COLLIN COUNTY COMMUNITY COLLEGE

1995-1996 CATALOG

Central Park Campus	Courtyard Center for	Spring Creek Campus	Preston Ridge Campus
2200 W. University Dr.	Professional and Economic	2800 E. Spring Creek Pkwy.	9700 Wade Blvd.
P. O. Box 8001	Development	Plano, Texas 75074	Frisco, Texas 75034
McKinney, Texas 75069-8001	4800 Preston Park Blvd.	(214) 881-5790	(214) 377-1790
(214) 548-6790	Plano, Texas 75093		
	(214) 985-3790		

Collin County Community College (CCCC) is an equal opportunity institution and provides educational and employment opportunities without discrimination on the basis of race, color, religion, sex, age, national origin, disability or veteran status. In accordance with the Americans with Disabilities Act of 1990 and Section 504 of the Vocational Rehabilitation Act of 1973, CCCC provides accommodations as required by law, to afford equal educational opportunities to all people. *An* ADA compliance officer can be reached at (214)548-6606.

The programs, policies, statements, fees and courses contained herein are subject to continual review and evaluation. CCCC reserves the right to make changes or deletions at any time without notice. This publication is intended for information only and is not intended as a contract. Upon request, the college catalog is available on computer disk and tape for students with print-oriented disabilities. For more information contact ACCESS (Accommodations at Collin County for Equal Support Services) at 881-5898 V/TDD. For persons with hearing or speech impairment, please use the Texas Relay Services when offices or departments on campus do not list a TDD number. The Texas Relay number is 1-800-735-2989 (TDD).

ACCREDITATION STATUS

Collin County Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees and certificates.

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ACADEMIC CALENDAR

FALL *1995*

Fall Classes Begin	Aug. 28
Labor Day Break (Campuses Closed)	Sept. 2-4
Fall Census Date	Sept. 11
Last Day to Withdraw	Nov. 17
Thanksgiving Break (Campuses Closed)	Nov. 23-26
Fall Final Exams/Textbook Buyback	Dec. 11-16
Winter Break (Campuses Closed)	Dec. 22-Jan 1

WINTER 1996

Winter Classes Begin	Jan. 2
Winter Census Date	Jan. 3
Last Day to Withdraw	Jan. 12
Winter Final Exams	Jan. 15

SPRING *1996*

Spring Classes Begin	Jan. 17
Spring Census Date	Jan. 30
Spring Break (No Classes)	March 11-17
Spring Break (Campuses Closed)	March 15-17
Spring Mini-Break (Campuses Closed)	April 5-7
Last Day to Withdraw	April 12
Spring Final Exams/Textbook Buyback	May 11-17
1995-96 Commencement Ceremony	May 16

MAYMESTER *1996*

Maymester Classes Begin	May 20
Maymester Census Date	May 21
Memorial Day (Campuses Closed)	May 25-27
Last Day to Withdraw	May 31
Maymester Final Exams	June 4

SUMMER I/III *1996*

Summer I/III Classes Begin	June 5
Summer I Census Date	June 10
Summer III Census Date	June 13
Summer I Last Day to Withdraw	June 28
Independence Day (Campuses Closed)	July 4
Summer I Final Exams	July 9
Summer III Last Day to Withdraw	July 26
Summer III Final Exams	August 12-13

SUMMER II 1996

Summer II Classes Begin	July 10
Summer II Census Date	July 15
Summer II Last Day to Withdraw	August 2
Summer II Final Exams	August 13

All dates are subject to change. See current schedule of classes for current information.

OFFICE AND PHONE DIRECTORY

	Central Park Campus	Courtyard Center for Professional & Economic Development	Spring Creek Campus	Preston Ridge Campus
	Phone	Phone	Phone	Phone
General Information	548-6790	985-3790	881-5790	377-1790
Accomodations at CCCC for Equal Support Services (ACCESS)			881-5950	
Administrative Services	548-6620		881-5620	
Admissions and Records	548-6710	985-3720	881-5710	377-1710
Advising	548-6770	881-5778		377-1778
Articulation and Transfer	548-6770	881-5757		377-1757
Bookstore	548-6680	985-3710	881-5680	377-1680
Business and Community Relations		985-3734		
Business and Engineering Division	548-6830		881-5831	
Business Office	548-6630	985-3724	881-5634	377-1630
Refunds/Tuition/Fees	548-6637		881-5634	377-1637
Career Services	548-6747	985-3786	881-5781	377-1781
College and Community Development Division		985-3731	881-5611	
Continuing Education Division	548-6790	985-3750		377-1711
Cooperative Work Experience	548-6735		881-5735	377-1735
Counseling	548-6770		881-5779	
Dean of Students	548-6770		881-5771	377-1771
Developmental Education Division	548-6896		881-5720	377-1720
Financial Aid	548-6760		881-5760	377-1760
Fine Arts Division	548-6830		881-5107	377-1507
Fitness Center	548-6891		581-5848	
Health Sciences, Physical Education and Child Development Division	548-6679		581-5925	
Human Resources	548-6660	985-3780	881-5660	
Humanities and International Studies Division	548-6830		381-5810	377-1510
Library/Learning Resources Center	548-6860		381-5860	377-1560
Mathematics and Natural Sciences Division	548-6830		381-5880	377-1580
Plant Operations/Security	548-6690	985-3777	381-5690	
President's Office	548-6600		381-5600	
Promise Program	548-6851			
Public Relations and Publications Office	548-6610		381-5610	
Recruitment and Retention Office			381-5853	
Registrar's Office	548-6744	985-3720	381-5744	377-1744
Social Science and Public Services Division	548-6830		381-5800	
Student Activities	548-6788		381-5788	377-1788
Student Development Center	548-6700		381-5700	377-1770
Texas Academic Skills Program (TASP)			181-5739 381-5902	
Testing Center	548-6849		181-5922	
Vice President for Instruction	548-6800		481-5801	
For offices not listed	548-6790	985-3790	481-5790	377-1790

BOARD OF TRUSTEES
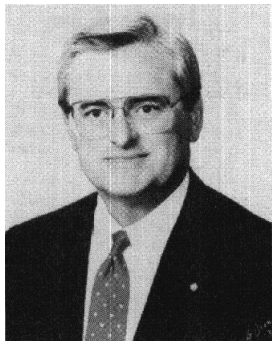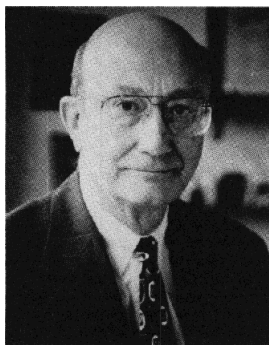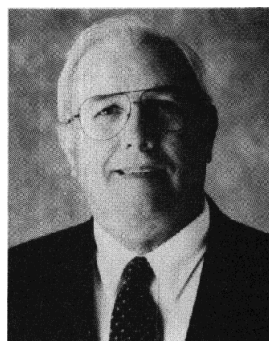
PERSPECTIVES

MISSION STATEMENT

Collin County Community College affirms as its mission the commitment to provide, within the resources available, educational programs and services that meet the individual and community needs. The district seeks to promote lifelong individual growth and excellence through strengthening the intellect, character and capabilities of all students. The college acts as a resource to local, state, national and international communities by providing educational, cultural and civic programs and services.
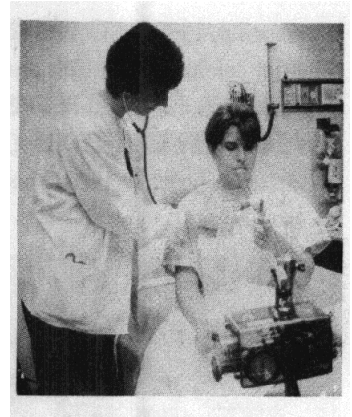
PHILOSOPHY AND PURPOSE

The philosophy of Collin County Community College is to achieve its mission by promoting:

- Universal access
- Personal development
- Open involvement and active participation in the learning and decision-making process
- Recognition, acceptance and encouragement of diversity
- High standards of innovation and excellence
- Recognition of the dignity and worth of all individuals

GOALS

1. To expand knowledge and develop skills through an integrated general education curriculum and support services that enable students to grow within a changing environment and to be productive citizens of the community and workplace.
2. To assist students in identifying and accomplishing their educational, career and personal goals.
3. To create an environment that promotes cultural understanding, social responsibility and international awareness.
4. To contribute to the economic growth and development of Collin County by offering diverse programs and services.
5. To develop and effectively utilize human, fiscal and physical resources of the college.
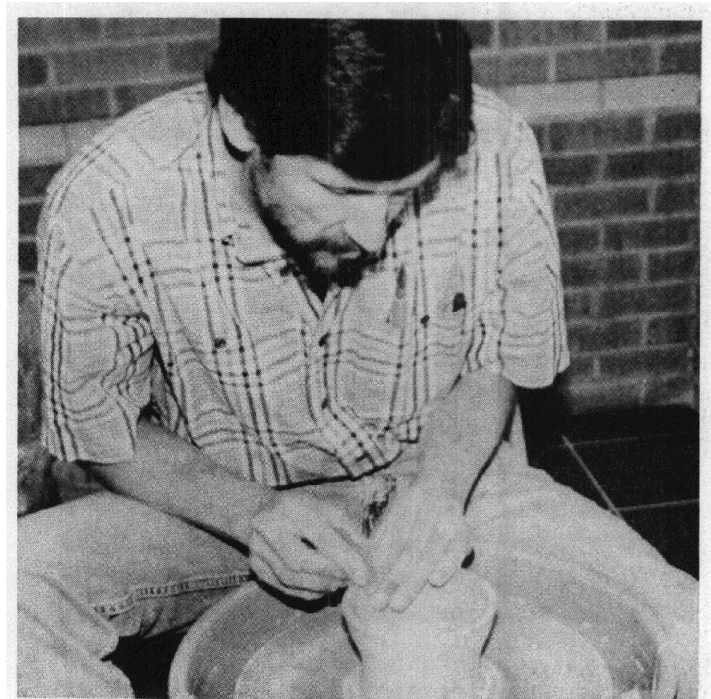
HISTORY

On April 6,1995 the Collin County Community College District celebrated its 10th anniversary. The first classes were offered in the fall of 1985 in high schools throughout the county. Central Park Campus opened its doors to students in January 1986. This campus is a 207,000
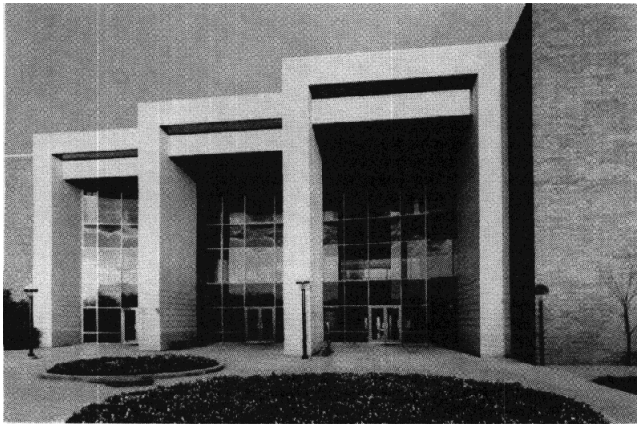
square-foot facility located on 115 acres of land near the intersection of Highways 75 and 380 in McKinney, Texas.

In the fall of 1988, construction of a second campus was completed. Spring Creek Campus, located at the intersection of E. Spring Creek Parkway and Jupiter
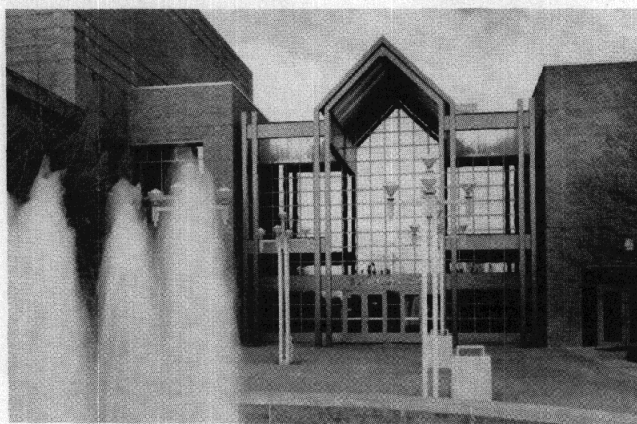
Road in east Plano, is a 380,000 square-foot facility housing a physical education complex, a conference center, a theatre, a student lounge, a Learning Resources Center and a food service area, in addition to classroom, laboratory and office space.

In July 1995, CCCC opened its third campus, Preston Ridge, in Frisco. Located just off State Highway 289

(Preston Road) and just north of State Highway 121, Preston Ridge Campus is being built in phases, with Phase I having two separate buildings for classroom, office, lab and LRC space.

A fourth site, Courtyard Center for Professional and Economic Development, was purchased in 1993 and

houses College and Community Development, including the Business and Community Relations Office; Continuing Education; Small Business Development Center (SBDC); and the CCCC Real Estate Program. Located in west Plano, Courtyard Center represents the widening reach of CCCC to its constituents.
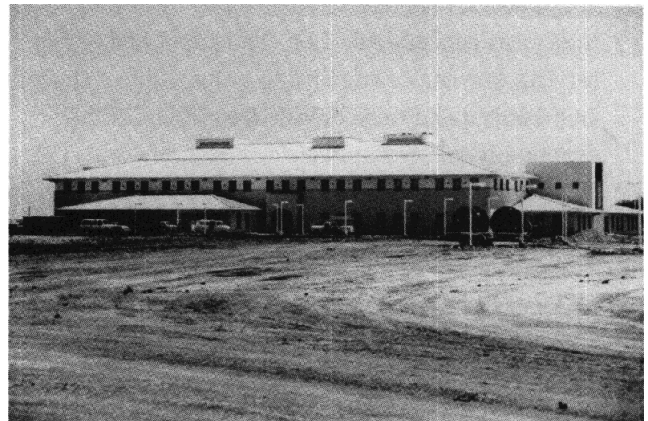
Day and evening classes are offered at Central Park Campus, Spring Creek Campus and Preston Ridge Campus as well as other locations throughout the county. The college does not liiit the use of its facilities to students only. All Collin County residents are encouraged to use the facilities at all sites.

ADMISSIONS AND REGISTRATION

ADMISSIONS PROCEDURES/RESIDENCY REQUIREMENTS

CCCC operates under an "open door" policy. Students who are 18 years of age or older with a high school diploma or equivalent are eligible for admission. Other students may be admitted under the special admission requirements that follow.

The college reserves the right to guide the placement of students through the assessment, which may include interviews and a review of past academic achievement.

Registration options are enhanced and delays may be avoided by completing all admission requirements in advance of registration.

In all admissions policies and practices, CCCC does not discriminate on the basis of race, color, religion, sex, national origin, age, disability or veteran status in accordance with federal law.

NEW STUDENTS

New students should submit to the Admissions Office:
1. **An** application for admission. This application may be submitted prior to, or at the time of, registration.
2. **An** official transcript from their most recent high school or college attended or a copy of their GED scores and documentation of TASP status. Students applying for and/or receiving financial aid or veterans benefits are required to submit a complete record of all academic work including high school transcripts. Degree-seeking students will be required to submit all official transcripts.
3. Students who have completed the SAT and/or ACT are encouraged to submit their scores.

Admission to the college does not guarantee admission to a specific program of study. Programs in emergency medical technician, fire fighter certificate, nursing, respiratory care, and dietary manager have additional admissions criteria. Contact the division office for information on program requirements or restrictions.

RETURNING STUDENTS

Former CCCC students who have not been enrolled during the preceding two regular (16-week) semesters will need to reapply for admiision An application for readmission and official transcripts from any colleges or universities attended since their last enrollment at CCCC and documentation of

TASP status are required. For more information on residency see, page 11.

STUDENTS WITHOUT HIGH SCHOOL DIPLOMA OR GED

Students under **18** without a high school diploma or equivalent will be required to:
1. complete CCCC assessments in reading, writing and math,
2. provide documentation that he/she is no longer enrolled in a high school program,
3. submit a transcript from last school attended and
4. interview with a college representative.

Students 18 years or older without a high school diploma or GED are strongly encouraged to complete the GED during the first semester of their enrollment at CCCC. Course selection and load may be restricted. Continued enrollment is provisional.

TRANSFER STUDENTS

Transfer students who are in good standing academically and otherwise at the last institution of higher education they attended are eligible for admission. **An** official college transcript from the college most recently attended and TASP status docurnentation are required.

Students who transfer to CCCC from other institutions of higher education may be awarded credit according to the conditions that follow.
1. Credit must have been earned at a regionally accredited institution of higher education. Foreign transcripts will not be evaluated.
2. **An** official transcript from all institutions of higher education attended by the student must be on file at CCCC.
3. Official course descriptions from the catalog under which the student attended may be required for evaluation.
4. Credit for courses equivalent to those listed in the CCCC catalog will be accepted if the courses are required on the student's degree plan for graduation. Other credits may be accepted in lieu of elective courses depending on the student's program of study
5. Only the grade and credits earned in the most recent repeated course will be used in computing the grade point average and applied toward degree or program requirements.
6. Official evaluations are conducted by the degree plan coordinator. Final approval rests with the division dean

7. Grades of "D" are accepted from other institutions; however, a cumulative GPA of 2.0 is required for graduation. Grades of " F and "I" do not transfer.

8. Waivers for physical education requirements may be granted for medical reasons. A written statement from a physician and two additional hours of electives are required. Credit for PHED courses is awarded for military training upon receipt of a student's DD214 (Honorable Discharge).

9. While there is no limit on the number of hours that can be transferred into CCCC from other institutions, there is an 18 credit hour residency requirement to earn an associate degree from CCCC. Students obtaining certificates containing 18 hours or less must complete course work in residence at CCCC. Petitions to transfer credits into certificate programs containing 18 hours or less may be made to the division dean through the degree plan coordinator.

10. Tie limits and minium grade requirements may be imposed for transfer work into select programs. Contact the program coordinator or division dean for details.

11. CCCC does not evaluate transcripts (except for TASP exemption purposes) or award transfer credit earned at foreign institutions; however, students may be eligible for credit through examination at the college.

OTHER STUDENTS' ADMISSIONS

HOME SCHOOL STUDENTS

Home school students interested in applying to CCCC who are under the age of 18 should

1. provide a completed SAT I score report with a verbal AND math score of no less than 500 for each section,
2. complete CCCC assessments in reading, writing, and math at college level ability
3. submit a transcript or academic record from the last or current high school attended (including home school programs) and
4. schedule an appointment with the Coordinator of Special Admissions. Course selection and load are not to exceed two college credit courses per semester. Admission and continued enrollment are provisional.

HIGH SCHOOL CONCURRENT ENROLLMENT/PROJECT FIRST STEP

High school students who have completed their junior year and are interested in concurrent admission to CCCC should

1. contact their high school counselor's office to obtain a concurrent enrollment permission form with appropriate signatures (from the high school counselor's office),
2. provide an official high school transcript,
3. take required CCCC institutional assessments (reading and writing assessments are required math assessment is optional depending on course selection) and
4. make an appointment with a Special Admissions representative.

High school students in grades 9-11 must also submit an SAT I score report with a verbal and math score of no less than 500 for each section. High school students should contact the TASP office before taking the TASP examination.

Instructor approval may be required. All students who are admitted must maintain at least a 2.0 GPA (no grade below a "C"), and will be enrolled

provisionally on a semester by semester basis. Credit will be awarded according to state, local and institutional policies in effect at the time of enrollment.

TECH PREP

High school students enrolled in Tech Prep programs may be eligible for college credit upon enrollment at CCCC. Enrollment in at least one college-level course at CCCC is required. Tech Prep students should provide the Admissions and Records Office with:

1. high school transcripts reflecting Tech Prep courses and grades,
2. an application for admission,
3. a petition for Tech Prep credit.

STUDENTS BORN OUTSIDE THE UNITED STATES

Students on temporary visas or holding permanent residence cards may be eligible for admission. To verify residency status, students are required to present their visa or permanent residence card with their application.

INTERNATIONAL STUDENT ADMISSIONS/F-1, F-2 VISAS

All international students must provide the Recruitment and Retention Office with

1. an application for admission,
2. an official international TOEFL score of 525 or above,
3. a completed statement of financial support (available from the Recruitment and Retention Office),
4. official transcripts (school records) and/or test results reflecting completion of 12 years of primary and secondary education,
5. official transcripts (school records) from all colleges and universities previously attended and
6. a valid visa or passport upon arrival.

International students who do not qualify under these requirements will be advised by the Recruitment and Retention Office as to how they might acquire the necessary qualifications. It is

recommended that all admission materials be received 30 days prior to regular registration to ensure issuance of the I-20.

STUDENTS ON SUSPENSION FROM OTHER COLLEGES AND UNIVERSITIES

Students currently on suspension from, or otherwise ineligible for admission to, other institutions of higher education must petition for admission. For consideration students must provide prior to the first class day:

1. official transcripts from all colleges and universities previously attended,
2. completed petition for enrollment form and
3. schedule an interview with the Academic Action Coordiiator.

Admission and continued enrollment are provisional. The college reserves the right to limit the number of hours or specify courses in which a student on suspension may enroll. Probationary status may be imposed while at CCCC. See the section on satisfactory progress or contact the Coordinator for Academic Action for more information.

RESIDENCE REQUIREMENTS

To be considered a Texas resident, students must clearly establish residence in Texas for the 12 months preceding their enrollment. Documentation of Texas residency may be required.

1. An in-county student is an individual who is a resident of Texas and who resides in Collin County at the time of registration.
2. An out-of-county student is a resident of Texas who resides outside of Collin County at the time of registration.
3. An out-of-state student is an individual who has not resided in Texas for 12 months preceding

registration or whose permanent resident card is less than 12 months old. Most students on temporary visas will also be classified as non-residents for tuition purposes.

The responsibility for registering under the proper residency classification is that of the student and any question concerning the student's right to classification as a resident of Collin County must be clarified prior to enrollment at CCCC. Changes of address, name, etc. must be reported promptly to the Admissions and Records Office. This enables students to receive registration and other information from various college departments and programs. Changes of address affecting residency should promptly be reported to the Admissions and Records Office.

Students who are dependent on a parent's residence status must also submit the top portion of the Federal Income Tax form for the current and preceding years.

AD VALOREM WAIVERS

Students who have not lived in Texas for the 12 months preceding registration, but who own property in Collin County, may be eligible for an ad valorem waiver. A copy of one's deed or most recent property tax statement is required for verification. If this waiver is based on a student's parents' property ownership, a copy of their most recent Federal Income Tax form showing the student as a dependent is also required. Once Texas residency has been established (12 months), the student should submit the necessary documentation to the Admissions and Records Office. At that point, ad valorem waivers will no longer be necessary. Property owners on most types of temporary visas are not eligible for the ad valorem waiver. Students must generally be U.S. citizens or permanent residents to be eligible for an ad valorem waiver.

ORIENTATION

Orientation provides an overview of the policies, procedures, services and student activities at CCCC. The initial concerns of both traditional and non-traditional students are addressed. The orientation dates and times may be found in the class schedule.

REGISTRATION PROCEDURES

TELEPHONE EXPRESS REGISTRATION (TEX)

TEX provides students with an opportunity to register early in courses for the upcoming semester. This process is designed for students who have completed admissions and assessment requirements and met with an adviser. TEX registration enables students to have earlier course selection, deferred tuition payment and more comprehensive advisement. See the current Schedule of Classes for a listing of dates, times and complete instructions regarding TEX.

Figure 1: Documents To Support Residency

Documentation of Texas residency may be required if the information given on the enrollment application is not adequate to prove residency If so, the following documents may be used in meeting residency requirements.

- Permanent Texas driver's license or Texas I.D. card (at least one year old)
- Texas high school transcript (if enrolled within the last 12 months)
- Letter of employment on company letterhead (verifying one year of employment)
- Texas voter's registration card (at least one year old)
- Lease agreement covering the past 12 months
- Collin County property tax statements

REGULAR REGISTRATION

Regular registration is scheduled prior to the beginning of classes with admissions, assessment and advising services available at that time. Comprehensive admissions, assessment and advising programs are more easily obtaiied prior to regular registration and students are encouraged to complete these steps early Tuition and fees are due at the time of registration. *See* the current Schedule of Classes for a listing of regular registration times and locations.

LATE REGISTRATION

Students who must register late should do so withii the published late registration schedule. A late registration fee will be assessed. This fee is not assessed to students who have completed registration during Telephone Express or regular registration periods and are making schedule changes, or to students who are registering on an audit basis. Students may also add available classes prior to the third class hour of the course being added. *See* page 15 for details.

REGISTRATION FOR CONTINUING EDUCATION CLASSES

Each semester CCCC offers continuing education classes to community members through the Continuing Education Division. Registration for these classes *can* be done in four ways:

1. Walk-in registration- Available at Courtyard Center, Central Park, Preston Ridge or Spring Creek, times are listed in the current Continuing Education Schedule of Classes.

2. Phone-in registration- (mdit card only). Call (214)548-6855 or (214)985-3711.Times and dates are listed in the current Continuing Education Schedule of Classes.

3. Mail-in registration- Send your registration information to: Registration, Collin County Community College,
   - Central Park Campus, P.O. Box 8001, McKinney, Texas 75069-8001 or
   - Courtyard Center for Professional and Economic Development, 4800 Preston Park Blvd., Box 12, Plano, Texas 75093 or
   - Preston Ridge Campus, 9700 Wade Blvd, Frisco, Texas 75034 or

   - Spring Creek Campus, 2800 E. Spring Creek Pkwy., Plano, Texas 75074

   See the current Continuing Education Schedule of Classes for registration deadlines.

4. Fax-in registration- (credit card only). Check the current Continuing Education Schedule of Classes for fax availability Fax your registration to (214)985-3765 or (214)548-1702.

See page 34 for more information on continuing education.

STUDENT ID CARDS

All credit students at CCCC are required to have a student identification card to use the services provided by the Bookstore, Fitness Center, Admissions and Records Office, Student Activities Office, Career Services Office, Testing Center, and other offices and labs. Students will have one ID card to use throughout their enrollment at CCCC, and must be issued a validation sticker (free of charge) at the beginning of each semester in which they are enrolled.

A $2 non-refundable fee is assessed with other registration fees for each student who has not previously purchased an ID card. First-time cards and validation stickers are issued during registration periods to all new and returning students. Replacement cards will be made at a cost of $2 each for those whose cards have been lost or stolen, who have had a name change, or who would prefer a new photo.

Students should go to the Student Activities Office at Central Park or Spring Creek Campuses or to the Testing Center at Preston Ridge with a valid photo ID to have their student ID cards and/or validation stickers issued.

Student ID cards are also valuable in the community. Students are eligible to receive discounts at participating restaurants, movie theaters and businesses as well as lower admission rates to some CCCC pmgrams and events.

TEXAS **ACADEMIC SKILLS PROGRAM (TASP)**

In an effort to ensure that all students pursuing higher education have certain basic skills, the State of Texas has *enacted* legislation which requires the following:

The *Texas* State *Education Code* requires that all students "... who entered public institutions of higher education in the fall of 1989 and thereafter be tested. TASP is a test in reading, writing and mathematics that is required of all students seeking a college degree or certificate with nine or more semester credit hours of general education courses (as defined by the Southern Association of Colleges and Schools), at a public college in Texas." If you are pursuing a Certificate in a program with less than nine semester d i t hours of general education courses, you may request "TASP Waived" (not required) status by contacting the TASP office. You do not have to take TASP if you have completed three college-level hours prior to fall of 1989. Transfer students with fewer than 60 *semester* credit hours or the equivalent and non degree seeking students who have not previously taken the TASP must take the test in the semester in which they accumulate their ninth college level hour at a Texas public institution. All students seeking teacher certification will be required to take TASP. Performance on TASP will not be used as a condition for admission to CCCC.

In addition, students may seek exemption from TASP based on a composite ACT score of 26 or higher (with individual math and English scores of no less than 22), as of April 1995 and thereafter: recentered scores of 1180 (combined with a minimum of 550 on the mathematical and verbal tests each), prior to April 1995 original scale scores of 1090 (combined with a minimum of 530 on the mathematical test and 470 on the verbal test), or TAAS scale scores of 1780 on the writing test and a Texas Learning Index (TLI) of 86 on the mathematics test and 89 on the reading test. ACT and SAT scores can be no more than five years old. TAAS scores can be no more than three years old.

A student may not "enroll in any upper division course, (the) completion of which would give the student 60 or more semester credit hours, or the equivalent until the student's test results meet or exceed the minimum standards in all test scores."

Other assessment procedures may be used in exceptional cases to allow a student to enroll in upper division courses "...in cases where test results do not meet minimum standards" (*Texas Education Code*, Sec. 51.306). Students may continue to take and accumulate lower division courses past the 60 hour limit, but will be unable to graduate with a degree or eligible certificate until they have passed the TASP test. Until TASP is successfully completed, continuous remediation is mandated. New students will be required to furnish the college with necessary proof regarding TASP status. The test fee will be paid by the student.

Note: For specific current information about TASP and CCCC's testing, contact the director of testing. Please note that, in addition to the state test, the college requires new students to be assessed in reading, writing and math for diagnostic and course placement purposes. All students who wish to enroll in any English or mathematics courses must be assessed for proper course placement. Developmental classes and tutorial assistance are available for students who need or want this support. Transfer students must provide documentation of TASP status. Documentation may be in the form of TASP score reports, official transcripts or other score reports.

Students requesting exemption from TASP should provide the Admissions Office with documentation of at least three hours of college-level credit earned prior to Sept. 1, 1989. Documentation may include:

● an official transcript (college, university, trade, foreign university or military);
● an official score report (AP, CLEP, DANTES).
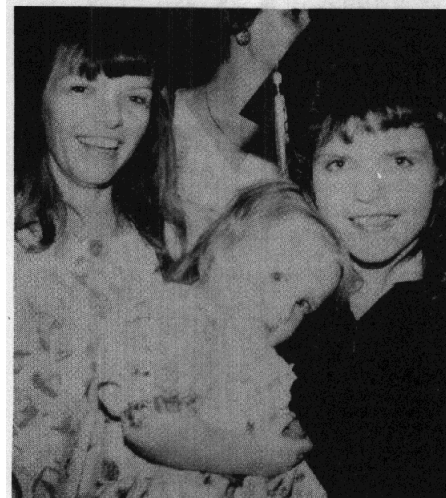
Figure 2: Tuition Schedule

Credit Hours	In-County ($23 per credit hour)	Out-of-County ($30 per credit hour)	Out-of-State ($65 per credit hour)
1	$34.50*	$34.50*	$209.50*
2	$46	$60	$219*
3	$69	$90	$228.50*
4	$92	$120	$260
5	$115	$150	$325
6	$138	$180	$390
7	$161	$210	$455
8	$184	$240	$520
9	$207	$270	$585
10	$230	$300	$650
11	$253	$330	$715
12	$276	$360	$780
13	$299	$390	$845
14	$322	$420	$910
15	$345	$450	$975
16	$368	$480	$1,040
17	$391	$510	$1,105
18	$414	$540	$1,170
19	$437	$570	$1,235
20	$460	$600	$1,300
21	$483	$630	$1,365

Minimum tuition required per semester by law. Note: A $9 per credit hour building use fee and a $.50 per credit hour student activity fee is included in the above figures.

TUITION AND FEES

Tuition is based on residency and the number of credit hours for which a student enrolls. Following is a schedule of tuition and fees by residency classification.

Lab fees are additional costs. Additional fees may be assessed as new programs are developed. These fees will be kept to a practical minimum.

Special fees and charges may be added as necessary and as approved by the board of trustees.

1. Student ID fee: $2 (a non-refundable fee for student's initial card, replacement cards cost an additional $2 each)"
2. Laboratory fee: none to $24 per lab***
3. Audit fee: $25 per course**plus tuition and any other applicable fees
4. Credit by exam: $30 per course**
5. Late registration fee: $10**
6. Student records fee: $2 per semester**
7. Returned check fee: $20

It is the policy of CCCCD to revoke check writing privileges to persons from whom we have received more than three returned checks.

Students participating in commencement ceremonies must purchase graduation regalia (cap and gown) from the college bookstore.

** non-refundable
*** some physical education classes have higher lab fees
Note: Firefighters and honor graduate students that qualify for a tuition waiver are required to pay the $9 per credit hour building use fee charged to all students.
Note: Veterans qualifying for a tuition and fee waiver are required to pay the $.50 per credit hour student activity fee.
Note: Fees for continuing education courses can be found in the current Continuing Education Schedule of Classes.

SENIOR CITIZEN SCHOLARSHIP

Reduced tuition for senior citizens is available for students age 55 and over. Details are pending legislative approval at the time of publication. Contact the Admissions and Records office for more information.

ACADEMIC POLICIES

ADDING/DROPPING COURSES

Any change in a student's class schedule may be made by telephone (during Telephone Express registration) or by submitting an Add/Drop form to the Admissions and Records office, when TEX is not available. Students may add avaliible classes prior to the third class hour. Students may withdraw from a course with a grade of "W" through the end of the 12th class week during a regular (16-week) term, through the end of the fourth week in a short (five-week) summer term, through the end of the seventh week in a long (10-week) summer term, and through the end of second week in Maymester or Winter Semester. (Contact the Admissions and Records Office for withdrawal deadlines for other terms.)

Students who are enrolled in a developmental course for TASP purposes may not drop or withdraw from their only developmental course unless they completely withdraw from the college. For information, see the dean of developmental education. International students and students receiving financial aid or veteran's assistance should see the appropriate college official before dropping or withdrawing.

See "Withdrawal from the College," page 20, for exact procedures.

Students should contact their professors prior to initiating a drop or withdrawal. A student who discontinues class attendance and does not officially drop or withdraw from the course will receive a performance grade.

AUDITING COURSES

Registration to audit a course will be permitted as long as a credit student is not displaced from the class as a result of the audit. Requests for audit are processed during late registration and the add/drop period only. Registered students may not change to audit status. Audit students may change to credit status prior to the term's census date. An audit student is subject to the usual registration process. Tuition and fees for an audit are included in the tuition and fees schedule. Since state funding is not received for audits, a special non-refundable audit fee is assessed in addition to tuition (see page 14).

Students who are auditing classes will not receive grades or credit for the course, but the transcript will indicate that the course was audited. Students who are auditing classes will not be required to take tests; however, participation in regular class activities is expected. Foreign language classes may not be audited. (The Continuing Education Department offers foreign language classes. See the current Continuing Education Schedule of Classes).

CLASS ATTENDANCE

Regular classroom attendance is expected of all students. Class attendance requirements are determined by professors: therefore, a student should ascertain each professor's attendance policy on the first day of the class.

Students who receive Veteran's Administration educational benefits must conform to attendance and academic standards as established by the Veteran's Administration and college policy. Information concerning requirements for attendance, satisfactory progress, certification of benefits and all other questions affecting veteran students may be obtained from the director of financial aid/veterans affairs. It is the veteran student's responsibility to determine and conform to college policies affecting veterans.

RELIGIOUS HOLIDAYS

In accordance with Section 51.911 of the Texas Education Code, CCCC will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time. Students are required to file a written request with each professor within the first 15 days of the semester to qualify for an excused absence. A copy of the state rules and procedures regarding holy days and the form for notification of absence from each class under this provision are available from the Admissions and Records Office.

GRADING SYSTEM

A	Excellent	**4** grade points per credit hour
B	Above Average	**3** grade points per credit hour
C	Average	**2** grade points per credit hour
D	Below Average	1 grade point per credit hour
F	Failure	0 grade points per credit hour
W	Withdrawal	0 grade points per credit hour; is not computed toward cumulative GPA or cumulative hours.
I	Incomplete	0 grade points per credit hour; not computed toward cumulative GPA unless it is replaced with a performance grade. *(See* "Incomplete Grades/Contracts" section.)
IP	In-Progress	0 grade points per credit hour; student has completed 70 percent of the program but is not yet at competency level. Earned only in MATH 0300; READ 0100,0105 and 0110; and ENGL 0300,0305 and 0310; is not computed toward cumulative GPA. Student must complete the remaining work during the next long semester or receive an "IP" as the permanent grade.
TP	TASP Remediation In-Progress	0 grade points per credit hour; is not computed toward cumulative GPA. Earned only in MATH 0300. Student must re-enroll and pay tuition during the next long semester.
AU	Audit	0 grade points per credit hour; is not computed toward cumulative grade point average nor cumulative hours.
CR	Credit	0 grade points per credit hour; is not computed in GPA but is computed in cumulative hours. Earned only when recording non-traditional credit or continuing education units.
Z	No grade reported	0 grade points per credit hour unless it is replaced by professor with a performance grade; is not computed in cumulative grade point nor cumulative hours.

At the completion of each term, the college will determine the student's semester and cumulative grade point averages, which will be recorded on the student's official transcript. Grades earned in developmental education courses are not included in the grade point average. Grades are available through Telephone EXpress (TEX).

GRADUATION

The college offers associate of arts, associate of science and associate of applied science degrees, and certificate programs. Students who plan to graduate from CCCC should request a degree plan prior to the completion of 30 credit hours. Students may graduate under any of the college's catalogs from the preceding five years as long as the student was enrolled under that catalog; however, students may benefit from graduating under the requirements of a recent catalog.

A student who completes specific course requirements for a degree or certificate with a minimum cumulative grade point average of 2.0 is a candidate for graduation.

Degree honors will be awarded for student with the following cumulative grade pont average at CCCC

4.0 Summa cum laude
3.75-3.99 Magna cum laude
3.5-3.74 Cum laude

Honors are calculated using all CCCC college-level coursework. (Grades earned in developmental and transfer courses are not included.) To be eligible for honors, students must complete 30 hours at CCCC.

ASSOCIATE'S DEGREE

Students may earn an Associate of **Arts** degree or an Associate of Science degree. Students may also earn an Associate of Applied Science degree and certificates. See pages 43-93 for specific degree plans. To graduate, students must complete a minimum of 18 credit hours at CCCC and satisfy all other degree requirements. Non-traditional and developmental course credit does not meet this residency requirement.

Candidates for an associate's degree should submit an application for graduation no later than the deadline established for that semester.

SUMMER GRADUATES

Students with six hours or less remaining toward completion of an associate's degree may participate in the current year's graduation ceremonies provided they are pre-registered for the appropriate summer courses. Students planning to complete graduation requirements during a summer session and participating in graduation ceremonies must file for graduation by the preceding spring semester deadline. Otherwise, summer graduates may participate in the following year's ceremonies.

CERTIFICATE PROGRAM

Students obtaining certificates containing 18 hours or less must complete course work in residence at CCCC. Petitions for transfer credits into

certificate programs containing 18 hours or less may be made to the division dean through the degree plan coordinator. Certificates will be awarded upon completion of program requirements. Students earning certificates may participate in commencement ceremonies.

HIGH ACADEMIC ACHIEVEMENT

All students who complete 12 or more quality credit hours during a regular (16-week) term with a current 3.5 GPA or above qualify for the Dean's List.

All students who complete **12** or more quality semester hours during a regular (16-week) term with a current 4.0 GPA qualify for the President's List.

INCOMPLETE GRADES/ CONTRACTS

Incomplete contracts must be agreed to and signed by the involved student, professor and appropriate division dean at the close of the term in order for a grade of "I" to be assigned. The contract must define the exact requirements the student is to fulfill in order to receive a performance grade. Requirements of incomplete contracts must be completed as specified in the contract, but by no later than the end of the following 16-week term. The contract may state that if the work is not completed as specified, the grade will be changed to a performance grade based on the quality and amount of work completed. Failure to remove an "I" as contracted will result in an "I" remaining on the permanent **record.**

NON-TRADITIONAL COLLEGE CREDIT (NTCC)

Various credit options enable persons who have acquired knowledge and skills in non-traditional ways to demonstrate academic achievement. Credit may be given for college-level experience as demonstrated by

acceptable test results regardless of the means by which the knowledge was acquired, except for college credit that **has** been previously granted. Students may also receive credit for some previous military training. Please note that a fee for test administration and transcript recording will be assessed. Without special permission from the vice president of instruction, no more than 18 hours of NTCC may be counted toward a degree.

For additional information regarding CLEP examinations, departmental examinations, advanced placement tests, the Customized Articulation Program, armed forces credit and credit for the completion of the Certified Professional Secretaries examination, contact the director of testing.

ADVANCED PLACEMENT TESTS OF THE COLLEGE BOARD (AP)

Beginning freshmen who have received college-level training in secondary schools and who present scores of three, four or five on the appropriate Advanced Placement Examination will be granted, on request, placement and credit for comparable courses at the college following the completion of six semester hours at the college. For more information contact the director of testing.

ARMED FORCES CREDIT

In addition to using credit earned at other institutions to achieve advanced placement at the college, students may also receive such standing by presenting evidence of having satisfactorily completed a program of military trainiig for which equivalent college credit may be given in accordance with the American Council on Education **Standards** and Recommendations. Armed Forces credit is evaluated by the degree plan coordinator.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

Most public supported colleges and universities have agreed to accept as transfer credits all CLEP credit granted by regionally accredited institutions using the criteria below. CLEP General Exams are not evaluated for credit at CCCC. Students planning to use CLEP credit to meet degree requirements at other institutions should check the requirements of the receiving institution. CCCC **uses** these criteria for CLEP Subject Examination evaluation:

1. CLEP credit shall be recorded on transcripts so as to be clearly recognized as credit earned by examination (CR) rather than through residency course work.
2. CLEP credits shall not be granted if they duplicate credits for courses already completed.
3. Credit is awarded for CLEP Subject Examination scores at or above the 70th percentile. Official score *reports* should be sent to the director of testing.
4. A $10 non-refundable fee will be charged for each CLEP examination in addition to the required fee for the CLEP examination.

CREDIT BY EXAM (DEPARTMENTAL EXAMS)

Credit for some courses may be granted upon successful completion of a comprehensive examination over the content of the course. A non-refundable fee is charged for each course examination. Students must be currently or previously enrolled or have earned credit at the college to receive credit by examination. Students may not request credit by examination in courses for which they are currently enrolled. Credit by examination may be attempted only once for any given course. The student must score at or above 70 percent to receive credit for the course.

Some credit by examination may require portfolio review.

OUTSIDE AFFILIATIONS

All learning experiences undertaken in affiliation with outside agencies are under the control and supervision of a faculty member or clinical coordinator at CCCC.

PORTFOLIO REVIEW FOR CREDIT

If a credit by exam requires portfolio review before credit is awarded the students must follow the steps outlined below.

1. Student must pick up institutional credit by exam/portfolio review form from the director of testing at Spring Creek Campus.
2. Contact one of the full-time faculty in the discipline for an appointment to review the student's portfolio.
3. The professor will review the portfolio to see if the coursework meets all the course requirements for which the student wants credit.
4. If the student's portfolio meets or exceeds the competencies, then the professor will complete the credit-by-exam form and will send the student to the director of testing.

If the student's coursework does not meet the competencies, he/she will be advised to take the course.

STUDENT RECORDS

PROCEDURE TO INSPECT EDUCATION RECORDS

Students may inspect and review their education records upon request to the registrar. Students should submit to the registrar a written request which identifies as precisely as possible the record or records he or she wishes to inspect. Contact the registrar for procedures on students' rights of inspection, review, and correction of educational records.

DISCLOSURE OF EDUCATION RECORDS

CCCC will disclose information from a student's education records only with the prior written consent of the student, except with regard to the law that provides for disclosure without consent as indicated below:

1. To school officials who have a legitimate educational interest in the records.
2. To other schools.
3. To certain officials of the U.S. Department of Education, the Comptroller General, and state and local educational authorities, in connection with certain state or federally supported education programs.
4. In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid.
5. If required by a state law requiring disclosure that was adopted before Nov. 19, 1974.
6. To organizations conducting certain studies for or on behalf of the college.
7. To accrediting organizations to carry out their functions.
8. To parents of an eligible student who claim the student as a dependent for income tax purposes.
9. To comply with a judicial order or a lawfully issued subpoena.
10. To appropriate parties in a health or safety emergency
11. As it relates to directory information, unless the student restricts directory information.
12. To the student.

DIRECTORY INFORMATION

Directory information may be released to the general public without the Student's consent. Directory information is defined as:

1. Student name
2. Student address
3. Telephone listing
4. Date and place of birth
5. Major field(s) of study
6. Participation in officially recognized activities and sports
7. Weight and height of athletic team members
8. Dates of attendance/enrollment
9. Most recent previous educational institution attended
10. Degrees and awards received

A student may request that directory information be withheld from the public by completing and filing a request with the Admissions and Records Office. This request should be submitted during the first twelve days of class of a regular semester, or prior to the census date of the current semester. If no request is filed, directory information will be released upon inquiry. Filed requests are valid until revoked by the student.

Directory information is the only part of a student's record that may be released without the student's prior written permission, except with regard to the law that provides for disclosure without consent.

REPEATING COURSES

Courses that may be repeated for credit more than one time are specified in the course description. Otherwise, courses may be repeated for the purpose of improving grade point average (GPA) only one time without permission from the appropriate academic administrator. Only the grade and credits earned in the most recent course repeated will be used in computing the grade point average and applied toward degree or program requirements. Grades of all

courses taken will be recorded on the student's transcript.

Veterans should consult the director of financial aid/veterans affairs before repeating any course.

SATISFACTORY PROGRESS

In order to encourage students to make progress towards their goals, the college has established minimum standards for satisfactory academic progress. After completing 18 quality hours, all students must maintain a minimum 2.0 cumulative GPA to be in good standing. Quality hours refer to the number of college-level hours a student completes at CCCC, excluding developmental, non-traditional and transfer work. These quality hours are used in calculating a student's GPA at CCCC.

Students who do not earn at least a 2.0 cumalative GPA will be placed on one of the following six academic actions:
1. Academic Warning
2. Academic Probation
3. Continued Enrollment on Probation
4. Academic Suspension
5. Second Suspension
6. Academic Dismissal

Students placed on any academic action, with the exception of academic warning, will be subject to Students on Academic Action Program (SOAAP).

ACADEMIC WARNING

Students with less than 18 cumulative quality hours at the college who have not earned a minimum 2.0 cumulative GPA will be placed on academic warning. Students on academic warning will receive written notification of their status each regular semester. Students on academic warning should **seek** advisement prior to continued enrollment; however, no registration restrictions apply.

STUDENTS ON ACADEMIC ACTION PROGRAM (SOAAP) PROCEDURE

Academic Probation

Students accumulating **18** or more quality hours with less than a 2.0 cumulative GPA at the college will be placed on academic probation and notified in writing of their probationary status. Students on academic probation will be required to obtain the signature of the adviser for academic action on their advising registration ticket prior to registration. These students are strongly encouraged to participate in SOAAP (see consequences for non-participation). Students who have registered early and have been subsequently placed on academic probation should meet with the adviser for academic action prior to the end of the add/drop period.

Continued Enrollment on Probation

Students may enroll for classes while on academic probation as long as they earn a **2.0** or better grade point average for the current semester. Students on probation must **see** the adviser for academic action prior to registration and will not be eligible for the registration signature waiver option. Students on continued enrollment on probation are strongly encouraged to participate in SOAAP (see consequences for non-partiapation). Students will be removed from academic probation when their cumulative GPA is 2.0 or better.

Academic Suspension

Students on probation who earn less than a 2.0 GPA for the semester will be placed on academic suspension. Students on academic suspension are required to participate in SOAAP, if they petition for re-enrollment for the next regular semester following the semester in which they were placed on suspension (see consequences for non-participation). Students may however,

petition for special permission to re-enroll.

Students who register early, through TEX, and are subsequently placed on suspension may be administratively withdrawn unless they petition for continued enrollment. Suspended students who petition and are granted permission to re-enroll must participate in SOAAP (see consequences for non-partiapation). Guidelines for re-enrollment are established by the Academic Progress Task Force. The Students on Academic Action Program is administered by the Academic Advising Center.

Second Suspension

Students who are suspended for the second time may not re-enroll for one calendar year and are not eligible to petition for re-enrollment during that calendar year.

Dismissal

A student who re-enrolls after the second suspension will be on academic probation status and will be required to maintain a minimum of a **2.0** GPA for each semester until the cumulative grade point average is 2.0 or better. The student who does not maintain a minimum 2.0 GPA for each semester until the cumulative GPA is **2.0** or better is subject to academic dismissal from CCCC. The Academic Progress **Task** Force will consider appeals after a period of one calendar year.

