal Internship	.....1
ADMJ	141	Criminal Law	.....3

**Option II** **CR**

Students must have completed a two-year degree and have satisfied JCCC general education requirements prior to admission. The following courses must be completed with a minimum G.P.A. of 2.0 prior to application for admission to the Paralegal Program.

ENGL	121	Composition I	.....3
PL	121	Introduction to Law	.....3
PL	123	Paralegal Studies	.....1

**First Semester**

CPCA	128	Integrated Software – IBM	.....3
		Or	
CPCA	108	Word Processing on Microcomputers I	...1
		And	
CPCA	110	Spreadsheets on Microcomputers I	.....1
		And	
CPCA	114	Databases on Microcomputers I	.....1
		Speech Elective	.....3
MATH	115	Introduction to Algebra or higher	.....3
		TOTAL CREDIT HOURS	.....16

**Second Semester**

Following admission to the Paralegal Program

ENGL	122	Composition II	.....3
PL	131	Legal Research	.....3
PL	132	Litigation	.....4
		Paralegal Electives	.....4
		TOTAL CREDIT HOURS	.....14

**Third Semester**

PL	205	Legal Writing	.....2
PL	275	Legal Ethics, Interviewing and Investigation	.....3
		Paralegal Electives	.....10
		TOTAL CREDIT HOURS	.....15

**Fourth Semester**

		Electives	.....15
		<b>TOTAL PROGRAM CREDIT HOURS</b>	<b>.....60</b>

**Paralegal Electives**

ADMJ	141	Criminal Law	.....3
PL	140	Computerized Litigation Support	.....2
PL	152	Real Estate Law	.....3
PL	162	Family Law	.....3
PL	171	Law Office Systems	.....2
PL	212	Business Organizations	.....3
PL	241	Will, Trusts and Probate Administration	.....3
PL	261	Employee Benefits Law	.....2
PL	264	Workers' Compensation	.....2
PL	268	Bankruptcy	.....2
PL	275	Paralegal Internship	.....1

## Associate of Arts Degree

The following courses must be completed with a minimum G.P.A. of 2.0 prior to application for admission to the Paralegal Program.

ENGL	121	Composition I.....	3
PL	121	Introduction to Law.....	3
PL	123	Paralegal Studies.....	1

### First Semester

**CR**

		Humanities and/or Art Elective.....	3
SPD	120	Interpersonal Communications.....	3
		Or	
SPD	121	Public Speaking.....	3
		Or	
SPD	125	Personal Communications.....	3
		Science and Mathematics Elective.....	3
		Social Science and/or Economics Elective.....	3
		TOTAL CREDIT HOURS.....	19

### Second Semester

Following admission to the Paralegal Program

ENGL	122	Composition II.....	3
PL	131	Legal Research.....	3
PL	132	Litigation.....	4
CPCA	128	Integrated Software – IBM.....	3
		Or	
CPCA	108	Word Processing on Microcomputers I...1 And	
CPCA	110	Spreadsheets on Microcomputers I.....1 And	
CPCA	114	Databases on Microcomputers I.....1 Social Science and/or Economics Elective.....	3
		TOTAL CREDIT HOURS.....	16

### Third Semester

PL	205	Legal Writing.....	2
		Paralegal Electives.....	6
		Health and/or Physical Education Elective.....	1
		Humanities and/or Art Elective.....	3
		Science and Mathematics Elective.....	3
		TOTAL CREDIT HOURS.....	15

### Fourth Semester

PL	271	Legal Ethics, Interviewing and Investigation.....	3
		Paralegal Electives.....	8
		Science and Mathematics Elective.....	3
		Elective.....	3
		TOTAL CREDIT HOURS.....	17
		TOTAL PROGRAM CREDIT HOURS.....	64

## Paralegal Electives

ADMJ	141	Criminal Law.....	3
PL	140	Computerized Litigation Support.....	2
PL	152	Real Estate Law.....	3
PL	162	Family Law.....	3
PL	171	Law Office Systems.....	2
PL	212	Business Organizations.....	3
PL	241	Will, Trusts and Probate Administration.....	3
PL	261	Employee Benefits Law.....	2
PL	264	Workers' Compensation.....	2
PL	268	Bankruptcy.....	2
PL	275	Paralegal Internship.....	1

## Physical Therapy Assistant

The physical therapy assistant, under the supervision of a licensed physical therapist, performs direct patient care. The therapist uses physical agents such as heat, light, sound, water, cold, massage, exercise and rehabilitation techniques as prescribed by a physician. JCCC offers a cooperative program with Penn Valley Community College. The Physical Therapy Assistant Program at Penn Valley 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. Students must be accepted into the program and must complete registration at both JCCC and Penn Valley. Interested individuals should consult a JCCC counselor for additional information about the program.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

## Associate of Applied Science Degree

Degree granted by Penn Valley Community College

### First Semester

**CR**

KPT	100	Molecular Basis of Living Systems.....	3
LC	130	Medical Terminology.....	3
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.....	18

### Second Semester

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

### Summer

	American Institutions * .....	3
KPT 161	Fundamentals of Modalities II .....	5
	TOTAL CREDIT HOURS.....	8

### Third Semester

KPT 155	Rehabilitation.....	4
KPT 158	Therapeutic Exercise .....	4
KPT 170	Clinical Experience I.....	2
KPT 171	Clinical Seminar .....	1
BIOL 225	Human Physiology.....	4
	TOTAL CREDIT HOURS .....	15

### Fourth Semester

KPT 172	Clinical Experience II .....	12
	TOTAL CREDIT HOURS .....	12
	<b>TOTAL PROGRAM</b>	
	<b>CREDIT HOURS.....</b>	<b>71</b>

\* All graduates from Penn Valley must meet the American Institutions requirement. Interested individuals should see a JCCC counselor about courses.

\*\* At PVCC, KPT 153, Kinesiology, has a prerequisite of KPT 155, Rehab (with a grade of C).

\*\*\* KPT 159 has corequisites of KPT 155, 158, 170 and 171, which are all shown in the third semester.

## 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 Penn Valley. Areas of study are radiographic exposure, positioning and anatomy, and the use of imaging equipment.

Related courses are taken at JCCC with lab and clinical courses held at Penn Valley or at a cooperating health facility.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

### Associate of Applied Science Degree

*Degree granted by Penn Valley Community College*

#### First Semester

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
EMS 121	CPR I – Basic Rescuer .....	1
	TOTAL CREDIT HOURS .....	15

CR

### Second Semester

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

### Summer

ENGL 121	Composition I.....	3
SOC 122	Sociology .....	3
KRAD 178	Clinical Training III .....	1
	TOTAL CREDIT HOURS.....	7

### Third Semester

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

### Fourth Semester

	American Institutions * .....	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

### Summer

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
	<b>TOTAL PROGRAM</b>	
	<b>CREDIT HOURS.....</b>	<b>72</b>

\* All graduates from Penn Valley must meet the American Institutions requirement. Interested individuals should see a JCCC counselor about courses.

\*\* Students must have the consent of an advisor/director before 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. The employment outlook is



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 by Oct. 15 before the clinic year they plan to enter. Successful completion of the program can lead to an associate of science degree or a certificate of completion, depending on the general education requirements completed. Students will be eligible for the National Board for Respiratory Care examination process after graduation. They will first earn the Certified Respiratory Therapy Technician credential and ultimately the Registered Respiratory Therapist credential.

Students should contact a counselor for additional information about the selective admission requirements, the registration process and the possible transfer of courses to four-year institutions.

### Associate of Science Degree

<i>Summer</i>		<b>CR</b>
CHEM	122 Principles of Chemistry *	5
ENGL	121 Composition I *	3
	Social Science and/or Economics Elective	3
	<b>TOTAL CREDIT HOURS</b>	<b>11</b>

### 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 (or a physics course with lab) *	4
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>

### Second Semester

BIOL	225 Human Physiology *	4
BIOL	230 Microbiology *	3
BIOL	231 Microbiology Lab *	2
	Communications Elective	3
	Humanities and/or Art Elective	3
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>

\* Indicates prerequisite courses that must be completed before the clinic year.

### Summer (clinic year)

RT	125 Beginning Principles of Respiratory Therapy	4
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RT	130 Respiratory Therapy Equipment	4
RT	135 Cardiopulmonary Medicine I	1
EMS	121 CPR I Basic Rescuer	1
	<b>TOTAL CREDIT HOURS</b>	<b>10</b>

### 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
	<b>TOTAL CREDIT HOURS</b>	<b>14</b>

### 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
	<b>TOTAL CREDIT HOURS</b>	<b>12</b>
	<b>TOTAL PROGRAM</b>	
	<b>CREDIT HOURS</b>	<b>77</b>

### Postsecondary Certificate Program

Respiratory therapy 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, which will allow 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.

<i>Summer</i>		<b>CR</b>
CHEM	122 Principles of Chemistry *	5
ENGL	121 Composition I *	3
	<b>TOTAL CREDIT HOURS</b>	<b>8</b>

### First Semester

BIOL	122 Principles of Biology *	3
BIOL	123 Principles of Biology Lab *	1
BIOL	140 Human Anatomy *	4
MATH	116 Intermediate Algebra (or a higher algebra course) *	3
PSCI	120 Physical Science (or a physics course with a lab) *	4
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>

### Second Semester

BIOL	225 Human Physiology *	4
BIOL	230 Microbiology *	3
BIOL	231 Microbiology Lab *	2
	<b>TOTAL CREDIT HOURS</b>	<b>9</b>

\* Indicates prerequisite courses that must be completed before the clinic year.

**Summer (clinic year)**

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
		<b>TOTAL CREDIT HOURS .....</b>	<b>10</b>

**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
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>

**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
		<b>TOTAL CREDIT HOURS .....</b>	<b>12</b>
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>68</b>

**Sales and Customer Relations**

The Sales and Customer Relations Certificate Program was developed for people now in a sales occupation or contemplating a career in sales. To receive a certificate, students must complete 30 hours of specialized coursework leading to competencies in selling and customer relations. The program was designed with three options available to the student: general sales, fashion sales and interior product sales.

**Postsecondary Certificate Program**

**Required Courses**

			<b>CR</b>
FASH	135	Image Management .....	1
MATH	111	Fundamentals of Math (or higher).....	3
MKT	121	Retail Management.....	3
MKT	133	Salesmanship .....	3
		Or	
MKT	134	Creative Retail Selling.....	3
MKT	202	Customer Relations.....	3
SEC	150	Business Writing.....	3
		<b>TOTAL CREDIT HOURS .....</b>	<b>16</b>

To complete the requirements for the certificate, students must select one of the following options.

**General Sales**

MKT	272	Seminar: Human Relations.....	3
CPCA	105	Introduction to Personal Computing.....	1
CPCA	108	Word Processing .....	1
PSYC	121	Applied Psychology .....	3



BUS	120	Management Attitudes and Motivation..	3
SPD	120	Interpersonal Communications.....	3
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>

**Fashion Sales**

FASH	121	Fashion Fundamentals.....	3
FASH	272	Seminar: Human Relations .....	2
FASH	277	Seminar: Career Options.....	2
FASH	283	Internship I.....	1
FASH	284	Internship II.....	1
CPCA	105	Introduction to Personal Computing.....	1
FASH	125	Visual Merchandising.....	3
LC	150	Job Search Skills.....	1
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>

**Interior Product Sales**

ITMD	121	Interior Design I.....	3
ITMD	275	Seminar: Budgeting and Estimating.....	2
ITMD	132	Interior Products.....	3
FASH	150	Textiles .....	3
ITMD	295	Seminar: Marketing and Management ...	3
		Or	
FASH	125	Visual Merchandising.....	3
		<b>TOTAL CREDIT HOURS .....</b>	<b>14</b>
		<b>TOTAL PROGRAM CREDIT HOURS.....</b>	<b>30</b>

## Science Technology

Greater Kansas City and specifically Johnson County have numerous biological, pharmaceutical and chemically related formulating, manufacturing, research and testing companies. Many of these facilities employ scientific technicians to support the endeavors of their professional scientists and engineers.

JCCC's Science Technology Program is designed to develop scientific support personnel for the metropolitan area. This program offers specific knowledge and training designed to provide students with entry-level skills for employment as technicians. It also provides the breadth of background sufficient to encourage change and flexibility. Students who complete the 65-credit-hour curriculum are awarded an associate of science degree.

### Associate of Science Degree

#### Chemical Specialty

<i>First Semester</i>		<b>CR</b>
CHEM	123 Principles of Technical Chemistry .....	6
BIOL	122 Principles of Biology.....	3
MATH	171 College Algebra.....	3
ENGL	121 Composition I.....	3
TOTAL CREDIT HOURS .....		15

#### *Second Semester*

CHEM	143 Principles of Technical Organic Chemistry .....	6
PHYS	125 Technical Physics I.....	4
PHYS	135 Special Topic Technical Physics I .....	1
MATH	172 Trigonometry .....	3
DP	132 BASIC for Engineering Technology .....	3
Or		
CPCA	120 Microcomputer BASIC Programming .....	3
TOTAL CREDIT HOURS .....		17

#### *Third Semester*

CHEM	223 Technical Analytical Chemistry .....	4	
PHYS	126 Technical Physics II.....	3	
PHYS	136 Special Topics Technical Physics II .....	2	
ENGL	123 Technical Writing I.....	3	
		Humanities and/or Art Elective.....	3
		Health and/or Physical Education Elective .....	1
TOTAL CREDIT HOURS .....		16	

#### *Fourth Semester*

CHEM	243 Technical Instrumental Analysis .....	5	
SPD	125 Personal Communications (Recommended).....	3	
Or			
		Speech Elective .....	3
PSYC	121 Applied Psychology (Recommended).....	3	
Or			
		Psychology Elective .....	3

ECON	130 Basic Economics (Recommended).....	3	
Or			
		Economics Elective .....	3
		Humanities and/or Art Elective.....	3
TOTAL CREDIT HOURS .....		17	
<b>TOTAL PROGRAM CREDIT HOURS.....</b>		<b>65</b>	

### Associate of Applied Science Degree

#### Chemical Specialty

<i>First Semester</i>		<b>CR</b>
CHEM	123 Principles of Technical Chemistry .....	6
BIOL	122 Principles of Biology.....	3
MATH	133 Technical Math I *.....	4
ENGL	121 Composition I.....	3
CPCA	105 Introduction to Personal Computing.....	1
TOTAL CREDIT HOURS .....		17

#### *Second Semester*

CHEM	143 Principles of Technical Organic Chemistry .....	6
PHYS	125 Technical Physics I.....	4
PHYS	135 Special Topic Technical Physics I .....	1
MATH	134 Technical Math II.....	5
CPCA	108 Word Processing on Microcomputers .....	1
Or		
CPCA	114 Databases on Microcomputers I.....	1
TOTAL CREDIT HOURS .....		17

#### *Third Semester*

CHEM	223 Technical Analytical Chemistry .....	4	
PHYS	126 Technical Physics II.....	3	
PHYS	136 Special Topics Technical Physics II .....	2	
ENGL	123 Technical Writing I.....	3	
		Humanities and/or Arts Elective.....	3
TOTAL CREDIT HOURS .....		15	



**Fourth Semester**

CHEM	243	Technical Instrumental Chemistry .....	5
SPD	125	Personal Communications .....	3
		(Recommended)	
		Or	
SPD	128	Business and Professional Speech .....	3
		(Recommended)	
		Or	
		Speech Elective .....	3
PSYC	121	Applied Psychology .....	3
		(Recommended)	
		Or	
		Psychology Elective .....	3
ECON	130	Basic Economics .....	3
		(Recommended)	
		Or	
		Economics Elective .....	3
		Health and/or Physical Education	
		Elective .....	1
		TOTAL CREDIT HOURS .....	15
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS.....</b>	<b>64</b>

\* It is recommended that this course be taken in the summer before the student starts the program.

**Veterinary Technology**

A person with a background in veterinary technology can expect to find employment opportunities in laboratory care and pharmaceutical animal colonies, or assisting a veterinarian in providing professional services and performing office routines. JCCC's Veterinary Technology Program is offered in cooperation with the Veterinary Technology Program at Maple Woods Community College. Students study sanitation and animal care, the preparation of animals for surgery, and anesthetic management. They also perform lab work and use radiologic techniques. The program features 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.

Program courses and credit hours are subject to change because of requirement changes at the degree-granting institution. It is the students' responsibility to check with a JCCC counselor before enrollment.

**Associate of Applied Science Degree**

*Degree granted by Maple Woods Community College*

**First Semester**

**CR**

KSAH	100	Introduction to Veterinary Technology .....	2
KSAH	101	Principles of Animal Science I.....	3
BIOL	127	General Zoology .....	5
KSAH	182	Veterinary Office and Computer Skills...	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	Veterinary Technician Internship.....	6
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**Third Semester**

KSAH	200	Veterinary Technology I.....	3
KSAH	202	Veterinary 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	Veterinary Technology II .....	3
KSAH	211	Clinical Pathological Technology II .....	5
KSAH	213	Radiology and Electronic Procedures.....	2
		American Institutions * .....	3
		TOTAL CREDIT HOURS .....	18
		<b>TOTAL PROGRAM</b>	
		<b>CREDIT HOURS.....</b>	<b>75</b>

\* All graduates from Maple Woods must meet the American Institutions requirement. JCCC students should see a counselor about courses.

# Course Prefix Listing

Academic Achievement Center	LC	Horticulture	HORT
Accounting	ACCT	Hospitality Management	HMGT
Administration of Justice	ADMJ	Humanities	HUM
Agribusiness	AGRI	Information/Word Processing	IWP
Anthropology	ANTH	Interdisciplinary Study	IDSP
Art	ART	Interior Merchandising	ITMD
Automotive Technology	AUTO	Interpreter Training	INTR
Aviation	KAV	Journalism and Media Communications	JOUR
Banking and Finance	AIB	Learning Strategies	LS
Biology	BIOL	Manufacturing Technology	MFTG
Biomedical Equipment Technology	BMT	Marketing Management	MKT
Business Administration	BUS	Mathematics	MATH
Chemistry	CHEM	Medical Record Technology	KMRT
Commercial Art	CA	Metal Fabrication	MFAB
Computer Science	CS	Music	MUS
Computers: Personal Computer Applications	CPCA	Nursing	NURS
Computer Systems Technology	CST	Occupational Therapy Assistant	KOT
Correctional Services	KADJ	Office Careers	SEC
Data Processing	DP	Paralegal	PL
Dental Hygiene	DHYG	Philosophy	PHIL
Drafting Technology	DRAF	Photography	PHOT
Economics	ECON	Physical Education	HPER
Education	EDUC	Physical Science	PSCI
Electronics	ELEC	Physical Therapy Assistant	KPT
Emergency Medical Science	EMS	Physics	PHYS
Engineering	ENGR	Political Science	POLS
English	ENGL	Psychology	PSYC
Equine	EQUUS	Quality Control	QC
Fashion Merchandising	FASH	Radiologic Technology	KRAD
Fire Protection/Prevention	FIRE	Respiratory Therapy	RT
Foreign Language	FL	Sociology	SOC
Health, Physical Education and Recreation	HPER	Speech	SPD
Hearing Impaired	HRIM	Theater	THEA
Heating, Ventilation and Air Conditioning Technology	HVAC	Veterinary Technology	KSAH
History	HIST		
Home Economics	HMEC		
Honors Program	HON		

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## **Courses by Division Listing**

### **Arts, Humanities and Social Science Division**

Administration of Justice  
Anthropology  
Art  
Basic Police Academy  
Commercial Art  
Correctional Services  
Education  
Emergency Medical Science  
Fire Protection and Public Safety  
History  
Humanities  
Music  
Philosophy  
Photography  
Political Science  
Sociology  
Theater

### **Business and Technology Division**

Accounting  
Automotive Technology  
Aviation Maintenance  
Biomedical Equipment Technology  
Business Administration  
Computer Systems Technology  
Drafting Technology  
Economics  
Electronics Technology  
Engineering  
Fashion Merchandising  
Heating, Ventilation and Air Conditioning  
Home Economics  
Hospitality Management  
Information/Word Processing  
Interior Merchandising  
Manufacturing Technology  
Marketing and Management  
Metal Fabrication  
Office Careers  
Paralegal  
Quality Control

### **Communications and Academic Enhancement Division**

Academic Achievement Center  
English  
Foreign Language  
Honors  
Interpreter Training  
Journalism  
Learning Strategies  
Speech and Debate

### **Computer and Information Systems Division**

Computer Science  
Computers: Personal Computer Application  
Data Processing

### **Physical Education Division**

Equine Studies  
Health  
Physical Education

### **Science, Health Care and Math Division**

Agribusiness  
Biology  
Chemistry  
Dental Hygiene  
Horticulture  
Mathematics  
Medical Record Technology  
Nursing  
Occupational Therapy Assistant  
Physical Science  
Physical Therapy Assistant  
Physics  
Radiologic Technology  
Respiratory Therapy  
Veterinary Technology

### **Student Development Division**

Hearing Impaired

## Academic Offerings





## Academic Achievement Center

### DEVELOPMENTAL COURSES

The following courses are designed to help students develop and enhance the 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 100 STUDY SKILLS (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Students will use books and programmed materials as they work on these areas: previewing academic reading, notetaking while reading, listening and taking class notes, preparing for and taking examinations, planning time and selecting a study area. By arrangement.

#### LC 101 STUDY SKILLS MINI-COURSE (1CR)

This class will focus on test-taking skills, taking notes, using a textbook, critical reading and memory recall, effective listening and classroom strategies, and library and counseling services. The format will include reading, discussion and practice exercises. 3 hrs./wk. for 5 wks.

#### LC 104 READING COMPREHENSION (1CR)

Students will take diagnostic tests to determine their appropriate starting level. This is a self-paced, individualized course for improving comprehension skills. Instruction is through sequenced materials and emphasizes survey techniques and vocabulary development. By arrangement.

#### LC 105 READING RATE (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Students will work on increasing their reading rate in this class. They may select their own materials to use with the reading pacer, or they may use one of the computer programs for the rate course. They also will work on skimming and scanning techniques. By arrangement.

#### LC 106 VOCABULARY DEVELOPMENT (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Students will concentrate on techniques for unlocking meaning through context clues and familiarity with roots, prefixes and suffixes. By arrangement.

#### LC 107 SPELLING IMPROVEMENT (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Students will work on correcting spelling errors using kits or programmed texts. By arrangement.

#### LC 110 POWER SPELLING (3CR)

*Prerequisite: Appropriate score on the assessment test*  
This is a course for students who wish to improve their spelling but who have not been successful in traditional study programs. A step-by-step process involving correct spelling of morphographs (units of meaning) and how to combine them to correctly spell hundreds of words is followed in this course. 3 hrs./wk.

#### LC 112 BASIC MATH REVIEW (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Then, using programmed materials, students will review addition, subtraction, multiplication, division, fractions, decimals and percents. By arrangement.

#### LC 113 ALGEBRA PREPARATION (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Then, using programmed materials, students will deal with sets, counting numbers, integers, rational numbers, equations involving two variables, polynomials, factoring, quadratics and absolutes, graphing, exponents and logarithms. By arrangement.

#### LC 114 CHEMISTRY PREPARATION (1CR)

Students will take diagnostic tests to determine their appropriate starting level. Then, using programmed materials, students will cover a variety of topics including valences, chemical equations, solubility, ionic structures and complexes, the metric system, atomic theory, thermochemistry, kinetic theory, nuclear structure and chemical equilibrium. By arrangement.



**LC 115****COLLEGE SKILLS DEVELOPMENT (1CR)**

Students will focus on becoming more aware of their personal values, their life plans and their career plans. Topics will include learning styles, techniques of time management, test taking, study skills and available college support services. 3 hrs./wk. for 5 wks.

**LC 120****INDIVIDUALIZED STUDY (1CR)****LC 121****INDIVIDUALIZED STUDY (2CR)****LC 122****INDIVIDUALIZED STUDY (3CR)**

Students will work at their own pace and according to their individual ability in this class. They will use self-motivating materials and projects to study grammar, spelling, vocabulary, reading rate/comprehension, study skills, mathematics, algebra and chemistry.

**LC 125****FUNDAMENTALS OF READING (3CR)**

*Prerequisite: Appropriate assessment score*

Fundamentals of Reading is a basic-level reading course that focuses on the development of a sight vocabulary, techniques of word recognition (phonetic and structural analysis and context clues), the ability to deal with words of multiple meaning and literal comprehension and recall. 3 hrs./wk.

**LC 126****READING SKILLS IMPROVEMENT (3CR)**

*Prerequisite: LC 125 or appropriate assessment score*

In this intermediate level class, students will review skills taught in Fundamentals of Reading. However, the major focus will be analytical reading skills, study techniques, flexible reading rate and vocabulary enrichment. 3 hrs./wk.

**LC 127****COLLEGE READING SKILLS (3CR)**

*Prerequisite: LC 126 or appropriate assessment score*

This advanced level course includes a review of the skills taught in Reading Skills Improvement with additional focus on critical reading skills along with vocabulary development, memory techniques, rate improvement and analytical skills. 3 hrs./wk.

**LC 130****MEDICAL TERMINOLOGY (3CR)**

In this self-instructional approach, students will use a handbook, a computer software program and tapes to build a medical vocabulary. Definition, spelling and pronunciation will be stressed. Students will study 12 body systems, the body as a whole and an oncology unit. By arrangement.

**LC 135****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.

**LC 150****JOB SEARCH SKILLS (1CR)**

Job-hunting techniques will be explored in this class. The class will consist 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)**

*Corequisite: MATH 120 or credit by examination*

This course will introduce the basic accounting procedures needed to maintain daily records for a small business and the use of such records in the decision-making process. Upon successful completion of the course, 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 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 of the course, the student will be able to effectively deal with the primary funds and accounting groups, assist in 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)**

*Corequisite: MATH 120 or credit by examination*

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 will teach 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 that will provide appropriate information for use in preparing federal income tax. The student also will be able to prepare the standard individual federal income tax return. 3 hrs./wk.

**ACCT 201  
COMPUTERIZED  
ACCOUNTING APPLICATIONS (3CR)**

*Prerequisites: ACCT 121 and ACCT 122*

*Corequisite: CPCA 105*

This course will provide a hands-on approach to learning how computerized integrated accounting systems function. At the conclusion of the course, students will be able to use a microcomputer to create charts of accounts, accounts receivable and payable subsidiary ledgers, transaction journals, general ledgers, financial statements, reports and forecasts. 3 hrs./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, determine income in a manufacturing environment and 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 covered will include financial statement analysis, cost application and budgeting reports to management. 3 hrs./wk.

**ACCT 231  
INTERMEDIATE ACCOUNTING I (3CR)**

*Prerequisite: ACCT 122*

The course will present 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, the student will be able to solve problems in the presentation of 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  
FIELD STUDY: HUMAN RELATIONS (2CR)**

Upon completion of this course, the student will be able to build better working relations with fellow employees and supervisors and become more skilled in communications and decision making. Weekly class discussions will focus on applying course content to work experience. 2 hrs./wk. Course will not be offered every semester.