VETERAN STUDENTS

Veteran students who make unsatisfactory academic progress will be reported **to** the Veterans Administration as being **on** suspension at the end of the second consecutive semester when the cumulative GPA remains below 2.0. If a non-punitive grade is assigned to a veteran and is not converted to a punitive grade within a limited period of time, this will be reported to a VA Regional Office within 30 days of issuance of the

non-punitive grade, and benefits will be reduced accordingly Students who fail to meet these academic standards of progress will jeopardize eligibility to receive financial aid and/or other benefits such as those from the Veterans Administration.

STUDENT CLASSIFICATIONS

- Freshman: A student who has successfully completed fewer than 30 quality hours.
- Sophomore: A student who has successfully competed 30 or more quality hours.
- Full-time: A student enrolled for 12 credit hours or more in a regular semester or six credit hours or more in a short summer session.
- Part-time: A student enrolled for 11 credit hours or less in a regular semester or five credit hours or less in a short summer session.

STUDENT LOAD

A full-time student load is a minimum of 12 credit hours per 16 week semester. Students taking 11 credit hours or less per 16 week semester are classified as part-time students. Full-time status during the summer sessions or accelerated sessions may vary. For clarification, see "Student Classifications" or the registrar.

Students with disabilities should contact Services for Students with Disabilities Office at 881-5950 for student classification/load information.

Students may, with special permission of a full-time academic adviser, enroll for more than 18 credit hours during a regular session and seven hours in a summer session. Normally, permission will not be granted unless the student has a 3.0 cumulative grade point average and plans to carry no more than 21 hours during a regular semester or nine hours or less during a summer session.

TRANSCRIPTS

Requests for official transcripts must be made by the student to the Admissions and Records Office. A student's written permission must be on file in the Admissions and Records Office before transcripts are released (except for releasing to the student or another school.) To request a transcript, students may complete a transcript request form available from the Admissions and Records Office, or send a signed request letter addressed to the Admissions and Records Office.

VETERANS' CERTIFICATION

Veterans wishing to enroll and receive benefits should contact the director of financial aid/veterans affairs. In order to receive benefits, veterans must maintain satisfactory progress as stipulated by the Veterans Administration and college policy. All prior credit earned through civilian or military education must be submitted to the degree plan coordinator for transfer evaluation.

WITHDRAWAL FROM THE COLLEGE

Students may withdraw with a grade of 'W' through the end of the 12th week during the regular (16-week) semester or the end of the fourth week during the short summer session, by completing a form in the Admissions and Records Office. Students may also withdraw from the college by sending a written request for such action. The request must include the student's signature and the student's address, social security number, phone number(s), and course names and numbers. The date postmarked on the envelope will be the official withdrawal date. Students should contact their professor prior to initiating a drop or withdrawal. Withdrawal from the college should be student-initiated.

Students who are enrolled in a developmental course for TASP purposes may not drop/withdraw from their only developmental course unless they completely withdraw from all college courses. A *student who discontinues class attendance and does not officially withdraw will receive a performance grade for the* course. *Students who do not attend/ participate in TASP required mediation may be administratively withdrawn from all comes with no refund.*

STUDENT DEVELOPMENT

ACADEMIC ADVISING

Academic advising is an integral component of each student's success at CCCC and is an on-going process at the college. Any prospective student interested in talking with an adviser should contact the Academic Advising Department located within the Student Development Center at either campus. New students are advised through the Academic Advising Department prior to their first enrollment at CCCC.

Students are strongly encouraged to meet with an academic adviser each semester to prepare and update their degree plans and evaluate their academic progress.

Academic advising in the Student Development Center offers:

- Assistance for undecided and new students in selecting a field of study;
- Facts about classes and programs;
- Help with registering as a CCCC student and adjusting to college;
- Information about academic requirements;
- A source of information about procedures involving dropping a class, appealing grades, registration, etc.;
- A place to start when seeking to establish a degree plan; and
- Transfer information for those planning to attend a fouryear institution (Transfer Lab).

ACCESS

ACCESS (Accommodations at Collin County for Equal Support Services) is a comprehensive accommodation program for all CCCC students. Following ADA guidelines and 504 Rehabilitation Act of 1973, reasonable accommodations for students with disabilities are provided. Students with disabilities are encouraged to make an appointment with ACCESS at least one month prior to the beginning of classes. Services include: interpreters, notetakers, readers, test assistants and tutors.

All CCCC students are eligible for two free hours of tutoring each week through ACCESS.

A licensed educational diagnostician conducts psychological evaluations for students requesting them. Results are evaluated and recommendations are made.

The ACCESS office is located at SCC/G200. Please contact this office for services on all campuses.

ARTICULATION AND TRANSFER

A transfer lab is available to students on all three campuses located in the Student Development Center. The transfer lab has materials that help students transfer courses and/or programs from CCCC to four-year institutions. Check the Transfer Lab for up-to-date information on other institutions.

- Students are encouraged to meet with an adviser.
- Four-year institutions determine courses which will be required for degrees. Check the appropriate catalog for current degree plans.
- Some courses are designed for job entry and career preparation and may not meet degree requirements.
- Courses in developmental education and some courses in human development are designed for individual skill and personal improvement and generally will not transfer to a four-year institution.

- Check the specific college catalog for admission, housing, scholarship and financial aid deadlines.

When duplicating (repeating) a course at CCCC, check with the receiving institution on their policy for accepting course duplications.

RESOLUTION OF TRANSFER DISPUTES

CCCC works closely with other institutions to make the transfer process as smooth as possible. The Texas Higher Education Coordinating Board has established procedures to be followed when transfer credit for lower division courses is disputed. The individual courses covered by this procedure are defined by the Coordinating Board's guide entitled "Transfer of Credit Policies and Curricula."

Resolution of Transfer Disputes for Lower-Division Courses

The following procedures shall be followed by public institutions of higher education in the resolution of credit transfer disputes involving lower-division courses:

1. If an institution of higher education does not accept course credit earned by a student at another institution of higher education, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied.
2. The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Board rules and/or guidelines.
3. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the

institution whose credit is denied for transfer shall notify the Commissioner of the denial.

The Commissioner of Higher Education or the commissioner's designee shall make the final determination about the dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions.

A complete copy of the guide, including definitions, and Transfer Dispute Resolution Forms are available at CCCC from the director of articulation and transfer (881-5757) and the vice president of instruction (881-5801).

GUARANTEE FOR TRANSFER CREDIT

CCCC guarantees to its students, who have met the requirements of selected "Transfer Guides," the transferability of course credits to those Texas colleges and universities that participate in the Guarantee for Transfer Credit program. If such courses are rejected, the student may take tuition-free alternate courses at CCCC that are acceptable to the four-year institution. Special conditions that apply to the guarantee program are available on request.

This guarantee is designed for CCCC students who have made firm decisions about their major and the institution to which they plan the transfer. CCCC has worked with several Texas institutions to make transfer guarantees possible. Students should contact the director of articulation and transfer for further information.

"NEXT STEP" TRANSFER PROGRAM

"Next Step" is a program designed to assist students' transition from CCCC to four-year institutions by providing the following:

- List of course equivalencies for CCCC and four-year institutions
- Information on transfer of credit

- Directory listing addresses and phone numbers for four-year institutions
- Course and program transfer guides
- Library of catalogs for both out-of-state and Texas colleges and universities
- Degree plans for four-year institutions

It is the responsibility of the student to check with the college or university to which they wish to transfer for all requirements.

The student should know admissions requirements, specific department requirements, deadlines and courses that will satisfy a specific degree.

DUAL OPPORTUNITIES AGREEMENTS

Collin County Community College (CCCC)/Dallas County community College District (DCCCD):

Collin County residents may enroll in select technical programs offered by the DCCCD at in-county tuition rates. Likewise, Dallas County residents may enroll in select technical programs offered by CCCC.

Collin County Community College (CCCC)/Grayson County College (GCC):

CCCC and GCC have agreed to offer a select number of programs in a 1 + 1 arrangement. The 1 + 1 program allows students to enroll in prerequisite courses at CCCC and transfer to GCC to complete study withii selected majors. For more information contact the Academic Advising Department.

ASSESSMENT AND TESTING SERVICES

Testing Centers are located on all campuses for basic skills testing, proctoring and national testing. CCCC is an official testiig site for the SAT, ACT and Texas Academic Skills Program (TASP).

BASIC SKILLS ASSESSMENT

Basic skills assessment is the process each student must complete to identify strengths and/or weaknesses in the following areas:

- Reading
- Writing
- Mathematics

Basic skills assessment in reading is **required** for all first-time students. Students who wish to enroll in any of the following courses must be assessed.

- English English 0300,0305,0315 and 1301.
- Mathematics: Math 0302, Math 0305, Math 0310, Math 1314,1316,1324, 1332,1342 and 2312. Other assessments may be required based upon faculty and adviser recommendations.

Developmental Mathematics Assessment Policy

All students enrolling in mathematics courses are required to participate in assessment or show proof of prerequisites (a transcript validating that the prerequisite course has been passed within the last three years). A student may be placed in the developmental mathematics sequence (Math 0300,0305, 0310) by scores on Test I, II or III. A student is allowed to take the assessment twice before the mathematics entry level is established for enrollment during that semester. If a student decides not to enroll in a mathematics course during the semester of assessment, the student may retain this assessment score for one year, or may reassess at the beginning of the semester when enrollment is planned. However, once a student has been placed in the proper course and has enrolled in the developmental mathematics sequence of courses, the student must continue from the point of entry through MATH 0310 before enrolling in a college level math course.

English as a Second language

Students who are interested in taking English as a Second Language (ESL) as a non-credit course through Continuing Education must first take the CLOZE Test in the Testing Center. Students who are interested in taking ESL courses as a credit course must first take the ESL Assessment. Students are placed in the appropriate course based on scores earned on the assessment. Please see the current schedule of classes for dates and times of the testing session(s).

Generally, assessment results are valid for one year. The results of the basic skills assessment guides the adviser and student in proper course placement. These results are used for course placement only and do not affect the admission status of the student.

ASSESSMENT PRIOR TO TASP

Students required to participate in TASP (see "Texas Academic Skills Program," page 13) must take TASP in the semester they accumulate nine or more hours of college-level course work. If students have earned nine or more college-level credit hours at the end of a given semester, they must take TASP before they will be eligible to enroll in college-level courses at any Texas public institution of higher education. For most students this will mean taking TASP in their first semester. TASP registration bulletins are available from the Testing Centers and Information Centers at CCCC. Passing scores for the TASP are:
- Reading 230 (beginning with the September 16, 1995 test)
- Mathematics 230 (beginning with the September 16, 1995 test)
- Writing 220

OTHER TESTING SERVICES

The Testing Center also offers an extensive testing program in the following areas:
- Certified Professional Secretaries Examination

- CLEP - College-Level Examination Program
- ACT - American College Testing Program
- ACT - Automechanics Certification Examination
- SAT - Scholastic Aptitude Test
- PEP - ACT Proficiency Examination Program
- Credit By Exam Subject tests designed by CCCC faculty
- Correspondence Testing (A fee of $20 is required for test administration.)
- International Society of Certified Electronics Technicians (ISCET)
- FCC Certification
- MCAT - Medical College Admissions Test
- MECP - Mobile Electronics Certification Program

CCCC codes for these tests are shown below.
- CLEP (Spring Creek) 1951
- ACT (Central Park Campus) 4046
- ACT (Spring Creek Campus) 4209
- SAT (Central Park Campus) 44-646
- SAT (Spring Creek Campus) 44-702
- TASP (Central Park Campus) 137
- TASP (Spring Creek Campus) 138

Students requiring more information on the above programs should contact the director of testing.

CAREER SERVICES

Career Services offers a variety of opportunities for students to explore career options and to prepare for the world of work. Career Services is designed in a laboratory setting with three basic components:

I. Career Assessment and Exploration

The following resources are available in or provided by Career Services:
- Interest assessments'
- Personality and values assessments*
- "Discover" Computerized Career Guidance Program
- GIS Computerized Guidance Information System

- Career Resource Library
  - Occupational Information
  - Personal Development
  - Career Planning/Job Search
  - Video Cassettes
- Annual Career Fair
- Workshops/Seminars
- Mentor Program

*Effective March 1, 1991, a fee scale was implemented for all non-Collin County Community College students desiring to take career assessments. Please contact Career Services at Central Park Campus (A108, 548-6747) or Spring Creek Campus (G103, 881-5781) for additional information.

2. Job Grooming

The following resources are located in each lab
- Free Resume and Cover Letter Service: Word processing programs and a laser printer are available by appointment. Individual critiques of resumes and resume writing assistance is available.
- Interview Coaching
- Videotaped Interviews: Mock interviews with an individual critique help prepare students for actual interviews.

3. Job Placement/Transition Support

Placement services are limited to current students with a valid CCCC student ID card. The following resources are available:
- On-Campus Employment: A variety of positions are available on campus for students. Student jobs are classified as Federal Work-Study (FWS) or non-Federal Work-Study positions.
- Off-Campus Employment: The Job Location and Development (JLD) Office develops off-campus employment sites for students. A computerized job program is used to provide referral information to students. Part-time and full-time jobs are listed.

- Career guidance and job placement is available for graduates.
- Internships: An internship program provides on-going experiential learning beyond the classroom. Students receive "hands-on experience" in a professional work setting.

Applications for both on- and off-campus positions are available in Career Services.

GUARANTEE FOR JOB COMPETENCY

Graduates of the Associate of Applied Science **(AAS)** degree program or recipients of a Certificate of Proficiency, who are judged by their employer to be lacking in technical job skills identified as exit competencies for their specific degree program, will be provided up to nine tuition-free credit hours of additional skill training by CCCC. Special conditions that apply to the guarantee are as follows:

1. The graduate must have earned the AAS degree or Certificate of Proficiency beginning May **1993,** or thereafter, in a technical, vocational or occupational program identified in the college's general catalog.
2. The graduate must have completed the AAS degree at CCCC with 45 hours in residence, and must have completed the degree withiin a five year time span. All course work for the certificate must have also been completed at CCCC within a five year time span.
3. Graduates must be employed full-time in an area directly related to the area of program concentration as certified by the appropriate division dean.
4. Employment must commence within six months of graduation or certification.
5. The employer must certify, in writing, that the employee is lacking entry-level skills identified by CCCC

as program exit competencies and must specify the areas of deficiency within **90** days of the graduate's initial employment.
6. The employer, graduate, division dean, job placement counselor and appropriate faculty member will develop a written educational plan for retraining.
7. Retraining will be limited to nine credit **hours** related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan.
8. All retraining must be complete within a calendar year from the time the educational plan is agreed upon.
9. The graduate and/or employer is responsible for the cost of books, fees and other course-related **expenses.**
10. The guarantee **does** not imply that the graduate will pass any licensing or qualifying examination for a particular career.
11. The program can be initiated by employer or graduate by a written request to the vice president of instruction withii 90 days of the graduate's initial employment. For more information, please contact the director of career services.

COUNSELING SERVICES

PERSONAL COUNSELING

The college's counseling program is designed to support and assist students who have personal issues which impact their college experience. The college is aware of the interaction between development, emotional wellness and success in academic pursuits. Therefore, the Counseling Sevices offers accessible services in the areas of therapeutic intervention, prevention and support. Staffed by a Licensed Professional Counselor and supervised interns, Counseling Services provides individual personal counseling, facilitates various

support groups, sponsors personal growth **seminars** and encourages awareness of issues of concern to both traditional and non-traditional students.

Counseling addresses issues which include:
- Crisis intervention
- Depression
- Stressmanagement
- Anxiety
- Relationships
- Alcohol and other drugs
- Eating disorders
- Trauma recovery
- Assertiveness
- Griefissues

The counseling program is designed to offer crisis intervention, solution-oriented therapy assessment and referral services. The counseling staff adheres to ethical and legal standards and contact with the counseling center is confidential. There is no fee charged to students for counseling services. For additional information or assistance with counseling concerns, call **881-5779** or **548-6770.**

FINANCIAL AID

As a service to CCCC students, the Fmcial Aid Office administers a financial aid program which includes scholarships, grants, loans and part-time employment, and its officers are trained to assist students in realizing their goals.

A primary purpose of the college's financial aid program is to provide assistance for students who otherwise might find it difficult or impossible to attend college. All students are encouraged to apply for financial aid. CCCC does not forward Federal Grants, **Loans** and Work-study to students with a Bachelor's degree. Students should not withdaw from college for financial reasons without having first consulted the director of financial aid/veterans affairs. All financial aid students must

familiarize themselves with the standards of academic progress. For more information call CPC 548-6760, SCC 881-5760, or PRC 377-1760.

FINANCIAL AID PROGRAMS - FEDERAL/STATE ASSISTANCE

Federal Pell Grant

Eligibility for the Pell Grant is based on the financial strength of the student and/or the student's family as well as the student's enrollment status (range: $400-$2,340/year).

Federal Supplemental Educational Opportunities Grant (FSEOG)

The FSEOG provides assistance for eligible students who show financial need and are making satisfactory progress toward their educational god. Priority consideration is given to students demonstrating the greatest amount of financial need (range: $200-$4,000/year).

Federal Work Study (FWS)

Students demonstrating financial need may be considered for the work study program. Students are employed to work at various jobs on campus or at other district sites. They are allowed to work to earn the amount that is designated in their award package (range: $200-$3,240 year).

Federal Stafford Loan Program

This program permits a student to borrow money from a commercial lending agency without need for collateral. The federal government guarantees repayment of the loan and also pays interest on the subsidized amount borrowed until six months after the student graduates or ceases to be at least a half-time student. Eligibility is based on financial need, but for periods of enrollment beginning on or after October 1, 1992 students can get a Stafford Loan regardless of need that is, regardless of their or their family's

income. Variable interest rates are set each fiscal year but not higher than nine percent. (Students can borrow $2,625 for the first year of completion in the program of study, during the second year the student may borrow $3,500.)

Federal PLUS Loans

Federal PLUS loans are for parents who want to borrow money to help pay for their children's education. The loan provide additional funds for education expenses and, like Federal Stafford Loans, are made by a lender such as a bank, credit union or savings and loan association Credit rates will vary. Parents may borrow up to the cost of education.

FINANCIAL AID PROGRAMS - STATE ASSISTANCE

Texas Public Education Grant (TPEG)

The TPEG program is a state financial aid program designed to assist students attending state supported colleges. Students must show financial need and be making satisfactory progress toward their educational goals. The actual amount of the grant will vary depending on the availability of funds to the college, the student's family financial condition and other financial aid the student may be receiving (range: $100-$1,200/year).

Texas Public Education - State Student Incentive Grant (TPE-SSIG)

The TPE-SSIG is a state program that bases grants upon the financial need of the applicant. Eligibility is determined by the college, based upon financial need and the availability of funds (range: $200-$1,000 per year).
See the Financial Aid Office for more information.

INSTITUTIONAL POLICY OF ACADEMIC PROGRESS FOR FINANCIAL AID

CCCC recipients of financial aid must meet or exceed the standards set for satisfactory progress for all students. Those standards are:

Academic Progress Requirements

Federal law requires that to receive finanaal aid, students must be making satisfactory progress in their course of study. CCCC requires the following Grade Point *Average (GPA)* Requirements:

1. A student must maintain a 2.0 GPA for each semester or the combined summer sessions for which an award is approved.
2. A transfer student from a college outside of the district must have a cumulative 2.0 GPA as evidenced by an official academic transcript.
3. All transfer students or new applicants with less than a 2.0 GPA will be allowed to be awarded financial aid under the following conditions listed below
    A. Student must complete 12 hours and maintain a 2.0 GPA of the last 12 hours at CCCC before financial aid is granted.
    B. Student will be granted one semester on probation if Section A above is fulfilled.

Completion *Requirements:*

1. A student enrolled full-time (12 credit hours or more) must complete a minimum of nine credit hours for any semester or the combined summer sessions for which funding is received.
2. A student enrolled in six to 11 credit hours must complete a minimum of six credit hours for any semester or the combined summer sessions for which funding is received.
3. A student who is enrolled in one to five credit hours in any semester or

combined summer sessions must complete all attempted credit hours.

4. An "IP" or "I" in developmental courses will not satisfy the completion requirements.

5. Developmental courses will be included to determine the financial aid student's G.P.A.

6. A student who fails all of their courses within a semester or term or withdraws from all classes will be immediately suspended from financial aid the next semester or term enrolled at CCCC.

Failure to Meet the Standards of Academic Progress

In the following provisions, probation or suspension means financial aid probation or suspension, not academic probation or suspension.

1. Following the first semester in which the above standards of academic progress are not met, the student will be placed on probation or suspension.

2. If the student's current GPA is at least a **2.0**, but his/her cumulative GPA **is** below a **2.0**, financial aid will be awarded on an extended probationary status.

3. The student who fails to meet the standards of academic progress during the semester of attendance while on probation will be placed **on** suspension and denied further funding.

4. During the first period of suspension, the student must enroll at least half-time for one semester at CCCC, pay the expenses related to that enrollment and maintain the standards of academic progress **to** re-establish eligibility for financial aid.

5. If failure to meet satisfactory progress results in a second suspen-**sion** from financial aid, the student must enroll at least half-time for the equivalent of two semesters at the college, pay the expenses related to

that enrollment, and maintain the standards of academic progress to re-establish eligibility for financial aid.

6. Following any period of suspension, the student will again be eligible for funding on a probationary basis for one semester or combined summer session(s).

7. If failure to meet satisfactory progress results in a third suspension from financial aid, no additional aid will be awarded. Exceptions may be petitioned to the dean of students.

Notification

A student who is placed on probation or suspension may be notified in writing.

Incremental Measurement of Progress

Academic progress of recipients will be measured three times a year – following the fall, spring and summer semesters.

Maximum Time Period for Completing Educational Objectives

1. Students receiving financial aid funds will be expected to complete their educational objective or course of study within a reasonable period of time. The maximum credit hour limit for CCCC is 75 credit hours (including all transfer credit), excluding developmental education courses.

2. Funding beyond the maximum credit hour limit may be approved by the Financial Aid Task Force and must be based on mitigating circumstances.

Appeal Process

A student who has been denied financial aid because of a failure to meet any of the criteria of the standards of satisfactory academic progress may petition to the Financial Aid Appeals Task Force by writing a letter explaining any mitigating circumstances. The Financial **Aid** Appeals Task Force will evaluate the petition and decide

whether to award the student financial aid. The following provisions must be included in the appeal letter:

1. Clearly state any mitigating circumstances (explain why you should be an exemption from the **2.0** GPA and/or 75 credit hour limit).

2. Official academic transcripts from all colleges, universities and/or trade schools attended are required. These must be provided even if you withdrew from all classes.

3. Documentation to provide support of your appeal (for example, verification from your doctor, copy of death certificate, etc.) if applicable.

4. Letters from people to support your request (for example, instructors, counselors).

5. Information requested from Items **1** and **2** must be submitted before the Task Force will review your appeal; Items **3** and **4** are optional.

The student's appeal must be submitted to the Financial Aid Office no later than the Friday before the last Wednesday of the month. The Task Force will meet the last working Wednesday of each month. The Financial Aid Office will contact students of the Task Force's decision in writing within seven working days of the scheduled meeting.

Effects on Funding

1. Certain courses not considered for funding are:
   a. Courses taken as an audit, and
   b. Courses taken outside the degree plan; however, developmental courses, if required as a prerequisite to enable a student to successfully complete a student's educational goal or TASP requirements, may be considered for funding.

2. Credit hours earned by a placement test will not be considered for funding.

3. All courses for which an "I", "IP", "F" or " W grade will not be treated as completed courses.
4. Repeated courses may be considered for funding if the student received a passing grade of " D or better when the course was first taken.
5. Financial aid may be used for developmental courses that are prerequisites for credit courses and mandated TASP requirements.

FINANCIAL AID PROGRAMS-SCHOLARSHIPS

Scholarships at CCCC are generally awarded on the basis of academic achievement, need, merit, special population or a combination of each. Scholarships are designed to encourage and assist students in pursuing academic excellence, merit and leadership roles. All students are encouraged to apply

Some of the Foundation Scholarships available are: Ann Eliza and Clyde Miller, Carole A. Anthony Performing Arts, Dr. John H. Anthony Endowment, Dr. Walter L. Pike Memorial, Dr. Richard H. Sewell Memorial, Gladys Young Music, Botsford, Christ United Methodist Men's Club, Patty Burton Memorial, Special Population-Disabled/First Generation Student/Single Parent/Displaced Homemaker, Collin County Legal Secretaries Association, Trustees Merit-based for Continuing Student, Trustees Merit-Based for First Year Student, Cooperative Work Experience Student of the Year Award, Eric Funk, Jackie Dooley Memorial Scholarship for Learning Disabled Students, Frito-Lay Endowment, HCA Medical Center of Plano Endowment, John Ferguson Endowment, Foundation Scholar's Program, Louise M. King Endowment, Performing Arts, Rodeo Club, Trustee-Merit Based and the E.L. Roy-H.P. Cohick. Athletic Scholarships: Men's and Women's Basketball, Men's Baseball, Men's and Women's Tennis,

Women's Volleyball. **CCCC** Departmental Scholarships: Music, Photography, Speech, Theatre. CCCC Scholarships; Botsford/J.C. Penney, Christ United Methodist Church Men's Club, Collin County Bar Association, Eric Douglas Funk Music, Jack Hatchell Public Administration/Engineering.

Scholarships information is located in the Financial Aid Office and the scholarship bulletin board.

FINANCIAL AID PROGRAMS-OTHER

Tuition Waivers

The State of Texas offers a number of tuition exemption programs. These programs provide exemptions from certain tuition and fee charges in public colleges. Applications and information about these tuition waivers may be obtained in the Financial Aid Office. Some of the tuition waivers are:
- Hazlewood Act
- Honor Graduates
- Orphans of National Guard Members
- Blind/Deaf Students
- Children of Disabled Firemen and Peace Officers
- Children of Prisoners of War or Persons Missing in Action
- Firemen Enrolled In Fire Science Courses
- Ad Valorem

Veterans' Educational Benefits

CCCC is fully approved for training of veterans under the provision of the G.I. Bill (Public Laws 346, 550, 16, and 89-358). Veterans and dependents of veterans should apply to the Financial Aid/Veterans Affairs Office before the school term begins. Paperwork should be filed six weeks prior to registration, if possible. This gives the VA Regional Office time to process the papers and to communicate with the veteran prior to registration.

Veterans must maintain satisfactory progress as stipulated by the Veterans Administration and college policy All prior credit earned through avilian or military education must be submitted to the degree plan coordinator for transfer evaluation.

ADDITIONAL FINANCIAL AID INFORMATION

Many of the financial aid programs listed are under constant state and federal review and are subject to change.

Students may apply for financial aid simply by completing a free application for Federal Student Aid (FAFSA) which is available in the Financial Aid Office and in most high school counseling offices. The priority deadline is as follows:
- Fall semester – June 1
- Spring semester – Nov. 1
- Summer semester – March 1

HEALTH SERVICES

The college is dedicated to the total well-being of its students. Health fairs, alcohol and drug awareness programs, aerobic and other fitness courses are geared toward student wellness. Although the college does not employ a nurse or physician, first aid kits are available at the Information Center, Fitness Center, Physical Plant, Student Activities Office and division offices. Should a student have a psychological or physiological problem, he or she should consult the dean of students for assistance.

IMMUNIZATIONS

Due to recent measles outbreaks, the Texas State Board of Health is requesting students born after Jan. 1,1957, confirm appropriate immunizations or immunity to the following diseases: tetanus/diptheria, mumps, measles and rubella.

HUMAN DEVELOPMENT

Credit and non-credit courses and seminars are available for students wishing to enrich their development in areas such as study skills, leadership development, personal development and career planning.

PROMISE PROGRAM

The PROMISE Program is available to assist displaced homemakers/single parents in coping with major life transitions due to separation, divorce, widowhood, spousal disability or single parenthood. The PROMISE Program provides comprehensive support services aimed at helping the displaced homemaker/single parent to re-enter the work force and to contribute fully to the well-being of their family and community.

The program provides services that include:
- Vocational training and educational advancement
- Vocational assessment and career counseling
- Personal counseling (individual and group)
- Life skills workshops
- Educational assessment
- Information and referral to social service agencies
- Job readiness and re-employment preparation
- Support network and support groups
- Textbook lending library

Please call the PROMISE Program for more information at 548-6851 or 881-5791, ext. 6851.

STUDENT ACTIVITIES

PROGRAMS

We believe that your active involvement in your educational experience greatly increases your likelihood of having a successful and rewarding college **career**. All students, therefore, are encouraged

to participate in co- and extra-curricular activities that will foster social, cultural and intellectual growth.

The Student Activities Office offers programs such as LeaderQuest, entertainers, social and cultural events, guest speakers, field trips, etc. In conjunction with CCCC's laboratory component, many student activities programs integrate in-class material with events outside the traditional classroom environment.

A variety of registered student organizations, including the Student Advisory Council, offer opportunities for involvement, and students are encouraged to join these or form new groups that meet their interests. Student Activities staff members are available to help students become involved in college programs and activities. Contact the Student Activities Office (548-6788 or 881-5788) for more information.

INVOLVEMENT IN INSTITUTIONAL GOVERNANCE

You are encouraged to become involved with institutional governance by expressing your thoughts and feelings about college policies, procedures and activities. The president, vice presidents and other administrators of the college are interested in your reactions, opinions and ideas.

Through participation in student advising council, representation on college task forces, participation in V.I.P. Luncheons and Dinners, and personal conversations with administrators, students can communicate their **needs**, desires and proposals for change.

In addition, students are encouraged to form relevant organizations and special interest groups to further their **own** interests and become involved with the college through co- and extra-curricular activities.

See the current CCCC *Student Handbook* for detailed information on how to get involved in student activities

and organizations.

STUDENT CODE OF CONDUCT

CCCC students are both citizens and members of the academic community. As citizens and students they enjoy the same freedom of speech, peaceful assembly and right of petition that other citizens enjoy As members of the academic community, they are subject to the obligations which are theirs by virtue of this membership.

The college expects its students to conduct themselves in such a way as to reflect credit upon the institution they represent. There are two basic standards of behavior **required** of all students:
1. They shall adhere to college policies and municipal, county state and federal laws; and
2. They shall not interfere with or disrupt the orderly educational processes of the college.

Students are entitled to only those immunities or privileges by law as enjoyed by other citizens. For more information, see the CCCC Student Handbook or contact the Dean of Students' Office.

STUDENTS WITH DISABILITIES

All campuses are accessible to all individuals with disabilities. Sign language interpreters, adaptive equipment, and academic and personal advising are provided to make college life more convenient.

The Special Needs Center, located within the Learning Resources Center, is equipped with low-vision readers, a scanner and a voice synthesized speech program on IBM-compatible personal computers.

Contact the ACCESS office, Spring Creek Campus G200, 881-5898, 881-5950/TDD for information about CCCC's facilities and specialized services.

EDUCATIONAL SERVICES

BOOKSTORE

The bookstore is an auxiliary enterprise of CCCC. Textbooks are selected by the faculty and ordered through the bookstore. Book prices are established by the book publishers and change at their discretion. The majority of textbooks are billed to the college at the selling price less 25 percent. Used books, sold at 75 percent of the new price, are purchased by the bookstore whenever available.

TEXTBOOK AND LANGUAGE TAPE REFUNDS

Students who change courses or select the wrong books and Language tapes may return them for a refund under the following conditions.
1. Books or language tapes are returnable during the first 10 class days of the fall and spring semesters and the first five days of the summer semesters.
2. Students must have their *original* cash register receipt to receive a refund.
3. Students should not write in new books until they are certain they have the correct books. New books which have been written in will not receive a full refund.
4. Books and cassette tapes in shrink wrap (plastic or vinyl packaging) must be returned unopened in the original package. Books cannot be accepted if the shrink wrap has been removed.
5. Defective books missing pages, etc., will be replaced at no charge during the semester in which they were purchased.

TEXTBOOK SHORTAGES

The bookstore makes every effort to have the required textbooks by registration week. For various reasons, there may be shortages out-of-print or out-of-stock by the publisher, unexpected increases in enrollment, late placement of orders by the faculty, missing shipments and human error. Every attempt is made to minimize these problems.

TEXTBOOK BUYBACK

Books are bought back every day at their current market value. Fifty percent of the original purchase price, subject to the following conditions, will be paid during final exams of each semester:
1. Books must be in clean, salable condition.
2. Books must be required for use by the college during the next semester.
3. Books must be current editions.
4. Workbooks, lab manuals, study guides, mass-market paperbacks, books with torn covers, excessive markings and water damage, books with perforated pages and books containing diskettes cannot be bought back.
5. Books cannot be bought back if the store is overstocked, or if needs for the following semester have been filled.

The faculty not the bookstore, decide whether or not each textbook will be used again. Unless an instructor tells the bookstore he/she will use that title again, the bookstore must assume it will not be used. Books falling into this category can be bought from students only at used wholesale prices. Old editions have no value and cannot be resold even to wholesalers. Some courses at CCCC are not taught every semester and students may wish to sell their books when that course is offered again, provided the faculty member requires the same books.

CHECK CASHING

Checks may be cashed in the amount of $10 with or without a purchase. Discover, MasterCard, VISA, checks and cash are accepted as payment. Students must show their CCCC student ID card to write or cash checks and to make credit card purchases.

CHILD DEVELOPMENT CENTERS

CCCC provides Child Development Centers at the Spring Creek and Central Park campuses. The SCC center enrolls children in morning and full-day programs. This center serves as a laboratory site for the Child Development Department, therefore, enrollment during the day is limited to Monday-Friday only.

The center at CPC offers more flexibility with enrollment, offering morning, afternoon, and full-day options to fit student schedules. The program is open to children of students, faculty/staff and to the community as spaces are available.

The children's program is designed to promote physical, social, emotional and cognitive development in a nurturing and supportive environment. Daily activities are based on individual children's needs and interests.

For more information, please call the following numbers:
CPC (214)548-6852
SCC (214) 881-5945

COOPERATIVE WORK EXPERIENCE

Cooperative Work Experience (CWE) at CCCC includes not only the traditional vocational/technical cooperative education opportunity but is also available in academic internships. Additionallp service learning opportunities are available in non-paid volunteer community service projects.

CWE is a unique plan of education which integrates classroom study with planned and supervised work experience. This educational pattern allows students to acquire practical skills as well as to be exposed to the reality of the world beyond the boundaries of the campus, thus enhancing the self-awareness and direction of the participants.

To be eligible for Cooperative Work Experience at CCCC, students must be working toward a degree or certificate, have a minimum grade point average of **2.5** and be concurrently enrolled in another credit course at the college.

Students who are presently employed may use their current job if it relates to their ultimate career goal. Students who are seeking related work experience may utilize the CWE placement service to find a job that can be used to receive college credit. Working a minimum of **20** hours per week for a 16-week semester allows a student to earn three credit hours toward a degree. Please call **881-5735** or **548-6730** for additional information.

STUDENTS WITH EDUCATION AND EXPERIENCE (S.E.E.)

S.E.E. is a cooperative education based retention program for students who are at risk of leaving the educational system. It features an innovative curriculum, a mentoring program and a career tracking plan. S.E.E. is open to all qualified students whose educational and career goals allow for enrollment in a cooperative education class. CCCC is committed to providing professional growth through experience based education.

SUCCESS

SUCCESS is a cooperative work experience program that unites classroom study with community service. Students approved for the program receive a stipend for volunteer, community service projects. The program helps to develop a unique linking system which bonds students to their communities and increases their civic knowledge.

DEVELOPMENTAL EDUCATION

Developmental Education courses are designed to provide students with the basic skills needed to achieve success in college-level courses and to pass TASP. Currently, courses are offered in math, reading, writing and ESL. The instructional formats vary and include individualized, self-paced and lecture approaches. If basic skills assessment scores indicate that a student would be better prepared by taking a developmental education class prior to enrollment in a collegelevel class, the student must enroll in the developmental class.

Developmental classes and other support programs are specifically designed to help students gain the skills and self-confidence needed to successfully complete credit courses. Since the fall of **1989,** the implementation of Texas House Bill **2182** (TASP) mandated that students who are not ready for college-level courses must take developmental classes. Each of the developmental disciplines (math, reading and writing) is designed to provide the skills tested on TASP.

In addition to the courses, developmental education also offers study skill seminars which teach students basic study and test-taking skills. A schedule of these free seminars is published each semester. Copies of the schedule may be obtained at the Information Center at all campuses. Please call **881-5720** for additional information.

EXPERIENTIAL LEARNING

A variety of learning laboratories are in use at CCCC to facilitate experiential leaming by students.

BEHAVIORAL SCIENCES LABORATORY

Behavioral Science laboratories are located on each campus. They are designed to provide students with the opportunity to replicate and/or conduct research projects in psychology and sociology. The labs provide students with an environment in which to conduct practical applications of theoretical principles from course work as well as opportunities to conduct original projects to promote the use of the investigative methods of the behavioral sciences.

The laboratories are equipped with computers, audio-visual equipment, biofeedback equipment and other state-of-the-art equipment. They include an observation room that connects to the classroom/research laboratory

MACINTOSH WRITING CLASSROOM

Several sections of English **1301** and **1302** are taught in the Macintosh classrooms located on the second floor of the Spring Creek Campus LRC, the second floor of the Central Park Campus and the second floor of the Preston Ridge Campus. Students in these classes use software including WordPerfectTM, InternetTM, AspectsTM and Correct GrammarTM.

MATH LAB

The Math Lab is provided for students enrolled in college and developmental math courses. In addition to professional and peer tutoring, students have an opportunity to use videos and computers to reinforce classroom lectures. Each semester the Math Lab hours are posted in rooms J228 at SCC, B336 at CPC, and ALC at PRC.

STUDENT MEDIA WORKSHOP

A video production and editing facility is available for course-assigned student projects. Computer generated special effects may be added as well as titles and credits. Two studio-quality cameras are available as well as equipment for special effects and graphics. A Commodore Amiga 2500 with Video Toaster and audio-dubbing capabilities enables students to produce professional-looking videos.

WRITING CENTER

The Writing Center is staffed by instructors to help students with writing assignments. Appointments are recommended but drop-in students are also welcome. The Writing Center is in the LRC.

INTERCOLLEGIATE ATHLETICS

The college offers intercollegiate athletic programs in men's basketball, baseball and tennis, and in women's basketball, volleyball and tennis. These teams are affiliated with the National Junior College Athletic Association (NJCAA) and participate in regional events which may lead to national competition. To participate in intercollegiate athletic programs at CCCC, students should contact the athletic director at 881-5888 for more information.

INTERDISCIPLINARY HONORS PROGRAM

The Honors Program at CCCC is designed to provide a challenging learning experience for students with advanced academic skills. In small classes (maximum: 15 students) advanced and highly motivated students engage in discussion, research and creative projects geared to their special abilities and commitment to learning. In the honors forum of thoughtful and communicative participants, interaction among students is fundamental. Among other benefits to students are an honors course designation on the transcript and possible qualification for honors scholarships.

Students are usually recommended to honors courses by professors. However, any disciplined student with accelerated skills is invited to consider the program and may enroll in honors courses with the instructor's approval.

Inquiries should be directed to the chair of the Honors Task Force at 881-5965 or the Academic Advising Center 881-5778.

INTERNATIONAL STUDIES PROGRAMS

The college offers international study programs in a variety of fields to help prepare students for the increasingly internationalized world. International programs (some offered in alternate years) include the following:

BRITISH ISLES PROGRAM

Students spend three to four weeks in Britain and earn college credit through the study of literature, photography and other varied topics.

INTERNATIONAL ARCHAEOLOGY PROGRAM-BELIZE

Offered in January and June, this program gives students experience in archaeological excavation and cultural anthropology on the Caribbean coast of Belize, Central America. Students enroll for three credits in Anthropology (Archaeological Internship). No previous experience is required.

INTERNATIONAL INTERNSHIPS

From time to time the college may offer students opportunities to earn credit by working abroad in fields such as photography or child care. Interested students should inquire at the office of the appropriate division dean.

INTERNATIONAL MARINE BIOLOGY PROGRAM

An increasing awareness of the global importance of the ocean environment has led to the establishment of this program which features a one-week field trip to selected coral reefs. Students earn four credits for enrolling in Marine Biology (BIOL 1470) and for participating in its field trip which emphasizes reef ecology and the biology of reef organisms.

MONTH-IN-GERMANY/AUSTRIA PROGRAM

The Month-in-Germany/Austria program offers students seven hours of college credit in German language and humanities. Participants spend one week in a major German-speaking city, followed by three weeks in a dramatic Alpine setting near the Austrian border.

MONTH-IN-PARIS PROGRAM

This program offers a combination of study and travel in France for students interested in the Fmch language and western world art. Students live and study in Paris during the month of July and earn seven college-level credits. Offered biennially since 1987, the program requires no previous language training.

SPANISH LANGUAGE PROGRAM

Involving intensive language study in Mexico or Spain, the Spanish Language Program was offered for the first time in the summer of 1992. Students earn transferable college credit, study Spanish with native teachers and develop first-hand knowledge of Hispanic culture.

LEARNING RESOURCES CENTERS (LRC)

The Learning Resources Centers consist of the Alternative Learning Centers (ALC), the Libraries and the Media Centers at Central Park, Spring Creek, and Preston Ridge Campuses. Media Services are also available at the Courtyard Center for Continuing Education. Wide area network provides access to the latest in electronic databases, Internet, and instructional and media computer technology. Materials within the LRCs include books, periodicals, microforms, and media which are accessible using the online public access catalog.

The Alternative Learning Centers (ALC) contain multidiscipline, instructional computing laboratories and classrooms, utilizing multimedia software on Power Macintosh and PC platforms, as well as software develop ment and authoring. The ALC also manages instructional television which includes distance learning, telecourses,

teleconferencing, and College TV. The science place provides students with software and models for hands on learning in anatomy and physiology. Computer classrooms designed to teach English Composition and a multi-discipline classroom at SCC allow faculty from Humanities, Foreign Languages, and Developmental Education to teach using technology.

The Libraries offer reference, interlibrary loan, library instruction, collection development, and circulation services within an automated environment. Internet and CD-ROM services give users access to information in a wide variety of fields, including business, humanities, social sciences, education, the sciences, and engineering.

Media Centers focus on video production and media distribution, recordings, satellite systems, student media workshop, tapings, teleconference d o w n l i i, and classroom setups. The Media Center manages the technical operation of College TV and Distance Learning Studio. Instructional videos and audio-visual equipment for classroom and student use are available from the Media Services desk. Requests for equipment should be made 24 hours in advance. Instructional videos are available for In-Library-Use only, but a large collection of videos are available for check out at the circulation desk.

Cumulative collections of the LRCs include:

Books — 118,244
Periodical titles — 675
Videotapes — 5,200
Music Recordings — 2,140
Books on Cassette — 660
CD-ROM Database — 17

SAFETY AND SECURITY

Safety and security is a concern for all members of the college community including students, college employees and visitors. Possession of firearms or other lethal weapons on campus or at college-sponsored events is illegal, except for commissioned police officers as prescribed by law.

In compliice with the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226) and Texas H o w Resolution 2253 and Senate Resolution 645, CCCC forbids the unlawful manufacture, distribution, sale, possession or use of illegal drugs, alcoholic beverages and tobacco products on campus or at college sponsored events. For more information, refer to the current CCCC Student Handbook, or contact the dean of students or the director of human resources.

REPORTING EMERGENCIES

If an emergency should arise on campus, report it to the Information Center receptionist located on the first floor of each campus. Contact faculty within the classroom if a problem should arise during a class. Emergency medical services will be notified for students when necessary.

If an emergency arises at an off-campus location, immediately notify a faculty member, who will then notify the building site supervisor.

EMERGENCY CLOSING OF THE COLLEGE

If classes have been cancelled, local radio and television stations will make the announcement. A decision to cancel classes will usually be made by 3 p.m. for evening classes and by 6 a.m. for day classes.

STUDENT WELLNESS

FITNESS CENTER

A major emphasis of the Physical Education and Dance department at CCCC is to encourage lifetime fitness. Students may use the Fitness Center at either Central Park Campus or Spring Creek Campus during the times posted. The Central Park Campus Fitness Center consists of locker room facilities; a weight training room with treadmills, Stairmasters™ rowing machines, weight machines and bicycle ergometers; a dance studio; and three racquetball courts.

The Spring Creek Campus Fitness Center consists of the main gymnasium with rubber running track; weight training room with Universal Super Circuit single station weight machines, free weights, treadmills, Stairmasters™, rowing machines and bicycle ergom-eters; dance studio; four racquetball courts; locker room facilities with sauna; eight lighted tennis courts; outdoor running trail; and playing fields.

Before beginning a new exercise regimen, students, faculty, staff and community members are encouraged to take a fitness assessment in the Wellness Center. Contact the wellness coordinator to set up an individual wellness program.

Collin County residents who are not enrolled in classes at the college will have the opportunity to take advantage of these facilities at night and on weekends with a $45 per semester paid membership and a $2 non-refundable, initial ID card fee. Contact the Fitness Center at CPC/E121, 548-6891 or SCC/A103, 881-5848 for further information and hours of operation.

INTRAMURALS

The intramural sports program includes volleyball, basketball, flag football, softball, soccer, bowling, golf, racquet-ball and tennis. These are an integral part of the total physical education program at CCCC. For information, contact the director of intramurals, 881-5848 or 548-6891.

TELECOURSES

CCCC offers a variety of credit courses through instructional television from the Alternative Learning Center (ALC). Registration for these courses is during regular registration and students are required to attend an orientation session in the LRC for each telecourse taken.

AU courses apply toward associate degree requirements, many fit into certificate programs, and the majority fulfill requirements for BA and BS degrees. Consult the current Schedule of Classes for available telecourses.

CONTINUING EDUCATION AND

Collin County Community College is dedicated to presenting dynamic and flexible educational programs to the community throughout our geographical area.

The college strives to make programs readily accessible and bring learning opportunities to the public as conveniently and economically as possible.

Learning goes beyond initial career preparation, traditional concepts of full-time study and program degree completion and encourages education renewal. CCCC endeavors to provide learning opportunities for people of all ages to develop their personal and professional potential, upgrade job-related skills and prepare for informed participation in the civic, cultural and political life of the community

The college, through the Continuing Education Division, can provide services which encompass a broad range of purposes:

- addressing adults' career needs by assisting them to cope with the explosion of new information and techniques, work toward job advancement, or move into a new career;
- providing job-specific customized training for use by business and industry with curricula relevant to needs of the local economy;
- contributing to the growth and development of local business and industry through economic development activities on local, state and national levels;
- responding to the non-academic or extra-curricular interests and needs of adults by providing a sufficient number of personal development courses;

- facilitating the interaction between the college and the community;
- expanding awareness and understanding of public issues affecting the local, state and national economy.

Each of these specific purposes within the Continuing Education Division relates to the purpose of promoting the philosophy of "lifelong learning" at CCCC.

CCCC's flexible continuing education program offers courses, programs and conferences geared to professional development. Course material is adapted to the needs of the particular groups of participants.

CONTINUING EDUCATION COURSES

The Continuing Education Division publishes a schedule each semester with approximately 600 courses pertaining to business and professional development, personal development and extra-curricular activities. Conferences, seminars and workshops on special topics are also offered throughout the year.

CONTINUING EDUCATION UNITS

The Continuing Education and Contract Training offices may offer courses which award credit or Continuing Education Units (CEU), depending upon the offering. CEUs are nationally recognized to record satisfactory completion of certain approved occupationally related programs. Courses are offered throughout the county at a variety of sites depending on the types of courses and availability of facilities.

For more information on how the Continuing Education Division can be

your connection to lifelong learning, please call 985-3750 in Plano or 548-6790 in McKinney

CONTRACT TRAINING

The Contract Training Office responds immediately to the current needs of business and industry by delivering job specific customized in-house training. This may mean entry-level or a "quick start" training of employees of new and expanding business and industry, re-training of employees for new technological developments or extension of technical assistance to business and industry in the essential managerial functions of planning, organizing, implementing and controlling.

COLLIN COUNTY LAW ENFORCEMENT ACADEMY

The Law Enforcement Academy received academy status in June of 1990 from the Texas Commission of Law Enforcement Officer Standards and Education (TCLEOSE). Working with the Collin County Sheriff's Office and other law enforcement agencies, the Law Enforcement Academy provides quality training programs by and for experienced law enforcement officers.

These courses provide basic and advanced training designed to enhance both the technical skills as well as the professionalism of law enforcement officers. The Law Enforcement Academy provides TCLEOSE training credits as well as Continuing Education Units to all students successfully completing program requirements.

FIRE PROTECTION TRAINING

Collin County Community College recognizes the demand for specialized training for fire and rescue personnel.

SPECIAL PROGRAMS

Fire suppression and rescue courses are designed for paid and volunteer firefighters. Experienced instructors represent area fire departments and are certified by the Texas Commission on Fire Protection. Classes are offered at a reasonable cost with convenient registration.

COLLIN COUNTY TRAINING AND EMPLOYMENT PROGRAM (CCTEP)

The CCTEP is a joint effort between the college and the Job Training Partnership Act (JTPA). Collin County has been designated a JTPA Service Delivery Area with CCCC as the primary service provider. Eligible persons who are needing to enter or re-enter the work force may qualify for employment training services. Special services also are provided to youth (ages 14-21), dislocated workers, welfare recipients, single parents and displaced homemakers. Contact the CCTEP Office at (metro) 569-4650 in McKinney for more information.

COLLEGE AND COMMUNITY DEVELOPMENT

The College and Community Development Division supports the entire college by promoting and facilitating delivery of college programs and services to the community. The division serves as an economic resource for the community. The college created the Business and Community relations Office to assist in reaching out to the community as a part of CCCC's coordinated marketing strategy

GLOBAL EDGE TECH PREP CONSORTIUM

The needs of Collin County employers for skilled workers are changing dramatically. To assure that students obtain the technical and lifelong learning skills required for immediate and continued employment, CCCC, local public school districts and area businesses have formed a consortium to transform education

Global EDGE will provide students with appropriate, flexible and seamless programs throughout the public school and higher education systems. The learning environment will reflect work place experiences and work transition programs will provide students with on the job learning experiences and smooth transitions from school to the workplace.

CCCC and Tech Prep consortium partners have developed Tech Prep programs that provide high school students with the opportunity to obtain free college credit while preparing for the world of work. These programs now include: Electronics Technology, Computer Aided Drafting and Design, Criminal Justice, Early Childhood Development, Office Administration and Management Development. New programs are created based upon occupational demand and interest. Students may elect to complete a Tech Prep program upon graduation from high school, or continue at the community college in pursuit of a certificate, applied associate degree, or an enhanced skills certificate. These degrees will

provide students with nationally-recognized credentials that will place them in high-skill, high-wage jobs. For more information, call 548-6723 in McKinney or 881-5790, ext. 6723 in Plano.

SMALL BUSINESS DEVELOPMENT CENTER (SBDC)

The SBDC, a partnership between the U.S. Small Business Administration and CCCC, aims to promote the economic health and success of small businesses in Collin County. The SBDC provides free, in-depth small business counseling as well as seminars and workshops on topics relevant to established, new and potential small business owners.

DEGREE PROGRAMS

Program	Associate of Art Emphasis in:	Associate of Science Emphasis in:	Associate of Applied Science	Certificate
Anthropology	•			
Applied Graphic Design Technology				
Graphic Design Option			•	
Multimedia Option				
Animation				•
Computer Graphics				•
Digital Photography				•
Illustration				•
Multimedia				•
Production *Art*				•
Art	•			
Biology		■		
Business Administration	•			
Chemistry				
Child Development				
Early Childhood Administrator			•	•
Early Childhood Educator			•	•
Computer Aided Drafting and Design				
Autocad				e
Commercial Interior Design			•	■
Electronic Design Option			•	■
Manufacturing Option			•	•
Computer Information Systems				
Business Programming			•	
Computer Systems			■	
Computer Operating Systems				•
Microcomputer Applications			•	
Computer Applications				•
Information Systems Management				•
Networking and Telecommunications				•
Computer Science		•		
Software Development			•	
Assembly Language Programming				•
Business Programming				•
C Programming				•
Programming for Educators				-
Criminal Justice	•			
Corrections			•	e
Law Enforcement			•	•
Dietary Manager				•
Drama	•			
Economics	•			

Program	Associate of Art Emphasis in:	Associate of Science Emphasis in:	Associate of Applied Science	Certificate
Electronic Technology			e	■
Instrumentation Technology			■	
Communications System Installation & Repair			e	■
Computer Maintenance Technology			■	e
Electronic Engineering Technology			e	e
Engineering		e		
English	e			
Fire Science	e		e	
Basic Firefighter				●
French	e			
Geography	■			
Geology		e		
German	■			
Government	e			
History	e			
Horticulture/Landscape Technology		e		
Horticulture Technology			e	
Landscape Technology			e	●
Legal Assistant	e			
Legal Assistant General				●
Legal Assistant Specialty				e
Management				
Management Development			e	
General				●
Small Business Management				●
Marketing			e	
Marketing/Advertising				●
Marketing/Fashion				●
Marketing/International				e
Marketing/Management				e
Marketing/Research				●
Marketing/Retailing				e
Marketing/Sales				e
Fashion Marketing			■	
Mathematics		e		
Music	■			
Commercial Music			e	
Audio Engineering			e	
Composer/Arranger/Copyist			e	
Performing Musician			e	
Nursing (ADN)			■	

Program	Associate of Art Emphasis in:	Associate of Science Emphasis in:	Associate of Applied Science	Certificate
Office Administration				
General			e	
Entry-Level Office Support				•
Mid-Level Office Support				•
Administrative Support				•
Word Processing				•
Entry-Level Medical Office Support				■
Medical Administrative Assistant				e
Entry-Level Medical Transcription Skills				e
Legal Office Support				•
Philosophy	e			
Photography	e			
Physical Education, Health, Dance		■		
Physics		■		
Real Estate			•	
				e
Advanced Certificate				■
Respiratory Care			e	
Sociology	■			
Spanish	■			
Speech Communication	■			

PRE-PROFESSIONAL PROGRAMS

- ■ Pre-Dentistry
- • Pre-Medicine
- • Pre-Veterinary Medicine
- • Pre-Professional Studies in Law
- • Pre-Pharmacy

No college/university awards a "pre" degree. Students are advised to consult with an academic adviser at CCCC to determine the program of study providing the most appropriate background (freshman/sophomore courses) for the programs listed above and for selected health science fields. A suggested curriculum is located in the transfer labs for students who plan to transfer to a university Students should carefully check the entrance requirements of the university to which they expect to transfer. Completion of the suggested curriculum along with the appropriate General Education Core will qualify students for an associate's degree.

EDUCATION

Suggested curriculum freshman/sophomore courses for Elementary (Interdisciplinary Studies) and Secondary Education majors is located in the transfer lab at Spring Creek Campus in room G103, Central Park Campus in A108, and Preston Ridge Campus in C135, Heritage Hall. Completion of the suggested curriculum along with the appropriate General Education Core will qualify students for an associate's degree.

DEGREES OFFERED

CCCC offers three degrees and a number of certificates. Offerings include Associate of Arts **(AA),** Associate of Science **(AS)** and Associate of Applied Science (AAS) degrees. The areas of study on the following pages reflect the courses which are suggested to obtain an associate's degree or certification. In addition, students may take courses without obtaining a degree.

Students with academic deficiencies are encouraged to take developmental comes to correct the deficiencies before they enroll in college-level courses. Developmental courses do not satisfy any graduation requirements or transfer to four-year institutions.

Students should contact the academic advising department for further information.

GENERAL EDUCATION CORE

The general education core required for an associate's degree at Collin County Community College provides students with a focused, integrated curriculum. Courses in the core establish a foundation for cultural understanding and lifelong learning. The core addresses skills in written and oral communication, mathematics, computer literacy, interpersonal relations, and critical and creative thiig. The core **also** fosters appreciation **of** the natural and physical environment, historical and political perspectives, international and multi-cultural issues, social, mental and physical well-being. The core emphasizes substantive knowledge and methods of inquiry, theory and application, and promotes active participation in the experience of learning.

The general education core is an essential component of all degree programs offered at CCCC because it transcends vocational and career training and provides students with the skills and knowledge to become active and productive members of the community.

CERTIFICATE PROGRAMS

Certificate programs are designed **for re-entry** into the job market or the upgrading of skills. Certificates are awarded after the completion **of** course requirements in the area of specialization. The certificate program requirements **follow** each related Associate of Applied Science degree plan in the pages that **follow.**

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the buck of this catalog.

Students planning to transfer to another college or university are responsible for checking the specific degree plan requirements for that institution. Contact the advisers in the Transfer Labs for information. Note: Foreign language is required at most four-year institutions, and Physical Education requirements vary among institutions.

ASSOCIATE OF ARTS DEGREE PROGRAMS

The Associate of Arts degree provides general academic courses which enable students to transfer to a four-year institution of their choice. It is the student's responsibility to choose a college or university as soon as possible and to determine the specific degree require ments of that institution. Students should consult with a CCCC adviser and the four-year institution on a regular basis to ensure enrollment in courses appropriate to the chosen major.

The general education core for the Associate of Arts degree consists of 46 credit hours. The electives and/or area of emphasis consists of a minium of 14 credit hours. This degree requires the completion of a mini-mum of 60 credit hours, including at least 18 hours earned at CCCC.

Waivers for physical education requirements may be granted for medical reasons. A written statement from a physician and two additional hours of electives are required. Credit for PHED courses is awarded for military training upon receipt of DD214 (Honorable Discharge).

GENERAL EDUCATION CORE'

(CH= credit hours)

I. English

9 CH to include:

6 CH	ENGL	1301	Composition/Rhetoric I
and	ENGL	1302	Composition/Rhetoric II
3 CH			Sophomore Literature

II. Speech Communications

3 CH	SPCH	1311	Fundamentals of **Speech** Communication
or	SPCH	1315	Public Speaking

III. Social Sciences

12 CH to include:

6 CH	HIST	1301	U.S. History I
and	HIST	1302	U.S. History II
6 CH	GOVT	2301	American Government I
and	GOVT	2302	American Government II

IV. Mathematics and Natural Sciences

3 CH	MATH	1XXX	**Any** college level mathematics **course as** determined by area of emphasis.
or		2XXX	
8 CH		1XXX	Lab Sciences to be chosen from any lab science course.
or		2XXX	See course description for prerequisite.

V. Computer Literacy

3 CH	COSC	1306	Introduction to Computers

VI. Humanities

3 CH	HUMA	1301	Introduction to Humanities
or	PHIL	1301	Introduction to Philosophy
or	PHIL	1304	Comparative Religion
or	PHIL	2303	Logic
or	PHIL	2306	Ethics
or	PHIL	2307	Social and Political Philosophy

VII. Behavioral Science

3 CH	PSYC	2301	General Psychology
or	SOCI	1301	Introduction to Sociology

VIII. Physical Education and Dance

2 CH	PHED/DANC		Any two activity courses
or	PHED	1238	Concepts of Physical Fitness and Wellness

General Education Core	46	Credit Hours
Electives	14	C d i t Hours Minimum
Total	60	Credit Hours Minimum

'Fire *Science* (Associate *of Arts) program* at *CCCC has* specific core *curriculum* requirements. **Please** *refer* to the degree plan **for** *details.*

ASSOCIATE OF SCIENCE DEGREE PROGRAMS

The Associate of Science degree provides general academic courses which enable students to transfer to a four-year institution of their choice. It is the student's responsibility to choose a college or university as soon as possible and to determine the specific degree requirements of that institution. Students should consult with a CCCC adviser and the four-year institution on a regular basis to ensure enrollment in courses appropriate to the chosen major.

The **general education core** for the Associate of Science degree consists of **46** credit hours. The **electives** and/or **area of emphasis** consists of a minimum of **14** credit hours. This degree requires the completion of a minimum of **60** credit hours, including at least **18** hours earned at CCCC.

Waivers for physical education requirements may be granted for medical reasons. A written statement from a physician and two additional hours of electives are required. Credit for PHED courses is awarded for military training upon receipt of DD214 (Honorable Discharge).

GENERAL EDUCATION CORE

(CH = credit hours)

I. English

6 CH	ENGL	1301	Composition/Rhetoric I
and	ENGL	1302	Composition/Rhetoric II

II. Speech Communications

3 CH	SPCH	1311	Fundamentals of Speech Communication
or	SPCH	1315	Public Speaking

III. Social Sciences

12 CH to include:

6 CH	HIST	1301	U.S. History I
and	HIST	1302	U.S. History II
6 CH	GOVT	2301	American Government I
and	GOVT	2302	American Government II

IV. Mathematics and Natural Science'

6 CH	MATH	1314	College Algebra
	MATH	2312	Pre-Calculus for Math and Science (or higher as determined by area of emphasis)
8 CH	Lab Science		Sequence to be chosen as determined by area of emphasis.
	BIOL	1406	General Biology I
	BIOL	1407	General Biology II
or	CHEM	1411	General Chemistry I*
	CHEM	1412	General Chemistry II
or	GEOL	1403	Physical Geology
	GEOL	1404	Historical Geology
or	PHYS	1401	General Physics I*
	PHYS	1402	General Physics II

V. Computer Literacy

3 CH	COSC	1306	Introduction to Computers

VI. Humanities

3 CH	HUMA	1301	Introduction to Humanities
or	PHIL	1301	Introduction to Philosophy
or	PHIL	1304	Comparative Religion
or	PHIL	2303	Logic
or	PHIL	2306	Ethics
or	PHIL	2307	Social and Political philosophy

VII. Behavioral Science

3 CH	PSYC	2301	General Psychology
or	SOCI	1301	Introduction to Sociology

VIII. Physical Education and Dance

2 CH	PHED/DANC		**Any** two activity courses
or	PHED	1238	Concepts of Physical Fitness and Wellness

General Education Core	**46**	Credit Hours
Electives	**14**	Credit Hours Minimum
Total	60	Credit Hours Minimum

'Higher levels of mathematics and natural Science may be substituted.
*See course descriptions for prerequisites.

ASSOCIATE OF APPLIED SCIENCE DEGREE PROGRAMS

The Associate of Applied Science degree is awarded after completion of a prescribed two-year program of study which prepares the student to enter and compete in the job market. The programs are also designed for individuals who are upgrading current job skills. The student should remember that the majority of credits earned in most vocational/technical programs are designed for workplace competencies and not transfer. However, some of the programs do transfer to specific four-year institutions and it is important for the student to consult with an adviser at CCCC as well as the four-year institution.

The general education core for the Associate of Applied Science degree consists of a 22 d i t hour minimum. The total number of hours required to complete an AAS degree varies depending upon the program of study A minimum of 18 d i t hours must be earned at CCCC.

Waivers for physical education requirements may be granted for medical reasons. A written statement from a physician and two additional hours of electives are required. C d i t for PHED courses is awarded for military training upon receipt of DD214 (Honorable Discharge).

GENERAL EDUCATION CORE'

(CH = credir hours)

I. English

3CH	ENGL	1301	Composition/Rhetoric I

II. Speech

3CH	SPCH	1311	Fundamentals of Speech Communication
or	SPCH	1315	Public speaking,
or	SPCH	1321	Business and Professional Speaking

III. Mathematics

3CH	MATH		College level mathematics course as determined by the AAS degree plan in this catalog.

IV. Computer Literacy

3CH	COSC	1306	Introduction to Computers

V. Economics

3CH	ECON	1301	Introduction to Economics
or	ECON	2301	Principles of Macroeconomics
or	ECON	2302	Principles of Microconomics

VI. Humanities

3CH	HUMA	1301	Introduction to the Humanities
or	PHIL	1301	Introduction to Philosophy
or	PHIL	1304	Comparative Religion
or	PHIL	2303	Logic
or	PHIL	2306	Ethics
or	PHIL	2307	Social and Political Philosophy

VII. Behavioral Science

3CH	PSYC	2302	Applied Psychology
or	PSYC	2301	General Psychology

VIII. Physical Education and Dance

1CH	PHED/DANC		Any activity course
or			
2CH	PHED	1238	Concepts of Physical Fitness and Wellness

Total General Education Core	22 Credit Hours Minimum

'The Fire Science, Nursing, Criminal Justice, and Respiratory Care programs at CCCC have specific core curriculum requirements. Please refer to these programs for details.

ADVISORY COMMITTEES

Advisory committees are used by the instructional divisions in each technical program area for program development, evaluation, long-range planning, development of employment opportunities for graduates, and other program issues.

These committees provide an essential link between the educational institution and the business community to ensure that our graduates are adequately prepared for employment.

Members of the advisory committees are selected from related industry prospective employers, and other knowledgeable community representatives. CCCC faculty may serve as ex-officio members. Current membership for each advisory committee is located in the appropriate instructional office. Advisory committees are required to meet one time per academic year.

DEGREE PROGRAMS

ACCOUNTING

A **two-year** Associate of Arts degree **program**
60 credit hours required to graduate

ABOUT OUR PROGRAM

This Associate of Arts degree provides general academic courses and electives that enable students who intend to major in accounting to transfer to four-year institutions. Because of the various transfer requirements of different four-year institutions, and to ensure enrollment in appropriate courses, students should consult with a CCCC adviser and the institution which they plan to attend.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS ACCOUNTING

I. General Education Core   **Credit Hours**

See page **40** for General Education Core requirements.

II. Recommended Electives

14 credit **hours minimum**

A.	ACCT	2301	Principles of Accountiig I	3
B.	ACCT	2302	Principles of Accounting II	3
C.	ACCT	2370	Managerial Accounting	3
D.	ECON	2301	Principles of Macroeconomics	3
E.	ECON	2302	Principles of Microeconomics	3
F.	MATH	1325	Calculus for Business/Economics[1]	3

ACCOUNTING

A two-year Associate of Applied Science degree **program**
61 credit hours required to graduate

ABOUT OUR PROGRAM

Accounting firms, public corporations and private firms have expressed a need for two-year accounting graduates who have learned the skills needed to act as accounting paraprofessionals. The Associate of Applied Science degree in accounting was developed in response to that need. Students who participate in this program learn a variety of accounting skills related to financial accounting, managerial accounting, auditing and taxation. Furthermore, these students learn computer skills related to spreadsheet, data bases and word processing. Students also learn about the ethical and legal environments in which these skills are used.

    This program is an exciting opportunity for students desiring a two-year Associate of Applied Science degree. After two years of college study, the student will be prepared for entrance into a paraprofessional accounting career.

    Students planning to transfer to a four-year institution should *check* with an academic adviser.

CAREER OPPORTUNITIES

A wide range of career options await the graduates of this program After completing the required course work and on-the-job training, students select from a diversified variety of career options in the areas of

- Internal Auditing
- External Auditing
- Tax Return Preparation
- Compilation Work
- Financial Statement Preparation
- Special Accounting Projects

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS ACCOUNTING

I. General Education Core   **Credit Hours**

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
C.	MATH	1324	Pre-Calculus for Business/Economics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	2301	Principles of Macroeconomics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

12 credit hours

A.	ACCT	2301	Principles of Accounting I	3
B.	ACCT	2302	Principles of Accounting II	3
C.	ACCT	2372	Intermediate Accounting I	3
D.	ACCT	2373	Intermediate Accounting II	3

III. Major Courses

18 credit hours

A.	ACCT	2370	Managerial Accounting	3
B.	ACCT	2375	Auditing	3
C.	ACCT	2377	Individual Income Taxation	3
D.	ACCT	2378	Corporate Income Taxation	3
E.	CSCI	2305	Integrated Spreadsheet Applications	3
F.	OFAD	2315	Office Procedures	3

IV. Electives

6 credit hours

A.	ACCT	7300	Cooperative Education I	3
B.	ACCT	2380	Accounting Ethics	3
C.	BUSI	2301	Business Law	3
D.	OFAD	1331	Word Processing I	3
E.	ENGL	2311	Technical Writing	3
F.	CSCI	2355	Networking/Telecommunications	3
G.	CSCI	2350	Computer Operating Systems	3
H.	SPCH	1318	Interpersonal Communications	3

V. Elective

3 credit hours

A.	Elective	3

ANTHROPOLOGY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The anthropology program has been designed to provide students with essential life skills and help them better understand themselves and the world around them. Anthropology asks, what does it mean to be human? What different ways are there of being human? How are we to understand these commonalities and differences7 These are critical questions for a world tom by racial and ethnic conflicts and divided by bigotry and unequal opportunities for individual growth and societal development. The study of such questions requires the integration of archaeological, biological, and cultural research – the basic components of anthropology. Anthropology majors or minors will gain a solid foundation in the discipline which will prepare them for transferring into a university program.

CAREER OPPORTUNITIES

The majority of students who select anthropology as **their** focus at CCCC transfer into a four-year program. There are entry level positions available in Cultural Resource Management firms upon completion of an associate's degree. Anthropology majors typically seek careers in teaching social sciences or research and planning in governmental or corporate settings. An anthropology minor is an excellent choice for students considering careers in business, medicine, law, government, or diplomacy.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: ANTHROPOLOGY

1. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives — Credit Hours

14 credit hours minimum

A.	ANTH	2351	Cultural Anthropology	3
B.	ANTH	2301	Physical Anthropology	3
C.	ANTH	7300	Internship	3
D.	SOCI	1301	Introduction to Sociology	3
E.	SOCI	2319	Minority Studies	3
F.	BIOL	1471	Human Anatomy and Physiology	4
G.	BIOL	2416	Genetics	4

APPLIED GRAPHIC DESIGN TECHNOLOGY

A two-year Associate of Applied Science degree program
67 credit hours minimum required to graduate

ABOUT OUR PROGRAM

The program in Applied Graphic Design Technology trains today's artists and designers in the communication medium of the future as well as the present: computer-aided communication design. Students work with state-of-the-art hardware and software, creating professional-level publishing, graphics, illustration, animation and imaging. Students also design software and human interface applications. Leading-edge industries support the program fiscally and act as a source of referral and employment for our graduates.

Apple Computer has named the CCCC Applied Graphic Design Technology area one of only three Apple Multimedia Regional Centers in the country. The high visibility of this center will enhance CCCC graduates' employment possibilities.

Applied Graphic Design Technology offers an Associate of Applied Science degree and certificate programs in Graphic Design, Computer Graphics, Digital Photography, Illustration, Animation, Production Art and Multimedia. Students receive a strong background in traditional graphics together with state-of-the-art training in electronic publishing, imaging, graphics, 3D modeling, animation and interactive multimedia. A student ad agency and an active internship program help to bridge the gap from formal training to full-time employment.

Students completing the two-year Commercial Art program in the Plano ISD or the two-year Commercial Art Cluster at Skyline High School may be eligible to receive credit through articulation. Contact the admissions office or program coordinator.

CAREER OPPORTUNITIES

Jobs in the applied graphic design technology area are varied and depend upon the business or agency specialty Listed below are some of the career opportunities:
- Production Artist
- Graphic Designer
- *Art* Director
- Illustrator
- Computer Graphics Production Artist
- Computer Illustrator
- Multimedia Director/Author
- Computer Animator
- Computer Visualization Artist
- Digital Photo Retouch Artist

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: APPLIED GRAPHIC DESIGN TECHNOLOGY/GRAPHIC DESIGN

I. General Education Core   Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I 3
B.	SPCH	1311	Fundamentals of Speech Communication 3
or	SPCH	1315	Public Speaking 3
or	SPCH	1321	Business and Professional Speaking 3
C.	MATH	1332	Contemporary Mathematics 3
D.	COSC	1306	Introduction to Computers 3
E.	ECON	1301	Introduction to Economics 3
or	ECON	2301	Principles of Macroeconomics.........3
F.	HUMA	1301	Introduction to Humanities 3
G.	PSYC	2301	General Psychology 3
or	PSYC	2302	Applied Psychology 3
H.	PHED/DANC	**Any** Activity Course 1	

II. Technical Program Core

21 credit hours

A.	AGDT	1310	Introduction to Computer Graphics 3
B.	ARTS	1311	Design I 3
C.	ARTS	1316	Drawing I 3
D.	ARTS	2356	Photography I 3
E.	AGDT	1325	Visual Communications I 3
F.	AGDT	1330	Beginning Illustration 3
G.	AGDT	2370	Professional Practices 3

III. Major Courses

12 credit hours

A.	AGDT	1300	Survey of Applied Graphic Design Technology 3
B.	AGDT	1326	Visual Communications II 3
C.	AGDT	1331	2D Computer Illustration 3
or	AGDT	2325	Electronic Publishing/Graphic Design 3
D.	AGDT	2365	Ad Agency 3

IV. Electives

12 credic hours

A.	AGDT	1351	Interactive Multimedia Authoring 3
B.	AGDT	2320	Image Processing 3
C.	AGDT	2325	Electronic Publishing/Graphic Design 3
D.	AGDT	2330	Illustration 3
E.	AGDT	2331	Advanced 2D Computer Illustration 3
F.	AGDT	2332	3D Computer Illustration 3
G.	AGDT	2335	2D Computer Animation 3
H.	AGDT	2360	Introduction to Art Direction for Video ... 3
I.	AGDT	2390	Special Topics in AGDT I 3
J.	AGDT	2391	Special Topics in AGDT II 3
K.	ARTS	1303	Art History I 3
L.	ARTS	1304	Art History II 3
M.	ARTS	1317	Drawing II 3
N.	ARTS	2311	Introduction to Color/Painting 3
O.	ARTS	2316	Painting I 3
P.	ARTS	2357	Photography II 3
Q.	AGDT	1331	2-D Computer Illustration 3
R.	AGDT	1315	Computer Typography 3
S.	AGDT	1320	Introduction to Electronic Imaging 3
T.	AGDT	1345	Artist Conceptualization for Interface Design 3
U.	AGDT	1340	Storyboard and Script Design 3
V.	AGDT	1350	Introduction to Multimedia Authoring ...3
W.	AGDT	2326	Graphic Design and Production 3
X.	AGDT	7300	Cooperative Education I 3
Y.	ARTS	2323	Life Drawing 3
Z.	ARTS	2334	Printmaking II 3
AA.	ARTS	2366	Watercolor I 3
BB.	COMM	1317	News Photography 3
CC.	MRKT	1320	Fashion Design 3
DD	MUSI	1371	Audio Engineering I 3

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: APPLIED GRAPHIC DESIGN TECHNOLOGY/MULTIMEDIA

I. General Education Core   Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I 3
B.	SPCH	1311	Fundamentals of Speech Communication 3
or	SPCH	1315	Public Speaking 3
or	SPCH	1321	Business and Professional Speaking 3
C.	MATH	1332	Contemporary Mathematics 3
D.	COSC	1306	Introduction to Computers 3
E.	ECON	1301	Introduction to Economics 3
or	ECON	2301	Principles of Macroeconomics.........3
F.	HUMA	1301	Introduction to Humanities 3
G.	PSYC	2301	General Psychology 3
or	PSYC	2302	Applied Psychology 3
H.	PHED/DANC	Any Activity Course 1	

II. Technical Program Core

18 credit hours

A.	AGDT	1310	Introduction to Computer Graphics 3
B.	AGDT	1325	Visual Communications I 3
or	ARTS	2356	Photography I 3
or	MUSI	2350	Audio for Multimedia 1 3
C.	ARTS	1316	Drawing I 3
or	ARTS	1311	Design I 3
or	AGDT	2360	Introduction to Art Direction for Video 3
D.	AGDT	1315	Computer Typography 3
or	AGDT	1330	Beginning Illustration 3
E.	AGDT	2370	Professional Practices 3

III. Major Courses

18 credit hours

A.	AGDT	2335	2D Computer Animation 3
or	AGDT	2332	3D Computer Illustration 3
B.	AGDT	1350	Introduction to Multimedia Authoring ...3
C.	AGDT	1320	Introduction to Electronic Imaging 3
D.	AGDT	1340	Storyboard and Script Design 3
E.	AGDT	1345	Artistic Conceptualization for Interface Design 3
or	AGDT	1335	Instructional Design/Graphic Design I ... 3
F.	AGDT	1351	Interactive Multimedia Authoring 3
or	AGDT	2336	Advanced 2D Animation 3

IV. Electives

APPLIED GRAPHIC DESIGN TECHNOLOGY

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS ANIMATION

CERTIFICATE REQUIREMENTS COMPUTER GRAPHICS

CERTIFICATE REQUIREMENTS DIGITAL PHOTOGRAPHY

F. AGDT 2355 Multimedia Studio 3
G. ARTS 2370 Photography-Portrayal 3
or AGDT 1320 Introduction to Electronic Imaging 3
H. AGDT 2370 Professional Practices 3
or ARTS 2371 Digital Portfolio 3
I. ARTS 2371 Digital Photography II 3
J. ARTS 1311 Design I 3
K. AIMS 2356 Photography I 3
L. ARTS 2357 Photography II 3
M. ARTS 2371 Digital Photography I 3
N. SPECIALTY ELECTIVE (Select One)
                 –Advanced Color Photography 3
                 –Alternative Processes 3
                 –Architectural Photography 3
                 –Fashion Photography 3
                 –View Camera/Zone System 3
O. COMM 1316 Photo Illustration 3
or COMM 1317 News Photography 3

CERTIFICATE REQUIREMENTS: ILLUSTRATION

33 credit hours

A. AGDT 1300 Survey of Applied Graphic Design
                 Technology 3
B. AGDT 1310 Introduction to Computer Graphics 3
C. AGDT 1325 Visual Communications I 3
D. AGDT 1330 Beginning Illustration 3
E. AGDT 1331 2D Computer Illustration 3
or ARTS 2323 Life Drawing 3
F. AGDT 2330 Illustration 3
G. AGDT 2365 Ad Agency 3
H. AGDT 2370 Professional Practices 3
I. ARTS 1311 Design I 3
J. ARTS 1316 Drawing I 3
K. ELECTIVE (Select One)

3 credit hours

    AGDT 1315 Computer Typography 3
    AGDT 1320 Introduction to Electronic Imaging 3
    AGDT 1331 2D Computer Illustration 3
    AGDT 1340 Storyboard and Script Design 3
    AGDT 1345 Artist Conceptualization for Interface
                 Design 3
    AGDT 1350 Introduction to Multimedia Authoring ...3
    AGDT 2326 Graphic Design and Production 3
    AGDT 2331 Advanced 2D Computer Illustration 3
    AGDT 2332 3D Computer Illustration 3
    AGDT 2335 2D Computer Animation 3
    AGDT 2360 Introduction to Art Direction
                 for video 3
    AGDT 2390 Special Topics in Applied Graphic
                 Design Technology I 3
    AGDT 2391 Special Topics in Applied Graphic
                 Design Technology II 3
    ARTS 1303 Art History I 3
    ARTS 1304 Arts History II 3
    ARTS 2311 Introduction to Color/Painting 3
    ARE 2316 Painting 3
    ARTS 2323 Life Drawing 3
    ARTS 2356 Photography I 3
    ARTS 2366 Watercolor 3
    MRKT 1320 Fashion Design 3

CERTIFICATE REQUIREMENTS MULTIMEDIA

33 credit hours

A. AGDT 1310 Introduction to Computer Graphics 3
B. AGDT 1315 Computer Typography 3
or AGDT 2335 2D Computer Animation 3
C. MUSI 2350 Audio for Multimedia I 3
D. AGDT 1350 Introduction to Multimedia Authoring ...3
E. AGDT 1320 Introduction to Electronic Imaging 3
F. AGDT 1340 Storyboard and Script Design 3
G. AGDT 1345 Artistic Conceptualization for
                 Interface Design 3
or AGDT 1335 Instructional Design for Graphic
                 Designers I 3
H. AGDT 2360 Introduction to Art Direction for Video ...3
I. AGDT 1351 Interactive Multimedia Authoring 3
or AGDT 2336 Advanced 2D Animation 3
J. AGDT 2370 Professional Practices 3
K. AGDT 2355 Multimedia Studio 3

CERTIFICATE REQUIREMENT9 PRODUCTIONART

36 credit hours

A. AGDT 1300 Survey of Applied Graphic Design
                 Technology 3
B. AGDT 1310 Introduction to Computer Graphics 3
C. AGDT 1315 Computer Typography 3
D. AGDT 1325 Visual Communication I 3
E. AGDT 1326 visual Communications II 3
or AGDT 2326 Graphic Design and production 3
F. AGDT 1331 2D Computer Illustration 3
G. AGDT 2325 Electronic Publishing for Graphic
                 Design 3
H. AGDT 2365 Ad Agency 3
I. AGDT 2370 Professional Practices 3
J. ARTS 1311 Design I 3
K. ARTS 1316 Drawing I 3
L. ELECTIVE (Select One)

3 credit hours

    AGDT 1320 Introduction to Electronic Imaging 3
    AGDT 1330 Beginning Illustration 3
    AGDT 1340 Storyboard and Script Design 3
    AGDT 1345 Artist Conceptualization for Interface
                 Design 3
    AGDT 1350 Introduction to Multimedia Authoring ...3
    AGDT 2330 Illustration 3
    AGDT 2331 Advanced 2D Illustration 3
    AGDT 2332 3D Computer Illustration 3
    AGDT 2335 2D Computer Animation 3
    AGDT 2336 Advanced 2D Computer Animation 3
    AGDT 2340 3D Computer Animation 3
    AGDT 2360 Introduction to Art Direction
                 for Video 3
    AGDT 2390 Special Topics in Applied Graphic
                 Design Technology 1 3
    AGDT 2391 Special Topics in Applied Graphic
                 Design Technology II 3
    ARTS 1303 Art History I 3
    ARTS 1304 Arts History II 3
    ARTS 1317 Drawing II 3
    ARTS 2311 Introduction to Color/Painting 3

	ARTS	2356	Photography 1	3
	ARTS	2357	Photography II	3

ART

A two-year Associate of Arts degree program
60 credic hours required to graduate.

ABOUT OUR PROGRAM

The f i e arts program offers courses in foundation classes such as drawing and design and specialization classes such as painting, watercolor, ceramics, sculpture, printmaking, computer design I and computer painting. All labs include professional quality equipment such as an intaglio printing press, a variety of ceramic kilns, electric pottery wheels and a metal-casting foundry. Two gallery spaces serve to acquaint students with current professional artists and to showcase student work in competitions and all-student shows. Seminars in professional practices help prepare the students to function as fine artists. Instructors are highly trained, practicing artists who are dedicated to encouraging the individual students to reach their highest level of skill and creativity

CAREER OPPORTUNITIES

Careers in fine arts are quite varied. Perhaps the most visible are the practicing, professional f i e artists and art teachers. Other career opportunities include work in museums as docents; museum curators; art historians; art restorers; exhibition designers; sales positions in galleries; artists' representatives; art brokers; art therapists; medical illustrators; art administrators and directors of cultural arts programs; color, space or texture consultants; commercial artists; illustration and design of books and advertising; window display; interior design; fabric, wall and floor covering design.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: ART

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives　　　　　　　　**Credit Hours**

14 credit hours minimum

A.	ARTS	1301	Art Appreciation	3
B.	ARTS	1303	Art History I	3
C.	ARTS	1304	Art History	3
D.	ARTS	1311	Design I	3
E.	ARTS	1312	Design II	3
F.	ARTS	1316	Drawing I	3
G.	ARTS	1317	Drawing II	3
H.	ARTS	1325	Art for Elementary Educators	3
I.	ARTS	1370	Problems in Contemporary Art	3
J.	ARTS	2311	Introduction to Color/Painting	3
K.	ARTS	2316	Painting I	3
L.	ARTS	2317	Fainting II	3
M.	ARTS	2323	Life Drawing	3
N	ARTS	2326	Sculpture I	3
O.	ARTS	2327	Sculpture II	3
P.	ARTS	2333	Printmaking I	3
Q.	ARTS	2334	Printmaking II	3

R.	ARTS	2336	Fibers I Papermaking	3
S.	ARTS	2346	Ceramics I	3
T.	ARTS	2347	Ceramics II	3
U.	ARTS	2366	Watercolor I	3
V.	ARTS	2367	Watercolor II	3

BIOLOGY

A two-year Associate of Science degree pmgram
60 credit hours required to graduate

ABOUT OUR PROGRAM

Today more than ever, an understanding of biology is critical to human life and the future of the planet. Fast-paced developments in medicine, genetics and environmental issues can be bewildering without basic knowledge of biological science. The Associate of Science degree with a biology emphasis provides an educational foundation broad enough to prepare students to pursue university studies leading to a bachelor's degree in a science-related field. An excellent instructional staff, computer-aided instruction, state-of-the-art laboratory facilities, and an emphasis on current research give biology students at CCCC a personalized, high quality educational experience.

CAREER OPPORTUNITIES

Many exciting career opportunities are available in the biological sciences. In particular, the areas of health care, genetic research and environmental science are predicted to provide many job opportunities in the coming decade. Students should bear in mind that many of the career areas listed below require training beyond the Associate of Science degree and some will require a post-graduate degree.

* Agriculture
* Allied Health Sciences
* Biotechnology
* Botany
* Dentistry
* Ecology
* Environmental science
* Genetic Counseling
* Genetic Engineering
* Marine Science
* Medicine
* Medical Research
* Medical Technology
* Microbiology
* Nutrition and Dietary science
* Pharmacology
* Physical Therapy
* Science Education
* Toxicology
* Veterinary Science
* Wildlife Biology

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: BIOLOGY

I. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

				Credit Hours
A.	BIOL	1322	General Nutrition	3
B.	BIOL	1411	General Botany	4
C.	BIOL	1424	Systematic Botany	4
D.	BIOL	1470	Marine Biology	4
E.	BIOL	2401	Anatomy and Physiology I	4
F.	BIOL	2402	Anatomy and Physiology II	4
G.	BIOL	2406	Ecology	4
H.	BIOL	2416	Genetics	4
I.	BIOL	2416	Invertebrate Zoology	4
J.	BIOL	2420	Microbiology	4
K.	BIOL	2426	Vertebrate Zoology	4
L.	BIOL	2470	Human Genetics	4
M.	CHEM	1411	General Chemistry I	4
N.	CHEM	1412	General Chemistry II	4
O.	CHEM	2423	Organic Chemistry I	4
P.	CHEM	2425	Organic Chemistry II	4
Q.	HLSC	1300	Medical Terminology	3
R.	MATH	1342	Statistics	3
S.	PHYS	1401	General Physics I	4
T.	PHYS	1402	General Physics II	4
U.	PHYS	2425	College Physics I	4
V.	PHYS	2426	College Physics II	4

BUSINESS ADMINISTRATION

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Arts with emphasis in Business Administration program consists of a forty-six credit hour general education core and fourteen credit hours of suggested electives. The program is designed to provide the basis for completing a bachelor's degree at most four-year colleges or universities located in Texas. This program provides flexibility allowing students to pursue accounting, economics, finance, marketing or management majors at many four-year institutions.

CAREER OPPORTUNITIES

This program is designed primarily to prepare students to major in some area of business administration at the junior/senior level. Students should consult an adviser if this is not their primary goal.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS BUSINESS ADMINISTRATION

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

				Credit Hours
A.	ACCT	2301	Principles of Accounting I	3
B.	ACCT	2302	Principles of Accounting II	3
C.	CSCI	1320	BASIC Programming	3
D.	ECON	2301	Principles of Macroeconomics	3
E.	ECON	2302	Principles of Microeconomics	3
F.	ENGL	2372	Forms of Literature II Poetry & Drama	3
G.	MATH	1325	Calculus for Business and Economics'	3
H.	MATH	1342	Statistics	3
I.	PSYC	2301	General Psychology	3

'Math 1324 (Pre-Calculus for Business and Economics) recommended in general education core.

CHEMISTRY

A two-year Associate of Science degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The CCCC Associate of Science degree with an emphasis in chemistry establishes an academic foundation for future studies. Courses include general chemistry and organic chemistry, as well as an introduction to chemistry designed for students who are novices in science disciplines.

Solving problems in chemistry requires creativity and curiosity as well as logic and reasoning. An excellent instructional staff, computer-aided instruction, laboratory facilities and current scientific literature give chemistry students at CCCC a personalized high quality educational experience.

CAREER OPPORTUNITIES

Modem society offers both challenging and lucrative careers to employees with scientific and technical backgrounds. Careers listed below demand a knowledge of chemistry and many require academic training beyond the Associate of Science degree.

- Biomedical Engineer
- Chemical Engineer
- Cosmetics Researcher
- Dietician
- Environmental Scientist
- Geophysicist
- Industrial Researcher
- Medical Technologist
- Nurse
- Oceanographer
- Perfumer
- Pharmacist
- Physician
- Veterinarian

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS CHEMISTRY

1. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A. CHEM 1170 Biochemistry 1
B. CHEM 2423 Organic Chemistry I 4
C. CHEM 2425 Organic Chemistry II 4
D. MATH 2415 Calculus III 4
E. MATH 2320 Differential Equations 3
F. PHYS 2425 College Physics I... 4
G. PHYS 2426 College Physics II 4

CHILD DEVELOPMENT

EARLY CHILDHOOD ADMINISTRATOR

A two-year Associate of Applied Science degree program
67 credit hours required to graduate

ABOUT OUR PROGRAM

The degree program in Child Development with an Early
Childhood Administrator major offers students an opportunity to
study administrative procedures in a variety of child care
facilities. Students learn management skills which will allow
them to provide quality programs in safe, nurturing environ-
ments that promote optimal growth and development of children.

The classroom learning experiences are supplemented by
laboratory activities. Students receive training in observation and
evaluation procedures; practice the skills necessary for planning,
organizing, communicating and supervising; and learn to work
cooperatively with parents and community services.

Tech Prep students who took collegiate-level courses in Child
Development while in high school may elect to receive college
credit by contacting a CCCC advisor. A petition for Tech Prep
credit should be completed as soon as possible upon admission to
CCCC.

CAREER OPPORTUNITIES

The Associate of Applied Science degree in Child Development
with an Early Childhood Administrator major is designed to
provide the necessary preparation to work as a day care director,
director of children's programs or educational director. The skills
acquired will be directly applicable in a variety of facilities
including:

- Child Care Centers
- Preschool Programs
- Family Day Homes
- Employer-sponsored Child Care
- Church-sponsored Child Care
- Hospital-sponsored Child Care
- Before and After School Programs
- Community Center Programs
- Parent and Child Study Programs
- Teacher's Aide
- Director, Assistant Director, Manager or Educational
  Coordinator in Children's Programs

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been
established allowing graduates with an Associate of Applied
Science degree to continue their education in a Bachelor of
Applied Arts and Sciences degree at specific four-year universi-
ties. For detailed information contact the coordinator of the AAS
program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS EARLY CHILDHOOD ADMINISTRATOR

I. General Education Core   Credit Hours

22 credit hours

A. ENGL 1301 Composition/Rhetoric I 3
B. SPCH 1311 Fundamentals of Speech
              Communication 3
C. MATH 1332 Contemporary Mathematics 3
D. COSC 1306 Introduction to Computers 3
E. ECON 1301 Introduction to Economics... 3
or ECON 2301 Principles of Macroeconomics.................... 3
F. HUMA 1301 Introduction to Humanities 3
G. PSYC 2301 General Psychology 3
or PSYC 2302 Applied Psychology 3
H. PHED/DANC Any Activity Course 1

II. Technical Program Core

27 credit hours

A. CHDV 1300 Early Child Development (0-3yrs) 3
B. CHDV 1301 Early Child Development (3-5yrs) 3
C. CHDV 1325 Early Childhood Programs and Services. 3
D. CHDV 1310 Nutrition, Health and Safely 3
E. CHDV 2310 Practicum A 3
F. CHDV 1305 Early Childhood Fundamentals 3
G. CHDV 1315 Child Guidance........................... 3
H. CHDV 1320 Child Abuse Prevention 3
I. CHDV 2305 Parents and the Caregiver........................ 3

III. Major Courses

12 credit hours

A. CHDV 2315 Administration of Early Childhood
              Programs 3
B. CHDV 2316 Organization and Management of Early ...
              Childhood Programs 3
C. CHDV 2311 Practicum B.................................... 3
D. SBMT 1300 Small Business Management 3

IV. Electives

3 credit hours minimum

A. CHDV 2400 Material and Activities Development I 4
B. CHDV 2401 Material and Activities Development II .. 4
C. CHDV 2300 Infant and Toddler Material and
              Activities Development 3
D. CHDV 1302 Child Development (5-12yrs). 3
E. CHDV 2398 Internship....................................... 3
E. CHDV 7300 Cooperative Education 3
G. CHDV 2100 Selected Topics in Child Development 3

V. Elective

3 credit hours

A. Elective 3

Elective must be chosen from discipline outside Child Development

CHILD DEVELOPMENT

EARLY CHILDHOOD EDUCATOR

A two-year Associate of Applied Science degree program
66 credit hours required to graduate.

ABOUT OUR PROGRAM

The degree program in Child Development with a major in Early Childhood Educator offers students an indepth study of children from birth to 12 years of age. A developmental approach is emphasized which promotes optimal physical, social, emotional and cognitive growth of children.

Supplementing the classroom learning experiences are laboratory activities which promote observational skills and multi-cultural, non-sexist approaches to teaching. Lab time is also used to implement guidance techniques and parent involvement programs.

Students planning to transfer to a four-year institution should check with an academic adviser.

Tech Prep students who took collegiate-level courses in Child Development while in high school may elect to receive college credit by contacting a CCCC advisor. A petition for Tech Prep credit should be completed as soon as possible upon admission to CCCC.

CAREER OPPORTUNITIES

The degree program in Child Development with an Early Childhood Educator major provides practical skills for working with young children. Students will receive necessary training for employment in such areas as:

- Child Care Centers
- Preschool Programs
- Family Day Homes
- Employer-sponsored Child Care
- Church-sponsored Child Care
- Hospital sponsored Child Care
- Before and After School Programs
- Community Center Programs
- Parent and Child Study Programs
- In-home Care Giver or Nanny
- Teacher's Aide

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: EARLY CHILDHOOD EDUCATOR

I. General Education *Core*   Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
or	ECON	2301	Principles of Macroeconomics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2301	General Psychology	3
or	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

27 credit hours

A.	CHDV	1300	Early Child Development (0-3 yrs)	3
B.	CHDV	1301	Early Child Development (3-5 yrs)	3
C.	CHDV	1325	Early Childhood Programs and Services	3
D.	CHDV	1310	Nutrition, Health, and Safety	3
E.	CHDV	2310	Practicum A	3
F.	CHDV	1305	Early Childhood Fundamentals	3
G.	CHDV	1315	Child Guidance	3
H.	CHDV	1320	Child Abuse Prevention	3
I.	CHDV	2305	Parents and the Caregiver	3

III. Major Courses

11 credit hours

A.	CHDV	2400	Material and Activities Development I	4
B.	CHDV	2401	Material and Activities Development II	4
C.	CHDV	2311	Practicum B	3

IV. Electives

3 credit hours

A.	CHDV	2300	Infant and Toddler Materials and Activity Development	3
B.	CHDV	1302	Child Development (5-12 yrs)	3
C.	CHDV	2398	Internship	3
D.	CHDV	7300	Cooperative Education	3
E.	CHDV	2315	Administration of Early Childhood Programs	3
E.	CHDV	2316	Organization and Management of Early Childhood Programs	3

V. Elective

3 credit hours

A. Elective 3

Elective must be chosen from discipline outside Child Development

CHILD DEVELOPMENT

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

33 credit hours minimum

ABOUT OUR PROGRAMS

The Child Development Certificate programs are one-year curriculums designed to prepare individuals for entry-level positions working with young children and their families. The course work can also be applicable as in-sewice training for teachers, administrators, nannies and family day home providers.

1. General Education Core — Credit Hours

9 credit hours

A.	ENGL 1301	Composition/Rhetoric I	3
B.	SPCH 1311	Fundamentals of Speech Communication	3
C.	MATH 1332	Contemporary Mathematics	3

II. Technical Program Core

18 credit hours

A.	CHDV 1300	Early Child Development (0-3)	3
or	CHDV 1301	Early Child Development (3-5)	3
B.	CHDV 1305	Early Childhood Fundamentals	3
C.	CHDV 1315	Child Guidance	3
D.	CHDV 1310	Nutrition, Health and Safety	3
E.	CHDV 2305	Parents and the Caregiver	3
F.	CHDV 2310	Practicum A	3

III. Major Courses

Early Childhood Administrator

6 credh hours

A.	CHDV 2315	Administration of Early Childhood Programs	3
B.	CHDV 2316	Organization and Management of Early Childhood Programs	3

Early Childhood Educator

8 credit houn

A.	CHDV 2400	Material and Activities Development I	4
B.	CHDV 2401	Material and Activities Development II	4

COMPUTER AIDED DRAFTING AND DESIGN

A two-year Arsociate of Applied Science degree program
(A b a Tech Prep program)
64 credit houn required to graduate.

ABOUT OUR PROGRAM

High-tech industries are constantly creating new career opportunities in exciting, highly specialized fields. The degree in Computer Aided Drafting and Design (CADD) provides both an educational foundation in computer-aided design and insight into current industry practices. Students in CCCC's intensive CADD hands-on training program are taught the skills a designer, draftsman, architect, or engineer needs for successful CADD operations.

   Tech Prep students who took collegiate-level courses in Computer Aided Drafting and Design while in high school may elect to receive college credit by contacting a CCCC advisor. A petition for Tech Prep credit should be completed as soon as possible upon admission to CCCC.