**ACCT 274  
FIELD STUDY: ACCOUNTING SEMINAR (3CR)**

*Prerequisite: ACCT 122*

Job simulation will be 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. 3 hrs./wk. Course will not be offered every semester.

**ACCT 278**  
**ACCOUNTING INTERNSHIP I (1CR)**

*Prerequisite: ACCT 121*  
*Pre- or corequisite: ACCT 272*

This internship is designed to enable students to use skills learned in accounting courses. Students will work in an approved training situation under instructional supervision. There will be 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 will explore 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 will provide 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 the 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 will include 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 will 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 will be provided in this course. 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 will 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 will cover 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 the program 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 the program 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 the program director*

This course will provide 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 will include the use of the baton and service revolver and constitutional limitations on the use of force. Students will be 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 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 the program director is 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 will consist 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 will include a look at career opportunities in the field. Students also will compare several business forms. 2 hrs./wk.

## 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 also will be studied. 3 hrs./wk.

**ANTH 126**  
**PHYSICAL ANTHROPOLOGY (3CR)**

This study of physical anthropology will include 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.

**ANTH 210**  
**PEOPLES OF THE WORLD (3CR)**

*Prerequisites: POLS 130 and SOC 160. Available to non-core students with the program director's permission.*

This interdisciplinary course will draw on economics, psychology, sociology and anthropology to help students better understand the increasing global connections between peoples and societies. Students will investigate the cultural basis of values, beliefs and behavior and learn how this affects their relationships both within their communities and across cultural boundaries. Specific topics will include the individual in North America today, the North American's relationship to the peoples of Earth, Earth as an economic system, views of work in the United States and other countries, comparative political participation, and cross-cultural value systems. 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./wk.

**ART 123**  
**ELEMENTARY ART METHODS (3CR)**

This is an exploration of art activities for children from preschool through sixth grade. 6 hrs./wk.

**ART 124**  
**DESIGN 2-D (3CR)**

This is an introductory study of the principles of visual perception, two-dimensional space organization and the visual elements of line, shape, value and texture. 6 hrs./wk.

**ART 127**  
**DESIGN 3-D (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 will be 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 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 will offer 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 will be on wheel-throwing with optional hand-building and slab construction. Students will be 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 will deal with more advanced methods and studio experiences in ceramic wheel techniques, creative expression and glaze formulation. Emphasis will be 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 will 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 will focus on advanced methods and techniques with emphasis on materials, forms and the student's selection of an individual direction. 6 hrs./wk.

**ART 148**  
**METAL AND SILVERSMITHING I (3CR)**

The metalsmithing techniques of casting and constructing using 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 metalsmithing 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 will 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. A notebook is required. 6 hrs./wk.

**ART 155**  
**SMALL LOOM TECHNIQUES (3CR)**

This is a study of the art of textile construction methods. Topics will include single and double element construction, fiber properties, spinning and dyeing. 6 hrs./wk.

**ART 166**  
**RAKU CERAMICS (3CR)**

This course will deal 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 will be on non-wheel manipulations of form. Students will be encouraged to develop a personal philosophical basis for their creative process and product. 6 hrs./wk.

**ART 172**  
**WATERCOLOR PAINTING (3CR)**

This course will explore the study of color, value and composition using transparent media in a variety of representational and non-objective situations. 6 hrs./wk.

**ART 222**  
**PRINTMAKING I (RELIEF AND INTAGLIO) (3CR)**

*Prerequisite: ART 130 or CA 130*

This course will introduce students to traditional and contemporary relief and intaglio printmaking processes. The relief techniques covered will be woodcut, lino cut and cut block print. The intaglio techniques covered will be drypoint, etching, aquatint, softground, photo etching and collograph. In both cases, editioning will be expected. Technical and aesthetic concerns must be demonstrated in the final print presentation. 6 hrs./wk.

**ART 223**  
**SILKSCREEN (3CR)**

*Prerequisite: ART 124 and either ART 130 or CA 130*

In an exploration of silkscreen techniques, this class will cover 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. Students will work from live models, skeletons and other presentations. 6 hrs./wk.

**ART 232**  
**LIFE DRAWING II (3CR)**

*Prerequisite: ART 231*

This course will offer 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. The student will decide the course content 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. The student will decide the course content under the supervision of a faculty member. 6 hrs./wk.

**ART 244**  
**CERAMICS WORKSHOP I (3CR)**

*Prerequisite: ART 143 and permission of the program director*

Students will have the opportunity to pursue advanced individual research under the direction of the instructor. Emphasis will be on creative expression as well as on the development of technical skills. 6 hrs./wk.

**ART 281**  
**DIRECTED READING**  
**IN CONTEMPORARY AMERICAN ART (1CR)**

*Prerequisite: Approval of the program director*

The technical and philosophical points of view of contemporary American artists will be 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 will trace 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**  
**BASIC AUTO I (4CR)**

*Prerequisite: MATH 111 or appropriate score on the 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 also will be covered. 3 hrs. lecture, 7 hrs. lab/wk. (AVTS)

**AUTO 118**  
**BASIC AUTO II (5CR)**

*Prerequisite: AUTO 116*

Upon successful completion of this course, the student will have developed an understanding of internal engines, two- and four-stroke cycle, theory and basic electricity. Students also will have the opportunity to develop a working knowledge of driveline service and an understanding of emission standards and basic diagnostic procedures. 4 hrs. lecture, 6 hrs. lab/wk. (AVTS)

**AUTO 121**  
**SMALL ENGINE SERVICE (3CR)**

Among the areas examined in this class will be 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 a satisfactory score on the math assessment exam*

Upon successful completion of this course, the student will be able to safely use school equipment and the automotive technology laboratory. The course also will teach skills in tune-up, wheel balancing and light alignment. 2 hrs. lecture-demonstration, 3 hrs. lab/wk.

**AUTO 150  
AUTOMATIC TRANSMISSIONS  
AND TRANSAXLES (4CR)**

*Prerequisite: AUTO 125*

Upon completion of this course, the student will be able to diagnose, service 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*

The focus will be on the four-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*

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 will 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 and AUTO 255*

This course will provide an 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, 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 loads, filling out repair orders and telephone usage. Students will 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 will 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 INTERNSHIP I (3CR)**

*Prerequisite: Division administrator approval*

The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work is 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. 2 hrs. lecture, 15 hrs. min./wk.

**AUTO 272  
AUTOMOTIVE TECHNOLOGY INTERNSHIP II (3CR)**

*Prerequisite: AUTO 271 and approval of the division administrator*

The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work is 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. 2 hrs. lecture, 15 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 basic electricity, drafting, fluid lines and fittings, materials and processes, ground operation and servicing, publications, and the 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 will present 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 POWERPLANT (6CR)**

*Prerequisites: KAV 100 and KAV 111*

Aircraft reciprocating powerplants 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 (4CR)**

*Prerequisites: KAV 100 and KAV 111*

The theory and practical application of a wide range of propeller types will be introduced as will 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 will 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 POWERPLANT (5CR)**

*Prerequisites: KAV 100 and KAV 111*

This course will present operating principles of gas turbine engines, their application to present-day aircraft, and 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*

This course will examine 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)**

Students will learn algebraic functions, factoring, linear equations, quadratic equations, systems of equations, exponents and radicals. Also covered will be trigonometric functions, solutions of right triangles, functions of the general angle, and graphs of trigonometric functions. The laboratory emphasis will be on elementary physics related to aircraft. 4 hrs./wk.

### **KAV 111** **INTRODUCTION TO** **AVIATION MAINTENANCE II (4.5CR)**

This course will present general aviation practices and theory and practical applications in basic electricity. 6.2 hrs. lecture, 3.2 hrs. lab/wk.

**KAV 115  
ENGLISH (3CR)**

This is an English course 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 will be presented. 10.2 hrs. lecture, 7.8 hrs. lab/wk.

**KAV 201  
POWERPLANT TESTING (5CR)**

*Prerequisites: KAV 100 and KAV 111*

This course will address reciprocating engine and engine system theory and inspection and theory and practical application in the 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 will 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*

This course will present the 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 will focus 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 will review engine systems through analysis of related instruments and control systems. Engine fire protection also will 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, the emphasis will be on areas of difficulty. 7.2 hrs. lecture, 3.6 hrs. lab/wk.

**KAV 209  
SEMINAR IN POWERPLANT MAINTENANCE (4.5CR)**

*Prerequisites: KAV 101, 103, 105, 107, 109, 203, 205 and 210*

This is a review of theory and laboratory experiences in previous powerplant courses. 6 hrs. lecture, 3 hrs. lab/wk.

**KAV 210  
SEMINAR IN AIRFRAME MAINTENANCE (4.5CR)**

*Prerequisites: KAV 102, 104, 106, 108, 200, 204 and 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)**

*Prerequisites: A & P license and approval of the instructor*

Management and leadership techniques in aviation maintenance will be addressed.

**KAV 242  
POWERPLANT PRACTICAL REVIEW (1CR)**

*Prerequisite: FAA approval for taking the powerplant exam*

This review is designed to prepare the student for the FAA oral and practical examination for the Powerplant 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 wks.

**KAV 243  
AIRFRAME PRACTICAL REVIEW (1CR)**

*Prerequisite: FAA approval for taking the airframe exam*

This review is 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 wks.

## 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 will 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)

The student will learn basic trust terminology and explore the concepts that make up the various trust functions and translate them into workable procedures. Upon successful completion of this course, the student will be able to adapt this information to individual trust function situations. 3 hrs. lecture/wk.

### AIB 124

#### INTRODUCTION TO COMMERCIAL LENDING (2CR)

*Prerequisite: ACCT 121 or ACCT 122*

This comprehensive treatment of commercial lending is designed for entry-level commercial loan officers and anyone who wants to know more about the role of commercial lending in the banking industry and in the collective economy. Characteristics of the business loan customer and the fundamentals of commercial loan products, pricing decision making, support and documentation also will 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.

## Biology

### BIOL 110

#### NUTRITION FOR LIFE (2CR)

Designed for students who wish to apply nutrition information to their lives, this course explores 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 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 the equivalent*

This introductory lab will focus on the structures and functions of plants and animals. 2 hrs./wk.

### BIOL 124

#### OCEANUS: THE MARINE ENVIRONMENT (3CR)

This course will focus on the marine environment as a unique feature of the planet Earth and investigate areas of intense scientific and public concern: the physical size and diversity of contained life forms; the marine environment's contribution to the physical and historical development of man; its impact on geopolitical and economic matters; the impact of oceanic pollutants; and the potential exploitation of marine resources. 3 hrs. lecture/wk.

### BIOL 125

#### GENERAL BOTANY (5CR)

This is a survey of the life, structure and growth of plants. Divisions of the plant kingdom will be presented with emphasis on the 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 three 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 122 and BIOL 123*

Phyla of protista, plant and animal kingdoms will be presented with emphasis on the life cycles, anatomy, physiology and ecology of the major groups. 4 hrs. lecture, 3 hrs. lab/wk.

**BIOL 205**  
**GENERAL GENETICS (3CR)**

*Prerequisite: BIOL 122 or the equivalent*

Heredity and variation of plants and animals will be studied, including classical and molecular genetics. 3 hrs./wk.

**BIOL 210**  
**PATHOPHYSIOLOGY (4CR)**

*Prerequisite: BIOL 144 or BIOL 140 and BIOL 225*

This introduction to the physiology of disease will cover common disorders of the body from the cellular level to the systemic level. Topics will include causes, symptoms, diagnostic tests and treatment of disease. 4 hrs./wk.

**BIOL 225**  
**HUMAN PHYSIOLOGY (4CR)**

*Prerequisite: 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 the 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 will be followed by 16 days of travel.

**BIOL 298**  
**SPECIAL TOPICS IN BIOLOGY:  
SOUTHWESTERN FIELD COURSE (4CR)**

Students will travel through the varied environments of the Southwestern United States to observe and study the field biology of each area. The course will include pretrip 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 seminars followed by two weeks in Mexico. The class is an introduction to the natural history, flora and fauna of selected geographical locations of the Yucatan Peninsula. The course will include pretrip lectures in addition to the two-week trip.

## Biomedical Equipment Technology

### **BMT 210 BIOMEDICAL EQUIPMENT TECHNOLOGY I (4CR)**

*Prerequisite: BIOL 144*

*Corequisites: ELEC 225 and ELEC 230*

Topics will include special electronic circuits used in biomedical equipment in this introduction to electronics in the health care field. 3 hrs. lecture/demonstration, 3 hrs. lab/wk. Fall.

### **BMT 211 BIOMEDICAL EQUIPMENT TECHNOLOGY II (3CR)**

*Prerequisite: BMT 210*

*Corequisite: BMT 271*

Upon completion of this course, the student should be able to work on actual biomedical equipment currently used in hospitals. Specific repair and maintenance problems will be discussed. Problems facing the biomedical equipment technician that are not related to electronics also will be covered. 2 hrs. lecture/demonstration, 3 hrs. lab/wk. Spring.

### **BMT 271 BIOMEDICAL INTERNSHIP (2CR)**

*Prerequisite: BMT 210*

*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 students. 1 hr. lecture, 6 hrs. internship/wk.

## Business Administration

### **BUS 120 MANAGEMENT ATTITUDES AND MOTIVATION (3CR)**

Upon successful completion of this course, students will be able to assess personal strengths and weaknesses and set goals for their personal and professional life; define their own communication and listening skills; analyze human relations problems; apply problem-solving strategies to human relations issues in the workplace; define and compare management styles; and analyze their own management style. Class meets for 48 hrs.

### **BUS 121 INTRODUCTION TO BUSINESS (3CR)**

Upon successful completion of this course, students will be able to explain the basic principles of the American free enterprise economic system. In addition, students

will be able to explain the fundamentals of starting a business and the interrelationship 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 for life, health, property and liability, automobile and other types of special insurance and explain employee and retirement benefits, including tax sheltered plans. 3 hrs./wk.



### **BUS 125 SAVINGS AND INVESTMENTS (3CR)**

This course will give students an understanding of basic financial planning concepts and tax planning procedures. Students who successfully complete this course will be able to define, analyze and evaluate types of savings instruments and other investments in order to set up a personal financial plan. 3 hrs./wk.

### **BUS 126 TRANSPORTATION RATES I (3CR)**

*Prerequisite: Permission of the division administrator*

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)**

*Prerequisite: Permission of the division administrator*

Students will be introduced to Middlewest Freight Bureau Tariff 125 and MWB 226 (commodities). 3 hrs./wk.

**BUS 128****TRANSPORTATION RATES III (3CR)**

*Prerequisite: Permission of the division administrator*

The course will focus on the Middlewest Motor Freight Bureau Tariff 129 (rule for discounts and allowances), MWB 600 local distribution, and Rocky Mountain Motor 303 (class and commodity rates). 3 hrs./wk.

**BUS 130****INTRODUCTION TO INTERNATIONAL BUSINESS (3CR)**

Students who successfully complete this course 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 131****FINANCIAL MANAGEMENT FOR SMALL BUSINESS (1CR)**

Upon successful completion of this course, the student will be able to understand financial terminology, read and analyze basic financial statements and prepare a cash budget. In addition, the student will understand the importance of working capital and how it relates to credit policies, borrowing and cash management. 1 hr. lecture/wk.

**BUS 133****ADVERTISING AND SALES PROMOTIONS FOR SMALL BUSINESS (1CR)**

This course is designed to give the student an understanding of the basic concepts for advertising and promoting a small business. Upon successful completion of this course, the student will be able to plan, develop and evaluate advertising and sales promotions. In addition, the student will be able to choose appropriate media and track advertising effectiveness. 1 hr. lecture/wk.

**BUS 135****THE BUSINESS PLAN (1 CR)**

Upon successful completion of this course, the student will understand what a feasibility study is and the importance of this early planning tool. The student also will be able to prepare a business plan and use the plan to guide the business and to communicate with potential investors. 1 hr. lecture/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 successful completion of this course, the student 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 communication 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 those effects. In addition, the student 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 vital to small business. The student also will be able to apply decision-making skills in the areas of business start-up, choosing the form of ownership, marketing, financial planning and managing the small business. 3 hrs./wk.

**BUS 150****BUSINESS COMMUNICATIONS (3CR)**

*Prerequisite: ENGL 121*

Students who successfully complete this course will be able to read for efficient summarizing and outlining; demonstrate listening skills that help 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 those principles to a short report; and prepare an effective oral business presentation. 3 hrs./wk.

**BUS 221****PRINCIPLES OF INSURANCE (3CR)**

Upon successful completion of this course, students 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)**

Students who successfully complete this course 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 a 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 those principles to target market strategies. 3 hrs./wk.

**BUS 243**  
**PERSONNEL MANAGEMENT (3CR)**

Upon successful completion of this course, students 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 knowledge of the law sufficient 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, students 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 also will 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, students will be able to describe the basic principles of law as applied to real and personal property, bailments, estates and trusts, secured

transactions, bankruptcy, and agency and business organizations. The student also will 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 123**  
**PRINCIPLES OF TECHNICAL CHEMISTRY (6CR)**

*Corequisite: MATH 133*

This introduction to the fundamental concepts of chemistry will emphasize the general concepts of inorganic chemistry with sufficient study of organic chemistry to introduce the student to biochemistry. Labs will introduce students to the processes and expectations of an industrial laboratory. 10 hrs. lecture, lab/wk.

**CHEM 124**  
**GENERAL CHEMISTRY I LECTURE (4CR)**

*Corequisites: CHEM 125 and 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 a 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 will 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 and CHEM 132*

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 143**  
**PRINCIPLES OF  
TECHNICAL ORGANIC CHEMISTRY (6CR)**

*Prerequisite: CHEM 123*

This course is a continuation of the study of organic and biochemistry initiated in CHEM 123. Biologically important concepts will be introduced in the study of basic functional group chemistry and extended into traditional biochemical topics such as carbohydrates, enzymes, lipids and proteins. The labs will emphasize the synthesis, separation, identification and characterization techniques common to the technician's role. 10 hrs. lecture, 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 223**  
**TECHNICAL ANALYTICAL CHEMISTRY (4 CR)**

*Prerequisites: CHEM 143, PHYS 135 and MATH 134 or MATH 171*

This course will introduce students to the fundamentals of modern wet quantitative chemical analysis. The topics of data analysis, quality control, gravimetric, titrimetric and potentiometric analysis will be related to the industrial environment through extensive supportive labs. 8 hrs. lecture, lab/wk.

**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 spectrophotometry as they apply to quantitative chemical analysis. The lab will introduce modern quantitative experimental techniques. 3 hrs. lecture, 6 hrs. lab/wk.

**CHEM 243**  
**TECHNICAL INSTRUMENTAL CHEMISTRY (5CR)**

*Prerequisites: CHEM 223, PHYS 136 and MATH 134 or MATH 172*

This course will introduce students to the fundamentals of modern instrumental quantitative analysis. The topics of spectrophotometry, fluorometry, chromatography and polarography will be related to the technician's role in the industrial environment through intensive supportive labs. 9 hrs. lecture, lab/wk.



## Commercial Art

### CA 130

#### REPRESENTATIONAL DRAWING I (3CR)

In this introduction to representational drawing, the emphasis will be 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 to convey 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 140

#### GRAPHIC PROCESSES (3CR)

*Prerequisite: PHOT 121*

This technical graphic arts process course will cover basic camera work using a variety of professional materials including photomechanical transfer materials and orthochromatic films. This course also will include various color proofing and comping techniques such as color key and lettrachrome, with an emphasis on chromatec. 6 hrs./wk.

### CA 230

#### ILLUSTRATION TECHNIQUES (3CR)

*Prerequisite: CA 131*

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)

*Prerequisites: CA 134 and CA 140*

This is a study of the fundamentals of preparing art for reproduction. Emphasis will be 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 will require 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 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 will explore the scope and potential of graphic design as a vehicle for visual communication through signs and symbols and will examine 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)

*Prerequisites: Permission of the program 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 database management will be introduced. 6 hrs. lecture, lab/wk. for 3 wks.

### **CPCA 108**

#### **WORD PROCESSING ON MICROCOMPUTERS I (1CR)**

*Prerequisites: CPCA 105 using the same hardware or equivalent experience and SEC 101 if typing speed is less than 35 w.p.m.*

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, lab/wk. for 3 wks.

### **CPCA 110**

#### **SPREADSHEETS ON MICROCOMPUTERS I (1CR)**

*Prerequisite: CPCA 105 using the same hardware or equivalent experience*

Students will learn the concepts and uses of spreadsheet software. They will use a spreadsheet to solve a typical business application. 6 hrs. lecture, lab/wk. for 3 wks.

### **CPCA 111**

#### **SPREADSHEETS ON MICROCOMPUTERS II (2CR)**

*Prerequisite: CPCA 110 using the same hardware and application software or equivalent experience*

Upon successful completion of this course, students will 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 on-line 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 using the same hardware or equivalent experience*

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, lab/wk. for 3 wks.

### **CPCA 120**

#### **MICROCOMPUTER BASIC PROGRAMMING (3CR)**

This beginning course in BASIC will cover elementary programming topics 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. lecture, lab/wk.

### **CPCA 125**

#### **WORD PROCESSING ON MICROCOMPUTERS II (1CR)**

*Prerequisite: CPCA 108 using the same hardware and application software or equivalent experience*

Upon completion of this course, students will be able to use the advanced concepts and applications 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 APPLICATIONS I (3CR)**

Students will attain a proficiency in the use of the word processor and in the spreadsheet and database modules of an integrated software package. In addition, they will be able to use the integration features of each module with the rest of the modules of that software package. 3 hrs. lecture, lab/wk.

### **CPCA 132**

#### **INTEGRATED APPLICATIONS II (3CR)**

*Prerequisite: CPCA 128 using the same hardware and application software or equivalent experience*

Upon successful completion of this course, students will be able to use the more advanced features of the word processor and the spreadsheet and database functions of an integrated applications program. Students also will be able to transfer data to and from internal and external files created with other software packages or within the modules of the integrated program. An introduction to the programming language of the package also will be included. 3 hrs. lecture, lab/wk.

**CPCA 135**  
**PC DOS (1CR)**

*Prerequisite: CPCA 105 using the same hardware and application software or equivalent experience*

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 procedures and to automate other repetitive sequences of commands also will be topics of study. 6 hrs. lecture-demonstration/wk. for 3 wks.

**CPCA 155**  
**DESKTOP PUBLISHING (1CR)**

*Prerequisite: CPCA 105 or CPCA 108 using the same hardware and application software or equivalent experience*

Upon successful completion of this course, students will be able to use the basic and advanced features of a desktop publishing program to produce documents that include both text and graphic drawings. In addition, students will produce multi-column documents that are typical of the publications business employees desire. 1 hr. lecture/wk.

## Computer Science

**CS 180**  
**INTRODUCTION TO**  
**ARTIFICIAL INTELLIGENCE (3CR)**

*Prerequisite: A computer programming course or the equivalent*

Upon successful completion of this course, students will 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 describe knowledge representation and problem-resolution techniques used in artificial intelligence. 3 hrs. lecture/wk.

**CS 200**  
**PASCAL (4CR)**

*Prerequisite: DP 134 or the 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. lecture/wk. Lab by arrangement.

**CS 210**  
**DISCRETE STRUCTURES I (3CR)**

*Prerequisite: MATH 171 or both MATH 116 and DP 134*

This course will offer an introduction to the topics of discrete structures, including switching circuits, Boolean algebra, logic, set theory and mathematical induction. 3 hrs./wk.

**CS 211**  
**DISCRETE STRUCTURES II (3CR)**

*Prerequisite: CS 210*

This course will provide 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)**

*Prerequisite: CS 200*

*Corequisite: CS 210 for students transferring to most four-year computer science programs*

This course will cover 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 the lecture. 3 hrs. lecture/wk. Lab by arrangement.

## Computer Systems Technology

**CST 260**  
**COMPUTER SYSTEMS (5CR)**

*Prerequisites: DP 132, ELEC 230 and ELEC 245*

Upon completion of this course, students should be able to identify and maintain disk drives, tape drives, monitors, terminals, printers, interface standards and interface devices. System maintenance techniques will be studied and practiced on a microcomputer system. 3 hrs. lecture, 6 hrs. lab/wk.

**CST 271**  
**COMPUTER SYSTEMS INTERNSHIP I (3CR)**

*Prerequisite: Approval of the division administrator*

The internship will provide advanced students with on-the-job experience 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. 2 hrs. lecture, 15 hrs. min./wk.

**CST 272****COMPUTER SYSTEMS INTERNSHIP II (3CR)**

*Prerequisites: CST 271 and division administrator approval*

The internship will provide 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. 2 hrs. lecture, 15 hrs. min./wk.

## Core Curriculum

**ANTH 210****PEOPLES OF THE WORLD (3CR)**

*Prerequisites: POLS 130 and SOC 160. Available to non-core students with the instructor's permission.*

This interdisciplinary course will draw on economics, psychology, sociology and anthropology to help students better understand the increasing global connections between peoples and societies. Students will investigate the cultural basis of values, beliefs and behavior and learn how this affects their relationships both within their communities and across cultural boundaries. Specific topics include the individual in North America today, the North American's relationship to the peoples of Earth, Earth as an economic system, views of work in the United States and other countries, comparative political participation and cross-cultural value systems. 3 hrs./wk.

**COM 125****ORAL AND WRITTEN COMMUNICATIONS (6CR)**

*Prerequisite: ENGL 106 or the appropriate assessment test score*

This course will combine the two primary modes of communication, writing and speaking, to demonstrate their natural connections. Students will learn research skills and apply them to significant topics in written papers and speeches. Critical thinking, group process and argumentation will be employed to further this process. 6 hrs./wk.

**HIST 124****COMMUNITY LIFE AND VALUES (3CR)**

This course will study the cultural values that are associated with classical Rome, Renaissance Florence and baroque Rome. Architecture, literature, the visual arts and philosophy of the three periods will be examined, and the values revealed will be compared to those of a modern community/city. 3 hrs./wk.

**HLT 260****LIFETIME WELLNESS: A PERSONAL GOAL (3CR)**

This course will offer an overall view of health care trends today. Specific areas will include exercise, nutrition, stress management, illness risk factors and holistic health. The primary focus will deal with health maintenance, and participants will be entered into a personalized Life Inventory Computer Program to provide information for their plan to improve and maintain their own lifetime fitness and wellness. 4 hrs. lecture, lab/wk.

**HUM 136****THE HUMAN EXPERIENCE (3CR)**

The themes of freedom and personal identity will be traced in the arts and sciences from the classical period of the 18th century through the romanticism of revolution in politics and the arts and finally in more modern idioms. The course will conclude with a consideration of each student's personal identity through family language. 3 hrs./wk.

**MATH 165****FINITE MATH, A CULTURAL APPROACH (3CR)**

*Prerequisite: MATH 116 or the appropriate score on the math assessment test*

This course is the first part of a two-semester sequence of courses on the beauty, scope, practical applications and relevance of mathematics. It is designed to teach math concepts as well as quantitative skills. Topics will include inductive and deductive reasoning, mathematical patterns, sets, topology, non-euclidian geometry, probability, statistics and matrices. The common themes throughout the course will be innovations in personal computers, related mathematical and cultural history and reasoning ability. 3 hrs./wk.