CAREER OPPORTUNITIES

Enjoy a profitable career in a modem business environment. Expanding job market possibilities related to drafting and design exist in such industries as:

- Manufacturing Firms
- Research Organizations
- Aircraft Industry
- Governmental agencies
- Computer Centers
- Architectural Firms

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS COMPUTER AIDED DRAFTING AND DESIGN

I. General Education Core — Credit Hours

22 credit hours

A.	ENGL 1301	Composition/Rhetoric I	3
B.	SPCH 1311	Fundamentals of Speech Communication[1]	3
C.	MATH 1314	College Algebra	3
D.	CADD 1301	Computer Graphics Systems	3
E.	ECON 1301	Introduction to Economics	3
F.	HUMA 1301	Introduction to Humanities	3
G.	PSYC 2302	Applied Psychology	3
H.	PHED/DANC	Any Activity Course	1

II. Technical Program Core

15 credit hours

A.	ELET 1440	AC/DC Fundamentals	4
B.	MATH 2312	PreCalculus for Math & Science	3
C.	PHYS 1401	General Physics I	4
D.	PHYS 1402	General Physics II	4

III. Major Courses

18 credit hours

A.	CADD 1302	Technical Graphics I	3
B.	CADD 1303	Technical Graphics II	3
C.	CADD 1304	Computer Aided Drafting	3
D.	CADD 2303	Advanced Computer Aided Drafting	3
E.	CADD 2305	Electronic PCB Drafting	3
F.	CADD 2307	Manufacturing Processes	3

IV. Electives

9 credit hours

A.	CADD 2301	Technical Illustration	3
B.	CADD 2302	Computer Aided Design	3
C.	CADD 2306	Descriptive Geometry	3
D.	CADD 2308	NC Programming	3

E. CADD 2309   Computer Integrated Manufacturing 3
E   CADD 2310   Printed Circuit Design _____ 3
G. CADD 2311   Advanced Printed Circuit Design 3
H. CADD 2315   Applications in PCB Design _____ 3
I. CADD 7300   Cooperative Education I _____ 3
J. CADD 7305   Cooperative Education II _____ 3
K. CADD 7310   Cooperative Education III _____ 3
L. COSC 2390   Advanced Topics-Autolisp_____ 3

[1] *May substitute SPCH 1315 or SPCH 1321*

COMPUTER AIDED DRAFTING AND DESIGN

ELECTRONIC DESIGN OPTION

A two-year Associate of Applied Science degree program
67 credit hours required to graduate

ABOUT OUR PROGRAM

The degree in Computer Aided Drafting and Design (CADD) Electronic Design Option provides both an educational foundation in computer aided printed circuit board (PCB) design and insight into current industry practices. Students in the intensive CADD program are taught the skills a PCB designer needs to seek high-tech career opportunities in this rapidly growing and ever changing field.

Students planning to transfer to a four-year institution should check with an academic adviser

CAREER OPPORTUNITIES

Enjoy a profitable career in a modem business environment. Expanding job market possibilities related to PCB design exist in the following industries:
- Aerospace
- Telecommunications
- Digital Switching
- Electronics
- Computer Centers
- Research Organizations
- Aircraft Industry
- Biomedical

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS COMPUTER AIDED DRAFTING AND DESIGN

ELECTRONIC DESIGN OPTION

I. General Education Core   Credit Houn

22 credit hours

A. ENGL 1301   Composition/Rhetoric I _____ 3
B. SPCH 1311   Fundamentals of Speech Communication[1] _____ 3
C. MATH 1314   College Algebra _____ 3
D. CADD 1301   Computer Graphics Systems _____ 3
E. ECON 1301   Introduction to Economics _____ 3
F. HUMA 1301   Introduction to Humanities _____ 3
G. PSYC 2302   Applied Psychology _____ 3
H. PHED/DANC Any Activity Course _____ 1

II. Technical Program Core

18 credit hours

A. ELAT 2335   Digital Control Applications _____ 3
B. ELAT 2425   Active Devices _____ 4
C. ELET 1400   Circuit Analysis I _____ 4
D. ELET 1401   Circuit Analysis II _____ 4
E. MATH 2312   Pre-Cal for Math & Science _____ 3

III. Major Courses

21 credit houn

A. CADD 1302   Technical Graphics I _____ 3
B. CADD 1303   Technical Graphics II _____ 3
C. CADD 1304   Computer Aided Drafting _____ 3
D. CADD 2303   Advanced Computer Aided Drafting 3
E. CADD 2305   Electronic PCB Drafting _____ 3
E   CADD 2310   Printed Circuit Design _____ 3
G. CADD 2311   Advanced Printed Circuit Design 3

IV. Electives

6 credit hours

A. CADD 2301   Technical Illustration _____ 3
B. CADD 2302   Computer Aided Design _____ 3
C. CADD 2306   Descriptive Geometry _____ 3
D. CADD 2307   Manufacturing Processes _____ 3
E. CADD 2308   NC Programming _____ 3
I   CADD 2309   Computer Integrated Manufacturing 3
G. CADD 2315   Applications in PCB Design _____ 3
H. CADD 7300   Cooperative Education I _____ 3
I. CADD 7305   Cooperative Education II _____ 3
J. CADD 7310   Cooperative Education III _____ 3
K. COSC 2390   Advanced Topics-Autolisp_____ 3

[1] *May substitute SPCH 1315 or SPCH 1321*

COMPUTER AIDED DRAFTING AND DESIGN

MANUFACTURING OPTION

A two-year Associate of Applied Science degree program
70 credit hours required to graduate

ABOUT OUR PROGRAM

An emerging field in computer integrated manufacturing is rapidly gaining a place in the manufacturing industry. The degree in Computer Aided Drafting and Design (CADD) Manufacturing Option provides both an educational foundation in computer integrated manufacturing and an insight into current industry practices. Students in the intensive CADD program are taught the skills the CADD/CAM technician needs to seek high-tech career opportunities in this rapidly growing field.

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Students receiving and Associate of Applied Science degree in Engineering Technology with an emphasis in Drafting and Computer Aided Design Manufacturing may seek careers in:
- Manufacturing
- Research
- Aerospace
- Aircraft Industries
- Electronics Industries

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: COMPUTER AIDED DRAFTING AND DESIGN

MANUFACTURING OPTION

I. General Education Core — **Credit Hours**

22 credit hours

A.	ENGL 1301	Composition/Rhetoric I	3
B.	SPCH 1311	Fundamentals of Speech Communication[1]	3
C.	MATH 1314	College Algebra	3
D.	CADD 1301	Computer Graphics Systems	3
E.	ECON 1301	Introduction to Economics	3
F.	HUMA 1301	Introduction to Humanities	3
G.	PSYC 2302	Applied Psychology	3
H.	PHED/DANC	Any Activity Course	1

II. Technical Program Core

IS credit hours

A.	ELET 1440	AC/DC Fundamentals	4
B.	MATH 2312	Pre-Calculus for Math & Science	3

C.	PHYS 1401	General Physics I	4
D.	PHYS 1402	General Physics II	4

III. Major Courses

21 credit hours

A.	CADD 1302	Technical Graphics I	3
B.	CADD 1303	Technical Graphics II	3
C.	CADD 1304	Computer Aided Drafting	3
D.	CADD 2303	Advanced Computer Aided Drafting	3
E.	CADD 2307	Manufacturing Processes	3
F.	CADD 2308	NC Programming	3
G.	CADD 2309	Computer Integrated Manufacturing	3

IV. Electives

12 credit hours

A.	CADD 2301	Technical Illustration	3
B.	CADD 2302	Computer Aided Design	3
C.	CADD 2305	Electronic PCB Drafting	3
D.	CADD 2306	Descriptive Geometry	3
E.	CADD 2310	Printed Circuit Design	3
F.	CADD 2311	Advanced Printed Circuit Design	3
G.	CADD 2315	Applications in PCB Design	3
H.	CADD 7300	Cooperative Education I	3
I.	CADD 7305	Cooperative Education II	3
J.	CADD 7310	Cooperative Education III	3
K.	COSC 2390	Advanced Topics-Autolisp	3

[1] *May substitute SPCH 2315 or SPCH 2321*

COMPUTER AIDED DRAFTING AND DESIGN

COMMERCIAL INTERIOR DESIGN OPTION

A two-year Associate of Applied Science degree program
67 credit hours

ABOUT OUR PROGRAM

Commercial interior design is an upcoming, fast-emerging career field for Computer Aided Drafting and Design (CADD) students. CADD is reaching into every aspect of the industrial community. The demand for commercial interior designers with a CADD background has never been as high as it is today. The interior design program at CCCC will prepare the student for a rewarding career in this field. It will also provide the student with a strong foundation in preparation for transfer to many four-year institutions.

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Expanding job market possibilities related to commercial interior design exist in all sectors of the industrial community

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: COMPUTER AIDED DRAFTING AND DESIGN

COMMERCIAL INTERIOR DESIGN OPTION

I. General Education Core   **Credit Hours**

22 credit hours

A.	ENGL 1301	Composition/Rhetoric I	3
B.	SPCH 1311	Fundamentals of Speech Communication[1]	3
C.	MATH .1332	Contemporary Mathematics	3
D.	COSC '1306	Introduction to Computers	3
E.	ECON 1301	Introduction to Economics	3
F.	HUMA 1301	Introduction to Humanities	3
G.	PSYC 2302	Applied Psychology	3
or	PSYC 2301	General Psychology	3
H.	PHED/DANC	Any Activity Course	1

II. Technical Program Core

12 credit hours

A.	BUSI 1301	Introduction to Business[2]	3
B.	CADD 1301	Computer Graphics Systems	3
C.	CADD 1302	Technical Graphics I	3
D.	CADD 1304	Computer Aided Drafting	3

III. Major Program Core

21 credit burs

A.	ARTS 1311	Design I	3
B.	ARTS 1316	Drawing I	3
C.	ARTS 2311	Design III	3
D.	CADD 2302	Computer Aided Design	3
E.	INTD 1301	Applied Interior Design I	3
F.	INTD 2302	Applied Interior Design II	3
G.	INTD 2303	Applied Interior Design III	3

IV. Electives

12 credit hours

A.	ARTS 1303	Art History I	3
B.	ARTS 1304	Art History II	3
C.	ARTS 2366	Watercolor I	3
D.	CADD 2301	Technical Illustration	3
E.	CADD 2303	Advanced Computer Aided Drafting	3
F.	CADD 7300	Cooperative Education I	3
G.	CADD 7305	Cooperative Education II	3
H.	CADD 7310	Cooperative Education III	3
I.	COSC 2390	Advanced Topics-Autolisp	3
J.	HORT 1315	Interior Plants	3
K.	HORT 2300	Introduction Landscape Design	3
L.	HORT 2420	Home Landscape Design	3
M.	MRKT 1310	Principles of Advertising	3
N.	MRKT 1395	Principles of Marketing	3
O.	SBMT 1310	Principles of Retailing	3

[1] *SPCH 1321 may be substituted for SPCH 1312*
[2] *SBMT 1300 may be substituted for BUSI 1301*

ENHANCED SKILLS CERTIFICATE

The Enhanced Skills Certificate in Computer Aided Drafting and Design provides additional training in specific job skills which supplement those acquired within the curriculum for an AAS degree in Computer Aided Drafting and Design. Students will have an opportunity to acquire those employment-related skills while completing the AAS degree requirements or subsequent to earning their AAS in Computer Aided Drafting and Design.

ENHANCED SKILLS CERTIFICATE REQUIREMENTS

9 credit hours

A.	CADD 2301	Technical Illustration	3
B.	CADD 2302	Computer Aided Design	3
C.	COSC 2390	Advanced Topics-Autoliip	3

COMPUTER AIDED DRAFTING AND DESIGN

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS: AUTOCAD

15 credit hours

A.	CADD 1301	Computer Graphics Systems	3
B.	CADD 1304	Computer Aided Drafting	3
C.	CADD 2302	Computer Aided Design[1]	3
D.	CADD 2303	Advanced Computer Aided Drafting	3
E.	COSC 2390	Advanced Topics-Autolisp[1]	3

[1]*Enhanced Skills Certificate*

CERTIFICATE REQUIREMENTS: DRAFTING AND COMPUTER AIDED DESIGN

30 credit hours

A.	CADD 1301	Computer Graphics Systems	3
B.	CADD 1302	Technical Graphics I	3
C.	CADD 1303	Technical Graphics II	3
D.	CADD 1304	Computer Aided Drafting	3
E.	CADD 2301	Technical Illustration'	3
F.	CADD 2302	Computer Aided Design'	3
G.	CADD 2303	Advanced Computer Aided Drafting	3
H.	CADD 2305	Electronic PCB Drafting	3
I.	CADD 2307	Manufacturing Processes	3
J.	COSC 2390	Advanced Topics-Autolisp[1]	3

'Enhanced *Skills Certificate*

CERTIFICATE REQUIREMENTS ELECTRONIC DESIGN

39 credit hours

A.	CADD 1301	Computer Graphics Systems	3
B.	CADD 1302	Technical Graphics I	3
C.	CADD 1303	Technical Graphics II	3
D.	CADD 1304	Computer Aided Drafting	3
E.	CADD 2303	Advanced Computer Aided Drafting	3
F.	CADD 2305	Electronic PCB Drafting	3
G.	CADD 2310	Printed Circuit Design	3
H.	CADD 2311	Advanced Printed Circuit Design	3
I.	ELAT 2335	Digital Control Applications	3

J.	ELAT	2425	Active Devices	4
K.	ELET	1400	Circuit Analysis I	4
L.	ELET	1401	Circuit Analysis II	4

CERTIFICATE REQUIREMENTS COMMERCIAL INTERIOR DESIGN

30 credit hours

A.	ARTS	1311	Design I	3
B.	ARTS	1312	Design II	3
C.	ARTS	1316	Drawing I	3
D.	CADD	1301	Computer Graphics Systems	3
E.	CADD	1302	Technical Graphics I	3
F.	CADD	1304	Computer Aided Drafting	3
G.	CADD	2302	Computer Aided Design	3
H.	INTD	1301	Applied Interior Design I	3
I.	INTD	2302	Applied Interior Design II	3
J.	INTD	2303	Applied Interior Design III	3

CERTIFICATE REQUIREMENTS MANUFACTURING DESIGN

30 credit hours

A.	CADD	1301	Computer Graphics System	3
B.	CADD	1302	Technical Graphics I	3
C.	CADD	1303	Technical Graphics II	3
D.	CADD	1304	Computer Aided Drafting	3
E.	CADD	2302	Computer Aided Design	3
F.	CADD	2303	Advanced Computer Aided Drafting	3
G.	CADD	2307	Manufacturing Processes	3
H.	CADD	2308	NC Programming	3
I.	CADD	2309	Computer Integrated Manufacturing	3
J.	COSC	2390	Advanced Topics-Autolisp	3

COMPUTER INFORMATION SYSTEMS

BUSINESS PROGRAMMING

A two-year Associate of Applied Science degree program
64 credit hours required to graduate

ABOUT OUR PROGRAM

The development and use of computers in business and industry has created a need for many data processing technicians who are proficient in business programming languages as well as computer operations. Many small and medium sized businesses spend a considerable amount of money seeking qualified computer specialists who can solve business problems.

The degree program in Computer Information Systems with an emphasis in Business Programming is for the person who wants to obtain the entry-level skills and technical knowledge necessary for the demands of today's business and industry needs. Areas of study include:

- Business Programming – use of COBOL in a business environment is emphasized
- Financial Skills – accounting and economics courses are used to strengthen the background of the graduate
- Management Skills – information systems management, systems analysis, database management systems, applied

psychology and technical writing are used to enhance effective management decisions

- Technical Skills – operating systems, data structures and statistics are presented to further technical competency

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Students in the Business Programming option program will receive basic instruction and pre-employment training for positions requiring high degrees of skill and technical knowledge. The Computer Information Systems curriculum will extend or improve the existing occupational competence of employed persons. The Business Programming option readies students to seek one of many new job opportunities, a few of which are:

- Business Programmer – produce new business programs and modify existing ones
- Computer Operator – control and monitor mainframe computer functions
- Database Manager – design and manage business data systems
- Production Analyst – maintain computer security, computer libraries, and business forms and equipment.

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS:COMPUTER INFORMATION SYSTEMS/BUSINESS PROGRAMMING

I. General Education Core   Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication'	3
C.	MATH	1324	Pre-Calculus for Business/Economics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	2302	Principles of Microeconomics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology[2]	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

15 credit hours

A.	CSCI	2330	COBOL I	3
B.	COSC	2380	Software Engineering	3
C.	CSCI	2350	Computer Operating Systems	3
D.	CSCI	2355	Networking/Telecommunications	3
E.	COSC	1320	C/C++ Programming	3

III. Major Courses

21 credit hours

A.	ACCT	2301	Principles of Accounting I _____	3
B.	ACCT	2302	Principles of Accounting II _____	3
C.	CSCI	2331	COBOL II _____	3
D.	COSC	1318	Programming Concepts I _____	3
E.	COSC	2318	Programming Concepts II _____	3
F.	ENGL	2311	Technical Writing _____	3
G.	MATH	1325	Calculus for Business/Economics 3

IV. Electives

6 credit hours

A.	BUSI	1301	Introduction to Business _____	3
B.	CADD	1301	Computer Graphics Systems _____	3
C.	CSCI	1305	Microcomputer Concepts _____	3
D.	CSCI	1320	BASIC Programming _____	3
E.	CSCI	2305	Integrated Spreadsheet Applications 3
F.	CSCI	2310	Database Applications _____	3
G.	CSCI	2315	Desktop Publishing _____	3
H.	CSCI	2335	Data Structures for Business _____	3
I.	CSCI	2390	Special Topics in CIS I _____	3
J.	CSCI	2395	Special Topics in CIS II _____	3
K.	CSCI	7300	Cooperative Education I _____	3
L.	CSCI	7305	Cooperative Education II _____	3
M.	COSC	2325	Assembly Language _____	3

[1]*May substitute SPCH 2325 or SPCH 1321*
[2]*Transfer Students should substitute PSYC 2301*

COMPUTER INFORMATION SYSTEMS

COMPUTER SYSTEMS

A two-year **Associate of Applied Science degree program**
64 credit hours required to graduate

ABOUT OUR PROGRAM

The area of computer information systems is an exating field that presents many opportunities for a student who is proficient in both applications and business programming. The skills acquired in this program will enable the student to solve problems that are encountered when working in this ever-changing and growing field. Five certificates are offered that can be a part of this degree. After completing one or more certificates students can continue at Collin County Community College and receive an Associate of Applied Science degree.

The degree program in Computer Information Systems is for persons who want to obtain the entry level skills and knowledge necessary for the demands of today's business and industry needs. Areas of study include:

- Microcomputer Applications
- Financial **Skills**
- Business Programming
- Management Skills
- Technical Skills

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Students in the Computer Systems option program will receive basic instruction and pre-employment training for positions requiring high degrees of skill and technical knowledge. The certificates will provide the knowledge to update current job requirements. The skills acquired will be directly applicable in a variety of business and industry jobs, a few of which are:

- Manufacturing Firms
- Computer Centers
- Governmental Agencies
- Accounting Finns
- Microcomputer Support Firms
- Transportation Industry
- Financial Firms

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS - COMPUTER INFORMATION SYSTEMS/COMPUTER SYSTEMS

I. General Education Core — Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I _____	3
B.	SPCH	1311	Fundamentals of Speech Communications' _____	3
C.	MATH	1324	Pre-Calculus for Business/Economics 3
D.	COSC	1306	Introduction to Computers _____	3
E.	ECON	2302	Principles of Microeconomics 3
F.	HUMA	1301	Introduction to Humanities _____	3
G.	PSYC	2302	Applied Psychology[2] 3
H.	PHED/DANC		Any Activity Course _____	1

II. Technical Program Core

15 credit hours

A.	COSC	2380	Software Engineering _____	3
B.	CSCI	1320	BASIC Programming _____	3
C.	CSCI	2305	Integrated Spreadsheet Applications 3
D.	CSCI	2310	Database Applications _____	3
E.	OFAD	1331	Beginning Word Processing _____	3

III. Electives

27 credit hours

A.	ACCT	1370	Elementary Accounting _____	3
B.	ACCT	2301	Principles of Accounting I _____	3
C.	BUSI	1370	Principles of Management _____	3
D.	BUSI	2372	Organizational Behavior _____	3
E.	CADD	1301	Computer Graphics Systems _____	3
F.	COSC	1318	Programming Concepts I _____	3
G.	COSC	1320	C/C++ Programming _____	3
H.	COSC	2318	Programming Concepts II _____	3
I.	COSC	2383	Computer Networks _____	3
J.	CSCI	1305	Microcomputer Concepts _____	3

K.	CSCI	2315	Desktop Publishing	3
L.	CSCI	2330	COBOL I	3
M.	CSCI	2331	COBOL II	3
N.	CSCI	2335	Data Structures for Business	3
O.	CSCI	2350	Computer Operating Systems	3
P.	CSCI	2355	Networking and Telecommunications	3
Q.	CSCI	2390	Special Topics in CSCI	3
R.	CSCI	7300	Cooperative Education I	3
S.	CSCI	7305	Cooperative Education II	3
T.	ENGL	2311	Technical Writing	3

[1]*May* substitute *SPCH* **2315** *or SPCH* **1321**
[2]*Transfer* **students should substitute PSYC 2302**

COMPUTER INFORMATION SYSTEMS

MICROCOMPUTER APPLICATIONS

A two-year Associate of Applied Science degree program
64 credit hours required to graduate

ABOUT OUR PROGRAM

The development and use of computers in business and industry has created a need for many data processing technicians who are proficient in business programming languages as well as a variety of computer application packages.

The United States Office of Technology Assessment estimates that by the year 2000, 80 percent of all jobs will be computer-related.

The Associate of Applied Science degree program in Computer Information Systems with an emphasis in Microcomputer Applications accentuates the entry level technical skills necessary for the demands of today's business and industry needs. These **skills** are:

■ Business Applications – fluency in the use of dBASE, Lotus 1-2-3, Symphony, word processing and desktop publishing software is emphasized

● Technical Skills – operating systems, data structures, networking, telecommunications and microcomputer concepts courses are used to enhance technical competency

● Management Skills – systems analysis and design, applied psychology and database design techniques are used to enhance effective management decisions

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Students in the Microcomputer Applications option will prepare for entry into the work force by experiencing practical applications and "real world" simulations using the latest in advanced software applications packages.

The degree in Computer Information Systems with a Microcomputer Applications option readies students for many new business and industry job opportunities, a few of which are:

● Database: dBASE programmer – using the latest database applications programs to design and maintain business data

● PC Support Specialist – business problem solving using a variety of micro-application packages

● Micro Programmer – design new programs and modify existing programs using microcomputer business languages

● PC Service Representative – support networking and the micro-telecommunications industry

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS – COMPUTER INFORMATION SYSTEMS/MICROCOMPUTER APPLICATIONS

I. General Education Core

22 credit hours
A.	ENGL	1301	Composition/Rhetoric 1	3
B.	SPCH	1311	Fundamentals of Speech Communications[1]	3
C.	MATH	1324	Pre-Calculus for Business/Economics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	2302	Prinaples of Microeconomics	3
F.	HUMA	1301	Introduction to Humanities.	3
G.	PSYC	2302	Applied Psychology[2]	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

15 credit hours
A.	CSCI	1305	Microcomputer Concepts	3
B.	CSCI	1320	BASIC Programming	3
C.	CSCI	1325	Introduction to Multimedia	3
D.	CSCI	2350	Computer Operating Systems	3
E.	CSCI	2355	Networking and Telecommunications	3

III. Major Courses

21 credit hours
A.	ACCT	2301	Principles of Accounting I	3
B.	CSCI	1310	Intro to Graphics	3
C.	CSCI	2305	Integrated Spreadsheet Applications	3
D.	CSCI	2310	Database Applications	3
E.	CSCI	2315	Desktop Publishing	3
F.	CSCI	2325	Intermediate Multimedia Applications	3
G.	OFAD	1331	Beginning Word Processing	3

IV. Electives

6 credit hours
A.	BUSI	1370	Principles of Management	3
B.	BUSI	2372	Organizational Behavior	3
C.	COSC	2380	Software Engineering.	3
F.	CSCI	2330	COBOL I	3

D.	CSCI	2331	COBOL II.		3
E.	CSCI	2335	Data Structures for Business		3
G.	CSCI	2390	Special Topics in CSCI I		3
H.	CSCI	2395	Special Topics in CSCI II		3
I.	CSCI	7300	Cooperative Education I		3
J.	CSCI	7305	Cooperative Education II		3

¹*May* substitute SPCH 1315 or SPCH 1321
¹*Transfer* students should *substitute* PSYC 2301

COMPUTER INFORMATION SYSTEMS

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS COMPUTER APPLICATIONS

15 credit hours

A.	COSC	1306	Introduction to Computers		3
B.	CSCI	1305	Microcomputer Concepts		3
C.	CSCI	2305	Integrated Spreadsheet Applications		3
D.	CSCI	2310	Database Applications		3
E.	CSCI	2315	Desktop Publishing		3
or	CSCI	1325	Introduction to Multimedia		3

CERTIFICATE REQUIREMENTS COMPUTER OPERATING SYSTEMS

18 credit hours

A.	COSC	1306	Introduction to Computers		3
B.	COSC	1318	Programming Concepts I		3
C.	COSC	2325	Assembly Language		3
D.	COSC	2380	Software Engineering		3
E.	CSCI	1305	Microcomputer Concepts		3
F.	CSCI	2350	Computer Operating Systems		3

CERTIFICATE REQUIREMENTS: INFORMATION SYSTEMS MANAGEMENT

21 credit hours

A.	COSC	1306	Introduction to Computers		3
B.	COSC	1318	Programming Concepts I		3
or	CSCI	1318	COBOL I		3
C.	COSC	2380	Software Engineering		3
D.	CSCI	1305	Microcomputer Concepts		3
E.	CSCI	1325	Introduction to Multimedia		3
F.	CSCI	2305	Integrated Spreadsheet Applications		3
or	CSCI	2310	Database Applications		3
G.	CSCI	2355	Networking and Telecommunications		3

CERTIFICATE REQUIREMENTS: NETWORKING AND TELECOMMUNICATIONS

24 credit hours

A.	COSC	1306	Introduction to Computers		3
B.	COSC	1318	Programming Concepts I		3
or	CSCI	2330	COBOL I		3
C.	COSC	2380	Software Engineering		3
D.	COSC	2383	Computer Networks		3

E.	CSCI	1305	Microcomputer Concepts		3
F.	CSCI	2350	Computer Operating Systems		3
G.	CSCI	2355	Networking and Telecommunications		3
H.	CSCI	7300	Cooperative Education I		3
or	CSCI	7305	Cooperative Education II		3

COMPUTER SCIENCE

A two-year Associate of Science degree **program**
60 credit hours required to graduate

ABOUT OUR PROGRAM

The accelerating pace of industrial and technological developments has created an ever-increasing demand for highly qualified professionals to formulate and solve the problems of today and the future. The Associate of Science degree with an emphasis in computer science discipline will prepare the student for work in this field. The course work for a BS in Computer Science is similar in most disciplines; however, the student is advised to consult an academic adviser when deciding upon which university to attend and which course of study to pursue.

CAREER OPPORTUNITIES

At the present time, over two-thirds of all the technical and a large percentage of the managerial positions in industry are occupied by software engineers and computer scientists. Our computer science program prepares the students for transfer to a four-year institution where they can specialize in such disciplines as Computer Science and Computer Software Engineering.

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: COMPUTER SCIENCE

I. General Education Core

See page **41** for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	COSC	1317	Scientific Programming		3
B.	COSC	1318	Programming Concepts I		3
C.	COSC	1320	C/C++ Programming		3
D.	COSC	2318	Programming Concepts II		3
E.	COSC	2325	Assembly Language		3
F.	ENGL	2311	Technical Writing		3
G.	ENGL	2300	Any 2300-Level Literature Course		3
H.	MATH	2318	Linear Algebra		3
I.	PHIL	2303	Logic		3

COMPUTER SCIENCE

SOFTWARE DEVELOPMENT

A two-year Associate of Applied Science degree program
65 credit hours required to graduate

ABOUT OUR PROGRAM

The development and use of computers, especially microprocessors, has created a demand for software application programs. There are career opportunities in both real time control programs and systems software development. This involves not only

developing programs but correcting and updating existing software.

This degree program requires extensive hands-on programming on both microcomputers and VAX minicomputers.

Students planning to transfer to a four year institution should check with an academic adviser.

CAREER OPPORTUNITIES

This program prepares entry-level computer programmers for work in an applications environment. The student gains a background in basic programming concepts including software design and is exposed to present-day computer languages. Careers available for the graduate include:

- Computer Service Technician
- Computer Programmer
- Software Development Programmer
- Numerical Control Programmer
- Minicomputer Programmer

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS COMPUTER SCIENCE SOFTWARE DEVELOPMENT

I. General Education Cora   Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I _____ 3
B.	SPCH	1311	Fundamentals of Speech Communications' _____ 3
C.	MATH	1314	College Algebra _____ 3
D.	COSC	1306	Introduction to Computers _____ 3
E.	ECON	2302	Principles of Microeconomics _____ 3
E	HUMA	1301	Introduction to Humanities _____ 3
G.	PSYC	2301	General Psychology _____ 3
H.	PHED/DANC		Any Activity Course _____ 1

II. Technical Program Core

10 credit hours

A.	ELET	1440	AC/DC Fundamentals _____ 4
B.	ENGL	2311	Technical Writing _____ 3
C.	MATH	2312	Pre-Cal for Math & Science _____ 3

III. Major Courses

24 credit hours

A.	COSC	1318	Programming Concepts I _____ 3
B.	COSC	1320	C/C++ Programming _____ 3
C.	COSC	2318	Programming Concepts II _____ 3
D.	COSC	2325	Assembly Language _____ 3
E.	COSC	2372	Object-Oriented Programming _____ 3
E	COSC	2380	Software Engineering _____ 3
G.	COSC	2383	Computer Networks _____ 3
H.	COSC	2384	Large Scale Operating System _____ 3
or	CSCI	2350	Operating System _____ 3

IV. Electives

9 credit hours

A.	COSC	1317	Scientific Programming _____ 3
B.	COSC	2315	Data Structures with C _____ 3
C.	COSC	2375	Advanced Assembly Language _____ 3
D.	COSC	2379	Programming in Windows _____ 3
E.	COSC	2387	Intro to Artificial Intelligence _____ 3
F.	COSC	2390	Advanced Topic in COSC _____ 3
G.	COSC	7300	Cooperative Education I _____ 3

'May substitute SPCH 1315 or SPCH 1321

COMPUTER SCIENCE: SOFTWARE DEVELOPMENT

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may **require** prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS ASSEMBLY LANGUAGE PROGRAMMING

21 credit hours

A.	COSC	1306	Introduction to Computers _____ 3
B.	COSC	1318	Programming Concepts I _____ 3
C.	COSC	1320	C/C++ Programming _____ 3
D.	COSC	2318	Programming Concepts II _____ 3
E.	COSC	2325	Assembly Language Programming _____ 3
F.	COSC	2375	Advanced Assembly Language Programming _____ 3
G.	COSC	2380	Software Engineering _____ 3

CERTIFICATE REQUIREMENTS BUSINESS PROGRAMMING

21 credit hours

A.	COSC	1306	Introduction to Computers _____ 3
B.	COSC	1318	Programming Concepts I _____ 3
C.	COSC	2318	Programming Concepts II _____ 3
D.	COSC	2380	Software Engineering _____ 3
E.	CSCI	2330	COBOL I _____ 3
E	CSCI	2331	COBOL II _____ 3
G.	CSCI	2350	Computer Operating Systems _____ 3

CERTIFICATE REQUIREMENTS C PROGRAMMING

24 credit hours

A.	COSC	1306	Introduction to Computers _____ 3
B.	COSC	1318	Programming Concepts I _____ 3
C.	COSC	1320	C/C++ Programming _____ 3
D.	COSC	2318	Programming Concepts II _____ 3
E.	COSC	2315	Data Structures with C _____ 3
F.	COSC	2372	Object-Oriented Programming _____ 3
G.	COSC	2379	Programming in Windows _____ 3
or	COSC	2386	Systems Programming _____ 3
H.	COSC	2380	Software Engineering _____ 3

CERTIFICATE REQUIREMENTS: PROGRAMMING FOR EDUCATORS

21 credit hours

A.	COSC	1306	Introduction to Computers	3
B.	COSC	1318	Programming Concepts I	3
C.	COSC	2318	Programming Concepts II	3
D.	COSC	2380	Software Engineering	3
E.	CSCI	1305	Microcomputer Concepts	3
E	CSCI	1320	BASIC Programming	3
or	COSC	1320	C/C++ Programming	3
G.	CSCI	2350	Computer Operating Systems	3

CRIMINAL JUSTICE

A two-year Associate of Applied Science degree program
(Also a Tech Prep program)
62 credit hours required to graduate

ABOUT OUR PROGRAM

The challenge of crime in a free society has created many employment opportunities for graduates of college programs in law enforcement and corrections. Virtually all public and private labor forecasting organizations predict that law enforcement and corrections career opportunities will grow substantially between now and the turn of the century Majoring in either law enforcement or corrections. graduates of the 62 semester hour Associate of Applied Science degree will be prepared for entry-level positions in local. county state. and federal law enforcement. corrections. and juvenile justice agencies and to continue their education at the baccalaureate level.

Tech Prep students who took collegiate-level comes in Criminal Justice while in high school may elect to receive college credit by contacting a CCCC advisor. A petition for Tech Prep credit should be completed as soon as possible upon admission to CCCC.

CAREER OPPORTUNITIES

Challenging career opportunities exist for graduates as:
- Municipal Police Officers
- State Law Enforcement Officers
- Forest. Watercraft and Game protection officers
- Victim Service Counselors
- Corrections Officers for local, county, state and federal corrections institutions
- Community Supervision officers
- Deputy Sheriffs
- Public Safety Officers
- Federal Law Enforcement Protection Officers
- Public and Private Investigators
- Juvenile Detention Officers

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in baccalaureate degree programs at specific four-year colleges and universities. Students planning to transfer to a four-year institution should consult with the coordinator of the criminal justice program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS CRIMINAL JUSTICE

I. General Education Core   Credit Hours

23 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	PHIL	2306	Ethics	3
G.	SOCI	1301	Introduction to Sociology	3
H.	PHED	1238	Concepts of Physical Fitness and Wellness	2

II. Technical Program Core

12 credit hours

A.	CRIJ	1301	Introduction to Criminal Justice	3
B.	CRIJ	1306	The Courts and Criminal Procedure	3
C.	CRIJ	1307	Crime in America	3
D.	CRIJ	1310	Fundamentals of Criminal Law	3

III. Major Courses

21 credit hours

Law Enforcement option

A.	CRIJ	1313	Juvenile Justice System	3
B.	CRIJ	2328	Police Systems and Practices	3
C.	CRIJ	2314	Criminal Investigation	3
D.	CRIJ	2323	Legal Aspects of Law Enforcement	3
E.	SOCI	2319	Minority Studies	3
F.	GOVT	2301	American Government I	3
G.	CRIJ	7300	Cooperative Education I or elective	3

Corrections option

A.	CRIJ	1313	Juvenile Justice System	3
B.	CRIJ	2313	Correctional Systems and Practices	3
C.	CRIJ	2301	Community Resources in Corrections	3
D.	CRIJ	2305	Legal Aspects of Corrections	3
E.	SOCI	2319	Minority Studies	3
F.	EDCC	2305	Individual Counseling	3
G.	CRIJ	7300	Cooperative Education I or elective	3

IV. Electives

9 credit hours

A.	CRIJ	2328	Police Systems and Practices	3
B.	CRIJ	2314	Criminal Investigation	3
C.	CRIJ	2315	Special Topics in Criminal Justice	3
D.	CRIJ	7300	Cooperative Education I	3
E.	PSYC	2301	General Psychology	3
F.	PSYC	2316	Psychology of Personality	3
G.	SOCI	1306	Social Problems	3
H.	PSYC	2306	Human Sexuality	3
or	SOCI	2306	Human Sexuality	3
I.	PSYC	2319	Social Psychology	3
J.	SOCI	2319	Minority Studies	3
K.	SOCI	2301	Marriage and the Family	3
L.	HIST	1302	United States History II	3
M.	PSYC	2370	Drug Use and Abuse	3.

N. BUSI   1370   Principles of Management _____   3

ENHANCED SKILLS CERTIFICATES

The Enhanced Skills Certificates in Law Enforcement and in Corrections provides additional training in specific job skills which supplement those acquired within the curriculum for an **AAS** degree in Criminal Justice. Students will have an opportunity to acquire these employment-related skills while completing the AAS degree requirements or subsequent to earning their AAS in Criminal Justice.

LAW ENFORCEMENT ENHANCED SKILLS CERTIFICATES

CERTIFICATE REQUIREMENTS CRIMINAL JUSTICE DUAL MAJOR

12 credit hours
A.	CRIJ	2313	Correctional Systems and Practices 3
B.	CRIJ	2301	Community Resources in Corrections 3
C.	CRIJ	2305	Legal Aspects of Corrections _____ 3
D.	EDCC	2305	Individual Counseling _____ 3

CERTIFICATE REQUIREMENTS: INTERPERSONAL SKILLS

12 credit hours
A.	PSYC	2316	Psychology of Personality _____ 3
B.	SPCH	1318	Interpersonal Communications 3
C.	PSYC	2319	Social Psychology 3
D.	BUSI	1371	Leadership and Human Relations 3

CERTIFICATE REQUIREMENTS SPANISH/ENGLISH BILINGUAL

14 credit hours
A.	SPAN	1411	Beginning Spanish I 4
B.	SPAN	1412	Beginning Spanish II 4
C.	SPAN	2311	Intermediate Spanish I _____ 3
D.	SPAN	2312	Intermediate Spanish II _____ 3

CERTIFICATE REQUIREMENTS TEXAS PEACE OFFICER

(Continuing Education Units are awarded)

CCM 7030 Texas Peace Officer Law (80 hours)

A study of laws directly related to police field work; traffic, intoxicated driver, Penal Code, elements of crime, Family Code, Alcoholic Beverage Code and civil liability

CCM 7031 Texas Peace Officer Procedures (80 hours)

Techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note taking and report writing, vehicle operation, traffic direction, crowd control and jail operations.

CCM 7032 Texas Peace Officer Skills (96 hours)

Demonstration and practice of the skills expected of a police officer. Patrol, traffic stops, use of force, mechanics of arrest, firearms safety and emergency medical care.

Note: *Texas* Peace *Officer* Enhanced *Skills Certificate is offered* during *Summer* sessions only Students *will* enroll *in CCM* 7030, 7032, *and* 7032 sequentially, completing one *course per* summer *session.*

CORRECTIONS ENHANCED SKILLS CERTIFICATES

CERTIFICATE REQUIREMENTS: CRIMINAL JUSTICE DUAL MAJOR

12 credit hours
A.	CRIJ	2328	Police Systems and Practices _____ 3
B.	CRIJ	2314	Criminal Investigation 3
C.	CRIJ	2323	Legal Aspects of Law Enforcement 3
D.	SPCH	1315	Public speaking 3

CERTIFICATE REQUIREMENTS: INTERPERSONAL SKILLS

12 credit hours
A.	PSYC	2316	Psychology of Personality 3
B.	SPCH	1318	Interpersonal Communications 3
C.	PSYC	2319	Social Psychology 3
D.	BUSI	1371	Leadership and Human Relations 3

CERTIFICATE REQUIREMENTS SPANISH/ENGLISH BILINGUAL

14 credit hours
A.	SPAN	1411	Beginning Spanish I 4
B.	SPAN	1412	Beginning Spanish II 4
C.	SPAN	2311	Intermediate Spanish I _____ 3
D.	SPAN	2312	Intermediate Spanish II _____ 3

CERTIFICATE REQUIREMENTS: CORRECTIONS OFFICER

(Continuing Education Units are Awarded)

CCM 1204 Basic Certification for Correctional Officer (128 hours)

This course will **certify** students for employment with the corrections division of the **Texas** Department of Criminal Justice.

Note: Course *is offered* during summer *sessions* only.

CRIMINAL JUSTICE

A two-year Associate of Arts degree **program**
60 credit hours required to graduate

ABOUT OUR PROGRAM

Providing comfort and direction during a rape crisis intervention, assisting persons with developmental disabilities, resolving a domestic dispute, arresting a dangerous offender or counseling a correctional client are just a few of the myriad of functions performed by criminal justice agents. Law enforcement, court and corrections personnel work with people most often when they are in need of help, when they are perplexed or sometimes when they are at their worst. Few careers will require the perseverance and compassion needed in criminal justice, yet few will be as personally rewarding.

The Criminal Justice program prepares its graduates for entry-level positions in law enforcement, court services, and corrections

at the local, state and federal echelons of government. Through classroom and laboratory experiences students will acquire **the** fundamental knowledge and skills necessary to understand the criminal justice system, its agencies, personnel and functions. Students planning to transfer to a four-year institution will have a solid foundation upon which to build as they pursue further studies in criminal justice.

CAREER OPPORTUNITIES

Challenging career opportunities await graduates at all levels of government as:

- Law Enforcement Officers
- Investigators
- Corrections Officers
- Victim Services Counselors
- Youth Service and Juvenile Court Officers

Students planning to transfer to a four-year institution should consult with the coordinator of the criminal justice program.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: CRIMINAL JUSTICE

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	CRIJ	1307	Crime in America.	3
B.	CRIJ	1301	Introduction to criminal Justice	3
C.	CRIJ	1310	Fundamentals of Criminal Law	3
D.	CRIJ	1306	The Court and Criminal Procedure	3
E.	BUSI	1370	Principles of Management	3
F.	PSYC	2301	General Psychology	3
G.	PSYC	2316	Psychology of Personality	3
H.	SOCI	1301	Introduction to Sociology	3
I.	SOCI	1306	Social Problems	3
J.	SOCI	2306	Human Sexuality	3
K.	SOCI	2319	Minority Studies	3
L.	SPCH	1315	Public Speaking	3
M.	PHIL	2306	Ethics	3

DIETARY MANAGER

CERTIFICATE PROGRAM

ABOUT OUR PROGRAM

The curriculum is approved by the Dietary Manager's Association. Students will be prepared to test for Certification by DMA to be designated a Certified Dietary Manager upon completion of the certificate.

CAREER OPPORTUNITIES

Health care food services supervisor for hospitals, nursing homes and other facilities.

SPECIAL ADMISSIONS REQUIREMENTS

- high school diploma or GED certificate
- completed admissions procedure packet

Registration is by permission **only.** *Additional information and applications may be obtained from the admissions office or from the Mathematics and Natural Sciences Division office.*

CERTIFICATE REQUIREMENTS

DTMG	1600	Dietary Manager I	6
DTMG	1601	Dietary Manager II	6
COSC	1306	Introduction to Computer *Science*	3
BUSI	1371	Leadership and Human Relationships	3

DRAMA

A **two-year** Associate of **Arts degree program**
60 credit hours required to graduate

ABOUT OUR PROGRAM

The theatre program at CCCC strives to introduce students to the aesthetic and analytical elements of theatrical productions. It offers studies in the principles and practices of acting, stagecraft, basic costuming preparation, theatre marketing, technical theater production and stage management.

The labs permit students "hands-on" experiences through performances, as well as shop and crew duties. Our studies include contemporary theories and classical aspects of theatrical studios.

The Quad C Theatre Program at CCCC offers a full curriculum of theatre study including work in beginning and advanced acting, voice and diction, stage and lighting design, costume design and stage makeup, theatre history and dramatic literature, and specialty courses in circus skills, stunt work and stage combat.

Students and community members interested in theatre performance are encouraged to audition for the plays performed each year. Auditions are announced both on and off campus.

Theatre program faculty have experience in professional stage and motion picture work, including such projects as the Broadway musical "Sarafina!"; rock tours with Van Halen, Michael W. Smith and Hank Williams, Jr.; films such as "Young Guns," "JKF," and "Flesh and Bone"; and the TV miniseries "Murder in The Heartlands."

The theatre facility is comprised of two separate performance spaces including the 365-seat John Anthony Theatre and the 100-seat Black Box Theatre. The multi-million dollar complex also houses three dressing rooms, a theatre box office, a costume vault and construction shop, a scene and paint shop, in addition to acting/directing classroom spaces.

For more information about the Quad C Theatre Program, contact the coordinator of theatre (SCC/C155, 881-5679). For ticket and season subscription information, contact the Quad C Theatre Program Box Office at (SCC/C120, 881-5809).

CAREER OPPORTUNITIES

- Theater Education
- Performer
- Technical Assistant
- Lighting Technician
- Costumer
- Producer/Director
- Theatre Marketing and Management

ASSOCIATE OF ARTS DEGREE REQUIREMENTS
DRAMA

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A.	DRAM 1171	Practicum-Performance	1
B.	DRAM 1172	Practicum-Technical	1
C.	DRAM 1310	Introduction to the Theatre	3
D.	DRAM 1330	Stagecraft I	3
E.	DRAM 2331	Stagecraft II	3
F.	DRAM 1341	Theatrical Makeup	3
G.	DRAM 1351	Acting I	3
H.	DRAM 1352	Acting II	3
I.	DRAM 2351	Acting III	3
J.	DRAM 1376	Introduction to Costuming	3
K.	DRAM 2336	Voice and Diction	3
L.	DRAM 2366	History of Film Making I	3
M.	DRAM 2367	History of Film Making II	3
N.	DRAM 2371	Theatre Outreach	3
O.	DRAM 2371	New York Theatre Field Studies	3
P.	ARTS 1370	The Art of Directing	3
Q.	BUSI 2379	Business of Theatre	3

ECONOMICS

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Arts degree with an emphasis in economics establishes an academic foundation for future studies at a four-year college or university. Students will develop an understanding of past and present economic theories and learn to apply this information toward solving tomorrow's economic problems.

CAREER OPPORTUNITIES

Numerous career opportunities are available to those with a background in economics. Areas of career opportunities are listed below. Prospective students should bear in mind that many of these areas require training beyond the Associate of Arts degree, and some may require professional degrees.

- Bankiig and Fiance
- College Teaching
- Economists
- Governmental Agencies
- Investment Specialists
- Planners

ASSOCIATE OF ARTS DEGREE REQUIREMENTS
ECONOMICS

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A.	ECON 2301	Principles of Macroeconomics	3
B.	ECON 2302	Principles of Microeconomics	3
C.	ACCT 2301	Principles of Accounting I	3
D.	ACCT 2302	Principles of Accounting II	3
E.	CSCI 1320	BASIC Programming	3
F.	ENGL 2372	Forms of Literature 11-Poetry & Drama	3
G.	PSYC 2301	General Psychology	3
H.	MATH 1325	Calculus for Business and Economics'	3
I.	MATH 1342	Statistics	3

[1]Math 7324 recommended in general education core

EDUCATION

Suggested curriculum for Elementary (Interdisciplinary Studies) and Secondary Education majors is located in the Transfer Lab at Spring Creek Campus in room G103, and at Central Park Campus in A108.

ELECTRONIC TECHNOLOGY

A two-year Associate of Applied Science degree program
(Also Tech Prep Program)
67 credii hours q u i d to graduate

ABOUT OUR PROGRAM

Graduates of this degree program will receive training in several diversified areas of modern electronics. The student will be exposed to a combination of classroom theory and hands-on laboratory experiments that will provide entry level skills for the electronic industry. Maintenance, repair, basic equipment calibration and troubleshooting techniques are emphasized.

Program curriculum and laboratory experiments have been formally evaluated and endorsed by an advisory committee consisting of members of the electronics industry.

Articulation agreements with four-year institutions allow students who complete this program to transfer credit toward a bachelor's degree. Students planning to transfer to a four-year institution should check with an academic adviser.

CCCC is a member of the Texas Association of Schools of Engineering Technology and certified as a testing center for the Certified Electronic Technician Exam.

Tech Prep students who took collegiate-level courses in Electronic Technology while in high school may elect to receive college credit by contacting a CCCC advisor. A petition for Tech Prep credit should be completed as soon as possible upon admission to CCCC.

CAREER OPPORTUNITIES

Trained electronics technicians are in demand in Texas and nationwide. According to "Jobs 1995," a Texas Employment Commission publication, Texas will require approximately 2,000 electronics technicians each year through 1995.

Students completing this program will receive quality training that will provide skills that may lead to employment in areas such as:

- Telecommunications
- Computer Maintenance
- Avionics
- Biomedical
- Automotive Electronics
- Marine Electronics

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS ELECTRONIC TECHNOLOGY

I. General Education Core

22 credit hours

				Credit Hours
A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication'	3
C.	MATH	1314	College Algebra	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core:

9 credit hours

A.	CADD	2305	Electronic PCB Drafting	3
B.	ENGL	2311	Technical Writing	3
C.	MATH	2312	PreCalculus for Math & Science[2]	3

III. Major Program Core:

30 credit hours

A.	ELAT	1315	Basic Digital'	3
B.	ELAT	1400	Basic Electronics I*	4
C.	ELAT	1401	Basic Electronics II*	4
D.	ELAT	1405	Electronic Fabrication I	4
E.	ELAT	1410	Solid State Devices*	4
F.	ELAT	2330	Instrumentation and Telemetry	3
G.	ELAT	2420	Fundamentals of Electronic Communications	4
H.	ELAT	2425	Active Devices	4

IV. Electives

6 credit hours minimum

A.	ELAT	2335	Digital Control Applications	3
B.	ELAT	2336	Programmable Logic Controllers	3
C.	ELAT	2340	Power Supply Systems	3

D.	ELAT	2360	Microcomputer Systems	3
E.	ELAT	2437	Industrial Automation	4
F.	ELAT	2445	Applied Electronic Circuits	4
G.	ELAT	2450	Computer Architecture	4
H.	ELAT	2455	Applied Computer Programming	4
I.	ELAT	2465	Optoelectronics	4
J.	ELAT	7300	Cooperative Education I	3
K.	ELAT	7305	Cooperative Education II	3

[1]SPCH 1315 or SPCH 1321 may be substituted for SPCH 1311
[2]Higher mathematics courses may be used
*These courses my have been taken in high school

ELECTRONIC TECHNOLOGY

COMMUNICATION SYSTEMS INSTALLATION AND REPAIR

A two-year Associate of Applied Science degree program
71 credit hours required to graduate

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS ELECTRONIC TECHNOLOGY/ COMMUNICATION SYSTEMS INSTALLATION AND REPAIR

I. General Education Core

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communications'	3
C.	MATH	1314	College Algebra[2]	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

9 credit hours

A.	CADD	2305	Electronic Drafting	3
B.	ENGL	2311	Technical Writing	3
C.	MATH	2312	Pre-Calculus for Math & Science[2]	3

III. Major Program Core

34 credit hours

A.	ELAT	1315	Basic Digital	3
B.	ELAT	1400	Basic Electronics I	4
C.	ELAT	1401	Basic Electronics II	4
D.	ELAT	1410	Solid State Devices	4
E.	ELAT	2340	Power Supply Systems	3
F.	ELAT	2420	Fundamentals of Electronic Communication	4
G.	ELAT	2465	Optoelectronics	4
H.	ELET	2420	Telecommunications	4
I.	ELET	2435	Microwave Fundamentals	4

IV. Electives

6 credit hours minimum

A.	ELAT	2335	Digital Control Applications	3
B.	ELAT	2336	Programmable Logic Controllers	3
C.	ELAT	2340	Power Supply System	3
D.	ELAT	2360	Microcomputer Systems	3
E.	ELAT	2437	Industrial Automation	4
F.	ELAT	2445	Applied Electronic Circuits	4
G.	ELAT	2450	Computer Architecture	4
H.	ELAT	2455	Applied Computer Programming	4
I.	ELAT	2465	Optoelectronics	4
J.	ELAT	7300	Cooperative Education I	3
K.	ELAT	7305	Cooperative Education II	3

[1] *May* substitute SPCH 1315 *or* SPCH 1321
[2] *Higher mathematics* courses *may be used*

ELECTRONIC TECHNOLOGY

COMPUTER MAINTENANCE TECHNOLOGY

A two-year Associate of Applied *Science* degree program
67 credit hours required to graduate

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: ELECTRONIC TECHNOLOGY/ COMPUTER MAINTENANCE TECHNOLOGY

1. General Education Core

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communications[1]	3
C.	MATH	1314	College Algebra*	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

9 credit hours

A.	CADD	2305	Electronic Drafting	3
B.	ENGL	2311	Technical Writing	3
C.	MATH	2312	Pre-Calculus for Math and Science2	3

III. Major Program Core

30 credit hours

A.	ELAT	1405	Electronic Fabrication I	4
B.	ELAT	2360	Microcomputer Systems	3
C.	ELAT	2450	Computer Architecture	4
D.	ELAT	2455	Computer Programming	4
E.	ELET	1405	Digital IC Analysis	4
F.	ELET	1410	Fundamentals of Computers	4
G.	ELET	2325	Computer Interfacing	3
H.	ELET	2430	Computer Maintenance	4

IV. Electives

6 credit hours minimum

A.	ELAT	2335	Digital Control Applications	3
B.	ELAT	2336	Programmable Logic Controllers	3

C.	ELAT	2437	Industrial Automation	4
D.	ELAT	2445	Applied Electronic Circuits	4
E.	ELAT	2450	Computer Architecture	4
F.	ELAT	2455	Applied Computer Programming	
G.	ELAT	2465	Optoelectronics	4
H.	ELAT	7300	Cooperative Education I	3
I.	ELAT	7305	Cooperative Education II	3

[1] *May* substitute SPCH 1315 *or* SPCH 1321
[2] *Higher mathematics* courses *may be used*

ELECTRONIC TECHNOLOGY

INSTRUMENTATION TECHNOLOGY

A two-year Associate of Applied Science degree program
68 credit hours required to graduate

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS ELECTRONIC TECHNOLOGY/ INSTRUMENTATION TECHNOLOGY

I. General Education Core

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communications'	3
C.	MATH	1314	College Algebra[2]	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

9 credit hours

A.	CADD	2305	Electronic Drafting	3
B.	ENGL	2311	Technical Writing	3
C.	MATH	2312	Pre-Calculus for Math and Science[2]	3

III. Major Program Core

31 credit hours

A.	ELAT	1315	Basic Digital	3
B.	ELAT	1400	Basic Electronics I	4
C.	ELAT	1401	Basic Electronics II	4
D.	ELAT	1410	Solid State Devices	4
E.	ELAT	2330	Instrumentation and Telemetry	3
F.	ELAT	2335	Digital Control Applications	3
G.	ELAT	2336	Programmable Logic Controllers	3
H.	ELAT	2360	Microcomputer Systems	3
I.	ELAT	2437	Industrial Automation	4

IV. Electives

6 credit hours minimum

A.	ELAT	2440	Power Supply Systems	4
B.	ELAT	2445	Applied Electronic Circuits	4
C.	ELAT	2450	Computer Architecture	4
D.	ELAT	2455	Applied Computer Programming	4
E.	ELAT	2465	Optoelectronics	4
F.	ELAT	7300	Cooperative Education I	3
G.	ELAT	7305	Cooperative Education II	3

[1]*May* substitute SPCH 1315 *or* SPCH 1321
[2]*Higher* mathematics courses may *be* used

ENHANCED SKILLS CERTIFICATE

The Enhanced Skills Certificate in Electronic Technology provides additional training in specific job skills which supplement those acquired within the curriculum for an AAS degree in Electronic Technology Students will have an opportunity to acquire those employment-related skills while completing the **AAS** degree requirements or subsequent to earning their AAS in Electronic Technology.

ENHANCED SKILLS CERTIFICATE REQUIREMENTS

10 credit hours

A.	ELAT	2335	Digital Control Applications	3
B.	ELAT	2336	Programmable Logic Controllers	3
C.	ELAT	2437	Industrial Automation	4

ELECTRONIC TECHNOLOGY

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS COMMUNICATIONS SYSTEMS INSTALLATION AND REPAIR

34 credit hours

A.	ELAT	1315	Basic Digital	3
B.	ELAT	1400	Basic Electronics I	4
C.	ELAT	1401	Basic Electronics II	4
D.	ELAT	1410	Solid State Devices	4
E.	ELAT	2340	Power Supply Systems	3
F.	ELAT	2420	Fundamentals of Electronic Communication	4
G.	ELAT	2465	Optoelectronics	4
H.	ELET	2420	Telecommunications	4
I.	ELET	2435	Microwave Fundamentals	4

CERTIFICATE REQUIREMENTS COMPUTER MAINTENANCE TECHNOLOGY

30 credit hours

A.	ELAT	1405	Electronic Fabrication I	4
B.	ELAT	2360	Microcomputer Systems	3
C.	ELAT	2450	Computer Architecture	4
D.	ELAT	2455	Computer Programming	4
E.	ELET	1405	Digital IC Analysis	4
F.	ELET	1410	Fundamentals of Computers	4
G.	ELET	2325	Computer Interfacing	3
H.	ELET	2430	Computer Maintenance	4

CERTIFICATE REQUIREMENTS ELECTRONIC TECHNOLOGY

30 credit hours

A.	ELAT	1315	Basic Digital	3
B.	ELAT	1400	Basic Electronics I	4
C.	ELAT	1401	Basic Electronics II	4
D.	ELAT	1405	Electronic Fabrication I	4
E.	ELAT	1410	Solid State Devices	4

E.	ELAT	2330	Instrumentation and Telemetry	3
G.	ELAT	2420	Fund of Electronic Comm.	4
H.	ELAT	2425	Active Devices	4

CERTIFICATE REQUIREMENTS INSTRUMENTATION TECHNOLOGY

31 credit hours

A.	ELAT	1315	Basic Digital	3
B.	ELAT	1400	Basic Electronics I	4
C.	ELAT	1401	Basic Electronics II	4
D.	ELAT	1410	Solid State Devices	4
E.	ELAT	2330	Instrumentation & Telemetry	3
E	ELAT	2335	Digital Control Applications[1]	3
G.	ELAT	2336	Programmable Logic Controllers[1]	3
H.	ELET	2360	Microcomputer Systems	3
I.	ELAT	2437	Industrial Automation[1]	4

[1]Enhanced Skills *Certificate Courses*

ELECTRONIC ENGINEERING TECHNOLOGY

A two-year Associate of Applied Science degree program
67 credit hours required to graduate

ABOUT OUR PROGRAM

Graduates of this degree program will receive training in several diversified areas of electronics. The emphasis of this program will be the application of mathematical theorems and applied physics toward the design and analysis of electronic circuits. Students will be exposed to a combination of classroom theory and hands-on laboratory design and analysis experiments. This training will provide students with entry level **skills** for employment in the electronic industry

Program curriculum and the design/analysis laboratory experiments have been formally evaluated and endorsed by an electronics industry advisory committee.

Articulation agreements with four-year institutions allow students graduating from this program to transfer credit toward a bachelor's degree. Students planning to transfer to a four-year institution should check with an academic adviser.

CCCC is a member of the Texas Association of Schools of Engineering Technology and certified as a testing center for the Certified Electronic Technician exam.

CAREER OPPORTUNITIES

Trained electronics technicians are in demand in Texas and nationwide. According to "Jobs **1995**," a Texas Employment Commission publication, Texas will require approximately **2,000** electronics technicians each year through **1995.**

A severe shortage of trained electronics design/analysis technicians has led to excellent employment opportunities for students completing this program. These positions are:

- Engineering Aides
- Research and Development Technicians
- Applied Engineering Technicians

Graduates of this program will receive quality training that will provide skills that may lead to employment in specific areas such as:

- Telecommunications
- Computer Systems Applications
- Avionics and Space Communications
- Biomedical Applications and Design
- Printed Circuit Board Design and Manufacturing
- Laser and Fiber Optics Applications

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: ELECTRONIC ENGINEERING TECHNOLOGY

I. General Education Con   Credit Houn

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication'	3
C.	MATH	1314	College Algrebra²	3
D.	COSC	1306	Introduction to Computen	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Con

I5 credit hours

A.	MATH	2312	Pre-Calculus for Math & Science	3
B.	MATH	2413	Calculus I²	4
C.	PHYS	1401	General Physics I²	4
D.	PHYS	1402	General Physics I f	4

III. Major Program Con

24 credit hours

A.	ELET	1400	Circuit Analysis I	4
B.	ELET	1401	Circuit Analysis II	4
C.	ELET	1405	Digital I.C. Analysis	4
D.	ELET	1410	Fundamentals of Computers	4
E.	ELET	1415	Circuit Analysis III	4
E	ELET	2420	Telecommunications	4

IV. Electives

6 credit hours minimum

A.	ELET	1440	AC/DC Fundamentals	4
B.	ELET	2325	Computer Interfacing	3
C.	ELET	2430	Computer Maintenance	4
D.	ELET	2435	Microwave Fundamentals	4
E.	ELET	2380	Selected Topics	3
E	ELET	2385	Independent Study	3
G.	ELET	7300	Cooperative Education I	3
H.	ELET	7305	Cooperative Education II	3

'SPCH **1321 (Business and Professional Speaking)** may be substituted for SPCH 1311.
²Higher level physics and mathematics courses may be used.

ELECTRONIC ENGINEERING TECHNOLOGY

CERTIFICATE PROGRAM

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS ELECTRONIC ENGINEERING TECHNOLOGY

30 credit hours

A.	MATH	2312	Precalculus for Math & Science¹	3
B.	MATH	2413	Calculus I'	4
C.	ELET	1400	Ciit Analysis I	4
D.	ELET	1401	Circuit Analysis II	4
E.	ELET	1415	Circuit Analysis III	4
F	ELET	1405	Digital I.C. Analysis	4
G.	ELET	1410	Fundamentals of Computers	4
H.	ELET	2325	Computer Interfacing	3

¹Higher level mathematics courses may be used.

EMERGENCY MEDICAL SERVICES

CAREER OPPORTUNITIES

Students certified as Emergency Medical Technician-Basic and Emergency Medical Technician-Paramedic may find employment opportunities with fire departments, private ambulance services, municipal ambulance services, insurance companies, and hospitals. Certified technicians may find rewarding careen such as those listed below.

- Emergency Medical Technician
- Paramedic
- Firefighter
- Hospital Lab Technician
- Patient Care Technician
- Emergency Department Assistant
- Cardiac Lab Technician

SPECIAL ADMISSIONS REQUIREMENTS

- Proof of high school diploma or GED
- Be 18 years old or older (special age waiver may be granted to those who are not yet 18 but will turn 18 prior to completion of the course)
- Complete program application prodedure
- Complete CCCC reading, writing and mathematics assessments
- Complete PSB examination for Allied Health Professionals

Registration is by permission only. Additional *information and* applications *may* be *obtained from* the Admissions *Office or from the* Health Science, Physical Education and Child *Development Office.*

Emergency Medical Services *at* CCCC *establishes an excellent* foundation for careers in *emergency* medicine and *related fields. After* completion *of the following* courses, *a* student *qualifies* to *test* for *state certification as* an ECA, *EMT/Basic* or *EMT/Paramedic.*

EMTP	1300	Emergency Care	3
EMTP	1500	Emergency Medical Procedures	5
EMTP	1800	Paramedic Procedures I	8
EMTP	2700	Paramedic Procedures II	7

ENGINEERING

A two-year Associate of Science degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The accelerating pace of industrial and technological developments has created an ever-increasing demand for highly qualified professional engineers to formulate and solve the problems of today and the future. The AS degree in engineering at CCCC prepares the student for transfer to a four-year institution in most engineering programs. The student is advised to consult with an academic adviser at CCCC when deciding on a transfer university.

CAREER OPPORTUNITIES

At the present time, over two-thirds of all the technical and a large percentage of **the** managerial positions in industry are occupied by engineers. *Our* engineering program prepares the students for transfer to a four-year institution where they can specialize in such disciplines as:

a Aerospace Engineering
• Agriculture Engineering
• Bioengineering
• Biochemical and Food Engineering
a Chemical Engineering
• Civil Engineering
• Computer Science Engineering
• Electrical Engineering
• Forest Engineering
• Industrial Engineering
• Mechanical Engineering
• Nuclear Engineering
• Ocean Engineering
• Petroleum Engineering
a Radiological Health Engineering

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS ENGINEERING

I. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	CHEM 1411	General **Chemistry** I	4
B.	CHEM 1412	General Chemistry II	4
C.	COSC 1318	Programming Concepts I	3
D.	ENGL 2311	Technical Writing	3
E.	ENGR 1304	Engineering Graphics	3
F.	ENGR 2301	Engineering Mechanics I	3
G.	ENGR 2302	Engineering Mechanics II	3
H.	ENGR 2332	Materials and Processes	3
I.	ENGR 2405	Electrical Circuit Analysis	3
J.	MATH 2318	Linear Algebra	3
K.	MATH 2320	Differential Equations	3
L.	MATH 2415	Calculus III	4

ENGLISH

A two-year Associate of Arts degree program
60 credit hours required to **graduate**

ABOUT OUR PROGRAM

The courses in English train students to communicate effectively through writing. Composition/Rhetoric I and II enable students to build skills in thinking and writing. In Composition/Rhetoric I, students practice expository and persuasive writing. In Composition/Rhetoric II, students focus on argumentation, logical thinking and research. Each of these courses includes a lab component that is an integral part of the course, designed to help students identify weak areas in their writing, eliminate individual problems in writing and strengthen their writing skills. The Writing Center, another part of the English program, provides professional consultation to students across the curriculum. At the center, students can get immediate help in composing, writing and revising papers, resumes, reports, etc. Some Composition/Rhetoric I courses are taught in the Macintosh classroom. Students may also enroll in Cooperative Work Experience to gain practical work experience.

CAREER OPPORTUNITIES

• Positions requiring writing skills
• Positions requiring editing/proofing skills
• Positions requiring word processing skills
• Positions requiring knowledge of the research process
Combined with further study the associate degree with an emphasis in English may equip students for a variety of careers in education, law, government and public information.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS ENGLISH

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 **credit** hours minimum

A.	ENGL 2307	Creative Writing	3
B.	ENGL 2371	Forms of Literature I-Short Story and Novel	3
C.	ENGL 2372	Forms of Literature II-Poetry & Drama	3

D.	ENGL	2322	British Literature I	3
E.	ENGL	2323	British Literature II	3
F.	ENGL	2327	American Literature I	3
G.	ENGL	2328	American Literature II	3
H.	ENGL	2332	World Literature I	3
I.	ENGL	2333	World Literature II	3
			Foreign Language Sequence I	4
			Foreign Language Sequence II	4
J.	ENGL	2311	Technical Writing	3

FIRE SCIENCE

A two-year Associate of Applied Science degree program
65 credit hours minimum required to graduate

ABOUT OUR PROGRAM

The firefighter with a well-balanced educational background will be **better** prepared to serve and protect the community. **The** Collin County Community College Associate of Applied Science degree in Fire Science is designed to give a broad perspective on various facets of providing fire protection. The program is applicable for students wishing to enter the fire service and for persons already employed as firefighters or in related career fields. Students acquire the technical knowledge needed to combat the fire problems created by modem living.

The Basic Firefighter Certificate is designed to prepare the student **for** certification as a Basic Firefighter by the Texas Commission on Fire Protection. Students enrolled in the Basic Firefighter Certification Program are involved in various hands-on exercises including rescue practices and live fire training.

CCCC's courses are scheduled to accommodate traditional firefighter work shifts. Full-time, full-paid firefighters employed by any political subdivision enrolled in fire science courses offered as a part **of** CCCC's **fire** science curriculum are exempt from payment of tuition and laboratory fees.

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

Today's fire protection responsibilities provide new and exciting challenges in both the public and private sectors. Students enrolled in the Fire Science program prepare for occupations involving fire suppression. investigation. prevention and education. **These** challenging job opportunities include:
* Firefighter
* Fire Department Officer
* Municipal Emergency Administrator
* Safety Technician
* Hazardous Material Team Member
* Fire Equipment Sales and Service Representative
* Industrial Fire Protection Technician

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate **of** Applied Science degree to continue their education in a Bachelor **of** Applied Arts and Sciences degree at specific four-year

universities. For detailed information contact the director of the **AAS** program **or** the director of articulation and transfer **pro-grams.**

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS FIRE SCIENCE

I. General Education Core

Credit Hours

32 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED	1100	Beginning Weight Training and Conditioning	1
I.	CHEM	1405	Introduction to Chemistry	4
J.	ENGL	2311	Technical Writing	3
K.	GOVT	2301	American Government I	3

II. Technical Program Core

15 credit hours

A.	FISC	1305	Fundamentals of Fire Protection	3
B.	FISC	1315	Fire Safety Education	3
C.	FISC	1325	Industrial Fire Protection I	3
D.	FISC	1330	Fire Protection Systems	3
E.	FISC	1335	Building Codes and Construction	3

III. Major Courses

18 credit hours

Basic Firefighter Courses

See special admissions requirements for the Fire Acadamy just for the Basic Firefighter courses.

A.	FISC	1011	Firefighter Certification I	3
B.	FISC	1012	Firefighter Certification II	2
C.	FISC	1013	Firefighter Certification III	2
D.	FISC	1014	Firefighter Certification IV	2
E.	FISC	1015	Firefighter Certification V	3
F.	FISC	1016	Firefighter Certification VI	1
G.	EMTP	1500	Emergency Medical Procedures	5

or

Fire Commission Approved Courses

A.	FISC	1310	Fire Prevention	3
B.	FISC	1320	Fire Administration I	3
C.	FISC	1340	Fire **Cause** and Determination	3
D.	FISC	1450	Firefighting Tactics and Strategy	4
E.	FISC	2100	Seminar	1
E	FISC	2305	Chemistry of Hazardous Materials I	3
G.	FISC	2310	Chemistry of Hazardous Materials II	3
H.	FISC	2315	Hazardous Materials III	3
I.	FISC	2320	Fire Administration II	3
J.	FISC	2330	Introduction to CAMEO	3
K.	FISC	2335	Methods of Fire Service Insruction	3

FIRE SCIENCE

CERTIFICATE PROGRAM (FIRE ACADEMY)

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS: BASIC FIREFIGHTER

SPECIAL ADMISSIONS REQUIREMENTS

- Have proof of high school graduation or GED
- Complete CCCC reading and mathematics assessments
- Complete the physical ability exam and personal interview scheduled through the program coordinator
- Candidates to the Fire Academy must be in good academic standing.

Registration is by permission only. Additional information and applications may be obtained from the Admissions Office, the Social Science and Public Services Office or from the program coordinator.

18 credit hours

A.	FISC	1011	Firefighter Certification I	3
B.	FISC	1012	Firefighter Certification II	2
C.	FISC	1013	Firefighter Certification III	2
D.	FISC	1014	Firefighter Certification IV	2
E.	FISC	1015	Firefighter Certification V	3
F.	FISC	1016	Firefighter Certification VI	1
G.	EMTP	1500	Emergency Medical Procedures	5

FIRE SCIENCE

A two-year Associate of Arts degree program
65 credit hours minimum required to graduate

I. General Education Core

37 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	ENGL	1302	Composition/Rhetoric II	3
C.	COSC	1306	Introduction to Computers	3
D.	SPCH	1311	Fundamentals of Speech Communication	3
E.	MATH	1332	Contemporary Mathematics	3
F.	GOVT	2301	American Government I	3
G.	GOVT	2302	American Government II	3
H.	HIST	1301	U.S. History I	3
I.	HIST	1302	U.S. History II	3
J.	CHEM	1405	Introduction to Chemistry I	4
K.	CHEM	1407	Introduction to Chemistry II	4
or	FISC	2310	Chemistry of Hazardous Materials II	3
L.	HUMA	1301	Introduction to Humanities	3
or	PHIL	1301	Introduction to Philosophy	3
or	PHIL	1304	Comparative Religion	3
or	PHIL	2303	Logic	3
or	PHIL	2306	Ethics	3
or	PHIL	2307	Social and Political Philosophy	3

II. Technical Program Core

22 credit hours

A.	FISC	1310	Fire Prevention	3
B.	FISC	1320	Fire Administration I	3
C.	FISC	1330	Fire Protection Systems	3
D.	FISC	1335	Building Codes and Construction	3
E.	FISC	1340	Fire Cause and Determination	3
F.	FISC	1450	Firefighting Tactics and Strategy	4
G.	FISC	2305	Chemistry of Hazardous Materials I	3

III. Commision Approved Fire Science Electives

6 credit hours

A.	FISC	1305	Fundamentals of Fire Protection	3
B.	FISC	1315	Fire Safety Education	3
C.	FISC	1325	Industrial Fire Protection I	3
D.	FISC	2310	Chemistry of Hazardous Materials II	3
E.	FISC	2320	Fire Administration II	3
F.	FISC	2330	Introduction to CAMEO	3
G.	FISC	2335	Methods of Fire Service Insruction	3

FRENCH

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Arts degree with an emphasis in French provides the essential language background for the advanced study of French, for competency in understanding, speaking, and writing the language, and for a more rapid acquisition of other foreign languages (particularly Romance languages like Spanish). The courses are oral-proficiency based in order to enable the student to converse in French as quickly as possible.

CAREER OPPORTUNITIES

When combined with further study beyond the associate degree, an emphasis in French may lead to careers in education, information science, business, and government.

In light of the economic opportunities presented by the emergence of a European Community, the mastery of French and other European languages may lead to exciting career opportunities when combined with a business or marketing degree.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS FRENCH

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A.	FREN	1411	Beginning French I	4
B.	FREN	1412	Beginning French II	4
C.	FREN	2311	Intermediate French I	3
D.	FREN	2312	Intermediate French II	3
E.	FREN	1100	French Conversational I[1]	1
F.	FREN	1110	French Conversational II[2]	1
G.	FREN	2303	French Literature I	3
H.	FREN	2304	French Literature II	3

GEOGRAPHY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The geography program has been designed to assist students expand their knowledge about the physical and cultural environments of the world. We are entering a period in human history of tremendous change marked by increasing globalization. It is extremely important to be geographically literate as our world approaches the Information Age.

CAREER OPPORTUNITIES

Students transferring into a four-year institution geography curriculum will be able to prepare for diverse careers in urban planning, petroleum exploration, cartography (mapping) and corporate planning for expansion and development. Many universities require education majors to take a geography course as part of their degree.

ASSOCIATE OF ARTS DEGREE REQUIREMENT9 GEOGRAPHY

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	GEOG	1301	Physical Geography	3
B.	GEOG	1302	Cultural Geography	3
C.	GEOG	1303	World Regional Geography	3
D.	ANTH	2351	Cultural Anthropology	3
E.	PSYC	2301	General Psychology	3
F.	HIST	2311	Western Civilization I	3
G.	HIST	2312	Western Civilization II	3
H.			Foreign Language Sequence I	4
I.			Foreign Language Sequence II	4

GEOLOGY

ABOUT OUR PROGRAM

The science of geology seeks to understand the earth and the natural processes that act within the earth's environment. The basic concepts of geology overlap several disciplines. A knowledge of geology provides a background for careers in geology and environment fields.

    The CCCC Associate of Science degree with an emphasii in geology prepares the student to pursue university studies leading to a bachelor's degree. The basic AS program in geology will prepare the student for further education in fields such as geology, environmental science, or resource management.

    Students planning to transfer to a four-year institution should check with the specific degree plan requirements of their intended major

CAREER OPPORTUNITIES

Geology students may select a career in a wide range of geological and environmental fields. The student should bear in mind that most of these career areas require education or training beyond the Association of Science degree. Career fields available to the geology student include:

- Geology
- Geophysics
- Geochemistry
- Seismology
- Mining Technology
- Environmental Science
- Environmental Engineering
- Oceanography
- Soil Science
- Civil Engineering
- Hydrogeology
- Resource Management
- Waste Management
- Land-use Planning

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: GEOLOGY

I. General Education Core

See page 41 for General Education Core requirements. Students seeking advanced degrees in geological or environmental fields should select electives related to their field of interest. Certaii fields may require higher levels of math or programming. Higher levels of math, science, or computer science may be substituted for the degree requirements. See program coordinator for additional information.

II. Recommended Electives   **Credit Hours**

II credit hours minimum

A.	GEOL	2409	Rock and Minerals	4
B.	MATH	1342	Statistics	3
C.	MATH	2413	Calculus I	4
D.	MATH	2414	Calculus II	4
E.	PHYS	2425	College Physics I	4
F.	PHYS	2426	College Physics II	4
G.	CHEM	1411	General Chemistry I	4
H.	CHEM	1412	General Chemistry II	4
I.	COSC	1318	Programming Concepts I	3
J.	ENGL	2311	Technical Writing	3

GERMAN

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Arts degree with an emphasis in German provides the essential language background for the advanced study of German, for competency in understanding, speaking, and writing the language, and for a more rapid acquisition of

other foreign languages (particularly Germanic languages like Dutch). The courses are oral-proficiency based in order to enable students to converse in German as quickly as possible.

CAREER OPPORTUNITIES

The recent reunification of Germany has mated many job opportunities in international relations, business, and finance. German has emerged as an important language in both the European community and the world market. Combining the study of German with business or related degrees will provide students with the tools to live and work in an international environment.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS GERMAN

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives — Credit Hours

14 credit hours minimum

A.	GERM	1411	Beginning German I	4
B.	GERM	1412	Beginning German II	4
C.	GERM	2311	Intermediate German I	3
D.	GERM	2312	Intermediate German II	3
E.	GERM	1100	Conversational German I[1]	1
E	GERM	1110	Conversational German II[2]	1
G.	GERM	2303	German Literature I	3
H.	GERM	2304	German Literature II	3

[1]*Co-requisite $GERM* **2311**
To-requisite $GERM **2312**

GOVERNMENT

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Government program features introductory courses in American and Texas politics. The courses emphasize contemporary political analysis, critical thinking and hands-on experiential learning exercises.

CAREER OPPORTUNITIES

An Associate of Arts degree in Government is a stepping stone to a liberal arts education whose second step is a bachelor's degree from a four-year institution. Persons who major in government often aspire to attend law school, anticipate a career in education or desire the broad background inherent in a liberal arts education which is valued by employers in all areas.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: GOVERNMENT

1. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives — Credit Hours

14 credit hours minimum

A.	COSC	1318	Programming Concepts I	3
B.	COSC	2318	Programming Concepts II	3
C.	CRIJ	1301	Introduction to Criminal Justice	3
D.	ECON	2301	Principles of Economics-Macro	3
E.	ECON	2302	Principles of Economics-Micro	3
E	GOVT	2304	Introduction to Political Science	3
G.	PHIL	2303	Logic	3
H.	PHIL	2306	Ethics	3
I.	PSYC	2301	General Psychology	3
J.			Foreign Language Sequence I	4
K.			Foreign Language Sequence II	4

HISTORY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The history program at CCCC is designed for both students who are interested in completing an associate degree or pursuing a bachelors degree and for those in the community who have an interest in their country's past. The American survey history course meets the state's requirement of six hours of American history. In addition to the survey courses, the department also offers classes in Western Civilization (required by some colleges) and special courses that are designed to examine a specific topic in detail, such as: Women in History, the 1960s, the Civil War and the History of Race Relations in the United States. These courses count as elective hours, or in some cases will transfer as part of the state's six hour requirement.

CAREER OPPORTUNITIES

Students who major in history will be attractive employee prospects because of the demands of the discipline: writing skills, organizational abilities, critical thinking and an ability to analyze problems in a holistic fashion. This liberal arts background prepares the student not just for a career as an historian but for a variety of fields such as journalism, law, politics, social work, television and radio, etc.

A degree in history will naturally assist the student interested in being a writer or teacher but also will provide career opportunities in such adjacent fields as public history, museum curator, archivist, research associate for public and private agencies, and in developing fields like environmental historian for state agencies, contract work for legal firms and in the areas which will dominate the 21st century: computer/video/film documentaries.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS HISTORY

1. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives — Credit Hours

14 credit hours minimum

A.	ECON	2301	Principles of Macroeconomics	3
B.	ECON	2302	Principles of Microeconomics	3
C.	HIST	2311	Western Civilization I	?

D.	HIST	2312	Western Civilization II	3
E.	HIST	2301	Texas History	3
F.	PHIL	1301	Introduction to Philosophy	3
G.	PHIL	2303	Logic	3
H.	PSYC	2301	General Psychology	3
I.	SOCI	1301	Introduction to Sociology	3
J.			Foreign Language Sequence I	4
K.			Foreign Language Sequence II	4

HORTICULTURELANDSCAPE TECHNOLOGY

A *two-year* Associate of Science degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The demand for developing new plants through research increases continuously. Students interested in continuing their education at a four-year university may begin by completing the core courses offered through the AS-Horticulture curriculum. Smaller class size allows students greater opportunity for individual study and prepares them for advanced courses in Horticultural Science at a university.

CAREER OPPORTUNITIES

- Extension Horticulturist
- Plant Research and Development
- County Agent
- Horticultural Education
- Department of Agriculture

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: HORTICULTURELANDSCAPETECHNOLOGY

I. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A.	HORT	1315	Interior Plants	3
B.	HORT	1305	Soils and Plant Nutrition	3
C.	HORT	1310	Plant Pests and Controls	3
D.	HORT	1300	Basic Horticulture	3
E.	HORT	1400	Woody Plant Materials	4
E	HORT	1401	Herbaceous Plant Materials	4
G.	HORT	2425	Plant Propagation	4

HORTICULTURELANDSCAPE TECHNOLOGY

A two-year Associate of Applied Science degree program

ABOUT OUR PROGRAM

Challenging careers for the 1990s and beyond may be found in the nursery and landscape industry. The degree programs in Horticulture and Landscape Technology are designed to prepare the student for immediate employment in the landscape or horticulture field. Students who are currently in the field can update their knowledge and skills in the areas of landscape installation, maintenance and many horticultural specialties.

An excellent instructional staff, small class size and laboratory experiences give Horticulture and Landscape Technology students a personalized, high quality educational experience.

Students planning to transfer to a four-year institution should refer to the Associate of Science degree in Horticulture (above).

CAREER OPPORTUNITIES

The field of landscape and horticulture is changing at a tremendous rate. Public awareness of the value of landscapes and gardens and increasing technical sophistication is contributing to the need for trained people in the area. Some opportunities for employment are:

- Grounds Supervision
- Landscape Contracting and Maintenance
- Landscape Supplies and Plant Sales
- Plant Propagation
- Nursery Ownership and Management
- Landscape Management
- Greenhouse Production
- Tree Maintenance

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: HORTICULTURE TECHNOLOGY

71 credit hours required to graduate

I. General Education Core   Cndii Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
or	SPCH	1315	Public Speaking	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
E	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2301	General Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

43 credit hours

A.	HORT	1100	Seminar	1
B.	HORT	1300	Basic Horticulture	3
C.	HORT	1305	Soils and Plant Nutrition	3
D.	HORT	1310	Plant Pests and Controls	3
E.	HORT	1315	Interior Plants	3
F.	HORT	1400	Woody Plant Materials	4
G.	HORT	1401	Herbaceous Plant Materials	4

H.	HORT	2300	Introduction to Landscape Design	3
I.	HORT	2320	Field Experience	3
J.	HORT	2400	Site Analysis and Surveying	4
K.	HORT	2425	Plant Propagation	4
L.	HORT	2430	Nursery and Greenhouse Production	4
M.	BIOL	1411	General Botany	4

111. Electives

6 credit hours

A.	HORT	1225	Irrigation Systems	2
B.	HORT	1330	Native Plants of Texas	3
C.	HORT	1335	Plants of North Texas	3
D.	HORT	2305	Floriculture	3
E.	HORT	2315	Landscape Management	3
F	HORT	2415	Arboriculture	4
G.	HORT	2420	Home Landscape Design	4

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS LANDSCAPE TECHNOLOGY

72 credit hours required to graduate

I. General Education Core
Credit Houn

22 **credic** hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
or	SPCH	1315	Public Speaking	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2301	General Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

47 credit hours

A.	HORT	1100	Seminar	1
B.	HORT	1200	Landscape Industry	2
C.	HORT	1300	Basic Horticulture	3
D.	HORT	1305	Soils and Plant Nutrition	3
E.	HORT	1310	Plant Pests and Controls	3
F.	HORT	1320	Turf-Grass Science and Management	3
G.	HORT	1400	Woody Plant Materials	4
H.	HORT	1401	Herbaceous Plant Materials	4
I.	HORT	2300	Introduction to Landscape Design	3
J.	HORT	2400	Site Analysis and Surveying	4
K.	HORT	2405	Landscape Construction	4
L.	HORT	2410	Landscape Business Operations	4
M.	HORT	2500	Practicum	5
N.	BIOL	1411	General Botany	4

III. Elective

3 credit hours minimum

A.	HORT	1300	Interior Plants	3
B.	HORT	1225	Irrigation Systems	2
C.	HORT	2315	Landscape Management	3
D.	HORT	2415	Arboriculture	4
E.	HORT	2420	Home Landscape Design	4

LANDSCAPE INDUSTRY

CERTIFICATE PROGRAM

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

A certificate program for the landscape industry began in the fall of 1993. This program allows persons entering the landscape contracting and management field an opportunity to gain an education, even though they have little or no previous academic background. Interested persons should contact the coordinator of the horticulture/landscape technology program at Spring Creek Campus.

I. Program Core

37 credit hours required

A.	HORT	1200	Landscape Industry	2
B.	HORT	1300	Basic Horticulture	3
C.	HORT	1305	Soils and Plant Nutrition	3
D.	HORT	1310	Plant Pests and Controls	3
E.	HORT	1320	Turf-Grass Science and Management	3
F.	HORT	1400	Woody Plant Materials	4
G.	HORT	1401	Herbaceous Plant Materials	4
H.	HORT	2400	Site Analysis and Surveying	4
I.	HORT	2405	Landscape Construction	4
J.	HORT	2410	Landscape Business Operation	4

II. Elective

3 credit hours minimum

A.	HORT	1300	Interior Plants	3
B.	HORT	1225	Irrigation Systems	2
C.	HORT	2315	Landscape Management	3
D.	HORT	2415	Arboriculture	4
E.	HORT	2420	Home Landscape Design	4

LEGAL ASSISTANT

A two-year **Associate** of **Arts** degree **program** or **certificate**
60 **credit** hours required to graduate

ABOUT OUR PROGRAM

The legal assistant program currently has two degree plans and two certificate plans.

The degree plans ace: (**1**) Associate of Applied Science: Legal Assistant (**2**) Associate of **Arts:** Legal Assistant. **The** primary difference is that six hours of History, six hours of Government and six-eight hours of Lab Science are required in the Associate of Arts degree. This degree plan is for those students who plan to pursue a four-year degree in legal assistant at TWU (or elsewhere).

Certificates: Two certificate plans **are** available to students with work experience (three years experience in a legal field or five years secretarial experience): **The** General Certificate (**27** semester hours) requires completion of fifteen semester hours office skills courses and twelve semester hours basic legal courses. **The** Specialty Certificate requires completion of fifteen semester hours in law courses. This certificate is appropriate for: (**1**) either students who have completed our degree plans or the General Certificate, or (**2**) students with five years full-time

employment in a legal related field and permission of the program coordinator.

Curriculum: In either degree plan. four legal courses are required: (1)Law and Judicial Systems. (2) Civil Procedure. (3) Law Office Management and (4) Legal Research. At least one section of each of those will be offered every fall and spring as long as student enrollment is sufficient. Electives may be chosen from a variety of law courses.

CAREER OPPORTUNITIES

In 1990 the U.S. Department of Labor. Bureau of Labor Statistics projected legal assistant to be the fastest growing occupation of the 1990s.

Law firms, corporations. and governmental agenaes at local, state. and national levels increasingly hire legal assistants to manage huge amounts of paperwork and to solve technical and legal problems.

Legal assistants must be computer proficient. and fully competent in legal terminology and procedures. Current market trends indicate that those student who complete an associate's degree can find employment at entry-level positions; however, for the more financially rewarding and personally satisfying positions. students should strongly consider continuing their studies to obtain a bachelor's degree.

JOB DESCRIPTION

A legal assistant performs specialized legal duties under the supervision of a licensed attorney. While the range of duties performed by a legal assistant will be determined by the individual employer. most positions require the clerical skills of a legal secretary plus the ability to perform some of the legal skills normally performed only by attorneys. Commonly, legal assistants draft legal documents. perform some legal research. obtain information relevant to cases from various sources. interview clients and assist in trial preparation

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Arts (AA) or Associate of Applied Science (AAS) degree to continue their education in bachelor's degree programs at specific four-year universities. For detailed information contact the program coordinator of the Legal Assistant program. the director of articulation and transfer program or an academic adviser.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS LEGAL ASSISTANT

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Houn**

14 credit hours minimum*

A.	LEGL	1301	Law and Judiaal Systems	3
B.	LEGL	1302	Legal Research	3
C.	LEGL	1305	Law Office Management	3
D.	LEGL	2301	Civil Procedure	3
E.	OFAD	1331	Beginning Word Processing	3
F.	OFAD	1332	Intermediate Word Processing/Legal	3
G.	OFAD	2303	Advanced Keyboarding/Legal	3

Additional hours may be required for transfer. See the program coordinator.

LEGAL ASSISTANT

A two-year Associate of Applied Science degree program
64 credit hours required to graduate

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS LEGAL ASSISTANT

I. General Education Core   **Credit Hours**

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
or	SPCH	1315	Public Speaking	3
or	SPCH	1321	Business and Professional Speaking	3
C.	MATH	1332	Contemporary Mathematics'	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Macroeconomics[2]	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology3	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

15 credit hwrs

A.	ACCT	2301	Principles of Accounting I	3
B.	ENGL	1302	Composition/Rhetoric II	3
C.	OFAD	1331	Beginning Word Processing	3
D.	OFAD	1332	Intermediate Word Processing	3
E.	OFAD	2303	Advanced Keyboarding	3

III. Major Courses

12 credit hours

A.	LEGL	1301	Law and Judicial Systems	3
B.	LEGL	1302	Legal Research	3
C.	LEGL	1305	Law Office Management	3
D.	LEGL	2301	Civil Procedure	3

IV. Electives

15 credit hours

A.	BUSI	2301	Business Law	3
B.	CRIJ	1301	Introduction to Criminal Justice	3
C.	CRIJ	1306	Courts and Criminal Procedure	3
D.	CRIJ	1310	Fundamentals of Criminal Law	3
E.	ENGL	2300	Any 2300-Level Course	3
F.	LEGL	2303	Family Law	3
G.	LEGL	2304	Wills. Trusts. Probate	3
H.	LEGL	2306	Business Organizations	3
I.	LEGL	2307	Tort and Insurance Law	3
J.	LEGL	2308	Business Legal Environment	3
K.	LEGL	7300	Cooperative Education I	3
L.	GOVT	2302	American Government II	3
M.	RLST	1315	Promulgated Contract Law	3
N.	RLST	2320	Real Estate Law	3

'Higher *level of mathematics may be* substituted with program d i m - tor *approval.*

LEGAL ASSISTANT

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS: LEGAL ASSISTANT GENERAL CERTIFICATE#

27 credit hours

A.	LEGL	1301	Law and Judiaal Systems	3
B.	LEGL	1302	Legal Research and Writing	3
C.	LEGL	1305	Law Office Management	3
D.	LEGL	2301	Civil Procedure	3
E.	ACCT	1370	Elementary Accounting'	3
F.	COSC	1306	Introduction to Computers [1]	3
G.	OFAD	1331	Beginniig Word Processing	3
H.	OFAD	1332	Intermediate Word Processing	3
I.	OFAD	2303	Advanced Keyboarding	3

To enroll in this certificate program the student must meet one of the following admission requirements and have permission from the program coordinator:

a. Three years full-time employment in a legal related field or

b. Five years full-time employment in a secretarial relafed field.
'Higher level accounting and computers may be substituted.

CERTIFICATE REQUIREMENTS LEGAL ASSISTANT SPECIALTY CERTIFICATE'

15 credit hours - choose five of the following courses

A.	LEGL	2303	Family Law	3
B.	LEGL	2304	Wills, Trusts and Probate	3
C.	LEGL	2306	Business Organization	3
D.	LEGL	2307	Tort and Insurance Law.	3
E.	LEGL	2308	Business Legal Environment	3
F.	BUSI	2301	Business Law	3
G.	CRIJ	1306	The Courts and Criminal Procedure	3
H.	CRIJ	1310	Fundamentals of Criminal Law	3
I.	RLST	1315	Promulgated Contract Law	3
J.	RLST	2320	Real Estate Law	3

+To enroll in this certificate program, the student must meet one of the following admission requirements and have permission from the program coordinator:

a. Completion of the legal assistant general certificate or

b. Five years fill-time employment in a legal related field.

MANAGEMENT

MANAGEMENT DEVELOPMENT

A two-year Associate of Applied Science degree prognm
(*Also* a Tech Prep Program)
67 credit hours required to graduate

ABOUT OUR PROGRAM

The world of management development is an exciting field that presents many unique opportunities. Every business, organization and group needs effective leaders to plan, organize, lead and control the many activities that accompany a successful venture. Topics include basic management foundations and theories, human resource management, human relations training, sales and promotion, and capital acquisition skills.

The skills acquired in this program will enable the student to identify and resolve many problems that are encountered daily when working with individuals, groups and organizations.

Students planning to transfer to a four-year institution should check with an academic adviser.

Tech Prep students who took collegiate-level courses in Management Development while in high school may elect to receive college credit by contacting a CCCC advisor. A petition for Tech Prep credit should be completed as soon as possible upon admission to CCCC.

CAREER OPPORTUNITIES

Earning an Associate of Applied Science degree in Management Development can enable the student to work in many fields:

- Manufacturing
- Retail
- Service
- Restaurant
- Hotel/Motel
- General Office

Management is an element common to all organizations. As a result, jobs will always be available in many fields, including government and public service.

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS MANAGEMENT DEVELOPMENT

I.	General Education Core			Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communications'	3
C.	MATH	1332	Contemporary Mathematics?	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics 2	3
F.	HUMA	1301	Introduction to Humanities	3

G. PSYC 2302 Applied Psychology[3] _____ **3**
H. PHED/DANC Any Activity Course _____ **1**

II. Technical Program Core

12 credit hours
A. ACCT 2301 Principles of Accounting I _____ **3**
B. *BUSI 1370 Principles of Management _____ **3**
C. BUSI 1372 Supervisory Management _____ **3**
D. BUSI 1374 Personnel Management _____ **3**

III. Major Courser

27 credit hours
A. *BUSI 1371 Leadership and Human Relations **3**
B. *BUSI 1378 High Performance Work Team **3**
C. BUSI 2370 Quality Management' _____ **3**
D. BUSI 2371 Quality Management Techniques[4] **3**
E. BUSI 2373 Management of Change[4] _____ **3**
F. BUSI 2376 Strategic Management _____ 3
G. BUSI 7300 Cooperative Education I _____ **3**
H. CSCI 2305 Integrated Spreadsheet Applications **3**
I. SBMT 1305 Small Business Finance _____ **3**

IV. Elective

6 credit hours
A. ACCT 2302 Principles of Accounting II _____ **3**
B. BUSI 1301 Introduction to Business _____ **3**
C. BUSI 1374 Organizational Behavior _____ **3**
D. BUSI 2301 Business Law _____ 3
E. BUSI 2378 Selected Topics in Personnel
Management _____ **3**
E BUSI 2379 Selected Topics in Business Principles **3**
G. BUSI 7305 Cooperative Education II _____ 3
H. ENGL 2311 Technical Writing _____ **3**
I. MRKT 1305 Principles of Marketing _____ **3**

[1]*May substitute SPCH 1315 or SPCH 1321. Students planning to transfer to another college or university should check with their transfer institution before selecting a speech option.*
[2]*Students planning to transfer to another college or university should check with their transfer institution before selecting a math or economics option.*
[3]*May substitute PSYC 2301. Students planning to transfer to another college or university should check with their transfer institution before selecting a psychology option.*
'*Enhanced Skills Certificate courses*
*These courses may have been taken in high school

ENHANCED SKILLS CERTIFICATE

The Enhanced Skills Certificate in Management Development provides additional training in specific job skills which supplement those acquired within the curriculum for an AAS degree in Management Development. Students will have an opportunity to acquire those employment-related skills whole completing the AAS degree requirements or subsequent to earning their AAS in Management Development.

ENHANCED SKILLS CERTIFICATE REQUIREMENTS

9 credn hours
A. BUSI 2370 Quality Management _____ **3**
B. BUSI 2371 Quality Management Techniques **3**
C. BUSI 2373 Management of Change _____ **3**

MANAGEMENT

MANAGEMENT DEVELOPMENT

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

CERTIFICATE REQUIREMENTS: MANAGEMENT DEVELOPMENT

General Certificate

33 credit hours
A. ACCT 2301 Principles of Accounting I _____ 3
B. BUSI 1370 Principles of Management _____ 3
C. BUSI 1371 Leadership and Human Relations **3**
D. BUSI 1372 Supervisory Management _____ **3**
E. BUSI 1374 Personnel Management _____ **3**
F. BUSI 1378 High Performance Work Team **3**
G. BUSI 2370 Quality Management _____ **3**
H. BUSI 2371 Quality Management Techniques **3**
I. BUSI 2373 Management of Change _____ **3**
J. BUSI 2376 Strategic Management _____ **3**
K. BUSI 7300 Cooperative Education I _____ **3**

SMALL BUSINESS MANAGEMENT

CERTIFICATE PROGRAM

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

ABOUT OUR PROGRAM

The Small Business Management Certificate is designed to provide an understanding of how to operate a business. Topics include how to prepare a business plan, raise capital, plan cash flow requirements, create tax strategies, develop marketing programs and establish rewarding employee benefit plans.