**MATH 175****DISCRETE MATH AND ITS APPLICATIONS (3CR)**

*Prerequisite: MATH 165*

This course is the second of a two-semester sequence of courses on the beauty, scope, practical applications and relevance of mathematics. It will focus on applications of general interest primarily drawn from the social and biological sciences and business. Topics will be placed in a historical context, and mathematical reasoning will be stressed. Many of the applications will be computer-oriented. 3 hrs./wk.

**POLS 130****POLITICAL ECONOMY: POWER IN SOCIETY (3CR)**

This course will examine the economic and political dimensions of social power as a vehicle for introducing students to the social sciences. The concept of power will be used to show commonalities and differences in the social sciences and to examine the language, methods, scope and insights of political and economic studies. Through examination of the manifestations of power through authority, force and influence, the significance of political economy will be revealed. 3 hrs./wk.

**SCI 121****SCIENCE: A DYNAMIC PROCESS (4CR)**

This course is an introduction to the process of learning about the natural world through science. Hands-on experiments will be done in the laboratory. Development of conceptual schemes will be seen in case studies in biology, chemistry, physics and geology. The course leads into Physical Science or Principles of Biology. 6 hrs. lecture, lab/wk.

**SOC 160****SOCIAL POWER: MOTIVATION AND ACTION (3CR)**

This course will concentrate on the socio-psychological aspects of power. Topics will include the development of personality, the role of social class and ideology, the mechanics of domination and subordination, discrimination, economic inequality, powerlessness and the search for community. Basic terminology and theoretical foundations of both sociology and psychology will be at the heart of the course. 3 hrs./wk.

**TECH 220****TECHNOLOGICAL LITERACY (3CR)**

*Prerequisites: SCI 121 and PSCI 120 or BIOL 122.*

*Available to non-core students with the program director's permission.*

This course is an overview of technology in our society. The study will begin with a definition of technology and a historical perspective of technological trends. Major

course components also will include in-depth looks at energy, manufactured materials, electronics and computers, and transportation. The impact of these on society and individuals will be assessed. 3 hrs./wk.

## Correctional Services

**KADJ 185****PRINCIPLES OF CORRECTIONS (3CR)**

*Prerequisite: Approval of the program director*

Topics will 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 the program 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)**

*Prerequisites: KADJ 185 and approval of the program director*

The role of the youth case worker will be explored in this course along with the basic theory of treatment, organizational structure and problem-solving skills. 3 hrs./wk.

**KADJ 191****CORRECTIONS IN THE COMMUNITY (3CR)**

*Prerequisites: KADJ 185 and approval of the program 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)**

*Prerequisites: KADJ 185 and approval of the program director*

This survey of management patterns in correctional agencies will cover 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 for dealing with problem behavior will be covered, and listening and communication skills will be developed. 3 hrs./wk.

**KADJ 194**  
**HUMAN SERVICES PRACTICUM I (3CR)**

*Prerequisites: KADJ 185 and approval of the program director*

This course will offer initial field experience in social services, corrections, juvenile treatment, mental health or other community services. It will require a minimum of 10 hours a week or 160 hours during the semester in placement.

**KADJ 261**  
**HUMAN SERVICES PRACTICUM II (3CR)**

*Prerequisites: KADJ 194 and approval of the program director*

This course will provide 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 will be required.

## Data Processing

**DP 110**  
**INTRODUCTION TO COMPUTERS (2CR)**

This television course features a survey of electronic data processing and 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 will study computer concepts, terminology and applications. Students will use a microcomputer and word processing, spreadsheets and database packages. 3 hrs. lecture/wk.

**DP 132**  
**BASIC FOR ENGINEERING TECHNOLOGY (3CR)**

*Corequisite: MATH 133*

Students will become acquainted with computer capabilities. The class will present 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 will focus on the skills students need to enroll in any programming language course. Topics will include computer concepts and applications, flow charts, number systems, and writing and running BASIC programs on a microcomputer. 3 hrs. lecture/wk. Lab by arrangement.

**DP 137**  
**ADVANCED BASIC (4CR)**

*Prerequisite: DP 132, 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. lecture/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. lecture, lab/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 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 DP 148.*

Students will use assembler language to solve typical problems on an IBM mainframe. 3 hrs./wk. Lab by arrangement.

**DP 157****RPG III BEGINNING (4CR)**

*Prerequisite: DP 134*

Students will look at the use of various approaches to RPG II problem solving. Topics will include defining, coding, testing, debugging and documenting RPG III programs, control levels and subroutines using an IBM AS 400 microcomputer. 3 hrs. lecture/wk. Lab by arrangement.

**DP 158****FORTRAN (4CR)**

*Prerequisites: MATH 116 and DP 140. DP 140 may be taken as a corequisite.*

The course will focus on the use of FORTRAN programming language to solve typical problems. Emphasis will be on the vocabulary and grammar of ANSI FORTRAN. 3 hrs. lecture/wk. Lab by arrangement.

**DP 162****dBASE PROGRAMMING (4CR)**

*Prerequisite: DP 134 or the equivalent*

Students will have the opportunity to learn how to use dBASE III/IV to create, maintain and manipulate databases. The use of command level dBASE III/IV programming language to custom design business reports and/or selectively retrieve information using single or multiple databases also will be studied. 3 hrs. lecture/wk. Lab by arrangement.

**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. lecture/wk.

**DP 215****OS/VS JOB CONTROL LANGUAGE (3CR)**

*Prerequisite: DP 148 or DP 150*

Students will study the use of OS/VS 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. lecture/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 will be included. The computers used will be IBM or IBM-compatible MS-DOS systems. 3 hrs. lecture/wk.

**DP 235****PROGRAMMING IN C (4CR)**

*Prerequisite: CS 200*

This course will cover advanced programming topics using the C language. Emphasis will be 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./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 the basic philosophy and techniques of developing and using business information systems. The emphasis will be on the human involvement necessary in systems design and implementation. The course will address the use of specific technical approaches available in information processing. 3 hrs. lecture/wk.

**DP 245****MICROCOMPUTER OPERATING SYSTEMS (3CR)**

*Prerequisite: DP 145, DP 150 or ELEC 225*

This course will cover 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. lecture/wk. Lab by arrangement.

**DP 250****ASSEMBLER LANGUAGE II (4CR)**

*Prerequisite: DP 150*

Advanced features of assembler language for the IBM 370 will be covered. Topics will include macros, subprograms, table handling, file access and a complete set of ALC instructions. 3 hrs. lecture/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. lecture/wk. Lab by arrangement.

**DP 257****RPG III ADVANCED (4CR)**

*Prerequisite: DP 156*

The advanced features of the RPG III language will be explored. Topics will include disk file techniques; disk utilities; tables and array methodology; interactive programming; and sequential, indexed and direct access methods. An IBM AS 400 microcomputer will be used in compiling and executing programs. 3 hrs. lecture/wk. Lab by arrangement.

**DP 258****OPERATING SYSTEMS (3CR)**

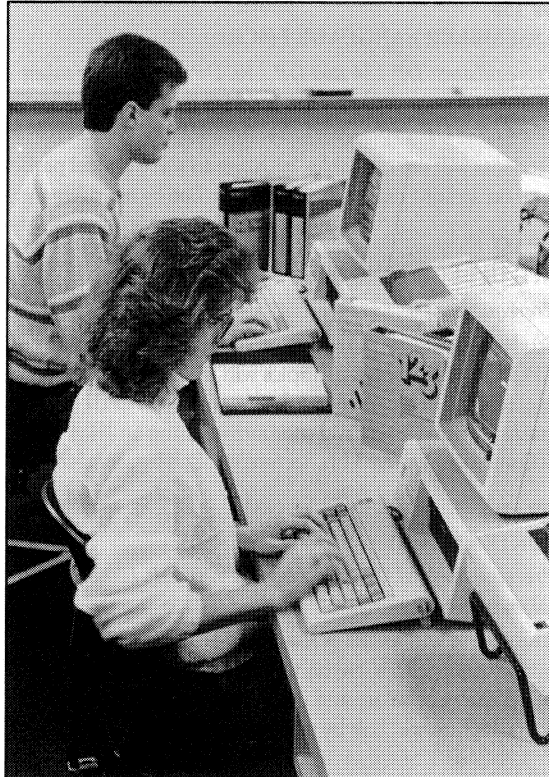
*Prerequisite: DP 150 or DP 148*

The basic concepts and principles of a digital computer operating system will be explained. Also explored through a study of a typical digital computer operating system will be the relationships between hardware and software. 3 hrs./wk.

**DP 260****DATABASE MANAGEMENT (4CR)**

*Prerequisites: DP 248 or DP 250. DP 242 offers useful background and is recommended before taking DP 260.*

Students will focus on the academic and commercial applications of three database 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. lecture/wk. Lab by arrangement.

**DP 264****APPLICATION PROGRAMMING:  
DATA PROCESSING TOPICS (3CR)**

*Prerequisite: DP 148 or division administrator approval*

This course is designed to further prepare the data processing student for the marketplace. It will provide information about firms and data processing positions in the local area. Various career-related skills will be emphasized. The student will have an opportunity to complete (with minimal supervision) a typical data processing project. 3 times/wk.

**DP 270****DATA PROCESSING INTERNSHIP (1CR)**

*Prerequisites or corequisites: DP 248 and division administrator 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 the Dental Hygiene Program and CHEM 122, ENGL 121 and SOC 122 (minimum 2.0 G.P.A.)

*Corequisites:* BIOL 146, DHYG 125 and PSYC 130

This course will include 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 125 and PSYC 130

This course will include a study of embryology; oral histology; developmental disturbances of the face, oral cavity and related structures; and 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

The 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 will 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 and DHYG 148

This class will concentrate on the theory and clinical practice of exposing, processing, mounting and evaluating oral radiographs with emphasis on radiation protection for the patient and operator. 1 hr. lecture, 3 hrs. lab/wk.

### DHYG 146

#### PERIODONTICS (2CR)

*Prerequisites:* DHYG 121 and no grade below a "C" in DHYG courses

*Corequisites:* DHYG 140, BIOL 225, BIOL 230, DHYG 142 and DHYG 148

This course will include an in-depth study of the inflammation process, its relationship to periodontal disease and recognition of the etiology, signs and symptoms of periodontal disease. 2 hrs. 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 and 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 and 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/wk.

### 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 and DHYG 240

Included in this course will be 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 and DHYG 240*

This course will introduce 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, 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 and 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 and DHYG 235*

Topics will include public health agencies, statistical procedures for 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 the dental hygienist in public health will be emphasized. Field experience will be included. 1 hr. lecture, 3 hrs. lab/wk.

**DHYG 245**  
**NITROUS OXIDE ANALGESIA (1CR)**

This course will concentrate on the principles of administration and monitoring nitrous oxide analgesia. Upon completion of the course, didactic and clinical proficiency in nitrous oxide analgesia will meet certification standards set by state dental boards. 1 hr. lecture, lab/wk.

**DHYG 250**  
**CLINICAL DENTAL HYGIENE IV (7CR)**

*Prerequisites: DHYG 221 and no grade below a "C" in DHYG courses*

This course will offer continued development of proficiency in clinical techniques and current procedural

practices of the dental hygienist with emphasis on self-evaluation. Topics will 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)**

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This course will offer 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 on understanding the applications for which each package is best suited. Students also will 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. (AVTS)

**DRAF 116**  
**ENGINEERING**  
**GRAPHICS/CAD-2D DRAFTING I (4CR)**

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This class will offer a study of the principles of graphic communication as they relate to various types of engineering drawings, with emphasis on visualization and interpretation. Topics will include the interrelationship of points, lines and planes; orthographic projection; intersections and developments; basic electrical and electronic diagrams; and pipe and photo drafting. Manual and computer drafting applications also will be provided. 10 hrs. lecture, lab/wk. (AVTS)

**DRAF 118  
ENGINEERING  
GRAPHICS/CAD-2D DRAFTING II (5CR)**

*Prerequisite: DRAF 116*

Students will have an opportunity to broaden their knowledge and skills in two-dimensional, computer-aided drafting with engineering drawing applications. Emphasis will be on machine/mechanical drawings. 10 hrs. lecture, lab/wk. (AVTS)

**DRAF 120  
BASIC DRAFTING (2CR)**

This course should be taken by students who have had no previous drafting experience. The emphasis will be on basic skills including lettering, measuring, geometric construction, orthographic views, sketching, isometrics, dimensioning and auxiliary views. 1 hr. lecture, 3 hrs. lab/wk.

**DRAF 121  
TECHNICAL ILLUSTRATION (3CR)**

*Prerequisite or corequisite: ENGR 131 or approval of the division administrator*

Students will work on basic techniques used by technical illustrators. Upon successful completion of this course, students should be able to convert engineering-type drawings to three-dimensional isometric, dimetric or trimetric obliques and perspectives. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 122  
INDUSTRIAL DRAFTING (3CR)**

*Prerequisite or corequisite: ENGR 131 or approval of the division administrator*

Students will produce basic engineering drawings and activities that are fundamental to reprodrafting and electrical, electronics, machine and pipe drafting. Upon successful completion of this course, students should be able to use timesaving techniques, drafting aids, vendor catalogs, standards, equipment and specialized media when producing drawings that are typical of the industry. 2 hrs. lecture-demonstration, 3 hrs. lab/wk.

**DRAF 123  
INTERPRETING MACHINE DRAWINGS (2CR)**

Students will work on reading machine drawings. Upon successful completion of this course, students should be able to interpret orthographic multiview drawings, symbols, abbreviations, surface finishes, dimensioning and geometric form and position tolerancing. 2 hrs./wk.

**DRAF 127  
BUILDING CONSTRUCTION ESTIMATING I (3CR)**

*Prerequisite: DRAF 129 or division administrator approval*

This is an introduction to the principles of building materials estimating. Upon successful completion of this course, students should be able to take off quantities of materials from drawings and use 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 the division administrator*

This course will provide in-depth study and applications in making complete building cost estimates. Upon completion of this course, students should be able to use professional resource materials, actual working drawings, and estimating forms to produce bid documents. Computers will be used extensively to determine quantities and costs. 3 hrs./wk.

**DRAF 129  
INTERPRETING  
ARCHITECTURAL DRAWINGS (2CR)**

This beginning course will explain the fundamentals of interpreting (reading) architectural-type drawings. Upon successful completion of this course, students should be able to understand plan and elevation views, sections, details, schedules, specifications, symbols and abbreviations found on most residential and commercial construction drawings. 2 hrs./wk.

**DRAF 150  
ELECTRICAL DRAFTING (3CR)**

*Prerequisite or corequisite: DRAF 122, MATH 133 or approval of the division administrator*

This course will emphasize drafting techniques applicable to industrial lighting, motor controls, power distribution and generation. Emphasis will be on the use of tables, catalogs and computer applications as aids, as well as the decision making required on electrical drawings. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 160  
PROCESS PIPING (3CR)**

*Prerequisite or corequisite: DRAF 122 or approval of the division administrator*

Students will become familiar with symbols, terminology, specifications, piping fittings and valving related to process pipe drawings. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 180****ARCHITECTURAL/ STRUCTURAL DRAFTING (4CR)**

*Prerequisite or corequisite: DRAF 122, MATH 134 or the equivalent or approval of the division administrator*

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)**

*Prerequisite: DRAF 122, MATH 134, ~~MATH 121~~ or approval of the division administrator*

Emphasis will be on the development of skills necessary to enter drafter positions in manufacturing industries. Topics covered will 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 or the equivalent and DRAF 122 or the equivalent or approval of the division administrator*

This is an introduction to map drafting and methods of land surveying used by engineering firms. Topics will 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 or the equivalent, MATH 172 or the equivalent or approval of the division administrator*

Concepts necessary for designing and analyzing pipe systems will be covered. Upon successful completion of this course, students should be able to apply ASTM and ANSI standards for routing, flexibility tolerances, insulation, supporting and estimating. 3 hrs. lecture/wk.

**DRAF 230****INTRODUCTION TO COMPUTER-AIDED DRAFTING 2-D (3CR)**

*Prerequisite: ENGR 131, practical drafting experience or approval of the division administrator*

Students will learn to use computer-aided drafting equipment including a graphics terminal, input devices and microcomputers as 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 3-D DRAFTING APPLICATIONS (3CR)**

*Prerequisite: DRAF 231*

Students will expand their knowledge of CAD/CAM into specific areas of interest. They will have the opportunity to select for study an advanced CAD/CAM software package including mechanical design, N/C processing and architectural applications. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 233****ADVANCED CAD APPLICATIONS (3CR)**

*Prerequisite: DRAF 232*

Upon successful completion of this course, students should be able to understand advanced aspects of computer-aided design-based systems (CAD). Topics covered will be graphics control routines, custom menus and database translators. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 261****GRAPHIC COMMUNICATIONS I FOR INTERIOR DESIGN (3CR)**

The focus of this course will be on the interpretation of residential and commercial construction drawing and the drawing of architectural interiors (floor plans) with the interior drawings in two- and three-dimensional styles. This course is for students in the JCCC Interior Merchandising Program and professionals in the interior design field who are enhancing their skills and competencies. 6 hrs. lecture, lab/wk.

**DRAF 264****CAD: INTERIOR DESIGN (3CR)**

*Prerequisite: ITMD 122 or division administrator approval*

This course is 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. They 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.

*\* Not a valid prereq. 6-21-90*

**DRAF 266**  
**GRAPHIC COMMUNICATIONS II**  
**FOR INTERIOR DESIGN (3CR)**

*Prerequisite: DRAF 261*

Upon successful completion of this course, the student will be able to describe the fundamentals of pictorial representation and demonstrate the ability to draw perspectives, section evaluations and isometric illustrations. The student will be expected to produce drawings with realistic appearance of building interiors, cabinets, furniture and decor. 2 hrs. lecture, 3 hrs. lab/wk.

**DRAF 271**  
**DRAFTING INTERNSHIP I (3CR)**

*Prerequisite: Approval of the division administrator*

This course will provide 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. 2 hrs. lecture, 15 hrs. min./wk.

**DRAF 272**  
**DRAFTING INTERNSHIP II (3CR)**

*Prerequisites: DRAF 271 and approval of the division administrator*

This course will provide the advanced student 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. 2 hrs. lecture, 15 hrs. min./wk.

## Economics

**ECON 130**  
**BASIC ECONOMICS (3CR)**

This course is designed for the student 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 will include supply of and demand for products, national income determination, money and banking, and monetary and fiscal policy. The student 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)**

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 will include extended analysis of product supply and demand and 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 will include the roles and responsibilities of the teacher, various modes of instruction, specialized areas in teaching, and professional requirements and concerns. Twenty hours of observation in a school setting are required. 3 hrs./wk.

**EDUC 130**  
**FOUNDATIONS OF**  
**EARLY CHILDHOOD EDUCATION (3CR)**

This introductory survey course is designed to provide students with current information on topics relevant to employment in early childhood programs. The course will explore the historical and philosophical roots of early childhood education, general principles in child development, the teacher's role, values and ethics in early childhood education, curriculum design and classroom management. Twenty hours of observation in a group child care setting is required. 3 hrs. lecture/wk.

**EDUC 220**  
**SURVEY OF THE EXCEPTIONAL CHILD (3CR)**

This is a survey of the exceptional children 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. Outside readings and a 12-hour practicum will be required. One six-hour session.

**EDUC 223**  
**BASIC STRATEGIES FOR SPECIAL EDUCATION PARAPROFESSIONALS II (1CR)**

*Prerequisite: EDUC 222*

Emphasis will be on defining the responsibilities and role of the paraprofessional in special education programs. Outside readings and a 12-hour practicum are required. One six-hour session.

## Electronics

**ELEC 110**  
**ELECTRONICS/ROBOTICS I (5CR)**

*Prerequisite: MATH 116 or appropriate score on the 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, and basic operation and maintenance of industrial robots. Various learning strategies techniques will be presented throughout the course. 10 hrs. lecture, lab/wk. (AVTS)

**ELEC 115**  
**ELECTRONICS/ROBOTICS II (5CR)**

*Prerequisite: ELEC 110*

Students will 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 on basic trigonometric functions and the four basic oper-

ations in the complex number system. Students also will be required to make extensive use of computer-controlled interactive video equipment supplemented by classroom lecture. 10 hrs. lecture, lab/wk. (AVTS)

**ELEC 120**  
**INTRODUCTORY ELECTRONICS (3CR)**

Upon successful completion of this course, the student should be able to identify resistive circuits in which electronic devices are employed. Students will be introduced to volt-ampere characters and the physics of diodes, transistors, and practical circuits using these devices. 2 hrs. lecture, 3 hrs. lab/wk.

**ELEC 121**  
**BASIC TELEPHONY (3CR)**

Upon successful completion of this course, the student should be able to identify the history, basic concepts and technical vocabulary of telephone systems and the equipment involved in those systems. The student will 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*

Upon successful completion of this course, the student should be able to identify and use fundamental AC and DC circuit concepts such as Kirchoff's Laws, Ohm's Law, Thevenin's Theorem and Norton's Theorem as they apply to resistive circuits. 3 hrs./wk.

**ELEC 123**  
**ELECTRONIC KEY SYSTEMS (3CR)**

*Prerequisite: ELEC 121 or three years of industry experience and division administrator approval*

Upon successful completion of this course, the student should be able to identify the evolution of the electronic key telephone system. Students will learn the industry standard definition of electronic key system features, installation techniques, programming procedures and final check-out procedures. 3 hrs. lecture, lab wk.

**ELEC 125**  
**DIGITAL ELECTRONICS I (3CR)**

*Corequisite: ELEC 120*

Upon successful completion of this course, the student should be able to conduct an analysis and synthesis of digital circuitry used in digital computers, digital machine control, telephone systems, calculators and other equipment. 2 hrs. lecture, 3 hrs. lab/wk.

**ELEC 130**  
**ELECTRONIC DEVICES I (3CR)**

*Prerequisite: ELEC 122*

Upon successful completion of this course, the student should be able to identify resistive circuits in which electronic devices are employed. The student will be introduced to volt-ampere characteristics and physics of diodes, transistors and practical circuits using these devices. 2 hrs. lecture, 3 hrs. lab/wk.

**ELEC 133**  
**PROGRAMMABLE CONTROLLERS (3CR)**

Upon completion of this course, the student should be able to identify the hardware components of programmable controllers, apply basic programming concepts, control functions using symbols and follow operation procedures. The student should be able to enter, edit and test controller programs. 2 hrs. lecture, 2 hrs. lab/wk.

**ELEC 140**  
**CIRCUIT ANALYSIS II (3CR)**

*Prerequisite: ELEC 122*

*Corequisite: MATH 134*

Upon successful completion of this course, the student should be able to identify and utilize capacitors and inductors as circuit elements. AC circuits with resistors, capacitors and inductors will be analyzed using complex algebra and phasors. The time response of these circuits also will be discussed. 3 hrs. lecture/wk.

**ELEC 225**  
**DIGITAL ELECTRONICS II (3CR)**

*Prerequisite: ELEC 125*

Upon successful completion of this course, the student should be able to comprehend and utilize the second course in TTL and CMOS integrated circuits, interfacing with the analog world and memory devices. This course is an introduction to digital computer operation and the architecture of simple to complex microcomputers. 2 hrs. lecture, 3 hrs. lab/wk.

**ELEC 230**  
**ELECTRONIC DEVICES II (3CR)**

*Prerequisite: ELEC 130*

Upon successful completion of this course, the student should be able to conduct an AC analysis of transistor amplifier circuits for both small signal and power amplifiers. Both bipolar and field effect transistors may be used. 2 hrs. lecture, 3 hrs. lab/wk.



**ELEC 240**  
**ELECTRONIC COMMUNICATION SYSTEMS (4CR)**

*Prerequisite: ELEC 230*

Upon successful completion of this course, the student should be able to apply theory and practical applications of electrical communications systems and components. 4 hrs./wk. Spring.

**ELEC 245**  
**MICROPROCESSORS (3CR)**

*Prerequisite: ELEC 225*

Upon successful completion of this course, the student should be able to identify and work with microprocessors and microcomputers. Topics will include microprocessor and microcomputer architecture, programming and application. 2 hrs. lecture, 3 hrs. lab/wk.

**ELEC 271**  
**ELECTRONICS INTERNSHIP I (3CR)**

*Prerequisite: Approval of the division administrator*

This internship 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. 2 hrs. lecture, 15 hrs. min./wk.

**ELEC 272**  
**ELECTRONICS INTERNSHIP II (3CR)**

*Prerequisites: ELEC 271 and approval of the division administrator*

This 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. 2 hrs. lecture, 15 hrs. min./wk.

## Emergency Medical Science

### EMS 121

#### CPR I – BASIC RESCUER (1CR)

This class is 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 offered through the Emergency Medical Technology Program. Students will have the advantage of being trained by instructors who are educated and experienced in prehospital care procedures. This course will meet the general education health and/or physical education requirement needed for graduation. 2 1/2 hrs. lecture, lab/wk. for 8 wks.

### EMS 125

#### CPR II – BASIC CPR INSTRUCTOR (1CR)

*Prerequisite: Successful completion of EMS 121 and/or current certification by AHA as Basic Rescuer*

This class will include a 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 offered through the Emergency Medical Technology Program. 2 1/2 hrs. lecture, lab/wk. for 8 wks.

### EMS 128

#### EMS FIRST RESPONDER (3CR)

This course is designed to provide training in emergency medical care for those who are apt to be the first person responding to a medical incident. The student will receive both didactic and psychomotor skills training in CPR, patient assessment, fracture management, airway management and trauma management. Successful completion of this course will enable the student to sit for the First Responder certification examinations administered by the Kansas Board of Emergency Medical Services. 2.5 hrs. lecture, 1 hr. lab/wk.

### EMS 130

#### EMERGENCY MEDICAL TECHNICIAN (6CR)

This class is an in-depth study of the techniques, rationale and background material necessary to perform as an emergency medical technician. Classroom instruction will cover 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 Board of Emergency Medical Services. 3 1/2 hrs. lecture, 3 1/2 hrs. lab/wk. Students also will be required to attend approximately six Saturday sessions lasting approximately four hours each. (Saturday dates and times will be announced during the first class session.)

### EMS 140

#### BASIC CARDIOLOGY AND EKG RECOGNITION (2CR)

*Prerequisite: Permission of the program director*

Topics will include basic anatomy, physiology, electrophysiology 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 will cover roles and responsibilities, medical terminology, anatomy and physiology as they apply to the MICT. Other topics will include diagnostic signs and assessment of patients, biomedical communication, venipuncture, medication administration 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 will cover 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., 12 hrs./wk. avg. 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 will be included. 32 hrs. clinical lab/wk., 4 hrs./wk. avg. lecture, 12 hrs. field lab/wk. avg.

**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 prehospital protocols. 54 hrs. field lab/wk., 4 hrs. lecture, lab./wk. avg.

## Engineering

**ENGR 105****CONSTRUCTION METHODS I (3CR)**

Upon successful completion of this course, the student should be able to interpret drawings and understand terminologies, methods, procedures, sequences of operation and types of construction and planning. 3 hrs./wk.

**ENGR 107****CONSTRUCTION METHODS II (3CR)**

*Prerequisite: ENGR 105*

Upon successful completion of this course, the student should be able to understand and apply legal requirements for construction projects, proposals, schedules and estimates. Practical guidelines for estimating and step-by-step approaches to preparing project schedules will be covered. 3 hrs./wk.

**ENGR 121****ENGINEERING ORIENTATION (1CR)**

Upon successful completion of this course, the student should be able to describe careers in engineering. Topics will include engineering disciplines, aptitude and academic requirements, work environment and the responsibilities of a professional engineer. The student will meet professional engineers and engineering faculty members during field trips to engineering companies and regional universities. The primary intent of this course is to help each student determine whether engineering is a suitable career for him or her and which engineering discipline would be the most rewarding to pursue. 1 hr./wk.

**ENGR 131****ENGINEERING GRAPHICS I (3CR)**

*Prerequisites: High school geometry and trigonometry or DRAF 120 or the appropriate score on the drafting assessment test, or permission from the division administrator*

Upon successful completion of this course, the student will be able to identify principles of graphics and design processes. Topics will 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*

Upon successful completion of this course, the student should be able to 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)**

*Prerequisite: MATH 171*

Upon successful completion of this course, the student should be able to use FORTRAN programming language to develop programming techniques for solving scientific and engineering problems on digital computers. This course will prepare the student for advanced studies in numerical methods and other computer applications. 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 the equivalent*

Upon successful completion of this course, the student should be able to identify the basic applications of plane surveying procedures; measurement of horizontal distances, directions, angles, leveling, traversing, curves and stadia coordinates; computations with the aid of a computer; and topographical property and construction surveying. Students will take part in field operations using equipment such 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*

Upon completion of this course, the student should be able to identify 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 included. 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. Upon successful completion of this course, the student should be able to analyze linear passive electrical circuits. Computer applications will be included. 3 hrs. lecture/wk.

**ENGR 231  
THERMODYNAMICS (3CR)**

*Prerequisites: MATH 242, PHYS 220 and CHEM 124 and competence in computer programming*

Upon completion of this course, the student should be able to identify thermodynamic principles and their application to the analysis of energy systems, including various power and refrigeration cycles. 3 hrs./wk.

**ENGR 251  
STATICS (3CR)**

*Prerequisite: MATH 242*

*Corequisite: PHYS 220*

Upon successful completion of this course, the student should be able to describe and predict the conditions of rest and motion of bodies under the action of forces. The principles used will include vectors, force systems, equilibrium, free body diagram, centroids and moments of inertia. Computer applications will be included. 3 hrs. lecture/wk.

**ENGR 252  
MECHANICS OF MATERIALS (3CR)**

*Prerequisites: ENGR 251 and competence in computer programming*

Upon successful completion of this course, the student should be able to identify mechanics of materials (strength of materials). This course is a continuation of Statics with the basic principles covered including simple stress and strain, torsion, shear, bending and deflection. Applications will be considered for beams, columns and beam-column members. 3 hrs. lecture/wk.

**ENGR 254  
DYNAMICS (3CR)**

*Prerequisites: ENGR 251 and computer programming competence*

Upon successful completion of this course, the student should be able to identify dynamics, the branch of engineering mechanics that studies objects in motion. Topics covered will include unbalanced force systems (Newton's second law), displacement, velocity and acceleration, work and energy, and impulse and momentum. Computer applications will be included. 3 hrs. lecture/wk.

**ENGR 258  
STRUCTURAL ANALYSIS AND DESIGN (5CR)**

*Prerequisite: ENGR 211*

Upon successful completion of this course, the student should be able to identify the analysis and design of simple structural systems. Structural members and systems composed of steel, reinforced concrete and wood will be investigated 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.

## English

### DEVELOPMENTAL COURSES

ENGL 100 through ENGL 112 are designed to help students develop basic skills in writing, grammar and sentence patterns. Most courses also will work in composing, proofreading, gathering and documenting information. Emphasis will be on assessing and developing a plan to meet individual student needs. These courses do not fulfill degree requirements.

**ENGL 100  
ENGLISH AS A SECOND LANGUAGE I (3CR)**

*Prerequisite: Appropriate assessment score*

This course is designed for students who are familiar with English but who have limited skills. The class will focus on pronunciation and listening comprehension as well as basic grammar and sentence structure. 3 hrs./wk.

**ENGL 101  
ENGLISH AS A SECOND LANGUAGE II (3CR)**

*Prerequisite: ENGL 100 or appropriate assessment score*

This course will include continued work in pronunciation, grammar and sentence structure and will emphasize improvement of reading skills. 3 hrs./wk.

**ENGL 102**  
**WRITING STRATEGIES (3CR)**

*Prerequisite: Appropriate placement test score*

Intended for reluctant writers, this course is designed to develop their confidence and competence. The focus will be on developing sentence-level skills that will be applied to paragraph development. Students will be taught methods of self-monitoring their written work to reduce the frequency of conventional errors. 3 hrs./wk.

**ENGL 103**  
**PRACTICAL WRITING SKILLS (1CR)**

A practical writing course in English for non-native speaking students and the hearing impaired, this course will focus on basic sentence patterns, techniques to expand and modify sentences, and practical methods for developing writing. Individualized instruction and practice in reading, writing and speaking will be included. By arrangement.

**ENGL 105**  
**BASIC ENGLISH GRAMMAR (3CR)**

This course will focus on grammar, usage and mechanics of edited English, emphasizing clear, correct communication in varied sentence patterns. 3 hrs./wk.

**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 will conclude with an introduction to the essay. 3 hrs./wk.

**ENGL 107**  
**SENTENCE PATTERN SKILLS (1CR)**

Students will work at their own pace in reviewing the parts of speech, elements of the sentence and basic sentence patterns. Emphasis will be on diagramming and combining sentences. The class will include individualized tutoring and practice in writing. By arrangement.

**ENGL 108**  
**COMPOSING SKILLS (1CR)**

In this review of the various aspects of composition, students will examine creating, outlining and developing a variety of paragraph and essay forms. The class will include individualized tutoring and practice in writing. By arrangement.

**ENGL 109**  
**PROOFREADING SKILLS (1CR)**

Students will learn to recognize and correct errors on exercise sheets and in their own writing. By arrangement.

**ENGL 110**  
**ENGLISH GRAMMAR REVIEW (1CR)**

Students will take diagnostic tests to determine the level at which they should begin work. They will use programmed materials dealing with parts of speech, punctuation, capitalization, sentence structure, verb forms, modifiers, pronoun choices, sentence fragments and run-ons. By arrangement.

**ENGL 112**  
**RESEARCH SKILLS (1CR)**

This course is a review of the research process, beginning with limiting the subject and moving to revising the finished product. Emphasis will be on the gathering of resource material and correctly documenting it into a scholarly paper. Students will receive individualized tutoring and practice in research writing. By arrangement.

**ENGL 121**  
**COMPOSITION I (3CR)**

*Prerequisite: ENGL 106 or appropriate placement test score*

This standard freshman English I course will concentrate on invention, paragraph development, essay format and an introduction to the research paper. Students will practice developing the form and content of clear, interesting compositions. 3 hrs./wk.

**ENGL 122**  
**COMPOSITION II (3CR)**

*Prerequisite: ENGL 121*

This standard freshman English II course will emphasize the 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 will be familiar with writing techniques appropriate for technology, industry and business. The student also will learn to create forms, plans, summaries, newsletter articles, press releases, memorandums, letters, and short and long reports. 3 hrs./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.

**ENGL 223**  
**CREATIVE WRITING (3CR)**

*Prerequisite: ENGL 122*

Students will study and practice poetry and short story writing. Topics will 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.

**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 will focus on important works of various writers and the relationship 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 will 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*

Students will read a variety of famous British writers and learn about their lives, times and works. Topics from selected writers will promote group discussion, and students will be assigned related writing projects. 3 hrs./wk.

**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. The class will include 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*

This course is a continuation of Children's Literature, focusing primarily on writing literature for children and marketing it. The course will cover 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 writers. The course will focus on important works of various writers and trace their influence on later writers. Writing projects will be assigned. 3 hrs./wk.

**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. The class will feature group presentations, written film critiques and related reading assignments. 3 hrs./wk.

**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, and writing projects will be assigned. 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 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 will offer instruction in dressage, including 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 course will 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)**

*Prerequisites: EQUUS 128 and EQUUS 154*

Students who intend to specialize in riding instruction can participate in this class. It will feature demonstrations of teaching methods, skills development and oral presentations. 4 hrs./wk.

**EQUUS 135  
TECHNIQUES OF RIDING INSTRUCTION II (3CR)**

*Prerequisite: EQUUS 134*

Topics covered in this course will include planning safe camp programs and public lessons, rider problems, maintenance of the school horses, 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 will cover the 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 will allow 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 will offer instruction in saddleseat equitation, with emphasis on the position of the rider, control of the horse and basic movement. Topics will 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 will cover handling, conditioning and training for horses of all ages. Topics 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 will include anatomy, reproductive physiology, genetics, breeding diseases, congenital and hereditary problems, and 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 enable students 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 the 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 the program coordinator. 4 hrs./wk.

## Fashion Merchandising

**FASH 121  
FASHION FUNDAMENTALS (3CR)**

Upon successful completion of this course, the student will be able to define appropriate fashion terminology and explain the structure of the industry, including the design process, production and marketing of the fashion product. 3 hrs. lecture/wk.

**FASH 125  
VISUAL MERCHANDISING (3CR)**

Upon successful completion of this course, the student will be able to explain and apply the principles of design in visual merchandising. The student will be able to identify and explain the use of mannequins and other forms, display fixtures and lighting systems; apply color theory; and present merchandise effectively in visual displays. The student also will be able to demonstrate the use of displays for in-store promotions. 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 with figures in various media. 3 hrs./wk.

**FASH 132  
MARKETING COMMUNICATIONS (3CR)**

Upon successful completion of this course, the student will be able to develop a marketing communication strategy for a retail establishment. The plan will include definition of the target market and application of advertising, sales promotion, publicity, public relations, television, newspaper and radio. 3 hrs./wk.

**FASH 135  
IMAGE MANAGEMENT (1CR)**

Students who successfully complete this course will be able to conduct an extensive wardrobe inventory. In addition, the student will apply principles of personal grooming, elements of design, and fabric and accessory knowledge to the development of an individual professional wardrobe plan. 1 hr./wk.



**FASH 140**  
**GARMENT DESIGN I (3CR)**

*Prerequisite: FASH 130 and/or program director approval*

Upon successful completion of this course, students will be able to translate their garment ideas from color sketches (croquis); continue the design process through fabric selection and pattern drafting; figure yardage, notions and wholesale cost; and construct a finished garment. Such skills would prove useful in couture, manufacturing design, entrepreneurship and personalized garments. 6 hrs. lecture, lab/wk.

**FASH 150**  
**TEXTILES (3CR)**

Upon successful completion of this course, the student will be able to differentiate fibers and textiles according to their characteristics and to select fibers and textiles for specific applications. The course will cover the properties and characteristics of natural and man-made fibers, construction methods and various finishing processes, including weaving, knitting, felting, printing and dyeing. 3 hrs. lecture/wk.

**FASH 220**  
**FASHION IN SOCIETY (3CR)**

This course is an interdisciplinary study of clothing that includes a current and historical perspective of both Western and Eastern dress. Upon successful completion of this course, the student will be able to relate clothing to the cultural, social, psychological, physiological and economic aspects and practices of chosen individuals and cultural groups. In addition, the student will be able to use computer-aided design to create fashion silhouettes. 3 hrs./wk.

**FASH 224**  
**HISTORY OF COSTUME (3CR)**

Upon successful completion of this course, the student will be able to identify the political, economic, technological and sociological factors that have influenced Western costume worn by women, men and children from ancient Egyptian times to the present. 3 hrs./wk. Spring.

**FASH 230**  
**FASHION ILLUSTRATION II (3CR)**

*Prerequisite: FASH 130*

In this course, a continuation of Fashion Illustration I, emphasis will be on the development of a personal illustration style and the presentation of a professionally executed portfolio. Upon completion of this course, the student will be able to produce refined fashion illustrations to enhance the portfolio. 3 hrs./wk.

**FASH 231**  
**MERCHANDISING STRATEGIES (3CR)**

*Prerequisite: MATH 120*

Upon completion of the course, the student will be able to describe the management structure of retail merchandising operations; contrast merchandising functions among the various types of retail operations; and explain the buying process and the financial operations of retail merchandising with applications of these principles in simulated case situations. 3 hrs. lecture/wk. Fall.

**FASH 242**  
**MERCHANDISE EVALUATION (3CR)**

Upon successful completion of this course, the student will be able to evaluate textile and non-textile products ranging from lingerie to china on the basis of specialized product knowledge. Students will prepare and present research projects on a selected product. 3 hrs. lecture/wk. Spring.

**FASH 268**  
**FIELD STUDY: THE MARKET CENTER (3CR)**

*Prerequisite: FASH 121 and/or program director approval*

Upon successful completion of this course, the student will be able to identify and distinguish between national and regional market centers and major and local retail centers. In addition, the student will be able to explain the importance of market centers; analyze the marketing mix of selected retailers; and describe uses of fashion auxiliary services. The class will include the experience of an international fashion review. 3 hrs./wk.

**FASH 272**  
**FASHION SEMINAR: HUMAN RELATIONS (2CR)**

Upon successful completion of this course, the student will be able to identify individual components that affect human relations in the workplace including motivation, values, assertiveness, change, stress and other concepts that will be studied through discussion and case studies relating to supervisory and coworker relations. 2 hrs. lecture/wk.

**FASH 275**  
**FASHION SEMINAR:  
SUPERVISORY DEVELOPMENT (2CR)**

Upon successful completion of this course, the student will be able to define the supervisor's role in the management of human and material resources. The importance of planning, organizing, staffing and controlling will be apparent. The student will be able to apply knowledge and supervisory skills through case studies and role playing related to hiring, training, disciplinary action and performance appraisal. 2 hrs. lecture/wk.

**FASH 277****FASHION SEMINAR: CAREER OPTIONS (2CR)**

Upon successful completion of this course, the student will be able to define individual career goals after a thorough examination of five career paths within the fashion industry. The class will address career options through a research project, guest speakers, field trips, lectures and class discussions. 2 hrs. lecture/wk.

**FASH 280****FASHION SEMINAR: INDUSTRY TOPICS (2CR)**

Upon successful completion of this course, the student will understand the impact of demographic trends and societal issues on fashion products and markets. The student will apply existing market research reports to problem solving and decision making. The discussion of current topics affecting the fashion industry will help students become aware of alternative solutions to problems and the impact of business decisions. The course will include research projects, guest speakers, field trips, lectures and class discussions. 2 hrs./wk.

**FASH 283****FASHION INTERNSHIP I (1CR)**

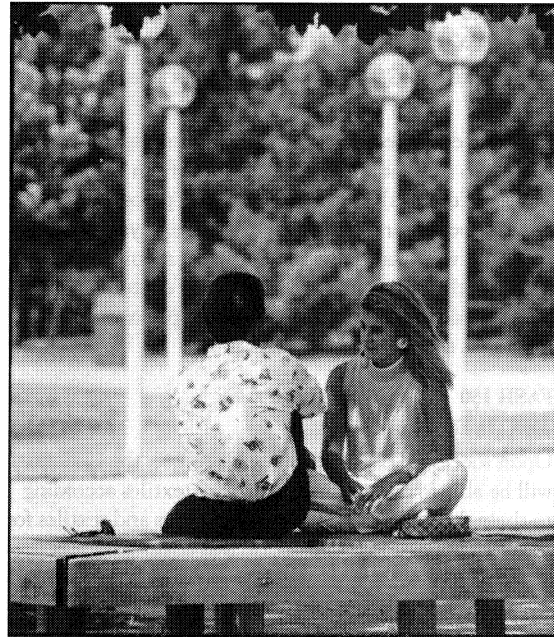
*Prerequisite: Admission to the Fashion Merchandising Program*

This course offers work experience under instructional supervision in an approved training situation designed to provide practical experience in the fashion industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hours on-the-job training/wk.

**FASH 284****FASHION INTERNSHIP II (1CR)**

*Prerequisite: Admission to the Fashion Merchandising Program*

This course offers work experience under instructional supervision in an approved training situation designed to provide practical experience in the fashion industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hours on-the-job training/wk.

**FASH 285****FASHION INTERNSHIP III (1CR)**

*Prerequisite: Admission to the Fashion Merchandising Program*

This course offers work experience under instructional supervision in an approved training situation designed to provide practical experience in the fashion industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hours on-the-job training/wk.

**FASH 286****FASHION INTERNSHIP IV (1CR)**

*Prerequisite: Admission to the Fashion Merchandising Program*

This course offers work experience under instructional supervision in an approved training situation designed to provide practical experience in the fashion industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hours on-the-job training/wk.

**FASH 298****EUROPEAN FASHION EMPHASIS (3CR)**

Upon successful completion of this course, the student will be able to compare American and European retail merchandising, advertising and visual presentation. This travel-for-credit course includes visits to selected European cities.



## **Fire Protection/ Fire Prevention and Fire Administration**

### **FIRE 121 FUNDAMENTALS OF FIRE PREVENTION (3CR)**

This class will cover the organization and function of fire prevention, inspections, surveying and mapping, recognizing life and fire hazards, eliminating fire hazards and public relations. 3 hrs./wk.

### **FIRE 125 BUILDING CONSTRUCTION FOR FIRE SERVICE (3CR)**

Students will explore how to classify buildings by occupancy and type of construction. Emphasis will be on fire protection features, including building equipment, facilities, fire-resistive materials and high-rise considerations. 3 hrs./wk.

### **FIRE 130 FIRE INVESTIGATION (3CR)**

How to determine the cause of a 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./wk.

### **FIRE 132 ARSON INVESTIGATION (3CR)**

*Prerequisite: FIRE 130*

Arson investigation techniques and procedures will be covered in this class for advanced students. Topics will include evidence preservation, interviewing and courtroom procedures. 3 hrs./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 that are used extensively in fire prevention. 3 hrs./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 of 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 materials, incidents and methods of identification of the substances involved. 1 hr./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./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./wk.

### **FIRE 150 INTRODUCTION TO FIRE SCIENCE (3CR)**

Topics covered in this course will include career opportunities; history of fire protection; fire loss analysis; public, quasi-public and fire protection services; specific fire protection functions; and fire chemistry and physics. 3 hrs./wk.

### **FIRE 159 FIRE SERVICE HYDRAULICS (4CR)**

This course will include a study of hydraulic principles and formulas. Hydraulic experiments will emphasize fire service applications. 4 hrs./wk.

### **FIRE 160 FIRE APPARATUS AND EQUIPMENT (3CR)**

Fire apparatus design, specifications, capabilities and use in emergencies will be discussed. 3 hrs./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./wk.

### **FIRE 169 RESCUE TECHNIQUES (4CR)**

This course offers a study of rescue techniques. Students will discuss and participate in simulated rescue situations. 5 hrs./wk.



**FIRE 170**  
**SPRINKLER AND STANDPIPE SYSTEMS (3CR)**

This advanced course will explain the types of sprinkler and stand-pipe systems used in fire protection and how they operate. 3 hrs./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. 6 hrs./wk.

**FIRE 190**  
**HAZARDOUS MATERIALS**  
**CHEMICAL BEHAVIOR (3CR)**

*Prerequisite: FIRE 145 or H.M. First Responder Certificate*

This course will introduce properties and behavior of hazardous materials according to their chemical structures and constituents. Both inorganic and organic com-

pounds will be studied, with specific attention to the hazards associated with particular functional groups and chemical classes. Principles of atomic and molecular structure, bonding, ionization and chemical nomenclature will be presented as they relate to the identification, containment and neutralization of hazardous chemicals in field settings. 3 hrs./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./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./wk.

**FIRE 224**  
**EMERGENCY MANAGEMENT OPERATIONS (3CR)**

This is a course in basic incident command. Disaster control, disaster management, communications for disaster management and types of disasters will be covered in this class. 3 hrs./wk.

**FIRE 250**  
**FIRE SERVICE**  
**INSTRUCTIONAL METHODOLOGY (5CR)**

*Prerequisite: Program 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: Program 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 give 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 on fundamental grammar concepts, extensive word study for English vocabulary growth, and the lasting contributions Roman society made to Western civilization. 3 hrs./wk.

### **FL 117 ELEMENTARY LATIN II (3CR)**

*Prerequisite: FL 116*

This course will complete the presentation of basic Latin vocabulary and grammar. Fundamental grammar concepts, extensive word study for English vocabulary growth, and the lasting contributions of Roman society to Western civilization will be emphasized. 3 hrs./wk.

### **FL 120 ELEMENTARY GERMAN I (5CR)**

This course will present the sounds, vocabulary and basic structural patterns of German, focusing on the development of listening comprehension, speaking, reading and writing skills. Cultural material will be 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 will continue 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 will continue the presentation of the material introduced in Elementary Spanish I. Graded reading selections will be 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 will 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 conversation. 5 hrs./wk.

### **FL 150 ELEMENTARY RUSSIAN I (5CR)**

In this course, students will study the sounds, vocabulary and basic structural patterns of Russian. The 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*

This course will complete 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 will emphasize the development of listening comprehension, speaking, reading and writing skills. Cultural material also will be integrated into the course. 7 hrs./wk.

### **FL 165 ELEMENTARY CHINESE I (5CR)**

This course is an introduction to the sounds, vocabulary, grammar, usage, characters and reading of the Chinese language. The emphasis will be on developing basic conversational skills. Cultural materials will be included. 7 hrs./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 reading of the Chinese language. The emphasis will be on developing more advanced conversational skills and cultural understanding. 7 hrs./wk.

**FL 170****ELEMENTARY JAPANESE I (5CR)**

This course is an introduction to the sounds, vocabulary, grammar, usage and reading of the Japanese language. The emphasis will be on developing basic conversational skills. Cultural materials will be included. 7 hrs./wk.

**FL 171****ELEMENTARY JAPANESE II (5CR)**

*Prerequisite: FL 170*

A continuation of Elementary Japanese I, this course will emphasize the sounds, vocabulary, grammar, usage and reading of the Japanese language. The emphasis is on developing more advanced conversational skills and cultural understanding. 7 hrs./wk.

**FL 178****INTERMEDIATE RUSSIAN I (3CR)**

*Prerequisite: FL 151*

This course will emphasize vocabulary development and more advanced study of Russian grammar. It gives students practice in reading, listening comprehension, speaking and writing. 3 hrs./wk.

**FL 179****INTERMEDIATE RUSSIAN II (3CR)**

*Prerequisite: FL 178*

The emphasis will be 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. 3 hrs./wk.

**FL 220****INTERMEDIATE GERMAN I (3CR)**

*Prerequisite: FL 121 or two years of high school German*

This class will emphasize 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 will further expand 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 German vocabulary and structural patterns, 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 hrs./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 will include 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 will be 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 will be on conversation and composition. A grammar review of Elementary French I and II also will be 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 will be 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 will be discussed in class. 2 hrs./wk.

**FL 298****FRENCH CULTURE AND CIVILIZATION (3CR)**

This travel-for-credit course will take students to France, where they will experience French culture as they visit Paris and most of the sites and places of historical significance in France. Summer.

## Health, Physical Education and 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 have an opportunity to 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 114****HORSEMANSHIP (1CR)**

Students will receive individualized instruction in the basic skills of horsemanship as a recreational pastime. Safety, fundamental horse care and behavior, proper equipment use and beginning horseback riding skills will be taught. 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 will be the focus of this class. Emphasis will be 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 cover the fundamental skills, rules and strategies of wheelchair basketball. Emphasis will be on 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 learn the basic skills, techniques and strategies that 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 that emphasizes the identification and correction of mistakes and poor habits. 2 hrs./wk.

**HPER 130****RUNNING AWARENESS AND EXERCISE (1CR)**

Cardiovascular fitness can be improved in this course. Topics will include the proper mechanics of running and training, exercise benefits, fitness programs, warm-ups and cool-downs. 2 hrs./wk.

**HPER 133****WEIGHTLIFTING – THEORY AND PRACTICE (2CR)**

An introduction to the theory and practice of weight training, weightlifting and sports conditioning, this course will cover the history of weightlifting, the biomechanics of correct lifting techniques, the physiological aspects of lifting weights, planification, the various free-weight methods to develop power, recovery exercise methods and nutrition. Relevant principles of kinesiology, biomechanics and psychology will be included. 2 hrs. lecture/wk.

**HPER 134****WEIGHT TRAINING (BEGINNING) (1CR)**

Muscular strength and endurance will be developed in this class. A directed workout program will be implemented, and 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, and 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 will 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 will focus 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 will be performed at a faster pace for a longer period of time than in Aerobics (Beginning). 1 hr. lecture, 1 hr. lab/wk.

**HPER 155****BALLET (BEGINNING) (1CR)**

The fundamentals of ballet will be introduced as will 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./wk.

**HPER 162****TEACHING ELEMENTARY DANCE (2CR)**

Upon the completion of this course, students will 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. 3 hrs./wk.

**HPER 163****BALLROOM DANCE (BEGINNING) (1CR)**

This is an introduction to ballroom dance with emphasis on basic patterns and fundamental steps in the 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 I (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 II (1CR)**

*Prerequisite: HPER 165*

Students will put the techniques of karate in practice in this class, which also will cover combination and defense techniques. 2 hrs./wk.

**HPER 167****KARATE III (1CR)**

*Prerequisite: HPER 166*

Students will have the opportunity to achieve higher levels of proficiency on Kata (forms), Kumite (sport/free fighting) and self-defense. 2 hrs./wk.

**HPER 168****KARATE IV (1CR)**

*Prerequisite: HPER 167 (Beginning Japanese is a suggested prerequisite)*

Students in this course will have the opportunity to achieve the advanced level of Taiso (exercise), Kata (forms), Kumite (sport/free fighting) and self-defense application. 2 hrs./wk.

**HPER 170****WRESTLING (1CR)**

This class will offer individualized instruction in the rules, fundamentals and history of wrestling. The practice area is scheduled by arrangement. 2 hrs./wk.

**HPER 172****TRACK AND FIELD (BEGINNING) (1CR)**

In this 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 on both discussion and demonstration. 2 hrs./wk.

**HPER 174****COACHING AND 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./wk.

**HPER 175****FENCING (1CR)**

This class will offer individualized instruction in the rules, fundamentals and history of fencing. 2 hrs./wk.

**HPER 182****SWIMMING (BEGINNING) (1CR)**

This course is intended for students who have little or no previous swimming experience. Students will practice beginning swimming strokes and have the opportunity to learn basic safety skills. 1 hr./wk.

**HPER 183****SWIMMING (INTERMEDIATE) (1CR)**

*Prerequisite: HPER 182 or the 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 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. 2 hrs./wk.