This program offers a unique opportunity for the student to generate ideas, identify and resolve business problems and develop an entrepreneurial management style.

CAREER OPPORTUNITIES

The Small Business Management Certificate provides the essential core of management practices and prepares students for:
• Entrepreneurship
• Manufacturing
• Construction
• Retail
■ Services
• Personnel

The federal government considers **97** percent of American businesses to be small businesses; one half of those employed in this country work in small business enterprises. Small businesses create over 80 percent of all new jobs in the United States.

CERTIFICATE REQUIREMENTS: SMALL BUSINESS MANAGEMENT

15 credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	SBMT	1300	Small Business Management I	3
C.	SBMT	1305	Small Business Financing	3
D.	SBMT	1310	Principles of Retailing	3
E.	SBMT	2300	Small Business Management II	3

MARKETING

A two-year Associate of Applied Science degree program
61 credit hours required to graduate

ABOUT OUR PROGRAM

The AAS degree in Marketing incorporates professional education courses to prepare individuals for career paths with retail or wholesale organizations, profit or non-profit service organizations, governmental agencies and academic institutions.

This program is designed to give a thorough background in aspects of marketing to students who desire such and to provide methods for improving skills for students already in a marketing career.

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

The AAS degree in Marketing provides the essential core of marketing practices and prepares students for positions in:

- Retailing
- Wholesaling
- Marketing Management
- Sales
- Sales Management
- Consulting
- Directing
- Promotion
- Advertising
- Industrial Marketing Management
- International Marketing

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS MARKETING

I. General Education Core — Credit Hours

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication	3
or	SPCH	1321	Business and Professional Speaking	3
C.	MATH	1332	Contemporary Mathematics	3
or	MATH	1324	Pre-Calculus for Business/Economics	3
D.	COSC	1306	Introduction to Computers.	3
E.	ECON	2301	Principles of Macroeconomics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
or	PSYC	2301	General Psychology'	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

15 credit hours

A.	ACCT	2301	Principles of Accounting I	3
B.	MRKT	1315	Principles of Selling	3
C.	MRKT	1305	Principles of Marketing	3
D.	SBMT	1300	Small Business Management	3
E.	SBMT	1310	Principles of Retailing	3

III. Major Courser

18 credit hours

A.	MRKT	1310	Principles of Advertising	3
B.	MRKT	1316	Sales Management	3
C.	MRKT	2305	Market Research	3
D.	MRKT	2315	Business Ethics	3
E.	MRKT	2320	International Marketing	3
F.	MRKT	2330	Special Topics	3

IV. Electives

3 credit hours

A.	AGDT	1300	Survey of Advertising Art	3
B.	AGDT	1325	Visual Communications I	3
C.	BUSI	2301	Business Law	3
D.	COMM	1307	Introduction to Mass Communication	3
E.	MRKT	2300	Fashion Show Production	3
F.	MRKT	2310	Promotion Techniques	3
G.	MRKT	7300	Cooperative Education I	3
H.	MRKT	7305	Cooperative Education II	3

V. Elective

3 credit hours

A.	Elective		3

[1]PSYC 2301 necessary for transfer

MARKETING

CERTIFICATE PROGRAMS

Some of the courses in the certificate program may require prerequisites. Please check the course descriptions in the back of this catalog.

MARKETING/ADVERTISING

15 credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	MRKT	2310	Promotion Techniques	3
E.	MRKT	2330	Marketing Special Topics (Media Management)	3

MARKETING/FASHION

IS credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	MRKT	1320	Fashion Design	3
E.	MRKT	1325	Fashion Buying	3

MARKETING/INTERNATIONAL

is credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	MRKT	2320	International Marketing	3
E.	MRKT	2330	Marketing Special Topics (Customer Service)	3

MARKETING/MANAGEMENT

IS credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	Electives'			6

Electives must be chosen from the following:

- MRKT 2330 Marketing Special Topics (Customer *Service*) 3
- MRKT 2330 Marketing *Special* Topics (*Problem* Soloing) 3
- SBMT 1300 *Small* Business *Management I* 3

MARKETING/RESEARCH

15 credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	MRKT	2305	Market Research	3
E.	MRKT	2315	Business Ethics	3

MARKETING/RETAILING

IS credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	SBMT	1300	Small Business Management	3
E.	SBMT	1310	Principles of Retailing	3

MARKETING/SALES

IS credit hours

A.	MRKT	1305	Principles of Marketing	3
B.	MRKT	1310	Principles of Advertising	3
C.	MRKT	1315	Principles of Selling	3
D.	MRKT	1316	Sales Management	3
E.	MRKT	2330	Marketing Special Topics	3

MARKETING

FASHION MARKETING

A twc-year Associate of Applied Science degree program
61 credit h w n required to graduate

ABOUT OUR PROGRAM

The **AAS** degree in Marketing with a major in Fashion Marketing incorporates both marketing and management aspects of skills needed for a fashion merchandising career. CCCC is committed to providing students with excellent educational programs that meet the demands of today's fashion job market and excellence in teaching that meets the needs of each student enrolled.

This program is designed to give the novice a thorough background in fashion marketing management **and** to provide an opportunity for those currently in the business to improve **skills** needed for success in the apparel industry.

Students planning to transfer to a four-year institution should check with **an** adviser.

CAREER OPPORTUNITIES

Positions with apparel makers fall into five general categories: production, administration, design, selling and communication. Job duties can be varied and depend upon a **firm's** particular job interpretation. **Listed** below **are** some of the possible career opportunities:

- Marketing Director
- costing **Engineer**
- **a** Piece **Goods Buyer**
- Order Processor
- Draper
- Sketcher
- **a** Designer Trainee
- **a** Pattern Maker
- Showroom Salesperson
- **a** Buyer
- Public Relations
- **a** Fashion Director

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS MARKETING/FASHION MARKETING

I. General Education Core

22 Credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech communications'	3
C.	MATH	1324	Pre-Calculus for Business/Economics[2]	3
or	MATH	1332	Contemporary Mathematics	3

D. COSC **1306** Introduction to Computers _____ 3
E. ECON 2301 Principles of Macroeconomics 3
F. HUMA 1301 Introduction to Humanities _____ 3
G. PSYC 2301 General Psychology' _____ 3
or PSYC 2302 Applied Psychology _____ 3
H. PHED/DANC Any Activity Course _____ 1

II. Technical Program Core

12 credit hours
A. ACCT 2301 Prinaples of Accounting I _____ 3
B. MRKT 1305 Prinaples of Marketing _____ 3
C. MRKT 1315 Principles of Selling _____ 3
D. SBMT 1300 Small Business Management _____ 3

III. Major Courses

18 credit hours
A. MRKT 1300 Fashion Marketing _____ 3
B. MRKT 1320 Fashion Design _____ 3
C. **MRKT** 1325 Fashion Buying _____ 3
D. MRKT 2300 Fashion Show Production _____ 3
E. MRKT 2305 Market Research _____ 3
F. SBMT 1310 Principles of Retailing _____ 3

IV. Electives

6 credit hours
A. ACCT 2302 Principles of Accounting II _____ 3
B. AGDT 1325 Visual Communications I _____ 3
C. ARTS 2336 Papermaking _____ 3
D. BUSI 2301 Business Law _____ 3
E. MRKT 7300 Cooperative Education I _____ 3
F. **MRKT** 7305 Cooperative Education II _____ 3
G. SPCH 1321 Business and Professional Speaking 3

V. Elective

3 credit hours
A. Elective _____ 3

¹SPCH 1321 may be substituted
²MATH 1324 and PSYC 2301 should be taken for transfer

MATHEMATICS

A two-year Associate of Science degree program
60 credit hours required **to** graduate

ABOUT OUR PROGRAM

The mathematics program offers courses which meet general mathematics requirements for associate degrees and for transfer and technical programs. More advanced courses prepare students for majors in mathematics, science and engineering. All courses include calculator or computer **use**, and lab components emphasize applications of mathematical concepts. Mathematics instruction at CCCC features a wellqualified instructional staff and a mathematics laboratory providing personal, computer and audio-visual tutorial assistance.

CAREER OPPORTUNITIES

Mathematics majors have many potential career opportunities. They may provide technical assistance in business, engineering science, mediane and many other fields. In addition, a knowledge of mathematics plays a crucial role in providing access to a

wide range of technical information in areas that are not so obviously dependent upon mathematics.

- Actuary
- Statistician
- Teacher
- Consultant
- Operations Researcher

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS MATHEMATICS

I. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   Credit Houn

14 credit hours minimum
A. ENGL 2311 Technical Writing _____ 3
B. MATH 2312 Pre-Calculus for Math and Science...........3
C. MATH 2318 Linear Algebra _____ 3
D. MATH 2320 Differential Equations _____ 3
E. **MATH** 2413 Calculus I _____ 4
F. MATH 2414 Calculus II _____ 4
G. MATH 2415 Calculus III _____ 4
H. COSC 1318 Programming Concepts I _____ 3
I. ENGL Sophomore Literature _____ 3
J. PHIL 2303 Logic _____ 3

MUSIC

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The music department offers a two-year Associate of Arts degree, emphasizing a strong curriculum of music theory, music literature, private study and ensemble participation.

CAREER OPPORTUNITIES

- Music Education
- Performer

ASSOCIATE OF ARTS DEGREE REQUIREMENTS MUSIC

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum
A. MUSI 1301 Music Fundamentals _____ 3
B. MUSI 1311 Music Theory I _____ 3
C. MUSI 1312 Music Theory II _____ 3
D. MUSI 2311 Music Theory III _____ 3
E. MUSI 2312 Music Theory IV _____ 3
F. MUSI 1116 Aural Skills I _____ 1
G. MUSI 1117 Aural Skills II _____ 1
H. MUSI 2116 Aural Skills III _____ 1
I. MUSI 2118 Aural Skills IV _____ 1
J. MUSI 1306 Music Appreciation _____ 3

K.	MUSI	1310	Music In America		3

K. MUSI 1310 Music In America 3
(History of Rock & Roll, History of Jazz)
L. MUSI 2308 Introduction to Music Literature I 3
M. MUSI 1162 Vocal Diction I 1
N. MUSI 1165 Vocal Diction II 1
O. MUSI 1183 Class Voice 1
P. MUSI 1192 Class Guitar I 1
Q. MUSI 1193 Class Guitar II 1
R. MUSI 1171 Leisure Piano I 1
S. MUSI 1172 Leisure Piano II 1
T. MUSI 1181 Beginning Piano I 1
U. MUSI 1182 Beginning Piano II 1
V. MUSI 2181 Beginning Piano III 1
W. MUSI 2182 Beginning Piano IV 1
X. MUSI 1173 Secondary Applied Music 1
(private study)
Y. MUSI 1273 Applied Music Major (private study) 2
Z. MUSI 1263 Improvisation 2
AA. MUSI 1286 Introduction to Song Writing 2
BB. MUSI 1287 Introduction to Composition 2
CC. MUSI 1386 Arranging 3
DD. MUSI 1271 Introduction to Synthesis & MIDI 2
EE. MUSI 1272 Advanced Synthesis & MIDI 2
FF. MUSI 1371 Audio Engineering I 3
GG. MUSI 1372 Audio Engineering II 3
HH. MUSI 2371 Audio Engineering III 3
II. MUSI 2372 Audio Engineering IV 3
JJ. MUSI 2350 Audio for Multimedia I 3
KK. MUSI 2351 Audio for Multimedia II 3
LL. MUSI 1131 Ensembles 1
(New Music, Percussion, String,
Keyboard, Wind)
MM. MUSI 1159 Vocal Ensemble 1
NN. MUSI 2124 Band 1
(Plano Community Band, Jazz Lab Band,
Jazz Combo, TI Stage Band)
OO. MUSI 2143 chorus 1
(Plano Civic Chorus, Collin County
Community Choir, Collin County
Chorale)
PP. BUSI 2379 Business of Music 3
(Selected Topics in Business Principles)
QQ. BUSI 2378 Business of Music II 3
(Selected Topics in Personnel Mngmt)

COMMERCIAL MUSIC

A two-year Associate of Applied Science degree program
67 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Applied Science degree program in Commercial Music began in the Fall of 1994. Three areas of study are available: Performance, Audio Engineering and Composer/Arranger/ Copyist. The Commercial Music program offers students the theoretical background and real-world experience which they need to successfully pursue a career in the music industry. Former students are currently employed by recording studios, tape duplicating and editing faalities, sound reinforcement companies, performing ensembles, and more.

CAREER OPPORTUNITIES

- Audio Engineering
- Digital audio editing
- Music transcribing
- Jingle composition
- Instrumental/vocal arranging
- Synthesizer programming
- Performance
- Studio management
- Music marketing
- Audio duplication/manufacture

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS COMMERCIAL MUSIC

AUDIO ENGINEERING OPTION

1. General Education Core

22 credit hours
A. ENGL 1301 Composition/Rhetoric I 3
B. MATH 1332 Contemporary Mathematics' 3
C. SPCH 1311 Fundamentals of Speech Communications' 3
or SPCH 1315 Public speaking 3
or SPCH 1321 Business and Prof. Speaking 3
D. COSC 1306 Introduction to Computers 3
E. PSYC 2301 General Psychology
or PSYC 2302 Applied Psychology 3
F. HUMA 1301 Introduction to Humanities 3
G. ECON 1301 Introduction to Economics' 3
or ECON 2302 Principles of Microeconomics 3
H. HPED/Dance Any Activity Course 1

II. Technical Program Core

19 credit hours
A. BUSI 2379 Business of Music 3
B. MUSI 1371 Audio Engineering I 3
C. MUSI 1372 Audio Engineering II 3
D. MUSI 2371 Audio Engineering III 3
E. MUSI 2372 Audio Engineering IV 3
E. ELAT 1400 Basic Electronics I 4

111. Major Courses

18 credit hours
A. MUSI 1311 Music Theory I 3
B. MUSI 1116 Aural Skills I 1
C. MUSI 1312 Music Theory II 3
D. MUSI 1117 Aural Skills II 1
E. MUSI 1181 Beginning Piano I 1
F. MUSI 1271 Introduction to Synthesis & MIDI 2
G. MUSI 1173 Secondary Applied Music' 1
and/or
H. MUSI 1273 Applied Music Major (private study)' 2
H. MUSI 1386 Arranging 3
I. MUSIC Ensembles[3] 2

IV. Electives

8 credit hours
A. MUSI 1183 Class Voice 1

B.	MUSI	1272	Advanced Synthesis & MIDI	2
C.	MUSI	1182	Beginning Piano II	1
D.	MUSI	2181	Beginning Piano III	1
E.	MUSI	2182	Beginning Piano IV	1
F.	MUSI	1263	Improvisation	2
G.	MUSI	7300	Cooperative Education	3
H.	MUSI	2308	Introduction to Music Literature	3
I.	MUSI	2311	Music Theory III	3
J.	MUSI	2116	Aural Skills III	1
K.	MUSI	2350	Audio for Multimedia I	3
L.	MUSI	2351	Audio for Multimedia II	3
M.	BUSI	2378	Business of Music II	3
O.	MUSI	1162	Vocal Diction I	1
P.	MUSI	1165	Vocal Diction II	1
Q.	MUSI	2312	Music Theory IV	3
R.	MUSI	1118	Aural Skills IV	1
S.	MUSI	1286	Introduction to Songwriting	2
T.	MUSI	1287	Introduction to Composition	2

'Students planning to transfer to another college or university should check with their transfer institution before selecting a speech. math or economics option.
²These courses may be taken in any combination to total two (2) credit hours
³ For a list of ensembles see the Music Department

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: COMMERCIAL MUSIC

COMPOSER/ARRANGER/COPYIST OPTION

I. General Education Core

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	MATH	1332	Contemporary Mathematics'	3
C.	SPCH	1311	Fundamentals of Speech Communication'	3
or	SPCH	1315	Public Speaking	3
or	SPCH	1321	Business and Proffesional Speaking	3
D.	COSC	1306	Introduction to Computers	3
E.	PSYC	2301	General Psychology	
or	PSYC	2302	Applied Psychology	3
F.	HUMA	1301	Introduction to Humanities	3
G.	ECON	1301	Introduction to Economics[1]	3
or	ECON	2302	Principles of Microeconomics	3
H.	PHED/Dance		Any Activity Course	1

II. Technical Program Core

6 credit hours

A.	BUSI	2379	Business of Music	3
B.	MUSI	1371	Audio Engineering I	3

III. Major Courses

31 credit hours

A.	MUSI	1311	Music Theory I	3
B.	MUSI	1116	Aural Skills I	1
C.	MUSI	1312	Music Theory It	3
D.	MUSI	1117	Aural Skills II	1
E.	MUSI	2311	Music Theory III	3
F.	MUSI	2116	Aural Skills III	1
G.	MUSI	2312	Music Theory IV	3

H.	MUSI	2118	Aural Skills IV	1
I.	MUSI	1181	Beginning Piano I* (unless main instrument is piano)	1
J.	MUSI	1182	Beginning Piano II* (unless main instrument is piano)	1
K.	MUSI	1263	Improvisation	2
L.	MUSI	1271	Introduction to Synthesis & MIDI	2
M.	MUSI	1173	Secondary Applied Music'	1
			and/or	
	MUSI	1273	Applied Music (Composition)*	
N.	MUSIC			
O.	MUSI	1386		

*If main instrument is piano. total credit hours is 29.

IV. Electives

Any 8 credit hours (If main instrument is piano, any 7 credit hwrs)

A.	MUSI	1183	Class Voice	1
B.	MUSI	1372	Audio Engineering II	3
C.	MUSI	2181	Beginning Piano III	1
D.	MUSI	2182	Beginning Piano IV	1
E.	MUSI	2371	Audio Engineering III	3
F.	MUSI	2372	Audio Engineering IV	3
G.	MUSI	7300	Cooperative Education	3
H.	MUSI	2308	Introduction to Music Literature	3
I.	MUSI	1272	Advanced Synthesis & MIDI	2
K.	SBMT	1300	Small Business Management	3
L.	MUSI	2350	Audio for Multimedia I	3
M.	MUSI	2351	Audio for Multimedia II	3
N.	MUSI	1162	Vocal Diction I	1
O.	MUSI	1165	Vocal Diction II	1
P.	BUSI	2378	Business of Music II	3
Q.	MUSI	1286	Introduction to Songwriting	2
R.	MUSI	1287	Introduction to Composition	2

'Students planning to transfer to another college or university should check with their transfer institution before selecting a speech. math or economics option.
²These courses may be taken in any combination to total four (4) credit hours
³ For a list of ensembles see the Music Department

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS COMMERCIAL MUSIC

PERFORMING MUSICIAN OPTION

I. General Education Core

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	MATH	1332	Contemporary Mathematics'	3
C.	SPCH	1311	Fundamentals of Speech Communication'	3
or	SPCH	1315	Public Speaking	3
or	SPCH	1321	Business and Prof. Speaking	3
D.	COSC	1306	Introduction to Computers	3
E.	PSYC	2301	General Psychology	3
or	PSYC	2302	Applied Psychology	3
F.	HUMA	1301	Introduction to Humanities	3
G.	ECON	1301	Introduction to Economics'	3
or	ECON	2302	Principles of Microeconomics	3

H. PHED/Dance Any Activity Course _____ 1

II. Technical Program Core

6 credk hours

| A. | BUSI | 2379 | Business of Music _____ | 3 |
| B. | MUSI | 1371 | Audio Engineering I _____ | 3 |

III. Major Courses

31 credit hours

A.	MUSI	1311	Music Theory I _____	3
B.	MUSI	1116	Aural Skills I _____	1
C.	MUSI	1312	Music Theory II _____	3
D.	MUSI	1117	Aural Skills II _____	1
E.	MUSI	2311	Music Theory III _____	3
F.	MUSI	2116	Aural Skills III _____	1
G.	MUSI	1181	Beginning Piano I* _____ (unless applied instr. is piano)	1
H.	MUSI	1182	Beginning Piano II* _____ (unless applied instr. is piano)	1
I.	MUSI	1263	Improvisation _____	2
J.	MUSI	1271	Introduction to Synthesis & MIDI 2
K.	MUSI	1272	Advanced Synthesis & MIDI _____	2
L.	MUSI	1173	Secondary Applied Music[2] _____ 1 and/or
	MUSI	1273	Applied Music (Composition)[2] 2
M.	MUSI	1386	Arranging
N.	MUSIC		Ensembles[5] _____ –	4

If main instrument is piano, total hours is 29.

IV. Electives

Any 8 credit hours; (If main instrument is piano, any 7 credit hours).

A.	MUSI	1183	Class Voice _____	1
B.	MUSI	1372	Audio Engineering II _____	3
C.	MUSI	2181	Beginning Piano III _____	1
D.	MUSI	2182	Beginning Piano IV _____	1
E.	MUSI	2371	Audio Engineering III _____ 3
F.	MUSI	2372	Audio Enginering IV _____	3
G.	MUSI	7300	Cooperative Education _____	3
H.	MUSI	2308	Introduction to Music Literature 3
I.	MUSI	2350	Audio for Multimedia I _____	3
J.	MUSI	2351	Audio for Multimedia II _____	3
L.	MUSI	2312	Music Theory IV _____	3
M.	MUSI	2118	Aural Skills IV _____	1
N.	MUSI	1162	Vocal Diction I _____	1
O.	MUSI	1165	Vocal Diction II _____	1
P.	MUSI	1286	Introduction to Songwriting _____	2
Q.	MUSI	1287	Introduction to Composition _____	2

'*Students planning to transfer to another college or university should check with their transfer institution before selecting a speech,* math or *economics option.*
[2]*These* courses *may be taken in any combination* to total four (4) credit hours
[3] *For a list of ensembles see the* Music *Department*

NURSING

A two-year Associate of Applied Science degree program
72 credit hours required to graduate

ABOUT OUR PROGRAM

This two-year Associate of Applied Science degree is offered to prepare the student to make application to the Board of Nurse Examiners for licensure as a registered nurse. The nursing curriculum is accredited by the Board of Nurse Examiners for the State of Texas and the National League for Nursing.

The course of study consists of five nursing courses which include a classroom and a cliical component. These courses must be taken in sequence to assure progression from simple to complex

Collin County healthcare facilities enthusiastically support the ADN program. Several healthcare faalities throughout the metroplex are used for the clinical experience.

ARTICULATION/TRANSFER AGREEMENT

Students completing the AAS degree nursing program may continue their education at a college or university that offers a bachelor of science degree in nursing. Many universities offer a bridge course/program that gives students credit for their previous education. Most courses completed at CCCC are accepted toward BS degree requirements. Students usually gain credit for nursing courses without repeating content already mastered.

SCHOLARSHIPS

Various scholarships are available to students when they have been accepted into the nursing program. Most scholarships are awarded based on financial need. Other types of monetary support are available through the Financial Aid Office.

SPECIAL ADMISSION REQUIREMENTS

- GPA of 2.5 or greater on all courses applicable to the nursing program
- Offiaal copies of all college transcripts
- Complete the PSB—Nursing School Aptitude Exam prior to January 31 with a satisfactory result
- Complete pre-entrance course requirements with a minimum 2.5 GPA

Admission is selective. Admission to the college does not guarantee admission to the nursing program.

Registration is by permission only. Information and applications may be obtained from the Admissions Office, the Health Science, Physical Education and Child Development Division Office or from the program coordinator.

Student placement in Mathematics and English is based upon the results of assessments and subjects completed before admission.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS NURSING

I. Pre-Entrance Requirements

19 credit hours

A.	MATH	1324	Pre-Calculus for Business/Economics 3
or	MATH	1342	Statistics _____	3
or	MATH	1314	College Algebra _____	3

B. BIOL 1406 General Biology I * ———————— 4
C. BIOL 2401 Anatomy and Physiology I ——— 4
D. BIOL 2402 Anatomy and Physiology II ——— 4
E. BIOL 2420 Microbiology ———————— 4

II. First Semester

14 credit hours
A. NURS 1800 Nursing I ————————— 8
B. PSYC 2301 General Psychology ————— 3
C. ENGL 1301 Composition/Rhetoric I ———— 3

III. Second Semester

15 credic hours
A. NURS 1805 Nursing II ————————— 8
B. PSYC 2314 Life Span Psychology ————— 3
C. Humanities or Philosophy' ————————— 3
D. PHED Any Activity Course ————— 1

IV. Summer Session

4 credit hours
A. NURS 2400 Nursing III ———————— 4

V. Fourth Semester

12 credit hours
A. NURS 2900 Nursing IV ————————— 9
B. SOCI 1301 Introduction to Sociolo............................ 3
or SOCI 1306 Social Problems ——————— 3
or SOCI 2371 Death and Dying ————— 3

VI. Fifth Semester

12 credit hours
A. NURS 2905 Nursing V ————————— 9
B. Elective ————————————— 3

Elective must &e *chosen from discipline* outside Nursing
**BIOL 1406 is not counted toward degree requirements. This course is
not required if student has completed Anatomy and Physiology and/or
Microbiology.*
¹Choose a Humanities or Philosophy course from the General Education
Core for the Associate *of* Applied *Science* Degree on **page 42.**

OFFICE ADMINISTRATION

GENERAL

A two-year Associate of Applied Science degree program
62 credit **hours** required **to** graduate

ABOUT OUR PROGRAM

The degree in OfficeAdministration is designed to incorporate
both the technical and behavioral aspects of jobs in the automated
office. This program enables the student to master office **skills**
and select a specialty by choosing the proper electives. Areas of
study include:
- Office Skills – document production, business telephone
  techniques, and electronic memory calculators
- Proofreading/Editing – language applications for business
  correspondence and documents
- Computers and Spreadsheet Software – hands-on experi-
  ence with DOS, Windows, spreadsheet and database

programs such as LOTUS 1-2-3, Excel, and dBase IV
- Word Processing – hands-on experience using software
  such as WordPerfect for DOS, WordPerfect for Windows,
  and other popular software for document production and
  desktop publishing
- Records Management – ARMA filing rules, design and
  implementation of efficient and cost-effective system
- Office Management – handle administrative details,
  coordinate office procedures
- Medical Transcription – patient **records** and reports
- Medical Terminology – general and specialized medical
  terms and abbreviations
- Financial Responsibilities – insurance claims, accounting
  systems, fees and payments
  Students planning to transfer to a four year institution
  should check with an academic adviser.

Tech Prep students who took collegiate-level courses in office
Administration whole in high school may elect to receive college
credit by contacting a CCCC advisor. A petition for Tech Prep
credit should be completed as soon as possible upon admission to
CCCC.

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been
established allowing graduates with an Associate of Applied
Science degree to continue their education in a Bachelor of
Applied **Arts** and Sciences degree at specific four-year universi-
ties. For detailed information contact the coordinator of the AAS
program or the director of articulation and transfer programs.

CAREER OPPORTUNITIES

Job opportunities for **those** with Office Administration training
(depending on electives chosen) would include:
- Typist – entry-level position requiring accurate typing
  skills (50 wpm).
- Receptionist/Typist – individuals for front desk positions
  to answer phones, type and handle various other duties
  such as machine transcription.
- CRT Operator – enter bills of lading by CRT, answer
  phones, process daily shipping reports and shipping
  labels.
- Human Resources Clerk – primary responsibilities include
  greeting and screening visitors, data input, and general
  office support.
- Billing Clerk – detail-oriented person to process invoices,
  purchase orders, and inventory **records** using the com-
  puter and 10-key **skills.**
- Secretary/Administrative Assistant – assisting the **execu-**
  tive in decision making, conducting research, meeting the
  public, and office **skills.**
- Medical Secretary or Medical Transcriptionist – work for a
  doctor in a general practitioner's office, a group practice,

the dental office, or hospitals and clinics.

- Medical Insurance Claims Support — work for public health departments, convalescent and nursing homes, health insurance companies, manufacturers and distributors of drugs, pharmaceutical products, surgical instruments, and hospital supplies or medical laboratories.
- Legal Office Support — work in a law office using entry-level law office clerical skills.

  Some of the courses required for the AAS Office Administration degree are also excellent preparation for the experienced secretary who plans to take the Certified Professional Secretary exam. The secretary who has already passed the CPS exam may apply for academic credit from CCCC to be applied toward the AAS degree in Office Administration.

ASSOCCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS OFFICE ADMINISTRATION/GENERAL

I. General Education Core   **Credit Hours**

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication'	3
C.	MATH	1332	Contemporary Mathematics	3
or	MATH	1324	Pre-Calculus for Business/Economics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

13 credit hours

A.	OFAD	1210	Records Management	2
B.	OFAD	1211	Proofreading/Editing	2
C.	OFAD	1302	Intermediate Keyboarding	3
D.	OFAD	1315	Electronic Calculator	3
E.	OFAD	1331	Beginning Word Processing	3

III. Major Courses

12 credit hours

A.	OFAD	1332	Intermediate Word Processing	3
B.	OFAD	2303	Advanced Keyboarding	3
C.	OFAD	2305	Machine Transcription	3
or	OFAD	2306	Medical Transcription I	3
D.	OFAD	2315	Office Procedures	3

IV. Electives'

15 credit hours

A.	OFAD	1310	Medical Insurance Coding	3
B.	OFAD	1320	Business Correspondence	3
C.	OFAD	1325	Office Support Software	3
D.	OFAD	2306	Medical Transcription I	3
E.	OFAD	2307	Medical Transcription II	3
F.	OFAD	2333	Advanced Word Processing	3
G.	OFAD	7300	Cooperative Education I	3

H.	OFAD	7305	Cooperative Education II	3
I.	ACCT	1370	Elementary Accounting	3
J.	CSCI	1305	Microcomputer Concepts	3
K.	CSCI	2305	Integrated Spreadsheets Applications	3
L.	CSCI	2310	Database Applications	3

¹May substitute SPCH 1315 or SPCH 1321
²Permission may be granted by OFAD Coordinator to substitute one non-OFAD course for one elective

OFFICE ADMINISTRATION

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

The Entry-Level Office Support Certificate, the Mid-Level Office Support Certificate, the Administrative Support Certificate and the Enhanced Entry-Level Accounting Clerk Certificate Programs are designed to prepare individuals for general office support or accounting clerk positions. Each level will feed into the next level while increasing your knowledge. Most courses will also count toward an AAS degree.

ENTRY-LEVEL OFFICE SUPPORT

16 credit hours

A.	OFAD	1210	Records Management	2
B.	OFAD	1211	Proofreading/Editing	2
C.	OFAD	1301	Beginning Keyboarding	3
or	OFAD	1302	Intermediate Keyboarding	3
D.	OFAD	1315	Electronic Calculator	3
E.	OFAD	1331	Beginning Word Processing	3
F.	OFAD	2315	Office Procedures	3

MID-LEVEL OFFICE SUPPORT

19 credit hours

A.	OFAD	1210	Records Management	2
B.	OFAD	1211	Proofreading/Editing	2
C.	OFAD	1302	Intermediate Keyboarding	3
D.	OFAD	1315	Electronic Calculator	3
E.	OFAD	1332	Intermediate Word Processing	3
F.	OFAD	2305	Machine Transcription	3
G.	OFAD	2315	Office Procedures	3

ADMINISTRATIVE SUPPORT

25 credit hours

A.	OFAD	1210	Records Management	2
B.	OFAD	1211	Proofreading/Editing	2
C.	OFAD	1302	Intermediate Keyboarding	3
D.	OFAD	1320	Business Correspondence	3
E.	OFAD	2303	Advanced Keyboarding	3
F.	OFAD	2315	Office Procedures	3
G.	OFAD	2333	Advanced Word Processing	3
H.	CSCI	2305	Integrated Spreadsheets Applications	3
I.	CSCI	2310	Database Applications	3

WORD PROCESSING

The Word Processing Certificate program is a one-year program designed to prepare individuals for entry-level positions requir-

ing extensive document preparation using microcomputer equipment and word processing software.

20 credit hours

A.	OFAD	1211	Proofreading/Editing	2
B.	OFAD	1302	Intermediate Keyboarding	3
C.	OFAD	1325	Office Support Software	3
D.	OFAD	1331	Beginning Word Processing	3
E.	OFAD	1332	Intermediate Word Processing	3
F.	OFAD	2303	Advanced Keyboarding	3
G.	OFAD	2333	Advanced Word Processing	3

MEDICAL OFFICE SUPPORT

The Entry-Level Medical Office Support, Medical Administrative Assistant, and Entry-Level Medical Transcription Skills Certificate programs are designed to prepare individuals for positions in a medical office, health care facility or as a medical transcriptionist.

Entry-Level Medical Office Support

19 credit hours

A.	HLSC	1300	Medical Terminology	3
B.	OFAD	1210	Records Management	2
C.	OFAD	1211	Proofreading/Editing	2
D.	OFAD	1302	Intermediate Keyboarding	3
E.	OFAD	1315	Electronic Calculator	3
F.	OFAD	1331	Beginning Word Processing	3
G.	OFAD	1332	Intermediate Word Processing	3

Medical Administrative Assistant

22 credit hours

A.	HLSC	1300	Medical Terminology	3
B.	OFAD	1210	Records Management	2
C.	OFAD	1211	Proofreading/Editing	2
D.	OFAD	1302	Intermediate Keyboarding	3
E.	OFAD	1310	Medical Insurance Coding	3
F.	OFAD	2303	Advanced Keyboarding	3
G.	OFAD	2306	Medical Transcription I	3
H.	OFAD	2315	Office Procedures	3

Entry-Level Medical Transcription Skills

17 credit hours

A.	HLSC	1300	Medical Terminology	3
B.	OFAD	1211	Proofreading/Editing	2
C.	OFAD	1331	Beginning Word Processing	3
D.	OFAD	1332	Intermediate Word Processing	3
E.	OFAD	2306	Medical Transcription I	3
F.	OFAD	2307	Medical Transcription II	3

LEGAL OFFICE SUPPORT

The Legal Office Support Certificate program is designed to prepare the student for legal office support with entry-level law office clerical skills and also allows the student to complete prerequisite courses leading to Legal Assistant programs.

19 credit hours

A.	LEGL	1301	Law and Judicial Systems	3
B.	OFAD	1210	Records Management	2
C.	OFAD	1211	Proofreading/Editing	2
D.	OFAD	1302	Intermediate Keyboarding	3
E.	OFAD	1331	Beginning Word Processing	3
F.	OFAD	1332	Intermediate Word Processing	3
G.	OFAD	2305	Machine Transcription/Legal	3

PHILOSOPHY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The philosophy program seeks to develop men and women dedicated to the pursuit of knowledge. Students become acquainted with the main problems of philosophy. Emphasis is placed on philosophical thinking which will enable graduates to integrate their work and lives.

CAREER OPPORTUNITIES

- Preparation for those who plan to major in philosophy at a four-year institution
- Preparation for related fields such as law, government, education, and the humanities

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: PHILOSOPHY

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	PHIL	1301	Introduction to Philosophy	3
B.	PHIL	2303	Logic	3
C.	PHIL	2306	Ethics	3
D.	PHIL	1304	Comparative Religion	3
E.	PSYC	2301	General Psychology	3
F.	HDEV	1205	Personal Development	2
G.			Foreign Language Sequence I	4
H.			Foreign Language Sequence II	4

PHOTOGRAPHY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The photography program provides an opportunity to acquire the various technical and aesthetic skills necessary to prepare for a career in professional photography The program is designed to meet the needs of the fine arts photographer and the commercially directed photographer.

For commercial photography instructional emphasis is offered in product illustration, news photography, color processing and printing, the portrait, large format photography and digital photography. For fine arts photography, courses are offered in landscape, portrayal, large format cameras and the zone system, non-silver printing and portfolio.

CAREER OPPORTUNITIES

Jobs in photography vary and can be applied to related disciplines:

- Portrait Studio
- Commercial Illustration
- Product Catalog Illustration

- Industrial Photography
- Digital Image Manipulation
- Multimedia Presentation
- Freelance Work
- Photo Lab Technician
- Architectural Photographer
- Historical Documentary Photographer

ASSOCIATE OF ARTS DEGREE REQUIREMENTS: PHOTOGRAPHY

(for *information about Digital Photography,* see *AGDT Certificates, page 46)*

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	ARTS	2356	Photography I	3
B.	ARTS	2357	Photography II	3
C.	ARTS	2370	Photography Portrayal	3
D.	ARTS	2371	Contemporary Studies in the Visual Arts Photography'	3
E.	ARTS	2372	History of Photography	3
F.	COMM	1316	Photo Illustration	3
G.	COMM	1317	News Photography	3
H.	DRAM	2366	History of Film Making I	3

¹*Check the current class schedule for each semester topics*

PHYSICAL EDUCATION

A *two-year* Associate of Science degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

Students may earn an Associate of science degree with an emphasis in physical education. The degree program emphasizes the interrelatedness of several fields of study. Physical **skills** and knowledge are acquired through the physical education activity and theory classes. Offerings in the humanities, social sciences and biological sciences also prepare the student for a career in physical education.

CAREER OPPORTUNITIES

Physical education offers challenging, rewarding careers. Listed below are some of the possibilities, many of which may require training beyond the Associate of Science degree.

- Athletic Director
- Personal Trainer
- Aerobic Instructor
- Athletic Trainer
- Coach
- Fitness Center Instructor
- Recreation Coordinator
- Sports Administrator

- Sports Medicine
- Teacher

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: PHYSICAL EDUCATION

I. General Education Core

See page 41 for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 credit hours minimum

A.	BIOL	2401	Anatomy and Physiology I	4
B.	BIOL	2402	Anatomy and Physiology II	4
C.	PHED	1301	Introduction to Physical Education	3
D.	PHED	1304	Personal Health	3
E.	PSYC	2301	General Psychology	3
E	PHED/DANC		Any Activity Course	1
G.	PHED	1238	Concepts of Physical Fitness and Wellness	2

PHYSICS

A two-year Associate of Science degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The science of physics seeks to understand the physical universe and deals with the behavior of matter and energy at the most fundamental level. By observation, physicists search for the basic principles that explain natural phenomena. The concepts of physics overlap many disciplines. A knowledge of physics provides a strong background for careers in science, engineering, computer technology or education.

The CCCC Associate of Science degree with an emphasis in physics prepares the student to pursue university studies leading to a bachelor's degree. The basic AS program, at the general physics level, will prepare the student for further education in fields such as biology, medicine or secondary education. Students seeking a bachelor's degree in fields such as physics, engineering or computer science will require the more advanced mathematics and physics.

Students planning to transfer to a four-year institution should check with the specific degree plan requirements of their intended major.

DEGREE REQUIREMENTS

The Associate of science degree with physics emphasis requires the General Education Core requirements for the AS degree offered by CCCC. Depending on the career plans of the student, the physics emphasis will be at either the general physics or the college physics level.

CAREER OPPORTUNITIES

Physics students may select a career in a wide range of scientific and technical fields. The student should bear in mind that most of these career areas require education or training beyond the Associate of Science degree. Career fields available to the physics student include:

- Aerospace Technology
- Astronomy
- Biophysics
- Chemistry
- Computer Science
- Elementary or Secondary Education
- Engineering-Civil, Electrical or Industrial
- Geophysics
- Hydrogeology
- Medicine
- Meteorology
- Patent Law
- Physics
- Seismology

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS: PHYSICS

I. General Education Core

See page 41 for General Education Core requirements.

A. General Physics Level

Students seeking advanced degrees in biology or pre-medical degrees should select math and physics courses from the Associate of Science Degree General Education Core (see page 41).

B. College Physics Level

Students seeking advanced degrees in science and engineering fields should select these or more advanced levels of math and physics sequences for the AS degree. See program coordinator for additional information.

Mathematics: 8 credit hours

A.	MATH 2413	Calculus I	4
B.	MATH 2414	Calculus II	4

Physics: 8 credit hours

A.	PHYS 2425	College Physics I	4
B.	PHYS 2426	College Physics II	4

II. Recommended Electives　　　　Credit Hours

14 credit hours minimum

A.	MATH	2312	Pre-Calculus for Mathematics Science (General Level)	3
B.	MATH	2415	Calculus III (College Level)	4
C.	MATH	2318	Linear Algebra (College Level)	3
D.	MATH	2320	Differential Equations (College Level)	3
E.	COSC	1318	Programming Concepts I	3
F.	CHEM	1411	General Chemistry I	4
G.	CHEM	1412	General Chemistry II	4
H.	PHYS	1411	Elementary Astronomy	4
I.	ENGL	2311	Technical Writing	3

PSYCHOLOGY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The psychology program features a variety of introductory courses exploring the nature of behavior and mental processes. Featured courses include general psychology, applied psychology and life-span psychology. These courses emphasize current psychological theory and research, as well as the practical application of the basic principles of psychology to the student's daily life. Many courses in the program require partiapation in hands-on, experiential laboratory exercises which further emphasize practical application of course material.

CAREER OPPORTUNITIES

An Associate of Arts degree in psychology serves as a foundation on which continued studies in psychology may be built. Since most careers in psychology require a graduate degree, many students continue on to four-year institutions and eventually enter graduate school in psychology. Students who earn advanced degrees in psychology are often employed as counselors, psychotherapists and mental health workers. With further study, a psychology degree may also be used as a stepping-stone to a career in education, business, law or medicine.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS PSYCHOLOGY

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives　　　　Credit Hours

14 credit hours minimum

A.	PSYC	2301	General Psychology	3
B.	PSYC	2306	Human Sexuality	3
C.	PSYC	2314	Life Span Psychology	3
D.	PSYC	2315	Psychology of Adjustment	3
E.	PSYC	2316	Psychology of Personality	3
F.	PSYC	2319	Social Psychology	3
G.	PSYC	2371	Selected Topics in Psychology	3
H.	SOCI	1301	Introduction to Sociology	3
I.	SOCI	1306	Social Problems	3
J.	SOCI	2301	Marriage and Family	3
K.	SOCI	2371	Selected Topics in Sociology	3

REAL ESTATE

A two-year Associate of Applied Science degree program
63 credit hours required to graduate

ABOUT OUR PROGRAM

Real Estate is a dynamic field in which highly motivated men and women can and do create their own success stories. The degree program in Real Estate is designed with flexibility to allow students to successfully achieve a goal, whether it be personal knowledge, receipt of a degree, completion of a certificate program, transfer to a four-year institution or real estate licensure.

- Students will explore a variety of topics including:
- Fundamentals and principles of real estate
- Sources of financing
- State and federal influences on financing
- Legal rights of owners, buyers and brokers
- Property appraisal
- Contract negotiations
- Closing

An excellent instructional staff and a cooperative education program with local brokers give real estate students at CCCC **a** personalized, practical, high quality educational experience.

Students planning to transfer to a four-year institution should check with an academic adviser.

CAREER OPPORTUNITIES

The study of real estate can be the beginning of an interesting and profitable career. Real estate is a vast and complex industry and career options are numerous. Some of the possibilities are:

- Brokerage
- Appraisal
- Finance
- Property Development
- Counseling
- Education
- Insurance

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer programs.

ASSOCIATE OF APPLIED SCIENCE DEGREE

REQUIREMENTS REAL ESTATE

I. General Education Core — **Credit Hours**

22 credit hours

A.	ENGL	1301	Composition/Rhetoric I	3
B.	SPCH	1311	Fundamentals of Speech Communication¹	3
C.	MATH	1332	Contemporary Mathematics	3
D.	COSC	1306	Introduction to Computers	3
E.	ECON	1301	Introduction to Economics	3
F.	HUMA	1301	Introduction to Humanities	3
G.	PSYC	2302	Applied Psychology	3
H.	PHED/DANC		Any Activity Course	1

II. Technical Program Core

8 credit hours

A.	BUSI	1301	Introduction to Business	3
B.	ENGL	1302	Composition/Rhetoric II	3
C.	OFAD	1200	Computer Keyboarding	2

III. Major Courses

21 credit hours

A.	RLST	1301	Real Estate Principles I	3
B.	RLST	1302	Real Estate Principles II	3
C.	RLST	1303	Law of Agency	3
D.	RLST	1305	Real Estate Math	3
E.	RLST	1315	Promulgated Contract Forms	3
F.	RLST	1320	Real Estate Sales and Marketing	3
G.	RET	2310	Real Estate Finance	3

IV. Electives

9 credit hours

Minimum three credit hours in the major elective, the other six credit hours may be selected from either the major or related electives listed below:

Major Electives

A.	RLST	1310	Real Estate Appraisal	3
B.	RLST	2305	Real Estate Investments	3
C.	RLST	2315	Real Estate Property Management	3
D.	RET	2320	Real Estate Law	3
E.	RLST	2325	Real Estate Commercial	3
F.	RLST	2330	Real Estate Financial Analysis	3
G.	RLST	2335	Real Estate Brokerage	3

Related Electives

A.	ACCT	2301	Principles of Accounting I	3
B.	BUSI	1370	Principles of Management	3
C.	BUSI	1374	Personnel Management	3
D.	BUSI	2301	Business Law	3
E.	CSCI	2305	Integrated Spreadsheet Applications	3
F.	MRKT	1316	Sales Management	3
G.	RLST	2101	Real Estate Selected Topics I	1
H.	RLST	2302	Real Estate Selected Topics II	3
I.	RLST	7300	Cooperative Education I	3
J.	RLST	7305	Cooperative Education II	3
K.	SBMT	1300	Small Business Management I	3
L.	SBMT	1310	Principles of Retailing	3

V. Elective

3 credit hours

A.	Elective		3

¹May substitute SPCH 1315 or SPCH 1321

REAL ESTATE

CERTIFICATE PROGRAMS

Some of the courses in the certificate programs may require prerequisites. Please check the course descriptions in the back of this catalog.

REAL ESTATE GENERAL CERTIFICATE

15 credit hours

A.	RLST	1301	Real Estate Principles I	3
B.	RLST	1302	Real Estate Principles II	3
C.	RET	1303	Law of Agency	3
D.	Electives			6

Choose from the following electives:

A.	RLST	1305	Real Estate Math	3
B.	RLST	1310	Real Estate Appraisal	3
C.	RLST	1315	Promulgated Contract Forms	3
D.	RLST	1320	Real Estate Sales and Marketing	3
E.	RLST	2101	Real Estate Selected Topics I	1
F.	RLST	2302	Real Estate Selected Topics II	3
G.	RLST	2305	Real Estate Investments	3
H.	RLST	2310	Real Estate Finance	3
I.	RLST	2315	Real Estate Property Management	3
J.	RLST	2320	Real Estate Law	3
K.	RLST	2325	Real Estate Commercial	3
L.	RLST	2330	Real Estate Financial Analysis	3
M.	RLST	2335	Real Estate Brokerage	3
N.	RLST	7300	Cooperative Education I	3
O.	RLST	7305	Cooperative Education II	3

REAL ESTATE ADVANCED CERTIFICATE

30 credit hours

A.	RLST	1301	Real Estate Principles I	3
B.	RLST	1302	Real Estate Principles II	3
C.	RLST	1303	Law of Agency	3
D.	RLST	1305	Real Estate Math	3
E.	RLST	1310	Real Estate Appraisal	3
F.	RLST	1315	Promulgated Contract Forms	3
G.	RLST	1320	Real Estate Sales and Marketing	3
H.	RLST	2310	Real Estate Finance	3
I.	Electives			6

Choose from the following electives:

A.	RLST	2101	Real Estate Selected Topics I	1
B.	RLST	2302	Real Estate Selected Topics II	3
C.	RLST	2305	Real Estate Investments	3
D.	RLST	2315	Real Estate Property Management	3
E.	RLST	2320	Real Estate Law	3
F.	RLST	2325	Real Estate Commercial	3
G.	RLST	2330	Real Estate Financial Analysis	3
H.	RLST	2335	Real Estate Brokerage	3
I.	RLST	7300	Cooperative Education I	3
J.	RLST	7305	Cooperative Education II	3

RESPIRATORY CARE

A two-year Associate of Applied Science degree program
72 credit hours required to graduate

ABOUT OUR PROGRAM

Respiratory care offers a program which prepare individuals for an allied health specialty in clinical care and management of respiratory disorders. The 23 month program graduates a student with an Associate in Applied Science degree and qualifies the individual to apply for the Registered Respiratory Therapist board examination.

The student is required to maintain a GPA of 2.0 in general academic coursework. The student must maintain a GPA of 2.0 in all science courses. The minimum grade in all respiratory care classes will be a B (3.0 GPA).