**HPER 197  
PLYOMETRICS (INTERMEDIATE) (1CR)**

*Prerequisite: HPER 194*

This is 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 199  
PLYOMETRICS – THEORY AND PRACTICE (2CR)**

*Prerequisite: HPER 133*

This course is an introduction to the theory and practice of plyometrics and has been designed to serve the needs of coaches, athletes and non-athletes. Topics will include analogies between the structural elements of the human body and the mechanics of support systems. The efficiency of flexibility, muscle strength and power, muscle contraction and relaxation, workload amounts and speed of acceleration will be analyzed. The terminologies of drills and the use of various exercises for specific sports will be covered. Principles of athletic training, training movements and methods and testing procedures also will be covered. 2 hrs. lecture/wk.

**HPER 200  
FIRST AID/CPR (2CR)**

This class will cover the cause, prevention and first aid care of common emergencies. American Red Cross certification may 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 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)**

In this 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 will contain 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 on the common and distinguishing features of recreation leadership. Students will develop guiding principles for 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 will include planning areas and facilities, personnel management, recreational financing and leadership. 3 hrs./wk.

**HPER 240**  
**LIFETIME FITNESS I (1CR)**

The various components of total lifetime fitness and the implications of lifelong health and fitness will be studied. Lectures and laboratory sessions will center on practical knowledge and experiences designed to help each person incorporate various types of physical activity into his or her lifestyle for both health and recreation. The topics discussed will 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 will cover 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

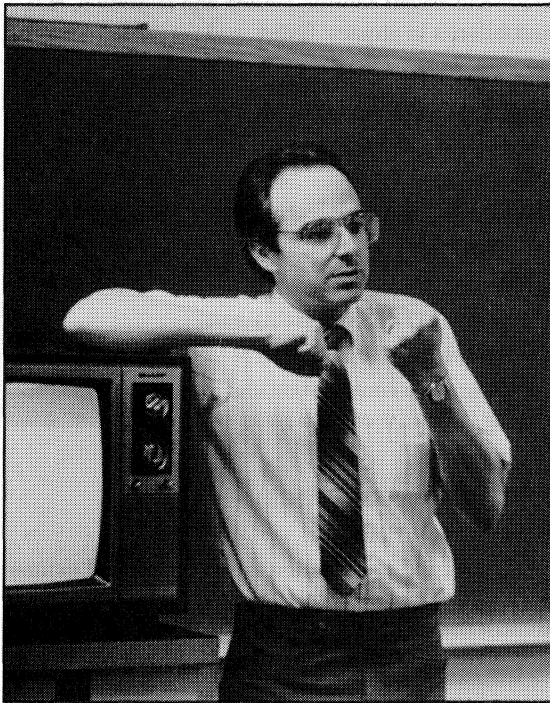
### **HRIM 100 BASIC ENGLISH FOR HEARING-IMPAIRED PERSONS I (HIP) (3CR)**

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, the emphasis will be 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 will be 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 that students need to become part of the mainstream in college, in-

cluding 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; and 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 will emphasize 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 will be 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 will focus 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 and Pidgin Signed English, 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 and Pidgin Signed English will emphasize signed vocabulary in context, body and facial grammatical markers, and facial expressions. 3 hrs./wk.

## Heating, Ventilation and Air Conditioning Technology

### HVAC 105

#### PLUMBING INSTALLATION PRACTICES I (3CR)

Upon successful completion of this course, students will be able to identify the basic elements of plumbing, plumbing applications and science in safety. Basic hand and power tools of the trade will be discussed, as will the nature of the role of the apprentice/student in the plumbing industry. 3 hrs. lecture/wk. (AVTS)

### HVAC 108

#### HVAC TECHNICAL SERVICE I (2CR)

Upon successful completion of this course, the student will be able to identify 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. (AVTS)

### HVAC 111

#### INTRODUCTION TO HVAC I (4CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

Upon successful completion of this course, the student will be able to demonstrate an understanding of brazing, evacuating and charging refrigeration systems. As an introduction to the basic elements of refrigeration, topics will include heat laws, refrigeration cycles and typical system components. Lab work will include designing, assembling and operating a working system. 3 hrs. lecture, 7 hrs. lab/wk. (AVTS)

### HVAC 114

#### INTRODUCTION TO HVAC II (5CR)

Upon successful completion of this course, the student will be able to identify 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 will 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 also will apply electrical theory and practice the interconnection of air conditioning and refrigeration systems components. 3 hrs. lecture, 7 hrs. lab/wk. (AVTS)

### HVAC 121

#### BASIC PRINCIPLES OF HVAC (4CR)

Upon successful completion of this course, the student will be able to identify behavior of refrigerants, oil component parts, heat laws, refrigeration cycles of domestic and light commercial refrigeration systems and absorption machines. In the lab, students will design, assemble and operate a working system. Competencies will include brazing, evacuating and charging the system. 3 hrs. lecture, 3 hrs. lab/wk.

### HVAC 123

#### ELECTROMECHANICAL SYSTEMS (3CR)

Upon successful completion of this course, the student will be able to identify the electrical course in the relationship of components and the various repair and troubleshooting techniques. The materials in this course will prove useful to those service technicians whose background in electricity is limited. The course will include material from basic electrical theory to troubleshooting complex dual-compressor split systems. This course will provide practice in applying electrical theory as well as the interconnection of components of air conditioning and refrigeration systems. 2 hrs. lecture, 3 hrs. lab/wk.

### HVAC 124

#### EQUIPMENT SELECTION AND DUCT DESIGN (4CR)

*Prerequisites: HVAC 121 and HVAC 123*

Upon successful completion of this course, the student will be able to identify techniques and procedures used in the home building industry to determine proper sizing of HVAC equipment and of ducts in terms of the requirements needed to maintain a comfortable climate within each room with respect to heating, cooling, humidifying, dehumidifying, ventilating and air cleaning or filtering. 3 hrs. lecture, 3 hrs. lab/wk.

### HVAC 125

#### ENERGY ALTERNATIVES (2CR)

Upon successful completion of this course, the student should be able to identify diverse methods of alternate energy production. Some of the technologies that will be discussed are wind energy, photo-electric energy, biomass and alternate fuel vehicles. Students will understand the advantages of using various alternate energy technologies, the impact or by-products of each and the problems that might be encountered. Some student research will be included in the context of the course. Emphasis will be on the most promising or effective alternate energy technologies available. 2 hrs. lecture/wk.

**HVAC 126****RESIDENTIAL HVAC SYSTEMS AND SERVICE (4CR)**

*Prerequisites: HVAC 121 and HVAC 123*

Upon successful completion of this course, the student should be able to identify the major components and accessories of heating and cooling systems and their relation to the function of the total. Topics covered will be electric, fossil fuel, heat pumps and central air conditioning systems in the residential market. Emphasis will be on practical instruction in procedures and techniques for the installation, maintenance and repair of these systems. 3 hrs. lecture, 3 hrs. lab/wk.

**HVAC 128****INSTRUMENT AND CONTROL DEVICES (3CR)**

*Prerequisites: HVAC 121 and HVAC 123*

Upon successful completion of this course, the student will be able to identify and maintain various controls for HVAC systems such as flow switches, thermostats, motor controls, float valves, oil heating controls, gas heating controls, electric heat controls, cooling controls and electronic controls. Students will be exposed to diagnostic problems of various types of controls. 2 hrs. lecture, 3 hrs. lab/wk.

**HVAC 130****PASSIVE SOLAR FUNDAMENTALS (3CR)**

Upon successful completion of this course, the student will be able to identify the passive solar technologies available today. Topics will include sun spaces, solariums, greenhouses, trombe walls and direct and indirect solar gain. Students will calculate the heat output of various solar additions. 3 hrs./wk.

**HVAC 143****READING BLUEPRINTS AND LADDER DIAGRAMS (2CR)**

Upon successful completion of this course, the student will be able to identify every type of industrial plant blueprint. Students also will discuss machine parts and machine drawings and examine hydraulic, pneumatic, piping and plumbing, electrical, air conditioning and refrigeration drawings. The structure of ladder logic diagrams, terminology and symbols for diagram components also will be covered. Logic or decision-making functions will be presented along with practice in creating ladder logic diagrams. 2 hrs./wk.

**HVAC 145****SERVICING HVAC EQUIPMENT (2CR)**

*Prerequisites: Approval of the Burlington Northern training director and the JCCC division administrator*

Upon successful completion of this course, the student should be able to identify basic components and know

the basic fundamentals of the refrigeration and heating cycle. The student should be able to recognize correct air conditioning service and maintenance procedures. 1 hr. lecture, 2 hrs. lab/wk.

**HVAC 160****PLUMBING SYSTEMS I (3CR)**

*Prerequisite: MATH 111, appropriate score on the math assessment test or division administrator approval*

Upon successful completion of this course, the student will be able to identify the basic elements of plumbing including plumbing fixtures, valves and piping, water, drains, vent and gas systems, and various health aspects. 3 hrs./wk.

**HVAC 221****COMMERCIAL SYSTEMS: AIR CONDITIONING (4CR)**

*Prerequisites: HVAC 121 and HVAC 123*

Upon successful completion of this course, the student will be able to identify large cooling systems used in commercial, institutional and industrial applications. Types of equipment will include reciprocating and centrifugal chillers, absorption systems, cooling towers, fans and air handlers. Topics will include psychrometrics, pressure-enthalpy diagrams and commercial load calculations. 3 hrs. lecture, 3 hrs. lab/wk.

**HVAC 222****ADVANCED CONTROL SYSTEMS (4CR)**

*Prerequisite: HVAC 123*

Upon successful completion of this course, the student will be able to identify four basic types of control systems: pneumatic, electronic, electromechanical and digital as applied to fans and air handlers. Classroom lectures will center on components, blueprints and wiring diagrams. Laboratory competencies will include using modular control motors, sequencing controls, analog to digital converters and motor starters. 3 hrs. lecture, 3 hrs. lab/wk.

**HVAC 223****COMMERCIAL SYSTEMS: HEATING (4CR)**

*Prerequisite: HVAC 123*

Upon successful completion of this course, the student will be able to identify large heating systems used in commercial, institutional and industrial applications. Types of equipment will 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.

**HVAC 224****DIAGNOSIS AND SERVICE PROCEDURES (3CR)**

*Prerequisites: HVAC 121 and HVAC 123*

Upon successful completion of this course, the student will be able to maintain, install and troubleshoot commercial and industrial applications of refrigeration. Students will troubleshoot and wire control circuits, diagnose malfunctions with testing equipment and correct malfunctions in commercial and industrial refrigeration units. 2 hrs. lecture, 3 hrs. lab/wk.

**HVAC 226****ENERGY MANAGEMENT (3CR)**

Upon successful completion of this course, the student will be able to identify how energy is consumed in commercial and industrial buildings and how energy usage may be reduced. Topics will 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.

**HVAC 271****HVAC INTERNSHIP I (3CR)**

*Prerequisite: Approval of the division administrator*

This course will provide 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, 15 hrs. min./wk.

**HVAC 272****HVAC INTERNSHIP II (3CR)**

*Prerequisite: HVAC 271 and division administrator approval*

This course will provide 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 actual job experiences directly related to the student's career goals. 1 hr. lecture, 15 hrs. min./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 the 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./wk.

**HIST 124****COMMUNITY LIFE AND VALUES (3CR)**

This class is a study of the cultural values that are associated with classical Rome, Renaissance Florence and baroque Rome. Architecture, literature, the visual arts and philosophy of the three periods will be examined. The values revealed will be compared to those of a modern community/city. 3 hrs./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 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 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 will 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 will focus on aspects of the history, politics, art, literature and economics of China, Japan and India. The major traditional themes and concepts of these civilizations will be stressed. 3 hrs./wk.

**HIST 140**  
**U.S. HISTORY TO 1877 (3CR)**

This survey course in U.S. history will emphasize developments and trends in American society from the early period of discovery and settlement through Reconstruction. Topics will 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 will be on analysis and interpretation of these developments. 3 hrs./wk.

**HIST 141**  
**U.S. HISTORY SINCE 1877 (3CR)**

This survey course will emphasize developments and trends in American society from the 1870s to the late 20th century. Topics will include the Reconstruction era, industrialization, immigration, reform movements, World Wars I and II, social and cultural trends, and foreign policy. Emphasis will be on analysis and interpretation of these developments. 3 hrs./wk.

**HIST 151**  
**WORLD HISTORY I:**  
**THE TRADITIONAL WORLD (3CR)**

This course will provide students an introduction to the history of the major world civilizations to approximately the year 1500. It will include the Neolithic revolution, the ancient Near East, Greece, Rome, medieval Europe, India, China, Japan, the Islamic Middle East, Africa and pre-Columbian America. It will emphasize the basic social, economic, political and cultural characteristics of these societies and long-term developments within them. 3 hrs. lecture/wk.

**HIST 152**  
**WORLD HISTORY II:**  
**THE MODERN WORLD (3CR)**

*Prerequisite: None (HIST 151 is recommended)*

This course will examine the history of the world since approximately the year 1500. It will begin with the development of the phenomenon of modernism in Europe, including the scientific revolution, secularism, industrialization and the rise of new political ideologies. It will then trace the expansion of modernism in both the Western and non-Western worlds and the response to modernism in the major non-Western countries. 3 hrs. lecture/wk.

**HIST 160**  
**MODERN RUSSIAN HISTORY (3CR)**

This course will focus 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 will 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 lifecycle 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 those points as they are challenged by others, thereby making judgments between alternative options. 3 hrs./wk in addition to attending 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, the positions of the industries in the American economic system, and the functions and limitations of those 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)**

*Prerequisites: HMGT 123, HMGT 230, HMGT 277 and admission to the Hospitality Management Program*

This course will emphasize 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 will be among the topics covered. 3 hrs./wk.

### **HMGT 130 HOSPITALITY LAW (1CR)**

This course will offer an overview of product and dram shop liability as well as of the various areas of federal and state legislation that regulate the hospitality industry. Emphasis will be on ways to avoid costly and time-consuming lawsuits. A manager's or owner's legal rights and responsibilities also will 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 will include front-office procedures, room rental, 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 will include layout, design and equipment specifications. 3 hrs./wk.

### **HMGT 223 FUNDAMENTALS OF BAKING (3CR)**

Topics will include ingredients, measurements, mixing, proofing, baking and final presentation. Students also will study various types of baking equipment. The class will include 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 sauces such as aspics and chaud-froid sauces. 3 hrs./wk.

**HMGT 228****ADVANCED HOSPITALITY MANAGEMENT (3CR)**

*Prerequisites: HMGT 121, HMGT 123, HMGT 128 and HMGT 273*

Students will have the opportunity to apply their skills in menu planning, food service, supervision, design and beverage control. This class will focus 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 will consist 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*

As an opportunity for acquiring a working knowledge of the preparation of specialty bakery products, this course will focus on lecture-demonstrations. Students will practice advanced baking procedures. Student lab projects will include 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****SEMINAR IN HOSPITALITY MANAGEMENT:  
PURCHASING (3CR)**

*Prerequisite: Admission to the Hospitality Management Program*

Students will study purchasing techniques and specification writing for items used in the industry. This training will take place in a supervised work situation in an approved area of the hospitality industry. 2 hrs. class, 15 hrs. minimum on-the-job training/wk. By arrangement.

**HMGT 273****SEMINAR IN HOSPITALITY MANAGEMENT:  
ACCOUNTING (3CR)**

*Prerequisites: Admission to the Hospitality Management Program and MATH 120*

This training will take 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 will consist of supervised work experience in an approved area of the hospitality industry. By arrangement. Summer.

**HMGT 277****SEMINAR IN MENU PLANNING  
AND SALES PROMOTION (3CR)**

*Prerequisite: HMGT 123*

This course will cover menu planning for every type of service and facility. Topics will 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 will 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 will begin 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 will be examined. 3 hrs./wk.

**HUM 133**  
**COMPARATIVE CULTURES (3CR)**

This course will trace the development of the humanities in classical Greece, medieval Europe and a selected Asian culture. 3 hrs./wk.

**HUM 136**  
**THE HUMAN EXPERIENCE (3CR)**

The themes of freedom and personal identity will be traced in the arts and sciences from the classical period of the 18th century through the romanticism of revolution in politics and the arts and finally in more modern idioms. The course will conclude with a consideration of each student's personal identity through family language. 3 hrs./wk.

**HUM 144**  
**INTRODUCTION TO ART HISTORY (3CR)**

This historical study of art will trace 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 the development of art from the Renaissance to the 20th century. 3 hrs./wk.

**HUM 155**  
**CLASSICAL MYTHOLOGY (3CR)**

This is 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 will 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 that have shaped Western civilization from the fall of the Roman Empire to the 20th century. By arrangement.

**HUM 297**  
**CLASSICAL GREECE (3CR)**

In this travel-for-credit study of classical Greek culture and its beginnings in the Minoan and Mycenaean period, students will spend 15 hours in the classroom exploring 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 or average touch typing skills (40 to 60 w.p.m.)*

This course is designed for students who have no previous experience with computers or word processing. Students who need to learn basic and intermediate operations of the specific software package designated in the schedule also will benefit from this course. Students who successfully complete the course will possess marketable word processing skills. They will be prepared to enroll in advanced courses with the same software or in other courses with different software. 3 hrs. lecture, 2 hrs. lab/wk.

**IWP 131****OFFICE AUTOMATION CONCEPTS (3CR)**

This course is an introduction to the interaction of people, processes and technologies in office information systems. In addition to the basic office automation topics included in the text, articles from the preceding week will be regularly discussed in class. Guest speakers and field trips will be scheduled frequently throughout the course. Concurrent or previous enrollment in IWP 121 is desirable but not required. 3 hrs. lecture/wk.

**IWP 132****WORD PROCESSING APPLICATIONS II (3CR)**

*Prerequisite: IWP 121, CPCA 108 or extensive experience in the same software*

This course will cover advanced features of specific software. Applications used by supervisors, trainers and others will be included to demonstrate the maximum capabilities and special features of the software. Current business applications from "power users" will be included in the course. Concepts of desktop publishing will be introduced. 3 hrs. lecture/wk. and a lab.

**IWP 140****DESKTOP PUBLISHING FOR THE OFFICE (3CR)**

*Prerequisite: IWP 121 or the equivalent*

This course will cover desktop publishing concepts, principles and skills. Hands-on activities will be emphasized as students produce publications such as flyers, newsletters, brochures, operating manuals, price lists and bulletins. 3 hrs. lecture-demonstration/wk.

**IWP 241****WORD PROCESSING  
DIRECTED EXPERIENCE I (1CR)**

*Prerequisite: IWP 121 or the equivalent*

This course will 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. By arrangement.

**IWP 250****WORD PROCESSING  
DIRECTED EXPERIENCE II (1CR)**

*Prerequisite: IWP 241*

This course will 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. By arrangement.

**Interdisciplinary Study****IDSP 175****GLOBAL RESOURCES FROM  
GEOLOGIC AND ECONOMIC VIEWPOINTS (3CR)**

This interdisciplinary course will examine 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 that 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.

**IDSP 180****INTERCULTURAL COMMUNICATIONS (3CR)**

This interdisciplinary course will draw on the disciplines of psychology, sociology, anthropology and communications to analyze how communication is influenced by culture. Students will explore the cultural basis of values, perceptions and behavior and learn how this affects communication across cultural lines. Specific topics will include the role of verbal and non-verbal symbols, cues, stereotypes, prejudice and ethnocentrism. Specific cultures will be studied, and role play and simulations will be used. 3 hrs. lecture/wk.

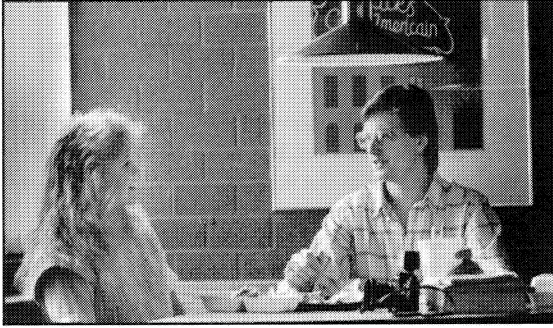
**Interior Merchandising****ITMD 121****INTERIOR DESIGN I (3CR)**

Upon successful completion of this course, the student will be able to demonstrate logical and usable arrangement of furniture in a house plan; use correct scale and symbols in creating a floor plan; develop a color wheel and color schemes; and develop a complete floor plan and decorative scheme for that plan. 3 hrs./wk.

**ITMD 122****INTERIOR DESIGN II (3CR)**

*Prerequisites: ITMD 121 and DRAF 261*

Upon successful completion of this course, the student will be able to demonstrate an advanced level of furniture arrangement on a floor plan; develop color schemes that will solve specific assigned decorating problems; and coordinate fabrics, colors, texture, patterns and finishes in a complete floor plan for a residential unit. 3 hrs./wk.



**ITMD 132**  
**INTERIOR PRODUCTS (3CR)**

Upon successful completion of this course, the student will be able to evaluate the quality of interior products; use catalogs and other product information resources; identify manufacturing and/or construction techniques used in products; use correct terminology to describe the various types of interior products; and compare design, use, durability and cost of products. 3 hrs./wk. Spring.

**ITMD 133**  
**FURNITURE AND ORNAMENTATION/  
ANTIQUITY TO RENAISSANCE (3CR)**

Upon successful completion of this course, the student will be able to analyze and compare furniture, ornamentation, design motifs and textiles of historical periods from antiquity to the Renaissance. The student will be able to define the religious, political and social influences on the ornamentation and furnishings of each period. In addition, the student will be able to identify the craftsmanship and materials used in the furniture of each historical period and use correct vocabulary related to each era. 3 hrs./wk. Fall.

**ITMD 140**  
**DRAPERIES, TREATMENTS  
AND CONSTRUCTION (1CR)**

*Prerequisites: ITMD 121 and FASH 150*

Upon successful completion of this course, the student will be able to use correct vocabulary relating to drapery and window treatments; explain the use of equipment in the drapery industry; identify appropriate textiles and fabrics for specific window treatments; measure for window treatments; and describe and select the proper suspension system for specific window treatments. 1 hr. lecture/wk.

**ITMD 145**  
**UPHOLSTERY CONSTRUCTION (1CR)**

*Prerequisites: ITMD 121 and FASH 150*

Upon successful completion of this course, the student will be able to use correct vocabulary relating to upholstery construction; explain the use of equipment in the

upholstery industry; identify appropriate textiles and fabrics for specific upholstery uses; and describe the various suspension systems used in bench-constructed and mass-produced furniture. 1 hr. lecture/wk.

**ITMD 147**  
**LIGHTING DESIGN AND PLANNING (1CR)**

Upon successful completion of this course, the student will be able to define and use vocabulary relating to lighting design and planning. The student also will be able to recognize and explain the use of fixtures and other related equipment necessary to the lighting industry, identify and describe proper fixtures and equipment for lighting applications, and demonstrate skills in selecting proper lighting designs for specific applications. 1 hr. lecture/wk.

**ITMD 148**  
**FURNITURE AND  
ORNAMENTATION/ORIENTAL (3CR)**

Upon successful completion of this course, the student will be able to analyze and compare furniture, ornamentation, design motifs and textiles of the Near and Far East during historical periods from antiquity to modern times. The student will be able to define the religious, political and social influences on the ornamentation and furnishings of each period. In addition, the student will be able to identify the craftsmanship and materials used in the furniture of each historical period and use correct vocabulary related to each era. 3 hrs. lecture/wk.

**ITMD 223**  
**CONTRACT DESIGN (3CR)**

*Prerequisite: ITMD 122*

Upon successful completion of this course, the student will be able to explain the differences between residential and contract design; use interior design skills to convert, redesign and create contract design space; explain the concept of open office planners; and compare and analyze the costs and benefits of open planning vs. closed planning. 1 hr. lecture, 3 hrs. lab/wk. Fall.

**ITMD 231**  
**FURNITURE AND ORNAMENTATION/  
RENAISSANCE TO 20TH CENTURY (3CR)**

Upon successful completion of this course, the student will be able to analyze and compare furniture, ornamentation, design motifs and textiles of historical periods from the Renaissance to the 20th century. The student will be able to define social, religious and political influences on the ornamentation of each period. In addition, the student will be able to identify the craftsmanship and materials used in the furniture of each historical period and use correct vocabulary related to each era. 3 hrs. lecture/wk.

**ITMD 234****KITCHEN AND BATH:  
PLANNING AND DESIGN (3CR)**

*Prerequisites: DRAF 261 and ITMD 122*

Upon successful completion of this course, the student will be able to define and use vocabulary related to kitchen and bath design and construction; identify and use proper architectural symbols common to kitchen and bath floor plans and elevations; state the space relationships required for proper kitchen and bath usage; and draw kitchen and bath floor plans and elevations. In addition, the student will identify and explain the work triangle, structural detail, cabinetry and appliances in kitchen design and wet walls, cabinetry, structural detail and plumbing in bath planning. 2 hrs. lecture, 1 hr. lab/wk.

**ITMD 239****PORTFOLIO AND PRESENTATION  
FOR INTERIOR MERCHANDISING (1CR)**

*Prerequisite: Approval of the program facilitator*

Upon successful completion of this course, the student will be able to select the proper format for a portfolio, rework the included material to maximum visual potential, and arrange the material in logical sequence. The student also will be able to select an appropriate type of resume; collect pertinent data; and compose, design and produce a resume. In addition, the student will be able to conduct a job search, determine and use appropriate interview techniques, and evaluate a potential job offer. 1 hr. lecture/wk.

**ITMD 273****INTERIOR MERCHANDISING SEMINAR:  
PRACTICES AND PROCEDURES (2CR)**

*Prerequisite: ITMD 121*

Upon successful completion of this course, the student will be able to use proper interior design industry terminology; use appropriate business forms and contracts; define the types of business legal structure; and solve business organizational and ethical problems through the use of case studies. 2 hrs. lecture/wk. Fall.

**ITMD 275****INTERIOR MERCHANDISING SEMINAR:  
BUDGET AND ESTIMATING (2CR)**

*Prerequisite: ITMD 121*

Upon successful completion of this course, the student will be able to describe methods of pricing interior design materials and services; measure accurately for materials; use business math in interior merchandising applications; and figure cost in example cases. 2 hrs. lecture/wk. Spring.

**ITMD 282****INTERIOR MERCHANDISING PRACTICUM I (1CR)**

*Prerequisite: ITMD 121*

This course consists of supervised work experience in an approved training situation. It is designed to provide practical experience in the interior merchandising industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hrs. on-the-job training/wk.

**ITMD 284****INTERIOR MERCHANDISING PRACTICUM II (1CR)**

*Prerequisite: ITMD 121*

This course consists of supervised work experience in an approved training situation. It is designed to provide practical experience in the interior merchandising industry. Upon successful completion of this course, the student will be able to apply classroom knowledge to an actual work situation. A minimum of 15 hrs. on-the-job training/wk.