PROGRAM COMPLETION REQUIREMENTS

All students are required to complete comprehensive program examinations to receive their certificate of completion and degree. The CRTT SAE will be given in the first semester of the second year. The RRT SAE and Clinical Simulation SAE will be given in the spring semester. The student will have *two* opportunities to pass all exams. Satisfactory completion is required for graduation from the program.

TRANSITION PROGRAM

The college offers a transition program to allow students who hold a CRTT credential and have one year experience to receive their degree and become registry eligible. Contact the program director for additional information.

CAREER OPPORTUNITIES

Career opportunities in the health care industry for registered respiratory therapists are increasing rapidly. Recent surveys indicate that the supply of trained respiratory care professional has not been sufficient to meet the progressive growth in demand.

ARTICULATION/TRANSFER AGREEMENT

Formal articulation and/or transfer agreements have been established allowing graduates with an Associate of Applied Science degree to continue their education in a Bachelor of Applied Arts and Sciences degree at specific four-year universities. For detailed information contact the coordinator of the AAS program or the director of articulation and transfer program.

SPECIAL ADMISSION REQUIREMENTS

- Proof of high school graduation or GED
- Official copies of all college transcripts
- Complete CCCC reading, writing and mathematics assessments
- Complete Psychological Services Bureau, Health Occupations Aptitude Exam

Registration is by permission only. Information and applications may be *obtained from* the Health Sciences, Physical Education and Child Development Division office or the program coordinator.

ASSOCIATE OF APPLIED SCIENCE DEGREE REQUIREMENTS: RESPIRATORY CARE TECHNOLOGY (CARDIOPULMONARY)

I. Pre-Entrance Requirements

A.	MATH	1314	College Algebra	3
or	MATH	1324	Pre-Calculus for Business/Economics	3
or	MATH	1342	Stastistics	3
B.	BIOL	2401	Anatomy and Physiology I	4
C.	BIOL	2402	Anatomy and Physiology II	4

Certification Eligible Option

II. First Yead/emester One

15 credit hours

A.	RTTP	1200	Cardiopulmonary Anatomy and Physiology	2
B.	RTTP	1220	Respiratory Chemistry/Physics	2
C.	RTTP	1010	Respiratory Clinical Practicum I	4

C. RTTP 1010 Respiratory Clinical Practicum I 4
D. RTTP 1400 Fundamentals of Respiratory Care I 4
E. ENGL 1301 Composition and Rhetoric I _____ 3

III. First Year—Semester Two

IS credit hours

A. RTTP 1415 Respiratory Disease _____ 4
B. RTTP 1205 Respiratory Pharmacology _____ 2
C. RTTP 1015 Respiratory Clinical Practicum II 2
D. RTTF 1405 Fundamentals of Respiratory Care II 4
E. PSYC 2301 General Psychology _____ 3
or PSYC 2302 Applied Psychology _____ 3
or SOCI 1301 Introduction to Sociology _____ 3

IV. First Year—Semester Three

6 credit hours

A. RTTP 1020 Respiratory Clinical Practicum III 2
B. RTTP 1410 Fundamentals of Respiatory Care III 4

FIRST YEAR TOTAL = 44 CREDIT HOURS

V. Second Year—Semester One

12 credit hours

A. RTTP 2310 Perinatal Respiratory Care _____ 3
B. RTTP 2010 Clinical Practicum IV _____ 2
C. RTTP 2210 Advanced Respiratory Care I _____ 4
D. Humanities or Philosophy[2] _____ 3

VI. Second Yeat—Semester Two

13 credit hours

A. RTTP 2300 Cardiopulmonary Dynamics _____ 3
B. RTTP 2215 Advanced Respiratory Care II 3
C. RTTP 2015 Clinical Practicum V _____ 2
D. BIOL 2420 Microbiology _____ 4
E. EMTP 1100 Advanced Cardiac Lie Support 1

SECOND YEAR TOTAL = 28 CREDIT HOURS

*Prerequisite BIOL 1406
[2]Choose a Humanities or Philosophy course from the General Education
Core for the Associate of Applied Science Degree on page 42.

SOCIOLOGY

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The soaology program has been designed to provide students
with essential life skills to help them better understand them-
selves and the world around them. Sociology courses at CCCC
will enable all students to comprehend the tremendous social
change brought about by the transition of our world into the
Information Age. Sociology helps us to better understand how
human behavior is influenced by social forces which exist in the
world. Students will develop critical thinking skills and a global
perspective which will benefit them regardless of their major in
college. Sociology majors or minors will gain a solid foundation
in the discipline which will prepare them for transferring into a
university program.

CAREER OPPORTUNITIES

The majority of students who select sociology as their focus at the
community college level transfer into a four-year program. There
are career opportunities available in entry level positions with
social service agencies upon completion of an associate's degree.
Sociology is an excellent minor for students considering careers in
education, business, law, medicine or psychology. The knowledge
gained from sociology courses will enhance a student's chances of
being successful in accomplishing their career and life goals.

Sociology majors typically seek careers in teaching, social
services or research and planning in governmental or corporate
settings.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS SOCIOLOGY

I. General *Education Core*

See page 40 for General Education Core requirements.

II. Recommended Electives   Credit Hours

14 credit hours minimum

A. SOCI 1301 introduction to Sociology _____ 3
B. S K I 1306 Social Problems _____ 3
C. SOCI 2306 Human Sexuality _____ 3
D. S K I 2301 Marriage and Family _____ 3
E. PSYC 2319 Social Psychology _____ 3
F. SOCI 2319 Minority Studies _____ 3
G. SOCI 2371 Selected Topics in Sociology _____ 3
H. PSYC 2301 General Psychology _____ 3
I. PSYC 2314 Lie Span Psychology _____ 3
J. PSYC 2316 Psychology of Personality _____ 3
K. ANTH 2351 Cultural Anthropology _____ 3

SPANISH

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

The Associate of Arts degree with an emphasis in Spanish
provides the essential language background for the advanced
study of Spanish, for the mastery of the competencies in listening,
speaking, and writing the language, and for a more rapid
acquisition of other foreign languages (particularly Romance
languages like French.) The courses are oral-proficiency based in
order to enable the student to converse in Spanish as quickly as
possible.

CAREER OPPORTUNITIES

Because of the growing number of Hispanics in this area and the
impact of new international trade agreements, the demand for
Spanish both in the community and the business environment is
growing rapidly Combining Spanish with another field can open
opportunities in nursing, teaching, computer science, sociology,
banking, counseling, law and many other areas.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS
SPANISH

I. General Education Core

See page **40** for General Education Core requirements.

II. Recommended Electives   **Credit Hours**

14 *credit* hours minimum

A.	SPAN	1411	Beginning Spanish I	4
B.	SPAN	1412	Beginning Spanish II	4
C.	SPAN	2311	Intermediate Spanish I,	3
D	SPAN	2312	Intermediate Spanish II	3
E.	SPAN	2171	Conversational Spanish I	1
F.	SPAN	2172	Conversational Spanish II	1
G.	SPAN	2321	Spanish Literature I	3
H.	SPAN	2322	Spanish Literature II	3

SPEECH

A two-year Associate of Arts degree program
60 credit hours required to graduate

ABOUT OUR PROGRAM

Excellent communication skills are essential in today's society. In school, the workplace, and at home, success depends greatly on our ability to communicate effectively The Associates of Arts degree in Speech Communication gives students a broad background in communication competencies. Students who enroll in Speech Communication courses will become aware of the impact of communication on their personal and professional lives. They will also improve interpersonal communication skills and strengthen presentational abilities.

Both the traditional rhetorical approach (oral presentation) and the behavioristic approach (communication theory and skill) are reflected in Speech Communication course offerings.

In addition, the CCCC Speech Communication program includes a forensics workshop, which entails participation in speech competitions. Scholarships are available for qualified students. Contact the Speech Communication department for more infortnation.

CAREER OPPORTUNITIES

The Associate of Arts degree in Speech Communication will aid individuals seeking employment in all occupations, especially those that involve a high degree of interaction with the public. Occupations involving marketing research, conference and special events planning, product/service demonstrations, and sales are but a few of the career opportunities well-suited to Speech Communications majors.

The Associate of Arts degree in Speech Communication provides the academic foundation to successfully complete a bachelor's degree at a four-year institution, and then to pursue a career in fields such as mass media, public relations, law, government, personnel, employee relations and education.

ASSOCIATE OF ARTS DEGREE REQUIREMENTS:
SPEECH COMMUNICATION

I. General Education Core

See page 40 for General Education Core requirements.

II. Recommended Electives   **Credit Houn**

14 *credii* hours minimum

A.	COMM	2331	Radio and TV Announcing	3
B.	COMM	2332	Radio and TV News	3
C.	DRAM	1351	Acting 1	3
D.	DRAM	1352	Acting II	3
E.	SPCH	1144	Forensics Workshop	1
F.	SPCH	1311	Fundamentals of Speech Communication	3
G.	SPCH	1315	Public Speaking	3
H.	SPCH	1318	Interpersonal Communication	3
I.	SPCH	1321	Business and Professional Speaking	3
J.	SPCH	1371	Public Speaking II	3
K.	SPCH	2341	Oral Interpretation	3
L	SPCH	2370	Language and Communication..	3

THEATRE

(See Drama)

DISCIPLINE COORDINATORS

Accounting (ACCT)
Dean Wallace — SCC/C152 — 881-5706

Applied Graphic Design Technology (AGDT)
Esther Kibby — SCC/K119 — 881-5968

Anthropology (ANTH)
Jeff MacKinnon — SCC/H219 — 881-5112

Art (ARTS)
Cathy Cotter — SCC/B131 — 881-5817

Biology (BIOL)
Jean Helgeson — SCC/J138 — 881-5885
David McCulloch — SCC/J225 — 881-5991

Business Administration (BUSI)
Larry Beck — SCC/J103 — 548-5832

Chemistry (CHEM)
Fred Jury — SCC/H116 — 881-5883

Child Development (CHDV) and Day Care Admininstration (CDAD)
Health/Physical Education/Child Development Division
SCC/A218 — 881-5925
CPC/A302 — 548-6679

Communication (COMM)
(Journalism/Speech)
Shelley Lane — SCC/B108 — 881-5821
(Photography)
Byrd Williams — SCC/K119 — 881-5727

Computer Aided Drafting and Design (CADD, INTD)
Glenn Adams — PRC/H114 — 377-1689

Computer Information Systems (CSCI)
Washington James — SCC/J127 — 881-5836

Computer Science (COSC)
Washington James — SCC/J127 — 881-5836

Criminal Justice (CRIJ)
Keith Haley — SCC/B119 — 881-5984

Dance (DANC)
Jill Whitson — SCC/B117 — 881-5913

Drama (DRAM)
Brad Baker — SCC/C155 — 881-5679

Economics (ECON)
Mike Cohick — SCC/J104 — 881-5840

Electronic Technology (ELAT)
John Baltzer — PRC/H115 — 377-1690

Electronics Engineering Technology (ELET)
John Baltzer — PRC/H115 — 377-1690

Emergency Medical Services (EMTP)
Robert Sherard — CPC/B308 — 548-6848

Engineering (ENGR)
Glenn Adams — PRC/H114 — 377-1689

English — Developmental (ENGL)
Karen Hayden — SCC/J218 — 881-5675

English (ENGL)
Sherill Cobb — SCC/B193 — 881-5812

English as a Second Language (ESLC, ESLG, ESLR, ESLW)
Peggy Breedlove — SCC/H222 — 881-5703

Fire Science (FISC)
Pat McAuliff — CPC/A219 — 548-6837

French (FREN)
Elke Matijevich — SCC/K229 — 881-5970

Geography (GEOG)
Debbie White — SCC/H221 — 881-5822

Geology (GEOL)
Pam Justice — SCC/J217 — 881-5909

German (GERM)
Elke Matijevich — SCC/K229 — 881-5970

Government (GOVT)
Ted Lewis — PRC/F213 — 377-1535
Loren Miller — SCC/H216 — 881-5895

History (HIST)
David Cullen — SCC/K227 — 881-5965
Larry Collins — CPC/A353 — 548-6820

Horticulture/Landscape Technology (HORT)
Kevin Starnes — SCC/J220 — 881-5908

Human Development (HDEV)
Linda Qualia — SCC/G200 — 881-5779

Humanities (HUMA)
Rodney Boyd — SCC/D240 — 881-5948

Japanese (JAPN)
Elke Matijevich — SCC/K229 — 881-5970

Legal Assistant (LEGL)
P. Dee Roessler — CPC/A352 — 548-6823

Management (MGMT)
Russell Kunz — PRC/F236 — 377-1692

Marketing (MRKT)
Gloria Cockerell — SCC/J247 — 881-5736

Mathematics — Developmental(MATH)

Rosemary Karr	SCC/K219	881-5865

Mathematics (MATH)

Denise Brown	SCC/B134	881-5886
Sharon Hosack	SCC/H112	881-5887
Doug Proffer	SCC/J238	881-5889

Music (MUSI)

Brian Allison	SCC/B182	881-5813

Nursing (NURS)

Vivian Lilly	CPC/A303	548-6883

Office Administration (OFAD)

Diana Ramsower	SCC/J117	881-5835
Linda Thompson	CPC/A221	548-6815

Philosophy (PHIL)

Janet Schriver	SCC/H113	881-5825

Photography (ARTS)

Byrd Williams	SCC/K119	881-5727

Physical Education, Health (PHED)

Susan Evans	SCC/A211	881-5150

Physics (PHYS)

Michael Broyles	SCC/J139	881-5882

Psychology (PSYC)

Dan Lipscomb	SCC/G225	881-5715
Barbara Lusk	CPC/B200d	548-6809

Reading — Developmental (READ)

Edelin Rubino	SCC/D114	881-5956

Real Estate (RLST)

Patricia Banta	SCC/B120	881-5837

Respiratory Care (RTTP)

Allen Barbaro	CPC/A315	548-6870

Russian (RUSS)

Elke Matijevich	SCC/K229	881-5970

Sign Language (SGNL)

Shelley Lane	SCC/B108	881-5821

Sociology (SOCI)

Debbie White	SCC/H221	881-5822

Small Business Management (SBMT)

Gloria Cockerell	SCC/J247	881-5736

Spanish (SPAN)

Estelita Young	SCC/G215	881-5724

Speech Communication (SPCH, COMM)

Shelley Lane	SCC/B108	881-5821

BUSINESS AND ENGINEERING DIVISION
CPC 8305 (548-6830)   SCC: F135 (881-5831)

'Accounting	•Legal Assistant
'Business Administration	'Management
Computer Information Systems	*Management Development
*Computer Science	•Marketing/Fashion Marketing
•Drafting and Design	•Office Administration
*Economics	•Real Estate
'Electronics	•Small Business Management
'Engineering	•Software Development
•Financial Management	

FINE ARTS DIVISION
SCC K128 (881-5107)

'Applied Graphic Design Technology	'Photography
•Art	•Theatre/Drama
*Music	

HEALTH SCIENCES, PHYSICAL EDUCATION AND CHILD DEVELOPMENT DIVISION
CPC: A302 (548-6679)   SCC A220 (881-5925)

•Child Development	'Nursing
•Emergency Medical Technology	-Respiratory Care
*Health, PE and Dance	

HUMANITIES AND INTERNATIONAL STUDIES DIVISION
CPC 8305 (548-6830)   SCC 8189 (881-5810)

*English	*Journalism
-Foreign Languages	*Philosophy
*Humanities	•Speech
•International Studies	

MATHEMATICS AND NATURAL SCIENCES DIVISION
CPC A300 (548-6880)   SCC K108 (881-5880)

*Biology	*Physical Science
•Chemistry	'Physics
*Geology	•Pre-Dental
•Horticulture/Landscape Technology	•Pre-Medical
*Mathematics	•Pre-Veterinary

SOCIAL SCIENCES AND PUBLIC SERVICES DIVISION
CPC: 8305 (548-6830)   SCC 8240 (881-5800)

*Anthropology	-History
'Criminal Justice	•Law Enforcement Academy
'Eating Disorders	*Political Science
*Education	•Pre-Law
*Fire Science	*Psychology
'Geography	*Sociology

COURSE DESCRIPTIONS

CCCC has incorporated Texas' Common Course Numbering system as part of an effort to simplify the transfer of courses to other educational institutions in Texas. The prefix and number listed before the course name is the Common Course Number. The prefix and number listed in parentheses after the **course** name is the former course number used by CCCC in the past. Some of the categories that CCCC previously **used** to describe courses have been reorganized to match the new system. Some of these reorganizations include:

- For Political Science, see Government
- **For** CADD (Interior Design **only), see** Interior Design
- For Speech, see both Speech and Communication
- For Journalism, see Communication
- For Theatre, **see** Drama

ACCOUNTING

ACCT 1370 Elementary Accounting (ACCT 131)
Designed for those persons who need to be familiar with the basic principles of accounting in order to manage the financial records of a business. It covers the recording and reporting of business transactions including the accounting cycle, financial statements and payroll. Lab required. 3 credit hours.

ACCT 2301 Principles of Accounting I (ACCT 191)
Concepts and applications of measuring and analyzing financial information for business entities. Topics include the accounting cycle, current assets, long-term assets and the preparation of financial statements. Lab required. 3 credit hours.

ACCT 2302 Principles of Accounting II (ACCT 192)
Concepts and applications of measuring and interpreting financial information for partnerships and corporations. Topics include cost data, budgeting and financial report analysis for use by management and third parties. Prerequisite: ACCT 2301 and COSC **1306.** Lab required. **3** credit hours.

ACCT 2370 Managerial Accounting (ACCT 193)
Preparation and interpretation of accounting data **used** in management planning, decision-making and administrative control. Topics include product costing, budgeting, accounting controls and analytical techniques. Prerequisite: ACCT **2302.** Lab required. **3** credit hours.

ACCT 2372 Intermediate Accounting I (ACCT 194)
Continued study of financial accounting topics in greater depth than in principles of accounting. Includes financial accounting functions and basic theory, current **assets** and current liabilities, plant assets and long-term liabilities. Prerequisite: ACCT **2302.** Lab required. **3** credit hours.

ACCT 2373 Intermediate Accounting II (ACCT 195)
Continuation of Intermediate Accounting I. Topics include stockholder's equity, dilutive securities and investments, issues related to income measurement and preparation and analysis of financial statements, Prerequisite: ACCT 2372. Lab required. 3 credit hours.

ACCT 2375 Auditing (ACCT 196)
Introduction to auditing theory and practice. Topics include an introduction to professionalism, the general technology of auditing, audit program applications and reporting responsibilities. Prerequisite: ACCT **2302.** Lab required. **3** credit hours.

ACCT 2377 Individual Income Taxation (ACCT 291)
History and the structure of federal income tax legislation and law as it pertains to individuals. Emphasis on current tax laws, preparation of tax returns and/or specific tax problems. Prerequisite: ACCT 2301, Lab required. 3 credit hours.

ACCT 2378 Corporate Income Taxation (ACCT 292)
History and structure of federal income tax legislation as it pertains to partnerships and corporations. Emphasis on current tax laws, tax return preparation and/or specific tax problems. Prerequisite: ACCT **2302.** Lab required. **3** credit hours.

ACCT 2380 Accounting Ethics (ACCT 295)
Examination of problems and ethical dilemmas faced by those practicing accounting. Designed to develop the qualities required of a professional accountant, regardless of the organization in which the accountant will be active. Prerequisite: ACCT **2302** or consent **of** instructor. **3** credit hours.

ACCT 7300 Cooperative Education I (ACCT 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. **3** credit hours.

ANTHROPOLOGY

ANTH 2301 Physical Anthropology
An overview of human origins and bicultural adaptations. Also introduces methods and theory in the excavation and interpretation of material remains of past cultures. Lab required. 3 credit hours.

ANTH 2351 Cultural Anthropology (ANTH 151)
Utilizes the comparative method to examine the concepts of culture and society The social and cultural beliefs and practices of people of diverse ethnic backgrounds are investigated and compared. Lab required. **3** credit hours.

ANTH 2389 Academic Co-op Anthropology

An instructional pmgram designed to integrate on-campus study with practical hands-on work experience in Anthropology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Anthropology. Contact the CWE office. 3 credit hours.

APPLIED GRAPHIC DESIGN TECHNOLOGY

AGDT 1300 Survey of Applied Graphic Design Technology

Introduction to Applied Graphic Design Technology including investigation into the various career opportunities and into the workings of an agency or in-house studio. Understanding of the relationship of art and visual communication and the psychology of effective media will be covered. 3 credit hours.

AGDT 1310 introduction to Computer Graphics (ADV 140)

Introduction to the computer as an art tool. Exposure to the various fields of advertising computer graphics including electronic imaging, electronic publishing, computer illustration and interactive multimedia. Introduction to basic computer functions; draw, paint and text tools, terminology, technology, keyboard familiarization, mouse use, software function and access. Lab required. 3 credit hours.

AGDT 1315 Computer Typography (ADV 143)

Introduction and exploration through definition, design, beginning manipulation and rendering of type. Practical knowledge of typography will be gained through hand skills and computer application. Prerequisite: AGDT 1310. Lab required. 3 credit hours.

AGDT 1320 Introduction to Electronic Imaging (ADV 142)

Introduction to electronic imaging and color separation using the computer as the primary tool. Photo retouch and manipulation, scanned art imaging and computer generated art image processing. Prerequisite: AGDT 1310. Lab required. 3 credit hours.

AGDT 1325 Visual Communications I (ADV 287)

Introduction to the field of graphic design including basic terminology, tools and media, typography, layout and design concepts, reproduction process and problem solving. Prerequisite: ARTS 1311. Lab required. 3 credit hours.

AGDT 1326 Visual Communications II (ADV 201)

Intermediate level graphic design course. Emphasis is on photo-ready production skills (traditional and computer), comp production, creative ads, marker skills, storyboards and logo design. Prerequisite: AGDT 1325. Lab required. 3 credit hours.

AGDT 1330 Beginning Illustration (ADV 288)

Introduction to conceptual visualization of ideas. Techniques of black and white dry and wet media are explored with emphasis on concept, light and value, line, and communication. Practical knowledge of illustration will be gained through real work assignments. Prerequisite: ARTS 1316. Lab required. 3 credit hours.

AGDT 1331 2D Computer Illustration (ADV 231)

An exploration of computer graphics with applications in design, illustration and other areas of graphic design. Current trends in computer graphics will be explored. Creative solutions will be stressed. Prerequisite: AGDT 1310 and 1330. Lab required. 3 credit hours.

AGDT 1335 Instructional Design for Graphic Designers

This course provides graphic design students with instructional design concepts. Students will be introduced to various learning theories and media utilization for presentations, video or interactive multimedia. Lab required. 3 credit hours.

AGDT 1340 Storyboard and Script Design

Introductory course in conceptualization, structure, visualization and design of storyboards and scripts for graphic designers. Emphasis on storyboarding techniques for various media. 3 credit hours.

AGDT 1345 Artist Conceptualization for Interface Design

This introductory course will provide a forum for artistic conceptualization through which students will be introduced to many different types of interfaces, physical and virtual. Through prototyping students will understand the use of metaphors, menus, navigation, and effective design of "look and feel." Prerequisite: AGDT 1310. Lab required. 3 credit hours.

AGDT 1350 Introduction to Multimedia Authoring (ADV 144)

Introduction to multimedia, principles, theories, systems and applications. Exposure and experience in authoring software through the use of labs and projects. Prerequisite: AGDT 1310 and 1340. Lab required. 3 credit hours.

AGDT 1351 Interactive Multimedia Authoring (A W 238)

Further exploration of multimedia principles, with practical application through work on continuing projects. Emphasis on interface design, instructional design issues, storyboard and concept. Prerequisite: AGDT 1335 and 1350. Lab required. 3 credit hours.

AGDT 1355 Color Theory for Digital Media

Intmduction to color theory with emphasis on color as it relates to non-print display, calibration, pixel properties, light mixing and additive vs. subtractive theory. Exploration of color use in different digital media; digital photography, pre-press, video and multimedia. Prerequisite: AGDT 1310. Lab required. 3 credit hours.

AGDT 2320 Image Processing (ADV 232)

Continuation of AGDT 1320. Use of photo manipulation software to mate electronic images. Scanning and output to high-end color and film printers. Prerequisite: AGDT 1320. Lab required. 3 credit hours.

AGDT 2325 Electronic Publishing for Graphic Design (ADV 233)

Exploration of electronic publishing software on computer as a tool in graphic design page layout. Emphasis in the use of pre-press technology. Prerequisites: AGDT 1310 and 1325. Lab required. 3 credit hours.

AGDT 2326 Graphic Design and Production (ADV 290)
Investigation of various graphic design problems with consideration of technical requirements and presentation techniques for camera ready art. Current trends will be explored. Creative solutions and client presentation will be stressed. Prerequisite: AGDT 1325. Lab required. 3 credit hours.

AGDT 2330 Illustration (ADV 292)
Problem solving techniques for advertising illustration with consideration of technical requirements for camera-ready art. Current trends be explored. Creative solutions and client presentation will be stressed. Prerequisite: AGDT 1330. Lab required. 3 credit hours.

AGDT 2331 Advanced 2D Computer Illustration (ADV 296)
Continuation of AGDT 2330. More advanced work in computer illustration, including color. Prerequisites: AGDT 1331 and 2330. Lab required. 3 credit hours.

AGDT 2332 3D Computer Illustration (ADV 289)
3D illustration using the computer as the main tool. Concentrated exploration of computer modeling and rendering tools. Prerequisite: AGDT 1320. Lab required. 3 credit hours.

AGDT 2335 2D Computer Animation (ADV 236)
Various aspects of two dimensional animation software. Students will develop concepts, storyboards and produce a two dimensional animation with soundtrack. Prerequisite: AGDT 1310 and 1340. Lab required. 3 credit hours.

AGDT 2336 Advanced 2D Computer Animation
Advanced work in two dimensional computer animation continued from AGDT 2335. Further development of animated graphics and art for video, film or interactive multimedia with emphasis on scripting. Prerequisite: AGDT 2335. Lab required. 3 credit hours.

AGDT 2340 3D Computer Animation (ADV 237)
Introduction to three dimensional animation. Students will begin to produce a three dimensional animation with emphasis on concept, storyboard and production. Prerequisite: AGDT 2332. Lab required. 3 credit hours.

AGDT 234 I Advanced 3D Computer Animation
Advanced work in three dimensional animation continued from AGDT 2340. Further development of photo realistic three dimensional animated images with soundtrack for artistic visualization, advertising, video, film, and interactive multimedia. Prerequisite: AGDT 2340. Lab required. 3 credit hours.

AGDT 2355 Multimedia Studio
Multimedia Studio gives students the opportunity to work with real clients and develop completed client directed and experimental personal projects. Students will explore various artistic options of multimedia software, display devices, video and sound. May be repeated for credit. Prerequisite: AGDT 1320 and consent of instructor. Lab required. 3 credit hours.

AGDT 2360 Intro. to Art Direction for Video (ADV 223)
This class will focus on video production techniques for independent video production. Students are taken through all phases of production and pre-production. Computer graphics included where necessary. Prerequisite: AGDT 1310. Lab required. 3 credit hours.

AGDT 2365 Ad Agency (ADV 295)
Advanced students from the areas of production art, illustration and computer graphics will work in teams to produce advertising and illustration solutions for clients both on and off campus. Prerequisite: Consent of instructor. Lab required. 3 credit hours.

AGDT 2370 Professional Practices (ADV 294)
Overview of professional practices required both in the work place and as a free-lance artist. Networking, professional organizations, presentation skills and job-seeking techniques will be covered. prerequisite: Consent of instructor. 3 credit hours.

AGDT 2390 Special Topics in Applied Graphic Design Technology I
Current developments in the rapidly changing field of graphic technology are studied. May be repeated as topics vary Prerequisite: Will vary based on topics covered and will be annotated in each semester's class schedule. May be repeated for credit as topics change. Lab required. 3 credit hours.

AGDT 2391 Special Topics in Applied Graphic Design Technology II
Current developments in the rapidly changing field of graphic technology are studied. May be repeated as topics vary. Prerequisite: Will vary based on topics covered and will be annotated in each semester's class schedule. May be repeated for credit as topics change. Cab required. 3 credit hours.

AGDT 7300 Cooperative Education I (ADV 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

AGDT 7305 Cooperative Education II
Continuation of supervised on-the-job experience and career related activities. Requires advanced learning objectives, increased levels of responsibility and seminar participation. Prerequisite: AGDT 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

ARTS
(Also see Photography)

ARTS I30I Art Appreciation (ART 190)
Introduction to the visual arts, emphasizing the understanding and appreciation of art. 3 credit hours.

ARTS 1303 Art History I (ART 295)
Survey of art history from prehistoric times to the Renaissance. Special consideration is given to the form and content of a work of art, as well as the social and cultural context in which the work is created. **3** credit hours.

ARTS 1304 Art History II (ART 296)
Survey of art history from the Renaissance period to the present. Special consideration is given to the form and content of a work of art, as well as the social and cultural context in which the work is created. **3** credit hours.

ARTS 1311 Design I (ART 191)
Introduction to two-dimensional visual organization dealing with basic elements and principles of design. Exploration of black and white, color and a variety of media. The experience in this class will prepare the student for composition in painting, drawing and other two-dimensional courses. Lab required. **3** credit hours,

Computer Design I
Introduction to two-dimensional visual organization dealing with basic elements and principles of design. Taught on the computer. Prerequisite: AGDT **1310.** Lab required. **3** credit hours.

ARTS 1312 Design II (ART 192)
Introduction to three-dimensional design problems utilizing various sculpture materials. Lab required. **3** credit hours.

ARTS 1316 Drawing I (ART 193)
An introduction to drawing including space, form, line, contour, gesture, texture, value and composition. The student will learn observational skills in order to render the subjects of still life, figure, perspective and landscape more accurately. Emphasis will be placed on technique, imagination and use of a variety of materials. Lab required. **3** credit hours.

ARTS 1317 Drawing II (ART 194)
Continued study of space, form, lie, contour, gesture, texture, value and composition in still life, figure, perspective and landscape. Use of color will be introduced in various media. Emphasis will be placed on imagination, technique, development of a personal drawing style and composition. Prerequisite: ARTS **1316.** Lab required. **3** credit hours.

ARTS 1325 Art for Elementary Educators (ART 249)
Art for elementary educators. Includes projects in drawing, painting, printing, crafts and sculpture. Lab required. **3** credit hours.

ARTS 1370 Problems in Contemporary Art-Selected Topics (ART 195)

Creative Solutions: Experimental Printmaking
Manipulating photographic images using processes from the graphic arts, printing and computer imaging fields combined with traditional art media techniques. Prerequisite: ARTS **1311** and **2356.** Required lab included. **3** credit hours.

creative Solutions: Mixed Media
An introduction to contemporary solutions in mixed media painting, Prerequisites: ARTS **2316** and **2317.** Required lab included. **3** credit hours.

Women in the Arts
Women as artists and art! Women as collectors and patrons! Explore the influence of women on the visual arts through a brief historical survey and by examining the art and lives of contemporary women. **3** credit hours.

Computer Painting
Utilizing the Macintosh computer and innovative painting software as a creative problem solving tool for the graphic designer and fine artist. Prerequisite: AGDT **1310.** Lab required. **3** credit hours.

ARTS 2311 Introduction to Color/Painting (ART 196)
Practical application of current color theories used in both fine arts and commercial art. Emphasis is on color perception and color psychology with exercises in transparent and opaque pigments, printing inks and color photography. Prerequisite: ARTS **1311** and **1316.** Lab required. **3** credit hours.

ARTS 2316 Painting I (ART 291)
Introduction to painting including use of materials, techniques, color study and composition. Various painting styles will be practiced. Prerequisite: ARTS **1316.** Lab required. **3** credit hours.

ARTS 2317 Painting II (ART 292)
Intermediate-level course designed to increase the student's ability to use various techniques, color and composition using acrylics, oil and other media. Realistic and abstract approaches to painting will be explored. Emphasis will be placed on design, imagination, personal expression and painting style. Prerequisite: ARTS **2316.** Lab required. **3** credit hours.

ARTS 2323 Life Drawing (ART 297)
Drawing from the life model including instruction in anatomical and creative approaches to figure drawing. Emphasis is on personal expression and creativity. May be taken for up to six **(6)** hours credit. The second semester of work is more advanced than the previous semester. Prerequisite: ARTS **1317.** Lab required. **3** credit hours.

ARTS 2326 Sculpture I (ART 281)
A study of three-dimensional form, including basic methods of modeling, construction and simple casting procedures. Prerequisite: ARTS **1312.** Lab required. **3** credit hours.

ARTS 2327 Sculpture II (ART 282)
Application of the principles of three-dimensional form with an emphasis in creative expression. Prerequisite: ARTS **2326.** Lab required. **3** credit hours.

ARTS 2333 Printmaking I (ART 285)
Introduction to the process of intaglio and relief printing. Prerequisite: ARTS **1316.** Lab required. **3** credit hours.

ARTS 2334 Printmaking II (ART 286)
Continuation of Printmaking I with an emphasis on creative expression. Prerequisite: ARTS 2333. Lab required. 3 credit hours.

ARTS 2336 Fibers & Papermaking (ART 298)
Investigates the problems of two and three-dimensional design with emphasis on individual expression and creativity Basic papermaking and elementary dyeing processes explored. Lab required. 3 credit hours.

ARTS 2346 Ceramics I (ART 283)
Introduction to ceramic design, including hand building, potter's wheel and glazing and firing techniques. Lab required. 3 credit hours.

ARTS 2347 Ceramics II (ART 284)
Continuation of Ceramics I with further study in clay and glaze composition and kiln operation with an emphasis on creative expression. Prerequisite: ARTS 2346. Lab required. 3 credit hours.

ARTS 2366 Watercolor I (ART 293)
Introduction to watercolor including instruction in the use of brushes, papers, materials and various painting techniques on wet and dry paper. The student will gain experience in mixing colors, color methods, problem solving in the use of technique and in skillful observation of composition and painting style. Prerequisite: ARTS 1316. Lab required. 3 credit hours.

ARTS 2367 Watercolor II (ART 294)
Intermediate-level course designed to inctease the student's ability to master technique, to identify the different pigment properties of color and to determine their best use. Exploration of different tools, papers, materials and techniques will be practiced. Emphasis is on composition, imagination, personal expression and painting style. Prerequisite: ARTS 2366. Lab required. 3 credit hours.

ARTS 2371 Portfolio
Advanced study for the development of a portfolio of high quality Prerequisite: Advanced class in a field of study. Lab required. 3 credit hours.

ARTS 2389 Academic Co-op Arts
An instructional program designed to integrate on-campus study with practical hands-on work experience in Art. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Art. Contact the CWE office. 3 credit hours.

BIOLOGY

BIOL 1322 General Nutrition (HLSC 191)
Study of nutrients and nutritional processes including functions, food sources, digestion, absorption and metabolism with application to normal and therapeutic human nutritional needs. 3 credit hours. (May not be used as a lab science.)

BIOL 1406 General Biology I (BIOL 191)
For science majors. Current knowledge in the fundamentals of biology. Will develop concepts in cellular structure and function from the molecular to the organism level. General topics covered include basic biochemistry, metabolism, energetics, molecular and cellular biology, DNA and genetics; viruses and bacteria; evolution and ecology. Laboratory correlates with lecture topics. Lab required. 4 credit hours.

BIOL 1407 General Biology II (BIOL 192)
For science majors. Continuation of Biology 1406. The biology of the protistans, fungi, plants and animals with emphasis on the study of biological systems including organ systems, immunity, reproduction, development, diversity, and behavior. Dissection included. Laboratory correlates with lecture topics. Prerequisite: BIOL 1406. Lab required. 4 credit hours.

BIOL 1408 Introduction to Biology I (BIOL 151)
For non-science majors. Survey of biology including molecular and cellular biology, genetics, DNA, microbiology, evolution and ecology, The cellular and molecular basis of life will be emphasized. Current topics in biology and medicine will be discussed. Students will meet three lecture hours per week and three lab hours per week. Lab required. 4 credit hours.

BIOL 1409 Introduction to Biology II (BIOL 152)
For non-science majors. Continuation of Biology 1408. The biology of protistans, fungi, plants, animals (with emphasis on general human anatomy and physiology) and animal behavior. Current topics in biology and medicine will be discussed. Students will meet three lecture hours per week and three lab hours per week. Prerequisite: BIOL 1408. Lab required. 4 credit hours.

BIOL 1411 General Botany (BIOL 281)
The study of structure and function of plant cells, tissues and organs. An evolutionary survey and life histories of these representative groups: algae, fungi, mosses, liverworts, ferns and seed-producing plants. Plants' reproductive and functional interactions with their environment and with man will be included. Selected laboratory exercises will complement the lecture topics. Prerequisite: BIOL 1407. May be taken concurrently with BIOL 1407 if BIOL 1406 has been completed. Lab required. 4 credit hours.

BIOL 1424 Systematic Botany
An introduction to plant nomenclature, identification, classification, and evolutionary relationships of vascular plants with emphasis on the flowering plants. The construction and use of taxonomic keys, the role of herbaria, and collection techniques will be covered in the lecture and lab. Includes field trips to study local and state flora. Prerequisite: BIOL 1411. Lab required. 4 credit hours.

BIOL 1470 **Marine Biology (BIOL 153)**
Morphological, physiological and ecological adaptations of
marine organisms to their environment. Prerequisite: BIOL 1406
or 1408, or consent of instructor. BIOL 1407 or 1409 is preferred.
Lab required, including an international field trip. 4 credit hours.

BIOL 1471 Human Anatomy and Physiology Basics (BIOL 155)
A one-semester introductory course surveying the structure and
function of the human body, including discussion and study of
cells, tissues, organs, and systems. Not intended for allied health
or science majors. Lab required. 4 credit hours.

BIOL 2401 Anatomy and Physiology I (BIOL 291)
A study of comparative structure and function of the mammalian
system with emphasis on anatomy. Topics include cell structure
and function, tissues, skin, skeletal, muscular and nervous
systems. The molecular aspects of cells and organisms are
stressed. Laboratory section includes dissection of a mammal, as
well as study of models, slides and charts correlating with lecture
topics. Prerequisite: BIOL 1406. Lab required. 4 credit hours.

BIOL 2402 Anatomy and Physiology II (BIOL 292)
Continuation of the study of the structure and function of the
mammalian system with emphasis on physiology, Topics include
digestion, nutrition, metabolism, respiratory systems, blood and
cardiovascular system, endocrine system, lymphatic and immune
systems, urinary system, reproduction, heredity and develop-
ment. Laboratory includes correlated physiological experiments
and continued mammalian dissection. Prerequisite: BIOL 2401.
Lab required. 4 credit hours.

BIOL 2406 Introductory Ecology
An introduction to contemporary ecological problems of plant
and animal communities. An analysis of ecosystems at the
species, population, and community levels of organization, with a
discussion of the effects of human interaction, Lab required,
including field trips. 4 credit hours.

BIOL 2416 Genetics (BIOL 294)
A study of the principles of classical and molecular genetics, and
the function and transmission of hereditary material. Course
content will include population genetics and genetic engineering,
with special attention paid to human genetics and current
research in genetics. Includes field trips to genetic laboratories.
Prerequisite: BIOL 1406. Lab required. 4 credit hours.

BIOL 2418 Invertebrate Zoology (BIOL 283)
Classification, anatomy, physiology, ecology and evolutionary
relationships of the invertebrate animals. Laboratory will be
correlated with animals studied in lecture and will include
observation and dissection of invertebrates. Prerequisite: BIOL
1407. Lab required. 4 credit hours.

BIOL 2420 Microbiology (BIOL 293)
Principles of microbiology, Classification, cell structure, metabo-
lism and historical concepts of microorganisms including
bacteria, viruses, fungi, protozoa and rickettsia. Infectious

diseases and immunology will be emphasized. Practical microbi-
ology will include diagnostic microbiology of water, food,
sewage, soil and industrial applications. Laboratory methods are
stressed and experimentation with pure cultures of medical,
environmental and industrial importance are studied extensively
Prequisite: BIOL 2401. Prerequisite or co-requisite: BIOL 2402.
Lab required. 4 credit hours.

BIOL 2428 Vertebrate Zoology (BIOL 284)
Classification, anatomy, physiology, development, ecology and
natural history of the vertebrate animals with emphasis on
comparative evolution. Prerequisite: BIOL 1407. Lab required. 4
credit hours.

BIOL 2470 Human Genetics (BIOL 264)
A study of the principles of molecular and classical genetics and
the function and transmission of hereditary material as applied to
the human. Medical applications include genetic diseases, genetic
counseling and genetics as involved in cancer and other acquired
diseases. Includes field trips to genetic laboratories. Prerequisite:
BIOL 1406. Credit toward a degree will not be given for both
BIOL 2470 and BIOL 2416. Lab required. 4 credit hours.

BIOL 2389 Academic Co-op Biology
An instructional program designed to integrate on-campus study
with practical hands-on work experience in biology. In conjunc-
tion with class seminars, the individual student will set specific
goals and objectives in the study of biology, Contact the CWE
office. 3 credit hours.

BUSINESS ADMINISTRATION

BUSI 1301 Introduction to Business (BSAD 121)
Survey of business operations in a capitalistic economy including
ownership, management, marketing, finance, and legal and
regulatory environment. The role of business in society is studied.
3 credit hours.

BUSI 1307 Personal Finance (BSAD 124)
Personal financial issues are covered. Topics include financial
planning, insurance, budgeting, credit, home ownership, savings
and tax problems. Lab required. 3 credit hours.

BUSI 1370 Principles of Management (BSAD 122)
Process of management is examined. The functions of planning,
organizing, leading and controlling are covered. Emphasis is on
management philosophy, decision-making, policy formulation,
communications and motivation. Lab required. 3 credit hours.

BUSI 1371 Leadership and Human Relations
A study of the prinaples of leadership, including leadership and
management, leadership and motivation, the major theories/
models of leadership, using situational leadership in manage
ment, and communication for leadership. The course is based on
thirty-three major leadership competencies. 3 credit hours.

BUSI 1372 Supervisory Management (BSAD 125)
Designed to instill a balanced quantitative/qualitative (high-
touch) approach to management. The theories of Taylor, Fayol,
Maslow, Mayo, Herzberg, Likert, etc. all are explored. The

challenges and opportunities presented by accelerated techno-logical change are discussed. Effective leadership **skills** (time management, stress management, negotiation, assertion, active listening, effective meeting leadership, effective business communications and technical writing, etc.) are demonstrated. The student is required to practice these leadership skills during labs. Lab required. 3 credit hours.

BUSI I374 Personnel Management (BSAD 222)
Study of principles and procedures in the management of employees. Topics include selection, placement, compensation, working conditions, training, labor relations and government regulations. 3 credit hours.

BUSI 1376 International Business (BSAD 225)
Introduction to international trade. Overview of managerial, financial and marketing issues for the operation of small or large firms in or entering world trade. Problems of adaptation to different sociological, legal, political and economic characteristics are emphasized. 3 credit hours.

BUSI I378 High Performance Work Teams
A study of the basic principles of implementing team building in business/industry. The course provides an overview of high-performance work teams and the techniques which should be followed in implementing work teams. Competencies emphasized in the course include skills needed in the forming, storming, performing stages of team development.

BUSI 2301 Business Law (BSAD 123)
General principles of the law of contracts, property and torts. The historical and ethical background of the law and current legal principles are covered. 3 credit hours.

BUSI 2370 Quality and Leadership (BSAD 233)
Examines the theoretical and conceptual foundation of total quality management while establishing a basis for managing cultural diversity. Complete analysis will include creating the means for organizational change that will allow for a more effective work force and a greater quality of work life. 3 credit hours.

BUSI 2371 Quality Management Techniques
Students examine the technical processes of quality management programs and learn effective procedures for developing comprehensive productivity improvement systems. Topics for this course include needs analysis, benchmarking, delivery systems, and process simplification. 3 credit hours.

BUSI 2372 Organizational Behavior (BSAD 228)
Human problems of administration in modem organizations are examined. The theory and methods of behavioral science as they relate to organizations are included. Lab required. 3 credit hours.

BUSI 2373 Management of Change
This course will expose the student to the knowledge, skills, and tools that enable a leader/organization to facilitate change in a pro-active participative style, leading to accomplishments consistent with the strategic goals of the organization.

BUSI 2374 Labor Management Relations (BSAD 231)
Organized labor and management organizations are examined. Topics include labor union development, legislative acts, legal considerations, labor-management relationships and collective bargaining. Lab required. 3 credit hours.

BUSI 2376 Strategic Management (BSAD 232)
Functions of management are examined and expanded in the formation of strategic goals, objectives and policies to enhance organizational effectiveness. Emphasis will be on organizational design and redesign, socic–technical and systems integration, forecasting techniques and leadership. 3 credit hours.

BUSI 2378 Selected Topics in Personnel Management (BSAD *297)*
An in-depth study of selected topics on current issues in person-nel management. Course may be repeated for credit as topics vary. 3 credit hours.

BUSI 2379 Selected Topics in Business Principles (BSAD 298)
Provides an overall picture of business operations, develops a business vocabulary and directs the thinking of each student to the field of business best suited to his/her interest and talent. Subject matter includes an analysis of the specialized fields within the business organization and of the role of business in modem society. Topics may vary from semester to semester. Course may be repeated for credit as topics change. 3 credit hours.

BUSI 7300 Cooperative Education I (BSAD 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific leaming objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

BUSI 7305 Cooperative Education II (BSAD 705)
Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: BUSI 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

CHEMISTRY

CHEM I I70 Biochemistry (CHEM 193)
Biochemistry is a seminar course for science majors exploring topics of catabolism and anabolism with excursion into areas of current biochemical investigations. Prerequisite: BIOL 1406 and CHEM 1411 within the last 5 years. Lab required. 1 credit hour.

CHEM I405 Introduction to Chemistry I (CHEM I5I)
Survey of chemistry for non-science majors including scientific calculations, chemical equations, theory of atoms and bonding, states of matter, nuclear chemistry, elementary thermodynamics and acid-base chemistry. Prerequisite: high school algebra or equivalent within the last 5 years. Lab and recitation required. 4 credit hours.

CHEM 1407 Introduction to Chemistry II (CHEM 152)
Continuation of CHEM 1405 including organic chemistry, biochemistry, nutritional and consumer chemistry within the last 5 years. Prerequisite: CHEM 1405. Lab and recitation required. 4 credit hours.

CHEM 1411 General Chemistry I (CHEM 191)
A classical chemistry course designed for science majors, pre-medical, dental or engineering students. Topics include stoichiometry, ideal gas behavior, atomic theory, periodic bends, VSEPR theory, thermochemistry and bonding theory. Laboratory exercises demonstrate concepts presented in class and develop basic lab skills. Prerequisite: 1 year of high school chemistry or CHEM 1405; MATH 1314, within the last 5 years with a grade of "C" or better. Lab and recitation required. 4 credit hours.

CHEM 1412 General Chemistry II (CHEM 192)
A continuation of CHEM 1411 that addresses topics in chemical equilibria, acid-base theory, solubility, electrochemistry, nuclear chemistry, organic chemistry, biochemistry and states of matter. Laboratory exercises demonstrate concepts presented in lecture and develop more advanced lab methods. Prerequisite: CHEM 1411 within the last 5 years with a grade of "C" or better. Lab and recitation required. 4 credit hours.

CHEM 2423 Organic Chemistry I (CHEM 291)
Study of carbon chemistry that considers covalent bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups and introductory synthesis. Laboratory experiments develop organic techniques and reinforce lecture material. Prerequisite: CHEM 1412 within the last five years with a grade of "C" or better. Lab and recitation required. 4 credit hours.

CHEM 2425 Organic Chemistry II (CHEM 292)
A continuation of CHEM 2423 that includes methods of structural analysis, advanced synthesis and reactions, biochemistry and organometallic topics. Laboratory experiments emphasize techniques in synthesis, purification, and analyses, and reinforce lecture material. Prerequisite: CHEM 2423 within the last 5 years with a grade of " C or better. Lab and recitation required. 4 credit hours.

CHEM 2389 Academic Co-op Chemistry
An instructional program designed to integrate on-campus study witn practical hands-on work experience in chemistry. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of chemistry. Contact the CWE office. 3 credit hours.

CHILD DEVELOPMENT

CHW 1300 Early Childhood Development (0-3 yrs.) (CHW 151)
Comprehensive study of growth and development from conception through three years of age. Emphasis on cognitive, language, emotional and social development. Lab required. 3 credit hours.

CHW 1301 Early Childhood Development (3-5 yrs.) (CHDV 152)
Comprehensive study of growth and development from three years thmugh five years of age. Emphasis on cognitive, physical, emotional and social development. Lab required. 3 credit hours.