**ITMD 295****INTERIOR MERCHANDISING SEMINAR:  
MARKETING AND MANAGEMENT (3CR)**

*Prerequisites: ITMD 121 and approval of the program director*

This travel-for-credit course consists of visits to manufacturing plants, a market showroom and a merchandise mart in a major market city. Upon successful completion of this course, the student will be able to compare, contrast and evaluate manufacturing processes and marketing techniques for interior products. 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 will offer 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)**

*Prerequisite: Admission to the Interpreter Training Program*

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 will include interpersonal skills, professional ethics, parameters of the interpreter's responsibilities, 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 will focus 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 the division administrator and proficiency in ASL*

Students will study the many English equivalents for ASL discourse, enhancing the written English skills of deaf students and the 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 will be 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 the continued development of English-to-ASL, ASL-to-English and transliteration skills. 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 are 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 one to four hours depending on the topic and the 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. Students will be able to understand these various media, become better critics of media messages and 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 who want to develop the basics of journalistic-style writing. Basic newswriting and news-style principles will be emphasized, with a focus on interviewing techniques. Practical experience will be gained through writing for the campus newspaper. 3 hrs./wk.

**JOUR 125**  
**FUNDAMENTALS OF ADVERTISING (3CR)**

This course will 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 will be included. 3 hrs./wk.

**JOUR 127**  
**INTRODUCTION TO BROADCASTING (3CR)**

This course serves as a general introduction to radio and television broadcasting and will include a study of the industry's development, program formats, personnel, equipment function, FCC codes and regulations, and cable. Classtime also will include discussion of current trends and issues in broadcasting so that students may develop a critical understanding of these media. 3 hrs./wk.

**JOUR 130****PRINCIPLES OF PUBLIC RELATIONS (3CR)**

This course will offer an overview of the function, purpose, procedures and practices of public relations; its roots in history; its role in society, business and government; and its potential as a career field. Primary emphasis will be on theory, practice and criticism, supplemented with written and verbal exercises in the application of public relations techniques. Discussion will center on the tools and media used in communicating with the public. 3 hrs./wk.

**JOUR 202****BROADCAST PERFORMANCE (3CR)**

Interviewing, commercial announcing, and radio and television news will be some of the topics covered in this course. Students will learn how to improve their speaking voices and their body language as they are taught techniques for communicating messages through basic announcing performances in the college's television studio. 3 hrs./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 the 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 and copy style, and how to develop advertising campaigns. The importance of coordinating marketing goals, advertising goals and campaign strategy also will be stressed. 3 hrs./wk.

**JOUR 271****JOURNALISM INTERNSHIP (3CR)**

*Prerequisite: Approval of the division administrator*

This course permits a student to gain work experience at an approved training center under staff supervision. Emphasis will be on the application of writing techniques needed to produce print news, broadcast news, and/or advertising or public relations promotional copy or production. On-the-job training involves a minimum of 12 hours a week by arrangement.

**Learning Strategies****DEVELOPMENTAL COURSES**

The following courses are designed to help students develop and enhance skills necessary for successful completion of college-level requirements. These courses do not fulfill degree requirements.

**LS 162****PARAPHRASING STRATEGY (1CR)**

The student will learn to paraphrase information in textbooks, class handouts, articles, class notes and other written materials as a means of improving comprehension and recall. This course is designed to enable students to develop skills in using paraphrasing techniques to learn and remember information from their other college courses. 1 hr./wk.

**LS 164****WORD IDENTIFICATION STRATEGY (1CR)**

For the student who is not efficient in using decoding skills to identify unfamiliar words, this course, through the use of specialized methodology, will offer an opportunity to develop these skills, formulate a strategy, practice under supervision, and apply the strategy in appropriate situations outside the class itself. Upon successful completion of this course, the student will have developed a specific learning strategy that can be applied as needed. 1 hr./wk.

**LS 172****LECTURE NOTES STRATEGY (1CR)**

*Prerequisite: Concurrent enrollment in a lecture course to which the strategy can be applied*

This course is designed to improve the skills required in taking effective notes. Through the use of specialized methodology, students can gain proficiency in taking lecture notes and using those notes to meet course objectives in lecture classes. 1 hr./wk.

**LS 178****MEMORY STRATEGY (1CR)**

*Corequisite: Concurrent enrollment in another college course*

Students will learn 12 techniques for acquiring, storing and recalling information. Each technique is presented and practiced in class and then applied to information from courses in which students are concurrently enrolled. Emphasis is on improving long-term memory as it is needed in an academic setting. 1 hr./wk.



**LS 190****TEXTBOOK LEARNING STRATEGIES (1CR)**

*Corequisite: Concurrent enrollment in a course requiring the use of a textbook*

This course, through highly specialized instructional procedures, teaches students how to get the most from the reading and study of textbooks in college courses.

1 hr./wk.

**LS 196****STRATEGIC LEARNING SYSTEM (1CR)**

*Corequisite: Concurrent enrollment in a college lecture course*

Students will learn a series of strategies dealing with textbooks, lectures, studying and taking tests. These strategies should enable them to learn more efficiently and effectively in courses in which they are concurrently enrolled. Upon successful completion of this course, students should be able to adapt these learning strategies to any learning situation. 1 hr./wk.

**LS 198****ADVANCED LEARNING STRATEGIES (1CR)**

*Prerequisite: LS 178 or LS 196*

This is a second-level course in which students will investigate their individual learning styles, use critical thinking and problem-solving techniques to increase learning efficiency, and create personalized strategies.

1 hr./wk.

**LS 200****METHODS OF INQUIRY (3CR)**

*Corequisite: Concurrent enrollment in at least one academic college course*

This course is designed for students who want to understand how they learn and how they can improve their efficiency and effectiveness in learning. Students will be introduced to thinking and learning principles that they will practice in class. Students will apply the methods of inquiry to other courses in which they are concurrently enrolled. 3 hrs./wk.

## Manufacturing Technology

**MFTG 132****METALLURGY (1CR)**

This basic metallurgy course will deal with iron and steel, properties of metals, types of classifications, heat treatment procedures and common processes of steel. 1 hr./wk.

## Marketing Management

**MKT 121****RETAIL MANAGEMENT (3CR)**

Upon successful completion of this course, the student will be able to describe and analyze the organization and operation of a retail store including location, layout, retail buying, human relations, employee supervision, pricing and merchandising. 3 hrs./wk.

**MKT 133****SALESMANSHIP (3CR)**

Upon successful completion of this course, the student will be able to define and contrast the three main areas of selling – direct, wholesale and retail – and explain the selling process. The student will be able to define the steps of selling and identify their appropriate application. In addition, the student will be able to demonstrate selling skills through role play and presentations. Students who have received credit for MKT 134 may not receive credit for MKT 133. 3 hrs./wk.

**MKT 134****CREATIVE RETAIL SELLING (3CR)**

Upon successful completion of this course, the student will be able to describe the process of successful selling in the retail environment. The student will be able to define the steps of selling and identify their appropriate application. In addition, the student will apply selling principles through role playing. Students who have received credit for MKT 133 may not receive credit for MKT 134. 3 hrs./wk.



**MKT 202****CUSTOMER RELATIONS (3CR)**

*Prerequisite: MKT 133 or MKT 134*

Upon successful completion of this course, the student will be able to demonstrate successful selling techniques for products and services. Specifically, the student will develop methods for listening effectively to customers; acquire product information; develop features and benefits to meet specific customer demands; refine his or her personal selling style; develop customer follow-up techniques; create customer records of purchase; demonstrate an ability to handle difficult customers; and develop a product information book and a self-training program. 3 hrs./wk.

**MKT 221****SALES MANAGEMENT (3CR)**

*Prerequisite: MKT 134 or MKT 133*

Upon successful completion of this course, the student will be able to identify skills necessary to manage a sales force. Topics will 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:  
ORGANIZATIONAL BEHAVIOR (3CR)**

*Prerequisite: Admission to the Marketing and Management Program*

This course consists of a minimum of 15 hours a week of supervised work experience in an approved training situation and two hours a week in the classroom. Upon



successful completion of this course, the student will be able to explain organizational structure and process and the principles of human behavior in organizations, describe the organizational structure of the work experience firm, explain how his or her own job fits into the overall operation of the organization, and apply the positive principles of organizational behavior to the job training experience.

**MKT 272****MARKETING AND MANAGEMENT SEMINAR:  
HUMAN RELATIONS (3CR)**

*Prerequisite: Admission to the Marketing and Management Program*

This course consists of a minimum of 15 hours a week of supervised work experience in an approved training situation and two hours a week in the classroom. Upon successful completion of this course, the student will be able to discuss the importance of effective human relations in the workplace; define personality types, explain the way in which they interact, and describe their impact in the work environment; and demonstrate the use of good human relations skills in the workplace.

**MKT 273****MARKETING AND MANAGEMENT SEMINAR:  
MARKETING RESEARCH (3CR)**

*Prerequisite: Admission to the Marketing and Management Program*

This course consists of a minimum of 15 hours a week of supervised work experience in an approved training situation and two hours a week in the classroom. Upon successful completion of this course, the student will be able to explain market research design; collect, organize and analyze market research data; explain demographic and psychographic impacts on markets; and prepare and present a marketing research project.

**MKT 274****MARKETING AND MANAGEMENT SEMINAR:  
MANAGEMENT (3CR)**

*Prerequisite: Admission to the Marketing and Management Program*

This course consists of a minimum of 15 hours a week of supervised work experience in an approved training situation and two hours a week in the classroom. Upon successful completion of this course, the student will be able to describe types of supervisory style; explain the impact of supervisory style on the organization; and determine from a list of supervisory skills those that he or she possesses and those that need to be developed. In addition, the student will demonstrate ability to handle supervisory problems.

## Mathematics

### DEVELOPMENTAL COURSES

MATH 111 and MATH 115 are designed to help students review and improve math concepts and develop math skills. MATH 111 and MATH 115 provide the mathematical foundation upon which subsequent studies in mathematics and other areas depend. These courses do not fulfill degree requirements.

### MATH 111 FUNDAMENTALS OF MATH (3CR)

*Prerequisite: Appropriate score on the math assessment test*

This is a course in basic math skills and concepts for those who need to improve or review their math training. The course will include 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 the Math Resource Center. 3 hrs./wk.

### MATH 115 INTRODUCTION TO ALGEBRA (3CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This course will cover fundamental algebraic operations, rational expressions, first- and second-degree equations, graphs, exponents and radicals. Some sections will be taught with computer-assisted instruction. 3 hrs./wk.

### MATH 116 INTERMEDIATE ALGEBRA (3CR)

*Prerequisite: MATH 115 or appropriate score on the math assessment test*

Polynomials, rational expressions, exponents and radicals, equations and inequalities, graphing and systems of linear equations will be covered. Some sections will be taught with computer-assisted instruction. 3 hrs./wk.

### MATH 120 BUSINESS MATH (3CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This is 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./wk.

### MATH 122 MATHEMATICS IN OUR CULTURE (3CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This is a course about the extent, power and history of many interesting areas of mathematics. Topics will include mathematical reasoning and recreation, calculator activities, computer literacy, mathematics in art and music, probability, statistics and topology. 3 hrs./wk.

### MATH 125 MATH FOR MODERN LIVING (3CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This is a telecourse consisting of 34 30-minute video programs with an accompanying workbook/study guide and arranged sessions with the instructor. The course will provide 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./wk.

### MATH 133 TECHNICAL MATHEMATICS I (4CR)

*Prerequisite: MATH 111 or appropriate score on the math assessment test*

This course is the first of a two-semester sequence that will introduce the mathematical skills and concepts necessary in technical work. It will focus on the basics of algebra and trigonometry and their applications. Topics will include operations with polynomials, linear equations, systems of equations, right and oblique triangles, vectors and complex numbers. This course has computer-interactive video programs to complement the classroom instruction. 4 hrs./wk.

### MATH 134 TECHNICAL MATHEMATICS II (5CR)

*Prerequisite: MATH 133 or the equivalent*

This course is the second of a two-semester sequence on technical applications of algebra and trigonometry. Topics will include factoring, algebraic fractions, quadratic equations, exponents, radicals, an introduction to coordinate geometry, logarithmic and exponential functions, trigonometric graphs and identities. 5 hrs./wk.

**MATH 165****FINITE MATH, A CULTURAL APPROACH (3CR)**

*Prerequisite: MATH 116 or appropriate score on the math assessment test*

This course is the first part of a two-semester sequence of courses on the beauty, scope, practical applications and relevance of mathematics. It is designed to teach math concepts as well as quantitative skills. Topics will include inductive and deductive reasoning, mathematical patterns, sets, topology, non-euclidian geometry, probability, statistics and matrices. The common themes throughout the course will be innovations in personal computers, related mathematical and cultural history, and reasoning ability. 3 hrs./wk.

**MATH 171****COLLEGE ALGEBRA (3CR)**

*Prerequisite: MATH 116 or appropriate score on the math assessment test*

This is a study of polynomial, rational, exponential and logarithmic functions, theory of equations, systems of equations, determinants, sequences and series, and the binomial theorem. 3 or 5 hrs./wk.

**MATH 172****TRIGONOMETRY (3CR)**

*Prerequisite: MATH 171 or appropriate score on the math assessment test*

This is a study of trigonometric functions and their properties, identities, graphs, equations, inverse trigonometric functions, polar coordinates, complex numbers and applications. 3 hrs./wk.

**MATH 175****DISCRETE MATH AND ITS APPLICATIONS (3CR)**

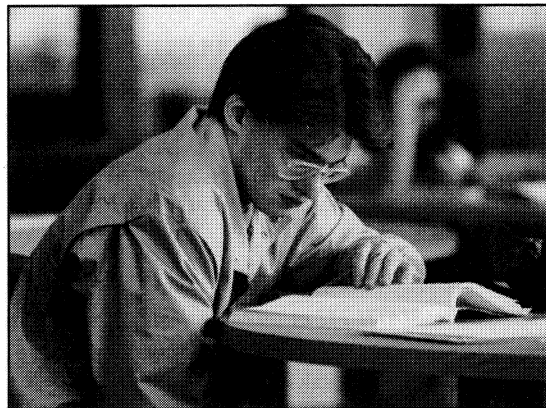
*Prerequisite: MATH 165*

This course is the second of a two-semester sequence of courses on the beauty, scope, practical applications and relevance of mathematics. It will focus on applications of general interest drawn primarily from the social and biological sciences and business. Topics will be placed in a historical context, and mathematical reasoning will be stressed. Many of the applications will be computer-oriented. 3 hrs./wk.

**MATH 181****STATISTICS (3CR)**

*Prerequisite: MATH 171 or appropriate score on the math assessment test*

This is a beginning course in statistical analysis. Topics will include descriptive statistics, probability, sampling, distributions, estimation, hypothesis testing, regression and correlation. Computer applications will be incorporated into course topics. 3 hrs./wk.

**MATH 190****GEOMETRY (2CR)**

*Prerequisite or corequisite: MATH 115 or appropriate score on the math assessment test*

This course is an intuitive approach to geometry. Topics will include lines, polygons, area, volume, circles, similarity, congruence and coordinate geometry. 2 hrs./wk.

**MATH 231****CALCULUS I (3CR)**

*Prerequisite: MATH 171 or appropriate score on the 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 along with an introduction to the integration of algebraic and exponential functions. 3 hrs./wk.

**MATH 232****CALCULUS II (3CR)**

*Prerequisites: MATH 231 and 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./wk.

**MATH 241****ANALYTIC GEOMETRY – CALCULUS I (5CR)**

*Prerequisite: MATH 172 or appropriate score on the 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./wk.

**MATH 242**  
**ANALYTIC GEOMETRY – CALCULUS II (5CR)**

*Prerequisite: MATH 241 or an equivalent course*

This is the second in a three-semester sequence on analytic geometry and calculus. The emphasis will be on differentiation and integration of transcendental functions, polar coordinates, conics and applications. 5 hrs./wk.

**MATH 243**  
**ANALYTIC GEOMETRY – CALCULUS III (5CR)**

*Prerequisite: MATH 242 or an equivalent course*

This is the third course in a three-semester sequence on analytic geometry and calculus. Topics will include vector-valued functions, functions of several variables, multiple integration, vector analysis, differential equations and matrices and linear algebra. 5 hrs./wk.

**MATH 244**  
**DIFFERENTIAL EQUATIONS (3CR)**

*Prerequisite: MATH 243 or an equivalent course*

This course will cover standard types of ordinary equations, second and higher order linear equations, solutions by series, the Laplace transform numerical solutions, and applications. 3 hrs./wk.

**MATH 281**  
**HONORS PROJECT IN MATHEMATICS (2CR)**

*Prerequisite: Approval of the 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 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 will be analyzed by learning word roots and combining forms. Disease processes and diagnostic and operative procedures will be studied as they apply to each system of the body. Selected medical specialties also will be presented. 3 hrs./wk.

**KMRT 160**  
**INTRODUCTION TO THE**  
**MEDICAL RECORD PROFESSION (2CR)**

*Prerequisite: Admission to the Medical Record Technology Program*

This course will offer 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 will be examined. Supervisory functions of the medical record department also will be presented. 2 hrs./wk.

**KMRT 161**  
**HEALTH RECORD SYSTEMS,**  
**ANALYSIS AND CONTROL (3CR)**

This course will be 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 also will be included. 3 hrs./wk.

**KMRT 162**  
**HEALTH STATISTICS AND**  
**RESEARCH METHODS (3CR)**

*Prerequisite: KMRT 161 or approval of PVCC*

This course will cover vital and health statistics, their uses and values. Abstraction and analysis of data from medical records and collection from other sources will be studied as will the methods of presenting the data. 3 hrs./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./wk.

**KMRT 164**  
**QUALITY ASSURANCE (3CR)**

*Prerequisite: KMRT 169 or approval of the program coordinator*

Quality assurance requirements of regulatory agencies will be emphasized as will methodology in assessing quality of care. 3 hrs./wk.

**KMRT 166**  
**CLINICAL EDUCATION I (2CR)**

*Prerequisite: KMRT 161*

This course will offer a supervised learning experience in a medical record department under the direction of an RRA or ART. A one-hour seminar will be included for the supervised discussion of clinical experiences. Didactic material will be reinforced by the performance of basic medical record department functions. 8 hrs. clinic arranged/alternate wks.

**KMRT 167**  
**CLINICAL EDUCATION II (2CR)**

*Prerequisite: KMRT 166*

This course will offer 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 will be included for the supervised discussion of clinical experiences. 8 hrs. clinic arranged/alternate wks.

**KMRT 168**  
**CLINICAL EDUCATION III (2CR)**

*Prerequisite: KMRT 167*

This course will provide 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 will be included for the supervised discussion of clinical experiences. 8 hrs. clinic arranged/alternate wks.

**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 will be studied. 2 hrs./wk.

**KMRT 175**  
**SPECIALIZED HEALTH RECORD SYSTEMS (2CR)**

*Prerequisite: KMRT 161 or approval of the program coordinator*

This course will offer an overview of specialized health care systems with an emphasis on record maintenance, requirements of accrediting and regulating agencies and specialized health information registers. 2 hrs./wk.

**KMRT 180**  
**CLASSIFICATION SYSTEMS, NOMENCLATURES, INDEXES AND 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./wk.

**KMRT 184**  
**MEDICAL TRANSCRIPTION (3CR)**

*Prerequisite: KMRT 151 and typing 40 w.p.m.*

In this course, students will be introduced 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)**

Upon successful completion of this course, the student should be able to identify oxy-fuel cutting, oxy-fuel welding and brazing, and shielded metal arc welding (SMAW). The SMAW portion will cover all positions but will be limited to fillets welds. All welds will be tested according to industry standards. 1 hr. lecture, 6 hrs. lab/wk.

**MFAB 123**  
**BASIC WELDING (3CR)**

*Prerequisites: Approval of the Burlington Northern training director and the JCCC division administrator*

Upon successful completion of this course, the student should be able to identify oxy-fuel cutting (OFC), shielded metal arc welding (SMAW) and air carbon arc cutting (AAC). Processes will be limited to flat and horizontal positions of fillet and groove welds. Welds will be tested. 1 hr. lecture, 4 hrs. lab/wk.

**MFAB 125**  
**ADVANCED GAS AND ARC WELDING (3CR)**

*Prerequisite: MFAB 121 or approval of the division administrator*

Upon successful completion of this course, the student should be able to identify 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 performed according to industry standards. 1 hr. lecture, 6 hrs. lab/wk.

**MFAB 127**  
**WELDING PROCESSES (2CR)**

*Prerequisite: Approval of the Burlington Northern training director*

Upon successful completion of this course, the student should be able to identify various welding processes used by railroads and industry. All standard shop and maintenance welding processes will be taught and demonstrated. Students will be required to participate. 1 hr. lecture, 4 hrs. lab/wk.

**MFAB 130**  
**MIG AND TIG I (3CR)**

*Prerequisite: MFAB 121 or approval of the division administrator*

Upon successful completion of this course, the student should be able to identify 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, the student will use welding symbols, read blueprints and test welds. 1 hr. lecture, 6 hrs. lab/wk.

**MFAB 132**  
**THERMIT WELDING (3CR)**

*Prerequisite: Approval of the Burlington Northern training director*

This course is intended for people who are employed in the railroad industry and will provide specific, in-depth industrial training. Upon successful completion of this course, the student should be able to produce, in a safe manner, high-quality, sound Thermit welds on both standard and mismatched rails. Students will be required to make various rail alignments and grind various new and worn rail. The student also should be able to clean a used crucible, assemble a crucible and temper new and used crucibles. 1 hr. lecture, 4 hrs. lab/wk.

**MFAB 135**  
**TRACK COMPONENT WELDING (3CR)**

*Prerequisites: MFAB 123 and approval of the Burlington Northern training director*

Upon successful completion of this course, the student should be able to identify industrial welding of track components used by the Burlington Northern Railroad. The course will involve the study of different welding processes, metallurgy and the effects of heat on track components. Demonstrations on actual track components will be given along with the lecture. The student will be required to experience all appropriate methods and processes of welding and straight edging for evaluation. 1 hr. lecture, 4 hrs. lab/wk.

**MFAB 145**  
**FROG WELDING (3CR)**

*Prerequisites: MFAB 135 and approval of the Burlington Northern training director*

Upon successful completion of this course, the student should be able to improve his or her track component welding skills. Students will be required to experience all appropriate methods and processes of welding and straight edging. The effects of heat on track components during and after the welding process also will be covered. 1 hr. lecture, 4 hrs. lab/wk.

**MFAB 230**  
**MIG AND TIG II (3CR)**

*Prerequisite: MFAB 130 or division administrator approval*

Upon completion of this course, the student should be able to identify 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)**

The 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. The 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 will introduce 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 composition in this introduction to augmented triads; Neapolitan, French and German sixth chords; chords at ninth, 11th and 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 contemporary jazz and pop music and occasionally will 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 156**  
**MIDI MUSIC COMPOSITION (3CR)**

*Prerequisite: MUS 142 or approval of the program director*

This course will combine the study of harmony, rhythm and melody as used in music composition with electronic technology available with the MIDI music system. Students will be introduced to the computer and the compatible equipment and software available for the expressed purpose of stimulating and enhancing the student's musical creativity. 2 hrs. lecture, 2 hrs. lab/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 will offer 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****EVENING JAZZ ENSEMBLE I (1CR)**

The ensemble will perform jazz and popular music at festivals, public concerts and college functions. 3 hrs./wk.

**MUS 177****EVENING JAZZ ENSEMBLE II (1CR)**

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 3 hrs./wk.

**MUS 178****EVENING JAZZ ENSEMBLE III (1CR)**

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 3 hrs./wk.

**MUS 179****EVENING JAZZ ENSEMBLE IV (1CR)**

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 3 hrs./wk.

**MUS 181****STUDENT JAZZ ENSEMBLE I (2CR)**

*Prerequisite:* Audition

The ensemble will perform jazz and popular music at festivals, public concerts and college functions. 6 hrs./wk.

**MUS 182****STUDENT JAZZ ENSEMBLE II (2CR)**

*Prerequisite:* MUS 176 or MUS 181

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 6 hrs./wk.

**MUS 183****STUDENT JAZZ ENSEMBLE III (2CR)**

*Prerequisite:* MUS 177 or MUS 182

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 6 hrs./wk.

**MUS 184****STUDENT JAZZ ENSEMBLE IV (2CR)**

*Prerequisite:* MUS 178 or MUS 183

This class will consist of continued performances of jazz and popular music at festivals, public concerts and college functions. 6 hrs./wk.

**MUS 187****JAZZ IMPROVISATION I (2CR)**

*Prerequisite:* High school playing experience

This is a fundamental approach to the 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 will focus 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 the 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 will offer 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 will offer 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 will offer advanced instruction for those who have completed Applied Woodwind III. 1 hr./wk.

**MUS 221****APPLIED PIANO I (Class) (2CR)**

This class will offer beginning group instruction in playing the piano. 2 hrs./wk.

**MUS 222****APPLIED PIANO II (Class) (2CR)**

*Prerequisite: MUS 221*

This course will provide advanced group instruction for those who have completed Applied Piano I. 2 hrs./wk.

**MUS 223****APPLIED PIANO III (Class) (2CR)**

*Prerequisite: MUS 222*

This course will provide advanced group instruction for those who have completed Applied Piano II. 2 hrs./wk.

**MUS 224****APPLIED PIANO IV (Class) (2CR)**

*Prerequisite: MUS 223*

This course will provide advanced group instruction for those who have completed Applied Piano III. 2 hrs./wk.

**MUS 226****APPLIED GUITAR I (Class) (1CR)**

This class will offer 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 will be offered in this course. 1 hr./wk.

**MUS 228****APPLIED GUITAR III (Class) (1CR)**

*Prerequisite: MUS 227*

This course will provide advanced group instruction in playing the guitar. 1 hr./wk.

**MUS 229****APPLIED GUITAR IV (Class) (1CR)**

*Prerequisite: MUS 228*

This course will offer 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, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 232****APPLIED VOICE II (Private) (1CR)**

*Prerequisite: MUS 231*

This course will offer advanced private vocal music instruction.

**MUS 233****APPLIED VOICE III (Private) (1CR)**

*Prerequisite: MUS 232*

This course will offer advanced private vocal music instruction.

**MUS 234****APPLIED VOICE IV (Private) (1CR)**

*Prerequisite: MUS 233*

This course will offer advanced private vocal music instruction.

**MUS 236****APPLIED PIANO I (Private) (1CR)**

Students will be offered private instruction on the piano, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 237****APPLIED PIANO II (Private) (1CR)**

*Prerequisite: MUS 236*

Advanced private instruction on playing the piano will be offered in this course.

**MUS 238****APPLIED PIANO III (Private) (1CR)**

*Prerequisite: MUS 237*

Advanced private instruction on playing the piano will be offered in this course.

**MUS 239****APPLIED PIANO IV (Private) (1CR)**

*Prerequisite: MUS 238*

This course will offer advanced private instruction on playing the piano.

**MUS 241****APPLIED GUITAR I (Private) (1CR)**

Students will be offered private instruction on the guitar, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 242****APPLIED GUITAR II (Private) (1CR)**

*Prerequisite: MUS 241*

This course will offer advanced private instruction on playing the guitar.

**MUS 243****APPLIED GUITAR III (Private) (1CR)**

*Prerequisite: MUS 242*

This course will offer advanced private instruction on playing the guitar.

**MUS 244****APPLIED GUITAR IV (Private) (1CR)**

*Prerequisite: MUS 243*

This course will offer advanced private instruction on playing the guitar.

**MUS 246****APPLIED CLASSICAL GUITAR I (Private) (1CR)**

Students will be offered private instruction on the classical guitar, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 247****APPLIED CLASSICAL GUITAR II (Private) (1CR)**

*Prerequisite: MUS 246*

This course will offer advanced private instruction on playing the classical guitar.

**MUS 248****APPLIED CLASSICAL GUITAR III (Private) (1CR)**

*Prerequisite: MUS 247*

This course will offer advanced private instruction on playing the classical guitar.



**MUS 249**  
**APPLIED CLASSICAL GUITAR IV (Private) (1CR)**

*Prerequisite: MUS 248*

This course will offer advanced private instruction on playing the classical guitar.

**MUS 251**  
**APPLIED BRASS I (Private) (1CR)**

Students will be offered private instruction on the brass instrument of their choice, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 252**  
**APPLIED BRASS II (Private) (1CR)**

*Prerequisite: MUS 251*

Students will be offered advanced private instruction on playing a brass instrument.

**MUS 253**  
**APPLIED BRASS III (Private) (1CR)**

*Prerequisite: MUS 252*

This course will offer advanced private instruction on playing a brass instrument.

**MUS 254**  
**APPLIED BRASS IV (Private) (1CR)**

*Prerequisite: MUS 253*

Advanced private instruction on playing a brass instrument will be offered in this course.

**MUS 256**  
**APPLIED PERCUSSION I (Private) (1CR)**

Students will be offered private instruction on the percussion instrument of their choice, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 257**  
**APPLIED PERCUSSION II (Private) (1CR)**

*Prerequisite: MUS 256*

Advanced private instruction on playing a percussion instrument will be offered in this course.

**MUS 258**  
**APPLIED PERCUSSION III (Private) (1CR)**

*Prerequisite: MUS 257*

This course will offer advanced private instruction on playing a percussion instrument.

**MUS 259**  
**APPLIED PERCUSSION IV (Private) (1CR)**

*Prerequisite: MUS 258*

This course will offer advanced private instruction on playing a percussion instrument.

**MUS 261**  
**APPLIED WOODWIND I (Private) (1CR)**

Students can choose their own woodwind instrument for advanced private instruction, 1/2 hr./wk. for 16 weeks by arrangement with an approved instructor.

**MUS 262**  
**APPLIED WOODWIND II (Private) (1CR)**

*Prerequisite: MUS 261*

This course will offer advanced private instruction in playing a woodwind instrument.

**MUS 263**  
**APPLIED WOODWIND III (Private) (1CR)**

*Prerequisite: MUS 262*

This course will offer advanced private instruction in playing a woodwind instrument.

**MUS 264**  
**APPLIED WOODWIND IV (Private) (1CR)**

*Prerequisite: MUS 263*

This course will offer advanced private instruction in playing a woodwind instrument.

## Nursing

### **NURS 121 NURSING CARE OF THE INDIVIDUAL: CONCEPTS OF HEALTH (8CR)**

*Prerequisite: Admission to the Nursing Program*

*Corequisites: BIOL 140 and PSYC 130*

The first in a series of four courses, this introduction to nursing will emphasize the assessment and maintenance of health in individuals of various ages. This course also will examine the concepts and principles of basic nursing care, providing a foundation for subsequent nursing courses. Clinical laboratory experience will be 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 will provide 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 will be an integral part of this course. 4 hrs. class, 12 hrs. lab/wk. Spring.

### **NURS 123 LPN-RN TRANSITION COURSE (6CR)**

*Prerequisites: Licensure as a 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 will include group process, relationships, the role of the associate degree graduate, communication skills, and the 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 will focus 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 will be

stressed. The course will include an introduction to contemporary issues in nursing. Clinical laboratory experience in health care agencies will be 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 will focus on the individual whose well-being has been altered by chronic, progressive, disruptive problems that require implementation of the nursing process. Emphasis will be on rehabilitation, adaptation to a permanently-altered lifestyle and the development and/or re-establishment of independence. The role of the associate-degree graduate seeking employment in the community will be stressed. Clinical laboratory practice will be an integral part of this course. 4 hrs. lecture, 15 hrs. clinical lab/wk. Spring.



## Occupational Therapy Assistant

### **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 will be presented. Twelve hours' observation in occupational therapy clinics will be required. 2 hrs./wk.

### **KOT 101 OCCUPATIONAL THERAPY GROWTH AND DEVELOPMENT (3CR)**

*Prerequisites: KOT 100 and admission to the program*  
Physical, perceptual, cognitive, social, intellectual and emotional development during normal growth from pre-natal stages to later adolescence will be covered. 3 hrs./wk.

### **KOT 103 CLINICAL CONDITIONS (3CR)**

*Prerequisites: KOT 100 and admission to the program*  
This course will cover both physical and psychosocial dysfunctions commonly referred to and treated by occupational therapists. 2 hrs. lecture, 2 hrs. lab/wk.

### **KOT 105 OCCUPATIONAL THERAPY IN GERONTOLOGY (2CR)**

*Prerequisites: KOT 100 and admission to the program*  
The role of the occupational therapy assistant will be explored. Included will be physical and psychosocial aging, treatment approaches and service management. 2 hrs./wk.

### **KOT 106 GENERAL TREATMENT PROCEDURES (2CR)**

*Prerequisites: KOT 100, formal admission to the program and concurrent enrollment in KOT 116*  
From the general treatment procedures presented in this class, students will learn the use of adaptive equipment, adaptive techniques for home and work, and general treatment procedures that are used in clinical settings. 2 hrs./wk.

### **KOT 107 OCCUPATIONAL THERAPY KINESIOLOGY (2CR)**

*Prerequisites: KOT 100, formal admission to the program and BIOL 144*  
The study and analysis of movement as it pertains to the clinical practice of occupational therapy will be covered in this class. 2 hrs./wk.

### **KOT 116 LEVEL I FIELDWORK (1CR)**

*Prerequisites: KOT 100, formal admission to the program and concurrent enrollment in KOT 106*  
In this class, students will be introduced to the medical setting through observation and clinical experience.

### **KOT 201 OCCUPATIONAL THERAPY IN MENTAL HEALTH (4CR)**

*Prerequisites: PSYC 130, KOT 100 and concurrent enrollment in KOT 211*  
This is a study of occupational therapy in mental health settings. Discussion will cover assessment and treatment techniques used by the occupational therapist in the psychiatric setting. 2 hrs. lecture, 6 hrs. lab/wk.

### **KOT 202 OCCUPATIONAL THERAPY IN PHYSICAL DISABILITIES (4CR)**

*Prerequisites: KOT 103, KOT 107 and concurrent enrollment in KOT 212*  
Areas covered will include occupational therapy treatment techniques and assessment used with the physically disabled. 2 hrs. lecture, 6 hrs. lab/wk.

### **KOT 203 SHOP PRACTICES/ORTHOTICS (2CR)**

*Prerequisites: KOT 100 and admission to the program*  
This course will include 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 (3CR)**

*Prerequisite: KOT 107*  
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 207 CLINICAL SEMINAR (2CR)**

*Prerequisites: KOT 100 and admission to the program*  
This course is an introduction to contemporary issues in occupational therapy and health care guidelines for documentation procedures. 2 hrs./wk.



**KOT 211  
LEVEL I FIELDWORK/MENTAL HEALTH (1CR)**

*Prerequisites: KOT 100, formal admission to the program and concurrent enrollment in KOT 201*

This class will introduce students to the mental health setting through observation and clinical experience.

**KOT 212  
LEVEL I FIELDWORK/  
PHYSICAL DISABILITIES (1CR)**

*Prerequisites: KOT 100, formal admission to the program and concurrent enrollment in KOT 202*

This class will introduce students to the physical disability setting through observation and clinical experience.

**KOT 221  
LEVEL II FIELDWORK/MENTAL HEALTH (4CR)**

*Prerequisite: Successful completion of all Occupational Therapy Assistant Program requirements for three semesters and the summer session*

This course will offer directed occupational therapy fieldwork in the mental health specialty.

**KOT 222  
LEVEL II FIELDWORK/  
PHYSICAL DISABILITIES (4CR)**

*Prerequisite: Successful completion of all Occupational Therapy Assistant Program requirements for three semesters and the summer session*

Directed occupational therapy fieldwork in the physical disability specialty will be presented in this class.

**KOT 230  
LEVEL II FIELDWORK/SPECIALTY AREA (2CR)**

*Prerequisite: Successful completion of all Occupational Therapy Assistant Program requirements for three semesters and the summer session*

This class will offer directed occupational therapy fieldwork in a specialized area.

## Office Careers

**SEC 101  
KEYBOARDING (1CR)**

Students will learn to operate a computer keyboard using the touch-typing system and build speed and accuracy in entering data. 17 hrs. instruction.

**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 memos. Students will learn a basic word processing package that will enable them to use a computer. 3 hrs. class, 2 hrs. lab/wk.

**SEC 115  
TYPING IMPROVEMENT (1CR)**

*Prerequisite: SEC 110 or the equivalent*

Students will use a diagnostic approach to develop typing speed and accuracy. Specific problems will be identified, and students will complete specialized drills and activities tailored to their own typing needs to improve or eliminate deficiencies. 1 hr./wk.

**SEC 122  
INTERMEDIATE TYPING (3CR)**

*Prerequisite: SEC 110 or the equivalent*

Students will type business letters using standard letter styles (block, modified block and AMS); format letters with special features; create center ruled or boxed tables; and type memos, manuscripts, magazine articles, itineraries, agendas, financial statements and legal documents. Students will build speed and accuracy in keyboarding and production skills using a computer with a basic word processing package. 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 will be 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**  
**SPEEDWRITING I (3CR)**

*Prerequisite or corequisite:* SEC 110 or the equivalent

Students will develop fluency in reading and writing notes in abbreviated longhand; develop the ability to construct outlines and take dictation; improve their English, spelling and punctuation skills; and transcribe notes into mailable copy. 3 hrs. class, 2 hrs. lab/wk.

**SEC 131**  
**SPEEDWRITING II (3CR)**

*Prerequisite:* SEC 130

Students will review shorthand theory; increase their 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 to build 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 will be discussed in this class. Selection of equipment for active, semi-active and inactive records will be 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. The course will cover the identification of evaluation methods and standards for both staff and programs in a records management department. 3 hrs./wk.

**SEC 142**  
**LEGAL TRANSCRIPTION (3CR)**

*Prerequisites:* SEC 122 and SEC 128

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 also will 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 150**  
**BUSINESS WRITING (3CR)**

Upon successful completion of this course, students will be able to develop business documents that demonstrate correct sentence and paragraph development and accurate English grammar and mechanics principles. Students also will demonstrate ability to use standard formats for letters, memos and reports through the processes of composition, production and editing. Students also will be able to proofread all of their written work using standard proofreading symbols. Students will demonstrate the ability to use the telephone as a business tool to convey and receive routine information, ask pertinent questions and solve problems. 3 hrs./wk.

**SEC 184**  
**MEDICAL TRANSCRIPTION (3CR)**

*Prerequisites:* SEC 122 and SEC 128

In this study of medical transcription, students will learn to spell, define, pronounce and use in proper context 1,000 medical terms. They also will 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 223**  
**MACHINE TRANSCRIPTION (3CR)**

*Prerequisites:* SEC 122 and SEC 128

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 – memos, letters, manuscripts, tables and specialized correspondence. 3 hrs. class, 2 hrs. lab/wk.

**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, 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)**

*Prerequisites: SEC 230 and SEC 128*

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**  
**MANAGEMENT SEMINAR (2CR)**

The focus of this course will be on efficient use 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**  
**HUMAN RELATIONS SEMINAR (2CR)**

This course will introduce 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**  
**ADMINISTRATIVE OFFICE**  
**MANAGEMENT SEMINAR (2CR)**

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 the Office Careers Program*

Students will gain work experience in an approved training situation under instructional supervision. The course will provide 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 the Office Careers Program*

Students will gain work experience in an approved training situation under instructional supervision. The course will provide 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 the Office Careers Program*

Students will gain work experience in an approved training situation under instructional supervision. The course will provide practical experience in the use of skills acquired in secretarial specialty courses. 15 hrs. on-the-job training/wk.

## Paralegal

**PL 121**  
**INTRODUCTION TO LAW (3CR)**

This introductory study of the legal system will cover the nature and functions of law and the operation and structure of state and federal court systems and administrative agencies. It will survey the major areas of substantive law including related legal concepts and terminology. (Open to students with a general interest in the law and required for students seeking admission to the Paralegal Program.) 3 hrs./wk.

**PL 123**  
**PARALEGAL PROFESSIONAL STUDIES (1CR)**

This course will provide an overview of the legal assistant profession and is intended to assist students in making a career decision. Students will review paralegal functions, types of employment, educational and training programs, licensing and certification, professional ethics and the unauthorized practice of law. (Open to students with an interest in paralegalism and required of students seeking admission to the Paralegal Program.) 1 hr./wk.



**PL 131  
LEGAL RESEARCH (3CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will cover the legal research process and introduce the student to a systematic method of researching legal questions. Topics covered will include issue recognition and fact analysis, primary and secondary resources, finding tools and the written communication of research results. Students will become familiar with the use of legal research materials through exercises and projects. 3 hrs./wk.

**PL 132  
LITIGATION (4CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will familiarize the student with the steps in the civil litigation process, the rules of procedure and the rules of evidence. Emphasis will be on the role of the legal assistant in a civil litigation practice and on the drafting of pleadings, forms and other documents used in the litigation process. 4 hrs./wk.

**PL 140  
COMPUTERIZED LITIGATION SUPPORT (2CR)**

*Prerequisites: Admission to the Paralegal Program and PL 132 and one of the following – DP 124; CPCA 128; CPCA 108, CPCA 110 and CPCA 114; or division administrator 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. 2 hrs. lecture, lab/wk.

**PL 152  
REAL ESTATE LAW (3CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator 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 become acquainted with the recording process. 3 hrs./wk.

**PL 162  
FAMILY LAW (3CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

Specific topics in family law will be covered in this class including 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)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will examine the unique characteristics of organizing and managing the law office or legal department. It will address such areas as time records and billing systems, pleadings organization, docket control and file maintenance in simple and complex legal proceedings, law library maintenance, financial and accounting management and office equipment. 2 hrs./wk.

**PL 205  
LEGAL WRITING (2CR)**

*Prerequisite: PL 131 or division administrator approval*

Students will implement the skills developed in the Legal Research course for the purpose of researching complex legal problems. Emphasis will be on the analysis of legal issues, the integrated use of legal research informational sources, application of law and the preparation of a formal memorandum of law. Students also will be introduced to other forms of legal writing commonly used in a law office. 2 hrs./wk.

**PL 212  
BUSINESS ORGANIZATIONS (3CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will cover the various forms of business ownership, including corporations, partnerships and sole proprietorships, and examine the legal concepts applicable to each type of organization. Emphasis will be on the role of the legal assistant in a business law practice and on the preparation of related documents. 3 hrs./wk.

**PL 241  
WILLS, TRUSTS AND  
PROBATE ADMINISTRATION (3CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will cover such topics as will drafting, use of trusts, probate procedures, techniques for fact gathering, and inheritance and estate tax principles. Emphasis will be on the role of the legal assistant in an estate planning practice. 3 hrs./wk.

**PL 261**

**EMPLOYEE BENEFITS LAW (2CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will address both qualified and non-qualified deferred compensation plans including pension, profit-sharing, health and welfare plans. Topics covered will include establishment, qualifications requirements, funding, discrimination in benefits, administration and termination. 2 hrs./wk.

**PL 264**

**WORKERS' COMPENSATION (2CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will examine workers' compensation rules and procedures. Topics will include administrative and adjudication procedures, calculation of benefits and preparation of claims. Emphasis will be on the role of the legal assistant in a workers' compensation practice. 2 hrs./wk.

**PL 268**

**BANKRUPTCY (2CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

This course will examine bankruptcy law and emphasize the role of the legal assistant in a bankruptcy practice. Topics will include bankruptcy court procedures and the preparation of bankruptcy forms and documents. 2 hrs./wk.

**PL 271**

**LEGAL ETHICS, INTERVIEWING AND INVESTIGATION (3CR)**

*Prerequisite: PL 132 or division administrator approval*  
*Prerequisite or corequisite: PL 205 or division administrator approval*

This course will cover the ethical rules and standards governing the legal profession, the interviewing of clients and witnesses and the performance of factual investigation pursuant to legal proceedings. Emphasis will be on the recognition of ethical problems commonly encountered by legal assistants and on the development of interviewing and investigation skills. 3 hrs./wk.

**PL 275**

**PARALEGAL INTERNSHIP (1CR)**

*Prerequisite: Admission to the Paralegal Program or division administrator approval*

Students will work in an approved training situation under instructional supervision. This internship is designed to give students practical experience in a law firm or other legal-related office. By arrangement.

## 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 will be 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, the emphasis will be 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, and 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 the news media. 3 hrs./wk.

**PHIL 176**

**PHILOSOPHY OF RELIGION (3CR)**

This course will deal 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 will be from contemporary theological and philosophical sources. 3 hrs./wk.

## Photography

### PHOT 120

#### THE PHOTOGRAPHIC VISION: ALL ABOUT PHOTOGRAPHY (3CR)

This is 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 will be 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

#### FUNDAMENTALS OF PHOTOGRAPHY (3CR)

In this introduction to the basic processes and principles of photography, the emphasis will be on competent 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 speed and aperture. 6 hrs./wk.

### PHOT 122

#### FINE ART PHOTOGRAPHY (3CR)

*Prerequisite: PHOT 121*

The emphasis will be on developing professional standards of photographic technique and image quality. Topics will 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. 6 hrs./wk.

### PHOT 123

#### COMMERCIAL PHOTOGRAPHY (3CR)

*Prerequisite: PHOT 121*

This course will emphasize commercial and other forms of applied photography. The class will include view camera techniques; lighting techniques with emphasis on studio lighting; and portrait, advertising and illustration photography. 6 hrs./wk.

### PHOT 134

#### COLOR TRANSPARENCIES (3CR)

*Prerequisite: PHOT 121*

The materials, camera techniques, processing and various applications of color transparency film will be explained. Color transparencies used in audiovisual 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. 6 hrs./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./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 will be 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 will 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 will include quasars, black holes, the 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 will provide a survey of the earth and the processes that have shaped it. Lecture units will cover the solid earth, the atmosphere, the hydrosphere, resources and environmental geology. Laboratory units will 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 will provide a survey of the geological development of North America and the processes, environments and tectonics that occurred during its formation. Topics will include the interrelationships 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 will constitute the major units of study. Some additional topics will include mapping, weather, climate, weathering, soils, rivers, deserts, mountains, topography and landforms. 3 hrs./wk.

**PSCI 141**  
**PHYSICAL GEOGRAPHY LAB (2CR)**

*Corequisite: PSCI 140 or the equivalent*

Students in this course will 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 course will survey 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 to study the stratigraphy, structure, hydrology, mineralogy, landforms and economic geology of the region. Five three-hour pretrip meetings will provide students with the geologic knowledge necessary to make field observations.

**PSCI 297**  
**GEOLOGY OF THE HAWAIIAN ISLANDS (3CR)**

This course will survey the geology and natural history of the Hawaiian Islands through field and classroom study. Field observations of concepts presented in five three-hour pretrip seminars will be made during a two-week trip to the Hawaiian Islands. Topics to be studied and observed will include volcanism, oceanography, meteorology, sedimentology, hydrology and the structure of the Hawaiian Islands as well as important natural history sites.

## Physical Therapy Assistant

**KPT 100**  
**MOLECULAR BASIS OF LIVING SYSTEMS (3CR)**

This course will introduce students to the fundamental concepts of chemistry, physics, morphology and physiology as they apply to the cell and the human body in preparation for the study of physiology and microbiology. 3 hrs./wk.

**KPT 151**  
**INTRODUCTION TO PHYSICAL THERAPY (2CR)**

The student will be introduced to the functions of a physical therapist and a physical therapist assistant as members of the health team and their interaction with other health disciplines in caring for a patient. Medical terminology related to the specific discipline will be introduced. Field trips to local hospitals will be included. 2 hrs. lecture/wk.

**KPT 152**  
**FUNDAMENTALS OF MODALITIES I (3CR)**

*Prerequisite: KPT 151*

The student will learn basic medical terminology, descriptions of modalities, and therapeutic measures used in the physical treatment of various injuries and diseases. The emphasis will be on department organization and orientation, position duties and job opportunities. During field trips, the student will be exposed to actual hospital and clinical facilities. A clinical lab will introduce students to the practical application of all modalities used in the physical therapy clinic. 2 hrs. lecture, 2 hrs. lab/wk

**KPT 153**  
**KINESIOLOGY (4CR)**

*Prerequisites: BIOL 120 and KPT 151*

Students will analyze muscles and their functions, the biomechanics of human motion, the activities of joints and the functions of the musculoskeletal system. 5 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 the anatomy and function of the nervous system and begin to correlate clinical problems with the pathology of the nervous system. 1 hr./wk.

**KPT 155**  
**REHABILITATION (4CR)**

*Prerequisites: KPT 152, KPT 153, KPT 154, KPT 159 and KPT 161*

The student will be introduced to the philosophy underlying rehabilitation and the theory and principles involved in normal and abnormal ambulation and mobility. The emphasis will be on the 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, 5 hrs. lab/wk.

**KPT 158**  
**THERAPEUTIC EXERCISE (4CR)**

*Prerequisites: KPT 152, KPT 153, KPT 154, KPT 159 and KPT 161*

This course will introduce students to the theory and principles of application of therapeutic exercise including patient instruction and manual techniques as well as equipment commonly used by the physical therapist assistant. Field trips will be scheduled during the semester so students may learn various specialized techniques. 2 hrs. lecture, 6 hrs. lab/wk.

**KPT 159**  
**CLINICAL PATHOLOGY (4CR)**

*Prerequisite: KPT 151*

Students will study general pathology with detailed emphasis on the study of diseases and disease processes. 4 hrs./wk.

**KPT 161**  
**FUNDAMENTALS OF MODALITIES II (5CR)**

The student will be introduced to the theory and practical application of electrotherapy and therapeutic massage with emphasis on techniques of application and indications and contra-indications for use. The student also will observe the application of therapeutic modalities at local clinical sites. 3 hrs. lecture, 4 hrs. lab/wk.

**KPT 170**  
**CLINICAL EDUCATION I (2CR)**

*Prerequisite: KPT 161 with a minimum grade of "C"*  
*Corequisite: KPT 171*

The student will review the practical application of principles learned in previous courses and take part in rotating internships in hospitals throughout greater Kansas City under the guidance of a registered physical therapist. 14 hrs. clinic/wk.

**KPT 171**  
**CLINICAL SEMINAR (1CR)**

*Corequisite: KPT 170*

While conducting student discussions, the program coordinator will evaluate the experience and programs of the students in Clinical Education I. 1 hr. lecture/wk.

**KPT 172**  
**CLINICAL EDUCATION II (12CR)**

*Prerequisites: KPT 155, KPT 158, KPT 170 and KPT 171 with a minimum grade of "C"*

The student will gain supervised clinical experience observing and applying techniques and procedures learned in previous courses. Emphasis will be on assisting the physical therapist with treatment procedures in a variety of clinical settings. 40 hrs. clinic/wk.

## Physics

**PHYS 125**  
**TECHNICAL PHYSICS I (4CR)**

*Prerequisite: MATH 133*

This class is 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)**

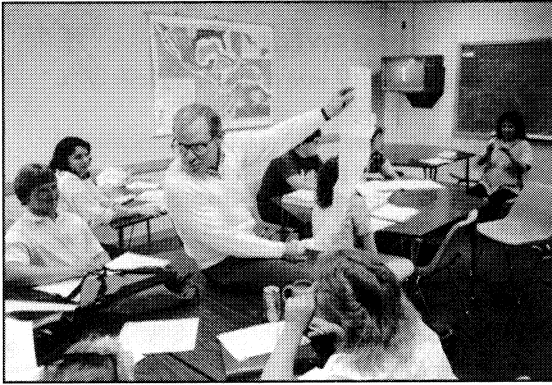
*Prerequisite: PHYS 125*

This is a continuation of the applied study of concepts begun in Technical Physics I. Concepts studied will 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 171*

Selected topics in physics will be introduced: motion, energy, matter, thermodynamics and wave motion. 4 hrs. lecture, 3 hrs. lab/wk.



**PHYS 131  
GENERAL PHYSICS II (5CR)**

*Prerequisite: PHYS 130*

In this continuation of General Physics I, topics will include electricity, magnetism, light, atomic and nuclear structure, quantum theory, relativity and particle physics. 4 hrs. lecture, 3 hrs. lab/wk.

**PHYS 135  
SPECIAL TOPICS IN TECHNICAL PHYSICS I (1CR)**

*Prerequisite: MATH 133 or MATH 171*

*Corequisite: PHYS 125*

Students in this course will explore momentum as it operates in mechanical, fluidal and electromagnetic systems. Topics begun in PHYS 125 will be explored further. 6 hrs. lecture, lab/wk.

**PHYS 136  
SPECIAL TOPICS IN TECHNICAL PHYSICS II (2CR)**

*Prerequisites: PHYS 125 and PHYS 135*

*Corequisite: PHYS 126*

Students will explore concepts involved in developing exponential constants for linear systems, radiation and optics. Students will continue studies begun in PHYS 125, PHYS 126 and PHYS 135. 6 hrs. lecture, lab/wk.

**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 will explore the interaction between political and economic ideas and institutions in the world political arena and examine the role of communism, capitalism, fascism and democracy in political science. 3 hrs./wk.

**POLS 124  
AMERICAN NATIONAL GOVERNMENT (3CR)**

This class is 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 will offer a thorough look at the issues facing our state and local government. Students will learn about the institutions and processes designed to address them. They will meet state and local decision-makers and visit the state legislature. Emphasis will be on how to participate effectively in community government. 3 hrs./wk.

**POLS 130  
POLITICAL ECONOMY: POWER IN SOCIETY (3CR)**

This course will examine the economic and political dimensions of social power as a vehicle for introducing students to the social sciences. The concept of power will be used to show commonalities and differences in the social sciences and to examine the language, methods, scope and insights of political and economic studies. Through examination of the manifestations of power through authority, force and influence, the significance of political economy will be revealed. 3 hrs./wk.

**POLS 132  
INTRODUCTION TO  
COMPARATIVE GOVERNMENT (3CR)**

This course is a study of the major world political systems. It will compare and contrast the resolution of key 20th century political, social and economic issues. 3 hrs./wk.

**POLS 135****INTERNATIONAL RELATIONS (3CR)**

This course will analyze the conflict and cooperation among nation-states. Students will 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 295****CONTEMPORARY CHINA (3CR)**

This travel course to the People's Republic of China will explore 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 will be supplemented by lectures and seminars while in China.

**POLS 298****U.S. AND THE U.S.S.R.: TRAVEL FOR CREDIT (3CR)**

By traveling 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)**

This course will examine how students can use psychological principles to better understand themselves and others. Topics will 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 a structured group experience designed to increase self-affirmation, self-motivation, self-determination and empathetic regard for others. It will include 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 130****INTRODUCTION TO PSYCHOLOGY (3CR)**

This is an introduction to general psychology. Topics will 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 will involve active participation in the application of research strategies to 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*

This class will seek to comprehend the nature and causes of individual behavior in social situations. It will identify those factors that shape our feelings, overt actions and thought in social situations. Topics will 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 will include behavior, skills, memory, generalization of learning, assessment and measurement of learning, and intelligence. A practicum in a structured setting will be 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.

**PSYC 250**  
**HEALTH PSYCHOLOGY (3CR)**

*Prerequisite: PSYC 130*

This course is intended to acquaint students with content, methods and theory regarding the interplay between psychological and biological determinants of health and illness, and to examine how these factors relate to students' own health status and that of others. The course will focus on the application of psychological methods and principles to the maintenance of health, prevention of disease and treatment of illness and to rehabilitation and recovery from impaired health, following an interdisciplinary approach to content and instruction. 3 hrs. lecture/wk.

## Quality Control

**QC 140**  
**QUALITY IMPROVEMENT USING SPC (2CR)**

*Prerequisites: Background in manufacturing processes and/or basic math*

Upon successful completion of this course, the student should be able to describe the concepts of quality improvement. This course will examine the application of the "Transformation of America" concept to American businesses. Statistical process control will be introduced as a tool to improve quality. W. Edwards Deming's 14 points and the management changes required to implement quality improvement also will be covered. 2 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**  
**RADIOLOGIC TECHNOLOGY I (3CR)**

*Prerequisite: Admission to the program*

Radiation biology, radiation protection and monitoring, professional attitudes and ethics will be among the topics covered. 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 and lower gastrointestinal track, gall bladder/biliary track and kidneys. 4 hrs./wk.

**KRAD 173**  
**CLINICAL TRAINING I (2CR)**

*Prerequisite: Admission to the program*

This class will offer training in basic radiographic examinations and related tasks. The student will be expected to perform six unassisted examinations by the end of the term. 26 hrs. clinic/wk.

**KRAD 174**  
**RADIOGRAPHIC EXPOSURES II (3CR)**

*Prerequisite: KRAD 171*

Topics will include analysis and quality control measures used for image-producing equipment including tests and calibration requirements. Computer-assisted image production will be studied in detail including the technology of computer-assisted tomography (C.A.T.) and magnetic resonance imaging (M.R.I.) scanners. 4 hrs./wk.



**KRAD 175  
CLINICAL TRAINING II (2CR)**

*Prerequisites: KRAD 169, KRAD 170, KRAD 171, KRAD 172 and KRAD 173*

This training will focus on the upper and lower extremities, cervical, thoracic and lumbar vertebrae, ribs, sternum, skull and mammographic examinations. The student must be able to perform eight additional unassisted examinations by the end of the term. 26 hrs. clinic/wk.

**KRAD 176  
RADIOGRAPHIC POSITIONING II (3CR)**

*Prerequisite: KRAD 172*

This class will cover anatomy and positioning related to the upper and lower extremities, the vertebral column and thorax and will include mammography. 4 hrs./wk.

**KRAD 178  
CLINICAL TRAINING III (1CR)**

*Prerequisites: KRAD 174, KRAD 175 and KRAD 176*

Students will continue to perform examinations they have previously proven competent in. Direct supervision and instruction will be provided until competence is attained for a minimum of three additional examinations not previously learned. Students will complete 10 evening shifts during the summer session. Average 24 hrs./wk.

**KRAD 278  
RADIOLOGIC TECHNOLOGY II (3CR)**

*Prerequisites: BIOL 144 and KRAD 170*

This course will study the disease processes of all organ systems, with an emphasis on pathology visualized on radiographs or through other image-producing modalities such as C.A.T. 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 will be on special views of the skull. 3 hrs. lecture, 1 hr. lab/wk.

**KRAD 280  
CLINICAL TRAINING IV (2CR)**

*Prerequisite: KRAD 178*

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 previously shown competence in as well as new exams. 20 hrs./wk.

**KRAD 281  
PHYSICS OF X-RAY EQUIPMENT (4CR)**

*Prerequisites: PSCI 120 and 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 and 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 including C.A.T. scan, nuclear medicine, ultrasound, vascular procedures and radiation therapy. 20 hrs./wk.

**KRAD 283  
FINAL SEMINAR (3CR)**

*Prerequisites: KRAD 278, KRAD 281 and 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 278, KRAD 281 and KRAD 282*

Students will complete rotations and experiences in the specialty sections of diagnostic radiology and will choose an area of emphasis for which additional training will be provided. A minimum of three new examination competencies or specialty rotations must be completed during this final summer session. 24 hrs./wk.

**KRAD 285  
SPECIAL PROCEDURES (3CR)**

*Prerequisites: BIOL 144, KRAD 278 and KRAD 279*

This course will cover 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 and KRAD 285*

Students will complete evaluations for their remaining exams and skills and will make final preparations 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 (9CR)**

*Prerequisite: Approval of the director of the PVCC Radiography Program*

This class will offer additional training in one of the following: nuclear medicine, ultrasound, radiation therapy or computer-assisted tomography. 1 hr. lecture, 16 hrs. lab/wk.

## 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, patho-physiology 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 will be 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 will include equipment for oxygen therapy, humidity and aerosol therapy and IPPB. Students will 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 will be an introduction to the diagnostic procedures used by the pulmonary physician in evaluating patients with respiratory disease. The class also will provide information on the pathology of disease states the student will encounter. 2 hrs./wk. Summer.

**RT 220**  
**CLINICAL CARDIOPULMONARY PHYSIOLOGY (2CR)**

*Prerequisite: Successful completion of the 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./wk. Fall.

**RT 230**  
**CLINIC TOPICS AND PROCEDURES I (4CR)**

*Prerequisite: Successful completion of the summer sequence of respiratory therapy courses*

In this lecture and lab course, students will focus on basic and emergency care and be introduced to mechanical ventilators and critical care of the respiratory patient. 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*

The focus will be on the respiratory care of neonatal and pediatric patients with emphasis on the management of cardiopulmonary disease states unique to children. Information will be based on developmental anatomy and physiology, pathology, diagnostic/laboratory procedures, and equipment manipulation in acute, chronic, critical and emergency care settings. 2 hrs./wk. Spring.

**RT 235**  
**CARDIOPULMONARY MEDICINE II (2CR)**

*Prerequisite: Successful completion of the summer sequence of respiratory therapy courses*

This is a continuation of the series taught by the program medical director emphasizing disease states of the cardiopulmonary system. Discussion will cover the pathology, diagnosis and treatment of various diseases and the role of the respiratory therapist in the medical management of these patients. 2 hrs./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./wk. Spring.

**RT 240  
RESPIRATORY PHARMACOLOGY (2CR)**

*Prerequisite: Successful completion of the summer sequence of respiratory therapy courses*

This class will present all the pharmacology that respiratory therapists provide. A general study of most of the drugs used in the care of patients with cardiopulmonary problems will be included. Drugs administered during a code blue also will be stressed. 2 hrs./wk. Fall.

**RT 271  
CLINICAL PRACTICE I (4CR)**

*Prerequisite: Successful completion of the 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 program medical director, 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.

## Sociology

**SOC 122  
SOCIOLOGY (3CR)**

This overview of social life will cover group structure and processes, social interaction and an 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 will possible solutions. 3 hrs./wk.

**SOC 131  
MARRIAGE AND THE FAMILY (3CR)**

This is an examination of the institutions of marriage and the family. It will emphasize changing roles, family formation, socialization, domestic conflict, interaction among family members and marriage partners, and the role of marriage and the 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 as well as social welfare as a response to social deprivation will be examined. 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 will include research themes and demographic trends; aging and its relationship to family, the economy, politics, religion and education; the effect of cultural values on behavior; and the future of the elderly. 3 hrs./wk.

**SOC 160  
SOCIAL POWER: MOTIVATION AND ACTION (3CR)**

This course will concentrate on the socio-psychological aspects of power. Topics will include the development of personality, the role of social class and ideology, the mechanics of domination and subordination, discrimination, economic inequality, powerlessness and the search for community. Basic terminology and theoretical foundations of both sociology and psychology will be at the heart of the course. 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 will be stressed. 3 hrs./wk.

### SPD 121

#### PUBLIC SPEAKING (3CR)

This fundamental speech course will emphasize 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 to 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 also will discuss types of speaking including impromptu, informative and persuasive speaking. Emphasis will be 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 communication skills both formally and informally by studying interviewing techniques, making effective presentations, working in groups, negotiating, studying listening techniques, and recognizing verbal and non-verbal 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 two to eight weekend intercollegiate debate tournaments a semester. 3 hrs./wk.

### SPD 132

#### INTERMEDIATE DEBATE I (3CR)

*Prerequisite: SPD 130 or the equivalent*

This is a continuation of argumentation and debate theories. Students will attend two to eight weekend intercollegiate debate tournaments a semester. 3 hrs./wk.

### SPD 230

#### INTERMEDIATE DEBATE II (3CR)

*Prerequisite: SPD 132 or the equivalent*

Intercollegiate debates will be stressed in this review of argumentation and debate theories. Students will attend two to eight weekend debate tournaments each semester. 3 hrs./wk.

### SPD 235

#### ADVANCED DEBATE (3CR)

*Prerequisite: SPD 230 or the equivalent*

Students will participate on the senior level in intercollegiate debate, attending two to eight 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 also will 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 will emphasize 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 TECHNICAL PRACTICUM I (1CR)**

Students can gain practical experience in technical theater techniques in this class. 2 hrs. lab/wk.

### **THEA 134 PERFORMANCE PRACTICUM I (1CR)**

This course will enable students to gain practical experience in performance-related aspects of college theater productions. Admission is by audition. 2 hrs. lab/wk.

### **THEA 135 MAKEUP (1CR)**

Students will study and practice applying stage makeup. 2 hrs./wk.

### **THEA 140 BASIC STAGECRAFT (3CR)**

This course will provide students with stagecraft theory as well as practical experience in building and painting stage scenery. 2 hrs. lecture, 2 hrs. lab/wk.

### **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 TECHNICAL PRACTICUM II (1CR)**

*Prerequisite: THEA 133*

This class will provide additional practice in technical theater techniques. 4 hrs. lab/wk.

### **THEA 234 PERFORMANCE PRACTICUM II (1CR)**

*Prerequisite: THEA 134*

This course will enable students to gain further practical experience in the performance-related aspects of college theater productions. Admission is by audition. 2 hrs. lab/wk.

### **THEA 240 COSTUMING (1CR)**

Students will study casting and practice creating costumes. 2 hrs./wk.

### **THEA 258 THE SHAKESPEARE PLAYS (3CR)**

This course will introduce the plays of Shakespeare. Students will read and view on cable videotaped performances of selected plays. By arrangement.

### **THEA 298 BACKSTAGE ON BROADWAY (2CR)**

In this travel-for-credit course, students will have a week of intensive study in professional New York theaters. The course will involve five one-hour sessions on campus and five full days of study on location in New York City. Sessions on campus will cover such topics 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.

## Veterinary Technology

### **KSAH 100 INTRODUCTION TO VETERINARY TECHNOLOGY (2CR)**

This course is an orientation to career opportunities available in veterinary technology. Professional ethics, public relations, and the psychological adjustment of the student to the need for physical treatment and emotional involvement in the care of animals will be discussed. Client relations, vaccination programs, regulatory organizations, receptionist duties, breeds and breed characteristics, neutering, puppy care, diets and hospital management also will be covered. 2 hrs./wk.

### **KSAH 101 PRINCIPLES OF ANIMAL SCIENCE I (3CR)**

This course will present the principles of handling, housing and managing animals; basic dietary and sanitation requirements; restraint and handling; administration of medications; bathing; skin scraping TPRs; and basic laboratory tests. The emphasis will be on animal physiology including the cell, muscle, nervous, respiratory and cardiovascular systems. An introduction to anesthesia and general animal nursing also will be included. 2 hrs. lecture, 2 hrs. lab./wk.

### **KSAH 108 CLINICAL MATH (1CR)**

The metric system and conversion of units; apothecaries' equivalents and vocabulary; preparation of solutions – strengths, procedures and computations; and drug administration – calculating and measuring dosages – will be covered. 1 hr./wk.

### **KSAH 110 PRINCIPLES OF ANIMAL SCIENCE II (3CR)**

*Prerequisite: KSAH 101*

This course is a continuation of Animal Science I. Specimen collection, urinary catheterization, blood collection, basic bandaging and an introduction to surgical preps and radiographic processing will be covered. Emphasis will be 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 also will be covered. 1 hr. lecture, 6 hrs. lab/wk.

### **KSAH 182 VETERINARY OFFICE AND COMPUTER SKILLS (3CR)**

*Prerequisite: Ability to key or type*

This specialized training course in veterinary office skills and computer applications will include computerized office management skills, bookkeeping and accounts management, records and supply control, telecommunication and client relation techniques. 2 hrs. lecture, 2 hrs. lab/wk.

### **KSAH 200 VETERINARY HOSPITAL TECHNOLOGY I (3CR)**

This course will cover the administration of anesthetics and surgical assisting, bandaging, casting, blood transfusions, surgical preparation and postoperative procedures. Parenteral fluid administration, intravenous hook-ups and an introduction to orthopedics, electrocardiography, bone marrow cytology and pharmacology also will be presented. 1 hr. lecture, 4 hrs. lab/wk.

### **KSAH 202 VETERINARY TECHNOLOGY ANATOMY (5CR)**

This course will present the basic principles of anatomy using a systemic approach. Physiology as it relates to anatomy and applicable pathology involving the animal body systems will be covered, as will a comparison of the animal species using the cat for dissection. 3 hrs. lecture, 4 hrs. lab/wk.

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**KSAH 203****LABORATORY ANIMAL TECHNOLOGY (2CR)**

*Prerequisites: KSAH 101, KSAH 110 and KSAH 120*

Restraint and handling of laboratory animals and birds, blood collection, physical examinations, medicating and anesthesia of various species will be covered. 1 hr. lecture, 2 hrs. lab/wk.

**KSAH 209****EQUINE MEDICINE AND MANAGEMENT (3CR)**

This course will cover breeds and types of horses and their use. Also presented will be 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****VETERINARY HOSPITAL TECHNOLOGY II (3CR)**

*Prerequisite: KSAH 200*

This course will cover the administration of anesthetics and surgical assisting, bandaging, casting, blood transfusions, surgical preparations and postoperative care. Parenteral fluid administration, emergency treatments, an introduction to ophthalmology and dermatology also will be covered. 1 hr. lecture, 4 hrs. lab/wk.

**KSAH 211****CLINICAL PATHOLOGICAL TECHNIQUES II (5CR)**

*Prerequisite: KSAH 120*

Theory and performance in hematology, urinalysis, clinical chemistry and parasitology will be covered. This course is an introduction to immunologic testing, 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*

Studied will be the techniques necessary to assist the veterinarian in a large animal or mixed practice and in research facilities. 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****VETERINARY TECHNICIAN 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 work hours.



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# Index



**A**

ABE/GED Program .....	44
Academic Achievement Center Courses.....	100
Academic and Student Policies and Procedures .....	33
Academic Calendar .....	6
Academic Offerings .....	99
Academic Progress .....	34
Academic Records Retention .....	35
Academic Renewal .....	35
Access to Student Information .....	35
Accounting Courses .....	101
Accounting Program .....	62
Adding and Dropping a Class .....	19
Administration of Justice Courses.....	103
Administration of Justice/Law Enforcement Program.....	63
Admission .....	9
Admission Policies.....	10
Admission Procedures – Credit.....	10
Admission Procedures – Non-credit.....	15
Adult Basic Education/ General Educational Development Program .....	44
Adults Unlimited Program .....	28
Advanced Standing Credit.....	36
Agribusiness Courses .....	104
Alumni Association .....	28
Anthropology Courses .....	104
Application for Financial Assistance .....	22
Art Courses.....	105
Associate Degrees.....	52
Associate of Applied Science Degree.....	60
Associate of Arts Core Curriculum.....	55
Associate of Arts Degree .....	53
Associate of Science Degree .....	58
Athletics, Intercollegiate and Intramural.....	28
Attendance .....	36
Auditing a Class .....	37
Automotive Technology Courses .....	107
Automotive Technology Program .....	64
Aviation Courses .....	109
Aviation Maintenance Technology Program .....	65

**B**

Banking and Finance Courses.....	111
Biology Courses.....	111
Biomedical Equipment Technology Courses.....	113
Biomedical Equipment Technology Program .....	66
Board of Trustees .....	5
Bookstore.....	28
Business Administration Courses .....	113
Business Administration Program .....	67
Business and Industry Institute .....	44

**C**

Career Planning and Placement Center .....	28
Career Program Descriptions.....	62
Career Programs .....	57
Center for Continuing Professional Education .....	44
Center for Literary Culture.....	45
Certificate of Completion.....	62
Chef Apprenticeship Courses.....	155
Chef Apprenticeship Program.....	67
Chemistry Courses.....	115
Children's Center .....	28
Citizens Forums.....	45
Civil Engineering Technology Program .....	68
Classes by Arrangement.....	37
CLEAR Program.....	45
Clubs and Organizations .....	29
Commencement Exercises .....	52
Commercial Art Courses .....	117
Commercial Art Program .....	69
Community Chorus.....	45
Community School Program .....	45
Community Services Courses .....	45
Computer Science Courses .....	119
Computers: Personal Computer Applications Courses.....	118
Computer Systems Technology Courses.....	119
Computer Systems Technology Program.....	70
Conferences and Workshops .....	46
Continuing Education and Community Services .....	43
Core Curriculum Courses .....	120
Correctional Services Courses .....	121
Counseling Center .....	29
Course Prefix Listing.....	97
Courses by Division Listing .....	98
Credit Transferred from Other Colleges .....	37
Cultural Arts Programming .....	46

**D**

Data Processing Courses .....	122
Data Processing Program.....	70
Dental Hygiene Clinic.....	29
Dental Hygiene Courses .....	125
Dental Hygiene Program.....	72
Drafting Technology Courses .....	126
Drafting Technology Program .....	73
Drama .....	29
Dropping a Class.....	19

<b>E</b>	
Economics Courses .....	129
Education Courses .....	129
Electronics Courses .....	130
Electronics Engineering Technology Program .....	74
Emergency Medical Science Courses .....	132
Emergency Medical Science Program .....	75
Engineering Courses .....	133
English Courses .....	134
Equine Courses .....	137
Equine Studies Program .....	76
Extension Courses .....	46

<b>F</b>	
Fashion Merchandising Courses .....	138
Fashion Merchandising Program .....	77
Fire Prevention Program .....	77
Fire Protection Administration Program .....	79
Fire Protection/Fire Prevention and Fire Administration Courses .....	141
Fire Protection Program .....	78
Food Service .....	29
Foreign Language Courses .....	143
Forensics .....	29

<b>G</b>	
Gallaudet University Regional Center .....	46
Grade Changes .....	38
Grade Point Average .....	38
Grading System .....	37
Graduation, Degree and Certificate Programs .....	51
Graduation Requirements .....	52
Graduation with Honors .....	52

<b>H</b>	
Health, Physical Education and Recreation Courses .....	145
Hearing Impaired Courses .....	150
Heating, Ventilation and Air Conditioning Technology Courses .....	151
Heating, Ventilation and Air Conditioning Technology Program .....	80
History Courses .....	153
Home Economics Courses .....	154
Honors .....	38
Honors Program .....	48
Honors Program Courses .....	154
Horticulture Courses .....	155
Hospitality Management Courses .....	155
Hospitality Management Program .....	81
Humanities Courses .....	157

<b>I</b>	
Information/Word Processing Courses .....	157
Information/Word Processing Program .....	81
Instructional Support Services .....	29
Interdisciplinary Study Courses .....	158
Interior Merchandising Courses .....	158
Interior Merchandising Program .....	82
International Education .....	49
Interpreter Training Courses .....	160
Interpreter Training Program .....	83

<b>J</b>	
Johnson County Area Vocational Technical School .....	62
Journalism and Media Communications Courses .....	162

<b>L</b>	
Learning Strategies Courses .....	163
Library .....	30
Lifetime Learning Institute .....	46

<b>M</b>	
Manufacturing Technology Courses .....	164
Marketing and Management Program .....	83
Marketing Management Courses .....	164
Mathematics Courses .....	166
Medical Record Technology Courses .....	168
Medical Record Technology Program .....	84
Metal Fabrication Courses .....	169
Metal Fabrication Program .....	85
Mission of Johnson County Community College .....	3
Mobile Intensive Care Technical Courses .....	132
Music Courses .....	170
Music Organizations .....	30

<b>N</b>	
Non-traditional Programs of Study .....	47
Nursing Courses .....	176
Nursing Program .....	85

<b>O</b>	
Occupational Therapy Assistant Courses .....	177
Occupational Therapy Assistant Program .....	86
Office Careers Courses .....	178
Office Careers Program .....	87

---

**P**

Paralegal Courses .....	180
Paralegal Program .....	89
Parking .....	38
Pass/Fail Grading System.....	38
Philosophy Courses .....	182
Phi Theta Kappa .....	30
Photography Courses .....	183
Physical Education Courses .....	145
Physical Science Courses .....	183
Physical Therapy Assistant Courses.....	184
Physical Therapy Assistant Program.....	91
Physics Courses.....	185
Political Science Courses .....	186
President's Message.....	4
Programs with Selective Admission .....	12
Psychology Courses .....	187

**Q**

Quality Control Courses .....	188
-------------------------------	-----

**R**

Radiologic Technology Courses .....	188
Radiologic Technology Program.....	92
Records on Hold .....	39
Refunds.....	20
Registration Procedures .....	18
Registration, Tuition and Fees.....	17
Respiratory Therapy Courses.....	190
Respiratory Therapy Program .....	92

**S**

Sales and Customer Relations Program.....	94
Satisfactory Academic Progress .....	24
Science Technology Program.....	95
Sexual Harassment of Students.....	39
Smoking Policy .....	39
Sociology Courses .....	191
Speakers Bureau .....	46
Special Events .....	46
Special Services.....	30
Speech Courses .....	192
Sports Clinics for Youth.....	46
Staff .....	197
Student Activities Program .....	31
Student Code of Conduct.....	40
Student Financial Services.....	21
Student Government .....	31
Student Grievance.....	41
Student Health .....	41
Student Housing .....	31
Student Publications.....	31
Student Support Services .....	27
Study Abroad.....	49

**T**

Television Courses .....	49
Testing/Assessment Center.....	31
Textbook Costs .....	20
Theater Courses .....	193
Tours .....	46
Transcript Records .....	41
Transfer Information .....	57
Transfer Programs .....	55
Travel for Credit .....	49
Tuition and Fees .....	19
Types of Financial Assistance .....	22

**V**

Veterinary Technology Courses .....	194
Veterinary Technology Program .....	96

**Y**

Youth Program.....	46
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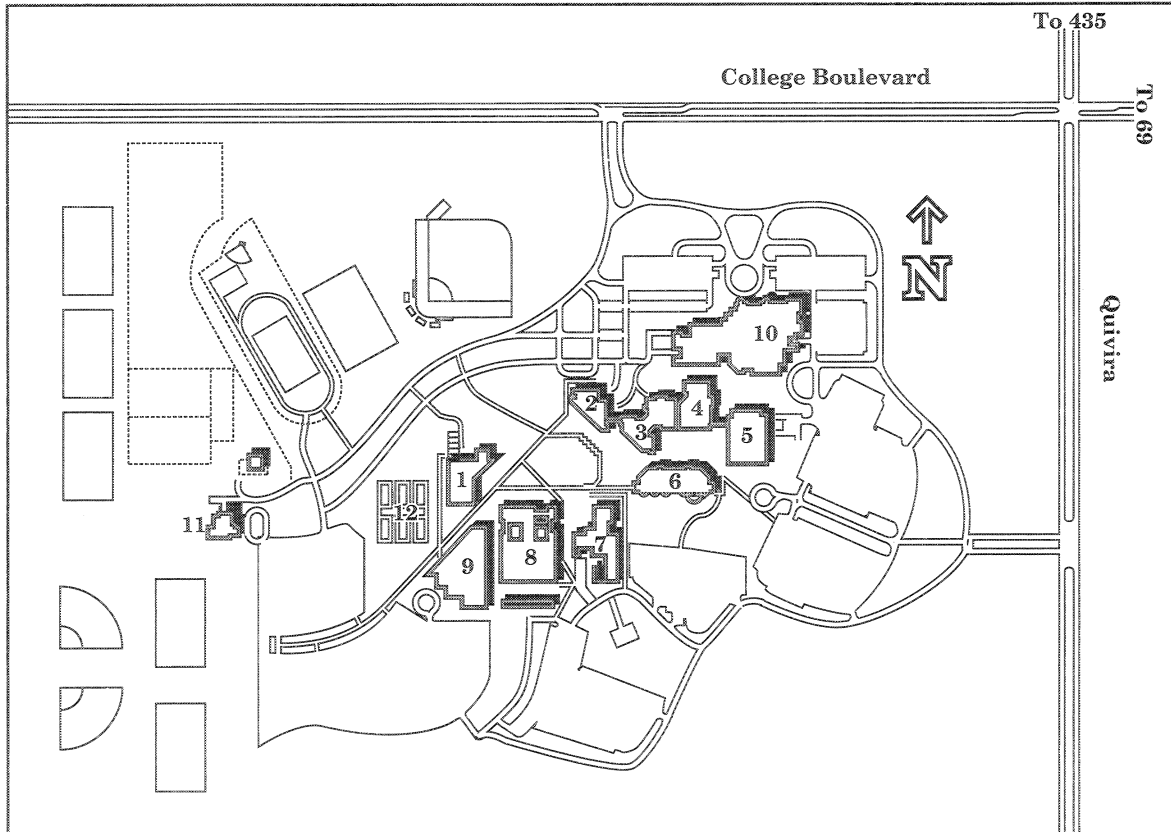


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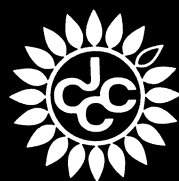






## Campus Map

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. (GYM) Gymnasium Building</li> <li>2. (COM) College Commons Building</li> <li>3. (GEB) General Education Building</li> <li>4. (OCB) Office and Classroom Building</li> <li>5. (EMC) Educational Media Center</li> <li>6. (SCI) Science Building</li> </ul> | <ul style="list-style-type: none"> <li>7. (CSB) Campus Services Building</li> <li>8. (ATB) Arts and Technology Building</li> <li>9. (ITC) Industrial Technical Center</li> <li>10. (CEC) Cultural Education Center</li> <li>11. Children's Center</li> <li>12. Tennis Courts</li> </ul> |
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