CHDV 1302 Child Development (5-12 yrs.) (CHDV 160)
Comprehensive study of growth and development fmm five through twelve years of age. Emphasis on cognitive, language, emotional and social development. Lab required. 3 credit hours.

CHW 1305 Early Childhood Fundamentals (CHDV 161)
Introduction to early childhood education, with an emphasis on the development of observation skills. Content includes methods for observation and recording of data, interpreting information and planning for children based on observations. The importance of children's play is emphasized. Lab required. 3 credit hours.

CHDV 1310 Nutrition, Health and Safety (CHDV 154)
Practical experience and information on the nutritional, health and safety needs of the young child. Students earn CPR certificates during this course. Lab required. 3 credit hours.

CHDV 1315 Child Guidance (CHDV 251)
Study of effective methods of guiding young children with emphasis on developing a positive self-concept, recognizing individual differences, varied family situations and various crisis situations. Includes observations and interpretations of case studies of young children. Lab required. Prerequisite: CHDV 1300, 1301, 1305 or permission of instructor. 3 credit hours.

CHW 1320 Child Abuse Prevention (CHDV 252)
Focuses on the causes and symptoms of abusive behavior. Emphasis on developing skills and competencies for working with the abused child and families to help alleviate abusive experiences. Lab required. 3 credit hours.

CHW 1325 Early Childhood Programs and Services (CHW 153)
Study of appropriate learning experiences for young children in a variety of child care environments. Emphasis on quality environments, learning activities and effective teaching techniques. Lab required. 3 credit hours.

CHW 2100 Selected Topics In Child Development (CHDV 297)
Current topics in the field of Child Development will be studied. May be repeated for credit as topics vary Lab required. 1 credit hour.

CHDV 2300 Infant and Toddler Materials and Activities Development (CHDV 159)
Appropriate experiences for infants and toddlers including learning activities, materials and teaching techniques. Prerequisite: CHDV 1300. Lab required. 3 credit hours.

CHW 2305 Parents and the Caregiver (CHW 257)
Explores relationships between care givers and parents of young children. Focuses on parental involvement, effective relationship building techniques and communication skills. Prerequisite: CHDV 1300 or CHDV 1301 and 1315 or permission of instructor Lab required. 3 credit hours.

CHDV 2310 Practicum A (CHDV 157)

Application of learning experiences through participation as an assistant teacher or assistant administrator in the Child Development Laboratory School. Prerequisite or co-requisite: CHDV 2400 or 2401 for Early Childhood Educator majors; CHDV 2315 or 2316 for Early Childhood Administration majors. Permission of instructor required. Lab required. 3 credit hours.

CHDV 2311 Practicum B (CHDV 158)

Advanced application of learning experiences involving increased responsibility for teaching or administration in the Child Development Laboratory School or in an approved early childhood facility such as a registered family day home, a licensed child care center or an accredited school. Prerequisite: CHDV 2310. Permission of instructor required. Lab required. 3 credit hours.

CHDV 2315 Administration of Early Childhood Programs (CHDV 253)

Business administration procedures for early childhood programs are studied. Topics include food, health, personnel practices, budgeting, record keeping, legal procedures and use of the computer. Lab required. 3 credit hours.

CHDV 2316 Organization and Management of Early Childhood Programs (CHW 254)

Organization and management procedures are studied. Topics include philosophy of early childhood education, organizational goals, staffing policies and training plans, facility planning and design, program management and evaluation. Lab required. 3 credit hours.

CHDV 2398 Internship (CHDV 255)

Supervised teaching or administrative experience in an approved program or service agency for young children and their families. Prerequisite: permission of instructor. Lab required. 3 credit hours.

CHW 2400 Material and Activities Development I (CHW 155)

Language Arts, Pre-reading, Computers and Math Techniques and materials for the progress of each child in language ark, reading and math concepts for appropriate stages of their cognitive development. Lab required. 4 credit hours.

CHDV 2401 Material and Activities Development II (CHW 156)

Nature, World of People and the Arts: The interrelationships among science, social science and creativity in the arts is studied as it applies to the total development of the young child. Activities, content, methods and materials are explored. Lab required. 4 credit hours.

CHDV 7300 Cooperative Education I (CHDV 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE Office. 3 credit hours.

COMMUNICATION

COMM 1307 Introduction to Man Communication (JOUR 151)

A study of the mass media in the United States with emphasis on newspapers, magazines, radio and television; history of the mass media; and the role and responsibility of the mass media in modern society. 3 credit hours.

COMM 1336 Television Production (SPCM 155)

Provides a basic orientation to the television studio, with utilization of cameras, lights, microphones, switching consoles, editing suites, character generators and telecine. Lab required. 3 credit hours.

COMM 2311 News Gathering and Writing I (JOUR 152)

Extensive practice in writing various stories in the areas of international, national and local news, sports, business, life-styles, etc. Prerequisite: ENGL 1302 or consent of instructor. Lab required. 3 credit hours.

COMM 2315 News Gathering and Writing II (JOUR 153)

Continuation of COMM 2311 with emphasis on more advanced reporting techniques such as complex stories, follow-up stories, features and profiles. Prerequisite: COMM 2311. Lab required. 3 credit hours.

COMM 2331 Radio and TV Announcing (SPCM 295)

A course in the principles of and practice in radio and TV announcing including the study of voice (diction, pronunciation and delivery) as it relates to mediated contexts, and experience in news announcing interviewing and commercial acting. 3 credit hours.

COMM 2332 Radio/Television News (SPCM 296)

The preparation and analysis of news styles for the electronic media. 3 credit hours.

COMM 2389 Academic Co-op Communication

An instructional program designed to integrate on-campus study with practical hands-on work experience in communication. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Communication. Contact the CWE office. 3 credit hours.

COMPUTER AIDED DRAFTING & DESIGN

CADD 1301 Computer Graphics Systems (CIS 121)

Basic computer systems used in drafting and design applications. Hardware and software operations including booting, displays, files, commands, defaults, input-output, disks, printers, plotters, precision, utilities and data bases. Lab Required. 3 credit hours.

CADD 1302 Technical Graphics I (CAD 151)

Use of instruments, applied geometry, engineering lettering, orthographic projections, dimensioning, pictorial drawing and sketching, sectional views and working drawings. Lab required. Prequisite: CADD 1301. 3 credit hours.

CADD 1303 Technical Graphics II (CAD 152)

A continuation of Technical Graphics I. This course covers working detail drawings with proper dimensioning and tolerances. Standard symbols, stock shapes and descriptions are covered and applied to fabrication and forming drawings. Prerequisite: CADD 1302. Lab required. 3 credit hours.

CADD 1304 Computer Aided Drafting (CAD 153)

Capabilities and limitations of the electronic computer as an aid to the designer are studied. Drafting procedures using an interactive system with computer graphics are practiced. Forms and uses of computer aided products are viewed in perspective with the overall design and documentation process. Prerequisite: CADD 1301. Lab required. 3 credit hours.

CADD 2301 Technical Illustration (CAD 220)

Applications of computer graphics in the field of technical illustrations. Students will learn how to produce axonometric and perspective drawings on a CAD system, which will be suitable for use in such areas as desktop publishing, commercial advertising and technical publications. Concepts in animation, rendering and 3-D modeling will be introduced. Prerequisite: CADD 1301 or 1304. Lab required. 3 credit hours.

CADD 2302 Computer Aided Design (CAD 221)

An advanced course in design applications. Students will complete actual design projects in the architectural, mechanical, civil, electronics, graphics or manufacturing fields of study. May be repeated for credit. Prerequisite: CADD 1304. Lab required. 3 credit hours.

CADD 2303 Advanced Computer Aided Drafting (CAD 224)

Advanced uses of the electronic computer as an aid to the designer are studied. Special emphasis is given to three-dimension design, specifically mechanical. Menu and library construction will be practiced while using the interactive graphic system. Prerequisite: CADD 1304. Lab required. 3 credit hours.

CADD 2305 Electronic PCB Drafting (CAD 231)

Focuses on drawings used in the electronics industry Topics include block and logic diagrams, schematic diagrams, interconnecting wire diagrams, taping printed circuit boards, integrated circuits, component packaging and current practices. Lab required. Prerequisite: CADD 1301. 3 credit hours.

CADD 2306 Descriptive Geometry (CAD 232)

Study of points, lines and planes in space with application of various technologies. Prerequisite: CADD 1303. Lab required. 3 credit hours.

CADD 2307 Manufacturing Processes (CAD 235)

Study of the characteristics of industrial materials and the processes employed in their conversion. The areas covered are sheet metal, machined parts and castings. Prerequisite: CADD 1302. Lab required. 3 credit hours.

CADD 2308 NC Programming (CAD 236)

NC Programming will provide students with basic conceptual knowledge about the fundamentals of NC Programming and basic understanding of various NC Programming languages. Prerequisite: CADD 2307. Lab required. 3 credit hours.

CADD 2309 Computer Integrated Manufacturing (CAD 237)

Systematic introduction of the aspects of Computer Integrated Manufacturing technology This course includes software examples, practical case studies and simulation techniques. Prerequisite: CADD 23W. Lab required. 3 credit hours.

CADD 2310 Printed Circuit Board Design (CAD 240)

This course develops skills in the design of double-sided and multi-layer printed circuit boards. Students design boards from schematics, parts lists and manufacturing specifications. Some boards are designed for manual parts insertion and taped artworks. Others are designed for automatic parts insertion and digitized inputs for artworks. Prerequisite: CADD 2305. Lab required. 3 credit hours.

CADD 2311 Advanced Printed Circuit Board Design (CAD 243)

Continuation of CADD 2310. Students will be designing power supply boards, shielding and denser PCB designs. Multi-layer board design concepts will be introduced. Prerequisite: CADD 2310 or 1304. Lab required. 3 credit hours.

CADD 2315 Applications in PCB Design (CAD 255)

Advanced topics in PCB technology to include surface mount and microwave circuit design together with new advancements in technology. Prerequisite: CADD 2311. Lab required. 3 credit hours.

CADD 7300 Cooperative Education I (CAD 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar partiapation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

CADD 7305 Cooperative Education II (CAD 705)

Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: CADD 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

CADD 7310 Cooperative Education III (CAD 710)

Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: CADD 7305 and consent of instructor. Contact the CWE office. 3 credit hours.

COMPUTER INFORMATION SYSTEMS

CSCI 1305 Microcomputer Concepts (CIS 128)

Introduction to microcomputers emphasizing Disk Operating Systems (DOS) and WindowsTM. Lab required. 3 credit hours.

CSCI 1310 Introduction to Graphics
Study of basic concepts of computer graphics. Design and use the graphic software package Corel Draw for Windows. Lab required. 3 credit hours.

CSCI 1320 BASIC Programming (CIS 130)
This course is designed to provide a comprehensive understanding of fundamental programming logic. The student is required to write several programs in QBASIC or Visual BASIC for Windows. Prerequisite: COSC 1306; or CSCI 1305; or consent of instructor. Lab required. 3 credit hours.

CSCI 1325 Introduction to Multimedia
This course provides an introduction to multimedia and its use in business. The student will be required to produce multimedia presentations using COMPEL by Asymetrix. Lab required. 3 credit hours.

CSCI 2305 Integrated Spreadsheet Applications (CIS 220)
Study of electronic spreadsheet with graphics and database features using LOTUS for DOS or Excel for Windows. Prerequisite: CSCI 1305 or COSC 1306, or consent of instructor. Lab required. 3 credit hours.

CSCI 2310 Database Applications (CIS 230)
Concepts and techniques for solving business problems using MS ACCESS. Emphasis is on database design, custom reports, file management and application creation Prerequisite: CSCI 1305 or COSC 1306 or consent of instructor. Lab required. 3 credit hours.

CSCI 2315 Desktop Publishing (CIS 225)
Use of the computer to produce printed communications using Ventura Publishing. To demonstrate proficiency, the student will be required to produce several projects. rerequisite: CSCI 1305, OFAD 1331. Lab required. 3 credit hours.

CSCI 2325 Intermediate Multimedia Applications
Continuation of CSCI 1325. More advanced Multimedia applications using authoring software. Emphasis will be on creating interactive applications. Lab required. Prerequisite: CSCI 1325 or consent of instructor. 3 credit hours.

CSCI 2330 COBOL I (CIS 200)
Presents structured program design, development, testing, implementation and documentation of common business applications using COBOL. Syntax, data and file processing, batch and interactive modes are covered. The student is required to write several COBOL programs. Prerequisite: CSCI 1320. Lab required. 3 credit hours.

CSCI 2331 COBOL II (CIS 205)
Continuation of CSCI 2330 with emphasis placed on advanced techniques, disk accessing and storage, direct and sequential access, and console input and output. Programs studied are complex and varied and are designed to employ all features available on the computer. Prerequisite: CSCI 2330. Lab required. 3 credit hours.

CSCI 2335 Data Structures for Business (CIS 210)
This course emphasizes the file structure to solve computer problems. The student will use a language to develop methods of searching and sorting sequential and direct access file systems. Concepts of stacks, queues, the linked lit, and data collision and resolution techniques will be applied to data files. Prerequisite: One programming language. Lab required. 3 credit hours.

CSCI 2350 Computer Operating Systems (CIS 245)
An introduction to Operating systems theory and concepts. Topics include computer hardware, software and their interaction, single-user vs. multiple-user systems, MS-DOS, UNIX and JCL. Prerequisite: One programming language, COSC 1306 or CSCI 1305. Lab required. 3 credit hours.

CSCI 2355 Networking and Telecommunications (CIS 235)
This course reviews data, text, graphics and voice communications technology and their applications. Included is vocabulary configuration of local networks, modems, rates and standards. An overview of protocols is given. Prerequisite: CSCI 1305 or COSC 1306 or consent of instructor. Lab required. 3 credit hours.

CSCI 2390 Special Topics in Computer Information Systems I (CIS 297)
Current developments in the rapidly changing field of computer information systems are studied. May be repeated when topics vary. Prerequisite: Will vary based on topics covered and will be annotated in each semester's class schedule. Lab required. 3 credit hours.

CSCI 2395 Special Topics In Computer Information Systems II (CIS 298)
Current developments in the rapidly changing field of computer information systems are studied. May be repeated when topics vary. Prerequisite: Will vary based on topics covered and will be annotated in each semester's dass schedule. Lab required. 3 credit hours.

CSCI 7300 Cooperative Education I (CIS 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

CSCI 7305 Cooperative Education II (CIS 705)
Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: CSCI 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

COMPUTER SCIENCE

COSC 1306 Introduction to Computers (CPSC 150)
Study of basic hardware components and major software applications. Topics emphasized in labs include introduction to DOS commands, Word, Access, Excel and elementary programming using QBASIC language. Lab required. 3 credit hours.

COSC 1317 Scientific Programming (CPSC 292)

Introduction to numerical techniques with applications in science and engineering using FORTRAN. Emphasis on program design and documentation. Topics include subscripting, file processing and subroutines. Prerequisite: MATH **2312.** Lab required. **3** credit hours.

COSC 1318 Programming Concepts I (CPSC 190)

Study of logical operation and organization of a computer, number systems, Boolean algebra, problem solving techniques, algorithmic processes and top-down design using the Pascal language. Co-requisite: MATH **1314,** COSC **1306;** or consent of instructor. Lab required. **3** credit hours.

COSC 1320 C/C++ Programming (CPSC 135)

An introduction to fundamental high-level programming using the C/C++ programming language. Prerequisite: COSC **1306** and one year of structured programming language. Note: This class is not for beginning programmers. Lab required. **3** credit hours.

COSC 2315 Data Structures with C (Advanced C) (CPSC 213)

Using **C** language, an in-depth look at records, variant records, enumerated data types, pointers, records, list processing trees, stacks, queues, abstract data **types,** searching, sorting, linked lists, graphs, traversals and recursions. Prerequisite: COSC **1320.3** credit hours.

COSC 2318 Programming Concepts II (CPSC 191)

Continuation of COSC **1318,** including structured programming, design, data structures, documentation and file processing. Emphasis on creating and modifying larger programs. Prerequisite: COSC **1318.** Lab required. **3** credit hours.

COSC 2325 Assembly Language (CPSC 210)

Study of the architecture of the computer through the **use** of assembly language programming. Includes study of registers, instruction sets, addressing techniques, machine execution traces, table searching/sorting, file I/O, program linking and macros. Prerequisite: COSC **1320** or COSC **2318.** Lab required. **3** credit hours.

COSC 2333 PL/1 Programming (CPSC 293)

Introduction to PL/1 programming with emphasis on the structured approach to program design using both mathematical and business applications. Prerequisite: COSC **2318.** Co-requisite: MATH **1314;** COSC 1306; **or** consent of instructor. Lab required. **3** credit hours.

COSC 2372 Object-Oriented Programming (CPSC 294)

A study of the principles underlying object oriented programming and design using C++. Prerequisite: COSC **2370** or consent **of** instructor. Lab required. **3** credit hours.

COSC 2375 Advanced Assembly Language Programming (CPSC 233)

Program design and practice with assembly languages, macro definitions, conditioned assembly advanced I/O, floating point operations. Prerequisite: COSC **2325.** Lab required. **3** credit hours.

COSC 2376 LISP Programming (CPSC 235)

Syntax and semantics of LISP programming language, style and recursion, tail recursion, algorithm development, list processing techniques. Prerequisite: COSC **2325.** Lab required. **3** credit hours.

COSC 2378 Ada Programming (CPSC 225)

Syntax and semantics of Ada language, packages, I/O, encapsulation, tasking, blocks, exceptions, private and generic **types.** Prerequisite: COSC **2318.** Lab required. **3** credit hour,

COSC 2379 Programming In Windows (CPSC 201)

Programming in a windows integrated development environment using C. Topics also include coding for dialogs, buttons, list boxes, edit fields, icons and other resources. Prerequisite: COSC **1320.3** credit hours.

COSC 2380 Software Engineering (CPSC 221)

Study of software design, implementation, validation techniques through team projects. Structured analysis, programming style and project documentation **are** emphasized in software projects large enough to give a group meaningful **work** experience. Lab requid. **3** credit hours.

COSC 2382 Software Techniques (CPSC 224)

Introduction to software testing methodologies. Emphasis on program development techniques which aid testing. introduction to proof of correctness. Laboratory exercises assigned to reinforce principles of program development. Prerequisite: COSC **2380.** Lab required. **3** credit hours.

COSC 2383 Computer Networks (CPSC 223)

Use of distributed networks containing mini and micro computers with an introduction to wide area networks. Hands-on experience in local area networks, network architecture, protocols and software security using a network software package, such as NOVELL. Lab required. **3** credit hours.

COSC 2384 Large Scale Operating Systems (CPSC 130)

Study of UNIX and VMS operating systems concepts with hands-on laboratory exercises. Topics include 1/0 techniques, buffering, spooling, device drivers, resource allocation, memory, file management, deadlock avoidance and job scheduling. Prerequisite: In-depth knowledge of one programming language. **3** credit hours.

COSC 2386 Systems Programming (CPSC 230)

Introduction to systems level operations booting compilers, translators, linkers, loaders, system control and runtime software. Laboratory examples assigned to reinforce principles. Prerequisite COSC **2325.3** credit hours.

COSC 2387 Introduction to Artificial Intelligence (CPSC 236)

Introduction to concepts and ideas in artificial intelligence. Topics will include search techniques, knowledge representation, control strategies and advanced problem-solving architecture. Prerequisite: COSC **2376.** Lab required. **3** credit hours.

COSC 2390 Advanced Topics In Computer Science (CPSC 297)
Selected topics in computer science and software development to address current issues. Topics may vary each semester. Course may be repeated for credit as topics vary. 3 credit hours.

COSC 2395 Special Topics I (CPSC 298)
Selected topics in computer science and software development to address current issues, Topics may vary each semester. Course may be repeated for credit. 1 credit hour.

COSC 7300 Cooperative Education I (CPSC 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

CRIMINAL JUSTICE

CRIJ 1301 Introduction to Criminal Justice (CRJS 152)
A multidisciplinary overview and analysis of the major agencies, personnel and decision-making points which comprise the criminal justice system, Included are a survey of problems and issues confronting legislatures, police, courts, corrections and the community as they respond to crime in a free society Legal precedents guiding the decisions of criminal justice agents are also discussed. 3 credit hours.

CRIJ 1306 The Courts and Criminal Procedure (CRJS 154)
Study of procedural regulations which guide the processing of criminal cases through the criminal justice system with emphasis on the Texas Code of Criminal Procedure and rules of evidence. Included is a discussion of due process rights of the criminal defendant from arrest through confinement as well as issues related to the administration of capital punishment. 3 credit hours.

CRIJ 1307 Crime In America (CRJS 151)
A survey of the nature, location and impact of crime in America. Includes historical foundations of crime, theoretical explanations of criminality and delinquency, the recording and measurement of crime, descriptions of criminal careers and an analysis of public policies concerning crime control. 3 credit hours.

CRIJ 1310 Fundamentals of Criminal Law (CRJS 153)
Study of the nature of criminal law; historical and philosophical development of law in society; major definitions and concepts; classifications of crime; elements of crimes and penalties using the Texas statutes as illustrations; criminal responsibility. 3 credit hours.

CRIJ 1313 Juvenile Justice System
The juvenile justice system; history, philosophy, and evaluation of the juvenile court, juvenile court practices and procedures; neglect, dependency and delinquency, jurisdiction of the court, the role of the police officer, the correctional officer, and the social welfare worker in the juvenile justice system. 3 credit hours.

CRIJ 2301 Community Resources In Corrections
An introductory study of the role of the community in corrections; community programs for adults and juveniles; administration of community program; legal issues; future trends in community treatment. 3 credit hours.

CRIJ 2305 Legal Aspects of Corrections
Legal problems from conviction to release; presentence investigations, sentencing, probation and parole, incarceration; loss and restoration of civil rights. Emphasis on practical legal problems confronting the probation and parole officer and the correctional administrator. 3 credit hours.

CRIJ 2313 Correctional Systems and Practices
Corrections in the criminal justice system; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues. 3 credit hours.

CRIJ 2314 Criminal Investigation
Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation. 3 credit hours.

CRIJ 2315 Special Topics In Criminal Justice
Presentation and discussion of current and significant subjects in criminal justice. Subjects selected for study vary each semester the seminar is offered. 3 credit hours.

CRIJ 2323 Legal Aspects of Law Enforcement
Police authority; responsibilities; constitutional restraints; laws of arrest, search and seizure; police liability 3 credit hours.

CRIJ 2328 Police Systems and Practices
The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. 3 credit hours.

CRIJ 7300 Cooperative Education I
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite or co-requisite: CRIJ 1301 or CRIJ 1307 and consent of instructor. Contact the CWE Office. 3 credit hours.

DANCE

DANC 1110 Beginning Tap (HPED 187)
Performance of basic rhythms and techniques fundamental to beginning tap dance. 1 credit hour.

DANC 1122 Folk Dance (HPED 139)
Analysis of cultural backgrounds, costumes and dance techniques leads to participation in a variety of folk dances. 1 credit hour.

DANC 1131 Popular Social Dance (HPED 186)
Practice in contemporary social dances including pop/rock and country western forms. 1 credit hour.

DANC 1141 Beginning Ballet (HPED 137)

Student develops elementary ballet technique and knowledge of terminology through participation in barre, center work and beginning movement combinations; emphasis on alignment. 1 credit hour.

DANC 1142 Intermediate Ballet (HPED 138)

Further practice in ballet technique through participation in barre, center work and basic enchainments. Prerequisite: PHED 1141 or consent of instructor. 1 credit hour.

DANC 1145 Beginning Modern Dance (HPED 133)

An introduction to the art and discipline of modern dance through analysis of dance techniques, exploration and composition development. 1 credit hour.

DANC 1147 Beginning Jazz Dance (HPED 135)

A practice in basic jazz movements including isolations, elementary jumps and turns. Participation in choreographed combination-using different rhythmic structures is also included. 1 credit hour.

DANC 1148 Intermediate Jazz Dance (HPED 136)

Further practice in jazz movements including intermediate isolations, jumps and turns. Participation in choreographed combinations using moderately complex rhythmic structures. 1 credit hour.

DANC 1151 Dance Performance (HPED 180)

Experience in rehearsal, production and performance. Permission of the instructor is required. 1 credit hour.

DANC 1171 Beginning Aerobic Dance and Step Training (HPED 130)

Level of physical fitness is improved through aerobic dance and step training, stretching, muscular strengthening and endurance. Heat rate, weight, and nutritional status are monitored. 1 credit hour.

DANC 1172 Intermediate Aerobic Dance (HPED 131)

Further toning and trimming of the body is obtained through vigorous exercise routines, stretching, muscular strengthening and other aerobic activities. Heart rate, weight and nutritional status are monitored. Prerequisite: DANC 1171 or consent of instructor. 1 d i t hour.

DANC 1173 Advanced Aerobic Dance (HPED 132)

An accelerated aerobic conditioning program for advanced fitness students. Advanced exercise routines with weights are choreographed to music to maintain or increase cardiovascular endurance, flexibility and strength. Prerequisite: DANC 1172 or consent of instructor. 1 credit hour.

DANC 1201 improvisation (HPED 184)

An exploration of movement in dance and design through problem solving activities leading to choreographic studies. 2 credit hours.

DIETARY MANAGER

DTMG 1600 Dietary manager I

A course designed for health care food service supervisors. Topics include dietary department organization and operations, nutrition in health and disease, nutrition care applicatiom, menu planning, principles of supervision, food production management, and purchasing. 6 credit hours.

DTMG 1601 Dietary Manager II

Designed for health care food service supervisors. Topics include sanitation and safety, quantity food preparation equipment, food delivery systems, quality assurance, production management, personnel management techniques, leadership skills, and budgeting. 6 credit hours.

DRAMA/THEATRE

ARTS 1370 The Art of Directing

Examines the art of directing for the *stage*, including the composition, picturization, style, form and structure of staging a play Emphasis will be placed on directing as an art form. Students will direct scenes and one act plays. Lab required. 3 credit hours.

BUSI 2379 Business of Theatre

Examines the business and marketing aspects of theatre, including processes of self-promotion for actors, designers and directors; and the processes of marketing and promotion of a theatre season or production. May transfer as a business elective to most institutions. 3 credit hours.

DRAM 1171 Theatre Practicum: Performance (THEA 190)

A practicum in theatre with emphasis on performance techniques and procedures, including a major performance role in a college play production. May be combined with DRAM 1172, or repeated for maximum of 6 credit hours. Flexible enrollment. Instructor's permission required. 1 credit hour.

DRAM 1172 Theatre Practicum: Technical (THEA 191)

A practicum in theatre with emphasis on theatre techniques and procedures. Students gain theatrical experience by assuming major technical responsibilities in the production of a college play. May be combined with DRAM 1171 or repeated for a maximum total of 6 credit hours, Flexible enrollment. Instructor's permission required. 1 credit hour.

DRAM 1310 Introduction to the Theatre (THEA 151)

Various aspects of theatre are surveyed. Emphasis is on types of plays, directing, acting and technical production. Lab required. 3 credit hours.

DRAM 1330 Stagecraft I (THEA 185)

The study and application of the visual aesthetics of design which may include the physical theatre, scenery construction and painting, properties, and lighting, costumes, make-up and backstage organizations. Lab required. 3 credit hours.

DRAM 1341 Theatrical Makeup (THEA 187)

Introductory study and application of visual aesthetics in theatrical makeup. Students will study fundamentals of stage makeup, character makeup, corrective techniques, beards, mustaches and three-dimensional makeup. Lab required. 3 credit hours.

DRAM 1351 Acting I (THEA 193)

Introduction to the art of acting. Body control, voice, pantomime, interpretation, characterization and stage movement are included. Lab required. 3 credit hours.

DRAM 1352 Acting II (THEA 194)

A continuation of DRAM 1351. Emphasis is on complex characterization, ensemble acting, stylized acting and acting in period plays. Prerequisite: DRAM 1351. Lab required. 3 credit hours.

DRAM 1376 Introduction to Costuming (THEA 186)

A survey of costuming which introduces students to the task of constructing costumes for theatrical productions. Students will gain an appreciation of the art of costuming, a sense of fashion history and changes, and will understand how the costume fits into the total concept and production of the play. Lab required. 3 credit hours.

DRAM 2331 Stagecraft II (THEA 188)

Advanced study and application of visual aesthetics in scene design and stage painting. Prerequisite: DRAM 1330. Lab required. 3 credit hours.

DRAM 2336 Voice and Diction (THEA 192)

Intensive work is provided in the improvement of voice through exercises to develop resonance, range, flexibility, intensity, control of voice. 3 credit hours.

DRAM 2351 Acting III (THEA 195)

Development of advanced speciality skills and techniques of acting including advanced character analysis. Emphasis on mechanics of the body as a tool for the actor. Special focus on advanced physical work in stage fighting, circus skills and stage stunt work. Prerequisite: DRAM 1352. Lab required. 3 credit hours.

DRAM 2366 History of Film Making I (PHO 299)

An examination of the history of motion pictures and its effect on our society as well as its contributions to our culture. The period covered includes 1890-1949. Emphasis will be placed on the cinema as an art form. Lab required. 3 credit hours.

DRAM 2367 History of Film Making II

A continuation of DRAM 2366. The period covered includes 1950-present. Emphasis will be placed on the cinema as an art form. Lab required. 3 credit hours.

DRAM 2371 Special Problems in Drama

Theatre Outreach

An in-depth study of the concepts of dramatic playwriting, production and performance, combined with an intensive study of current issues in sociology. Students will research, write and produce plays which highlight and depict the social concerns of contemporary youth. Prerequisite: Consent of instructor required. 3 credit hours.

New York Field Studies

The purpose of this course is to introduce students first-hand to the performance, practice and theory of the New York professional theatre. The diverse methodology of this course includes lecture/discussions with working theatre professionals in New York (i.e. actors, directors, designers, theatre managers and company managers); attendance at Broadway and Off-Broadway plays and musicals; observation/discussion of a Broadway play in rehearsal; and field trip visits to the professional training programs of the American Academy of Dramatic Arts, New York University and the Juliard School. Lab required. 3 credit hours. Students must also enroll in the New York Field Studies program. For information, contact Prof. Brad Baker at 881-5679.

DRAM 2389 Academic Co-op Drama

An instructional program designed to integrate oncampus study with practical hands-on work experience in Drama. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Drama. Contact the CWE office. 3 credit hours.

EATING DISORDERS

EDCC 1300 A Survey of Eating Disorders (EDCC 221)

Studies the history, dynamics, prevalence, symptoms and treatment approaches to eating disorders. Examines biological, psychoanalytic, behavioral, cognitive and other theoretical perspectives. 3 credit hours.

EDCC 2305 Individual Counseling (EDCC 224)

Presents an introduction to interviewing, history-taking, care-giving, listening, intervention and interpretation skills. Includes experience under supervision. Prerequisite: PSYC 2301 or SOCI 1301. 3 credit hours.

ECONOMICS

ECON 1301 Introduction to Economics (ECON 121)

An introduction to the principles of economics. A study of the economic behavior of consumers, businesses, and government agencies. Economic decision making as used in daily life. 3 credit hours.

ECON 2301 Principles of Macroeconomics (ECON 291)

Decision-making in the public sector. Economic analysis of inflation, unemployment, economic growth. National income measurements. Money and banking. Monetary and fiscal policy. Competing economic theories. International Economics. International economics. Prerequisite: ECON 2302. 3 credit hours.

ECON 2302 Principles of Microeconomics (ECON 292)

Decision-making in the Private sector. Markets and prices, demand and supply. Consumer economics. Production, costs and industrial organization. International economics. Current topics.

Prerequisite: MATH 0310 and ENGL 0305 or consent of instructor. 3 credit hours.

ECON 2389 Academic Co-op Economics

An instructional program designed to integrate on-campus study with practical hands-on work experience in Economics. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Economics. Contact the CWE office. 3 credit hours.

ELECTRONIC TECHNOLOGY

ELAT 1315 Basic Digital (ELT 115)

This course provides a practical study of digital electronic circuits and their applications. The course will progress from basic digital theory to the analysis and design of common circuit applications. Devices covered include logic gates, flip flops, counters, registers and memory functions. Numbering systems and Boolean algebra will be covered and applied to logic circuits. The knowledge gained will be demonstrated in a laboratory environment utilizing digital circuits in laboratory experiments. Lab required. 3 credit hours.

ELAT 1400 Basic Electronics I (ELT 111)

This course is the first in a series of courses leading to an Associate of Applied Science degree with a major in electronic technology. No previous knowledge of electronics is required for this course. The topics covered in this course include the following: terminology, concepts, basic laws and theories as applied to direct current electronic circuits. Students will be required to perform various laboratory experiments using electronic components and record results in a Technician's Log. Lab required. 4 credit hours.

ELAT 1401 Basic Electronics II (ELT 112)

This course is a continuation of ELAT 1400. The topics covered in this course include the following: terminology, concepts, basic laws and theorems as applied to alternating current electronic circuits. Students will be required to perform various laboratory experiments using electronic components and record results in a Technician's Log. Lab required. 4 credit hours.

ELAT 1405 Electronic Fabrication I (ELT 113)

A basic course in electronic assembly Topics include component identification, schematic diagrams, soldering principles, wire preparation and harness assembly, terminal connections, inspection and quality control. Lab required. 4 credit hours.

ELAT 1410 Solid State Devices (ELT 114)

This course provides a practical study of solid state devices and their applications. The course will progress from basic semiconductor theory to the analysis and design of common circuit applications. Devices covered include diodes, bipolar transistors (BJTs), field effect transistors (FETs), integrated circuits (ICs) and special purpose devices. Circuit applications include basic power supplies, filters, regulators and amplifiers. Specifications and limits of voltage, current and heat dissipation are included. Lab required. 4 credit hours.

ELAT 1470 Electronic Fundamentals (ELT 110)

Introductory course recommended for non-electronics majors in areas such as manufacturing, marketing and sales. The course provides the student with a knowledge of vocabulary definitions, component identification and applications for electrical/electronics systems. Lab required. 4 credit hours.

ELAT 2330 Instrumentation and Telemetry (ELT 209)

Operation and use of meters, counters, oscilloscopes, signal generators and test sets which are utilized in electronic circuit fault isolation and measurement. Lab required. Prerequisite: ELAT 1401. 3 credit hours.

ELAT 2335 Digital Control Applications (ELT 210)

Digital principles as applied to microcomputer systems. Logic design, computer structure and organization, number systems conversion, busing and interfacing. Co-requisite: ELAT 1315. Lab required. 3 credit hours.

ELAT 2336 Programmable Logic Controllers

This course provides the student with the skills to install, program, maintain, troubleshoot and repair programmable logic controllers (PLCs). The student will complete a vast array of hands-on" experiments that will include application problems and problem solving solutions. Lab required. 3 credit hours.

ELAT 2340 Power Supply Systems (ELT 211)

Theory and operation of linear and switching power supplies. Topics covered will be: waveform analysis to include pulse characteristics and pulse train measurements, full-wave rectification, filtering and regulation. Prerequisite: ELAT 2425. Lab required. 3 credit hours.

ELAT 2360 Microcomputer Systems (ELT 215)

Microcomputer interfacing and the use of programmable peripherals devices. Selected programmable interface devices will be studied and the software and hardware interfaces developed. Experience in testing and troubleshooting interface circuits will be provided in a laboratory setting. Specialized logic analyzer and emulation systems will be utilized. Lab required. 3 credit hours.

ELAT 2420 Fundamentals of Electronic Communications (ELT 207)

The course will provide the advanced student with a review of basic electronic concepts and a comprehensive course in electronic communications. This course will provide the student with information that will be found on the various license and certification tests for electronic technician, The text and lab book will be keyed to the FCC General Radiotelephone License, all classes of the FCC Amateur Radio License, the FCC Marine Operator License and the ISCET Certified Technician's Exam. Topics covered will pertain to all areas of electronic communications. Lab required. 4 credit hours.

ELAT 2425 Active Devices (ELT 208)

This course provides a practical study of active devices (semiconductors) and their applications. The course includes composition, parameters and linear and non-linear characteristics in common circuit applications,Devices covered include diodes, bipolar transistors (BJTs),field effect transistors (FETs), integrated circuits (ICs) and special purpose devices. Circuit applications include basic power supplies, regulators, amplifiers, oscillators, filters, timers and electronic switching. Lab required. **4** credit hours.

ELAT 2437 Industrial Automation Controllers

This course provides a practical study of components and electronic systems used in industrial automation applications. The student will receive comprehensive up-to-date instruction on generalized industrial process control systems. The practical state-of-the-art applications will be conducted by the student in the electronic laboratory. Topics included linear IC circuits, DC and AC motors, generators, control circuits, transducers,optoelectronics, telemetry, data communications,programmable controllers and introduction to robotics. Lab required. **4** credit hours.

ELAT 2445 Applied Electronic Circuits (ELT 212)

Electronic circuit applications with considerations in **areas** of high speed EMI; high speed switching, coupling and decoupling circuits, transmission modes, noise source and **types,** transconductive, measurement techniques. Prerequisite: ELAT 1410. Lab required. **4** credit hours.

ELAT 2450 Computer Architecture (ELT 213)

This course encompasses architecture, programming and interfacing. Includes a presentation of the more common programmable I/O devices, including 80186/80188 controllers, the 80286,80386 and the 80486. Detailed coverage **of** the interface and programming of the 80087 family of arithmetic co-processor. Manufacturers data sheets are used throughout the course to give students experience with industry standards and specifications. Prerequisite: ELAT 1315. Lab required, **4** credit hours.

ELAT 2455 Applied Computer Programming (ELT 214)

Computer programming techniques using Spice and BASIC to solve problems and demonstrate system operation. The language syntax, flowcharting and coding with applications to technical projects is emphasized. Lab required. **4** credit hours.

ELAT 2465 Optoelectronics (ELT 216)

A comprehensive course on the theory and application of optical electronic devices, circuits and fiber optics **as** they apply to industrial controls, data transmission and telecommunications. Prerequisite: ELAT 1401. Lab required. **4** credit hours.

ELAT 7300 Cooperative Education I (ELT 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

ELAT 7305 Cooperative Education II (ELT 705)

Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prequisite ELAT 7300 and *consent* of instructor. Contact the CWE office. **3** credit hours.

ELECTRONIC ENGINEERING TECHNOLOGY

ELET 1400 Circuit Analysis I (EET 151)

Introduction to design principles of electrical/electronic direct current circuits. The course will cover division principles and various analysis techniques for analyzing different circuits. Node analysis, Superposition,KVL, KCL, Thevenin equivalent, Norton equivalent and the Millman equivalent theorems are utilized. This course is an applied mathematics course and includes Cramer's rule. Prerequisite: MATH 1314. Lab required. **4** credit hours.

ELET 1401 Circuit Analysis II (EET 152)

Continuation of Circuit Analysis I. The information from the first semester course will be applied to alternating current circuits. Additional topics covered for AC Circuits are: **the** effects of frequency and impedance: resonant circuit characteristics and filter networks; troubleshooting techniques; coupling networks, transformers. Utilization of standard phaser notation and application of fundamental laws and theorems for network analysis is covered. Prerequisite: ELET 1400, MATH 2312 or concurrent enrollment in MATH 2312 Lab required. **4** credit hours.

ELET 1405 Digital I.C. Analysis (EET 153)

In-depth course in digital circuit analysis, theory, design and troubleshooting. Topics include: numbering systems and codes, logic elements, synchronous sequential logic, IC architecture, chip survey applications, design of memory systems, A/D and D/A converters and survey of peripherals. Lab required. **4** credit hours.

ELET 1410 Fundamentals of Computers (EET 154)

Study of microcomputers; how they operate, how they are used, how they are programmed and how they relate to their equipment. Topics include: memories, microprocessor architecture, input/output operations, bus operations, control, execution cycles and bootstrap procedures. Prerequisite: ELET 1405. Lab required. **4** credit hours.

ELET 1415 Circuit Analysis III (EET 250)

The analysis and design of linear devices are studied, while emphasizing their circuit applications. Specifications and limits of voltage, current and heat-dissipation are included. Circuits covered include amplifiers, regulators, oscillators, filters, timers and signal processors. Prerequisite: ELET 1401. Lab required. **4** credit hours.

ELET 1440 A U D C Fundamentals (EET 150)

This introductory course is suitable for both electronic and non-electronic majors who require a solid background in electrical and electronic circuits, components and applications. Students in this course will understand and make use of electronic devices,

circuits and systems. This course will be of great value to students who are planning a career in robotics, automotive electronics, manufacturing technology, computer integrated manufacturing technology, automated systems technology, electronic communications and biomedical technology Lab required. **4** credit hours.

ELET 2325 Computer Interfacing (EET 251)
Microcomputer interfacing and the **use** of programmable peripheral devices. Selected programmable interface devices will be studied and the software and hardware interfaces developed. Experience in testing and troubleshooting interface circuits and use of specialized logic analyzer and emulation systems will be provided in a laboratory setting. Prerequisite: ELET 1410. Lab required. 3 credit hours.

ELET 2380 Selected Topics (EET *290)*
An in-depth study of selected topics on current engineering technology practices and **procedures.** Lab required. 3 credit hours.

ELET 2385 Independent Study (EET 291)
Prerequisite will vary based on topics covered and will be annotated in each semester's class schedule. May **be** repeated for credit when topics vary. Lab required. 3 credit hours.

ELET 2420 Telecommunications (EET 254)
This course will provide the advanced student with a review of basic electronic concepts and a comprehensive course in electronic telecommunications. This course will provide the student with information that will be required to pass the various license and certification tests for electronic technician. The text and lab book will be keyed to the FCC General Radiotelephone License, all classes of the FCC Amateur Radio License, the FCC Marine Operator License and the ISCET Certified Technician's Exam. Topics covered will pertain to all areas of electronic telecommunications. Lab required. **4** credit hours.

ELET 2430 Computer Maintenance (EET 252)
Emphasis on **the** distinction between **hardware** and **software** failures in **a** computing system. This determination will be made in a lab setting using equipment with simulated or actual failures. Concentration is on the use of factory supplied and technician written diagnostic programs to identify and isolate a faulty device or subsystem. Lab required. **4** credit hours.

ELET 2435 Microwave Fundamentals (EET 253)
Introduction to microwave theory and applications, transmitter and receiver. Prerequisite: ELET **1415.** Lab required. 4 credit hours.

ELET 7300 Cooperative Education I (ELT 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

ELET 7305 Cooperative Education II (ELT 705)
Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: ELET 7300 and consent of instructor. Contact **the** CWE office. 3 credit hours.

EMERGENCY MEDICAL TECHNOLOGY

EMTP 1100 Advanced Cardiac Life Support
Provides the student with an opportunity to apply all critical care skills in a simulated ICU environment. Fee for course materials. 1 credit hour.

EMTP 1300 Emergency Care Attendant (ECA)/First Responder
This **course** is designed to provide the student with a working knowledge of first aid procedures. Through didactic and skills instruction, students learn the signs, symptoms, and treatment of various diseases and traumatic conditions. Students completing this course are eligible to take the Emergency Care Attendant certification exam given by the Texas Department of Health. Lab required. 3 credit hours.

EMTP 1500 Emergency Medical Procedures (EMTP 141)
Successful completion of this course qualifies a student to take the State Examination for Emergency Medical Technician (EMT) certification. Includes classroom, clinical and ambulance training. Topics include anatomy and physiology, extrication and management of injured patients, cardiopulmonary resuscitation (CPR), bleeding control and automated external defibrillation. Lab and clinical required. **5** credit hours.

EMTP 1800 Paramedic Procedures I (EMTP 221)
The First of two courses designed to prepare the student for state certification as an Emergency Medical Technician - Paramedic. Subjects taught in this course include: general anatomy and physiology, pharmacology, fluids and electrolytes, and acid-base balance. Emphasis is placed on disorders of the heart and advanced cardiac life support. Skills developed include: ECG recognition, defibrillation and cardioversion, endotracheal intubation, drug administratrion, and intravenous fluid administration. Prerequisite: EMT-Basic certification. Extensive clinicals required in addition to classroom time. Lab required. 8 credit hours.

EMTP 2700 Paramedic Procedures II (EMTP 231)
The second course of two designed to prepare the student for state certification as an Emergency Medical Technician - Paramedic. Subjects taught include: medical emergencies, shock trauma management, pediatric emergencies, musculoskeletal and **soft** tissue injuries, obstetrical emergencies, and psychiatric emergencies. Skills developed include: PASG (pneumatic anti-shock garment), pediatric resuscitation, intraosseous infusion, chest decompression via needle thorocotomy, and advanced airway management. Prerequisite: EMT-Basic certification and EMTP 1800. Extensive clinicals required in addition to classroom time. Lab required. 7 credit hours.

ENGINEERING

ENGR 1304 Engineering Graphics (ENGR 151)
Use of computer-aided drafting, applied geometry, engineering lettering, orthographic projections, dimensioning, pictorial drawing and sketching, sectional views and working drawings. Lab required. 3 credit hours.

ENGR 2301 Engineering Mechanics I (ENGR 191)
Vectors, tensors, foundations of mechanics. Motion of particles including momenta, energy, work concepts. Statics including concept of free-body diagrams, friction forces, virtual work. Prerequisite: MATH 2413. 3 credit hours.

ENGR 2302 Engineering Mechanics II (ENGR 192)
Dynamics of particles including harmonic motion, motion of a particle in a central force field, momentum and energy methods. Relative motion in rigid bodies. Prerequisite: ENGR 2301. 3 credit hours.

ENGR 2332 Materials and Processes (ENGR 291)
Simple structural elements are studied. Emphasis on forces, deformation and material properties. The concepts of stress, strain and elastic properties are presented. Behavior phenomena such as fracture, fatigue and creep are introduced. Prerequisite: ENGR 2301. 3 credit hours.

ENGR 2405 Electrical Circuit Analysis (ENGR 292)
Basic principles of R, L and C circuits. Steady state DC and AC signals. Simple transient response. Kirchoff's laws, Ohm's law, Thevenin-Norton equivalence, impedance, nodal, mesh, and loop analysis, and phasers. Laboratory experiments demonstrate basic circuit and network laws and acquaint students with electrical instruments. Lab required. Prerequisite: MATH 2414. 4 credit hours.

ENGLISH

ENGL 0300 Developmental Writing I
A skills improvement course designed to help the student improve basic writing skills necessary for ENGL 1301. Focus is on paragraph and short essay writing. Basic grammar, punctuation and sentence construction studied as needed. This course may not be used to satisfy the requirements of an associate degree. Lab required. 3 credit hours.

ENGL 0305 Developmental Writing II
A skills improvement course designed to help students reach competencies necessary for ENGL 1301. Focus is on advanced paragraph development and medium length essay writing. Critical reading skills, analytical writing and vocabulary building are emphasized. Punctuation and sentence construction studied as needed. Completion of ENGL 0300 or assessment is requid. This course may not be used to satisfy the requirements of an associate degree. Lab required. 3 credit hours.

ENGL 0310 Developmental Grammar I
A skills improvement course designed to help the student strengthen the sentence for clearer, more emphatic, more concise expression of thought. Focus is on all facets of standard written English correct grammar, punctuation and usage. This course will teach the student to recognize and correct common errors in sentence structure and may be taken concurrently with any English course. This course may not be used to satisfy the requirements for an associate degree. Lab required. 3 credit hours.

ENGL 0315 Reading, Writing and Reasoning
A skills improvement course designed to help students reach competencies necessary for ENGL 1301. Focus is on reading and writing medium length expository essays. Reading and writing assignments are complementary with special emphasis given to writing on issues arising from class readings. Students will learn to write effective, logical essays, to develop reading comprehension strategies, and to analyze, synthesize and make value judgments using critical thinking. Completion of ENGL 0305 or assessment is a prerequisite. This course may not be used to satisfy the requirements of an associate degree. Lab required. 3 credit hours.

ENGL 1301 Composition/Rhetoric I (ENGL 151)
A beginning freshman course in writing. Development of paragraphs and the whole composition, study of model essays, extensive theme writing, individual conferences and departmental final exam. Assessment prior to enrollment required. Lab required. 3 credit hours.

ENGL 1302 Composition/Rhetoric II (ENGL 152)
Continued development of skills acquired in English 1301 and development of skills in argumentation. Analysis and interpretation of various types of argumentation and identification of fallacies. Extensive reading, outlining and summarizing of essays. Extensive writing, study of research methods and materials, preparation of research paper and individual conferences. Prerequisite: ENGL 1301. Lab required. 3 credit hours.

ENGL 2307 Creative Writing (ENGL 241)
Practical experience in the techniques of imaginative writing. May include fiction, non-fiction, poetry or drama. This course does not satisfy CCCC requirements for a sophomore literature course. Prerequisite: ENGL 1302. 3 credit hours.

ENGL 2311 Technical Writing (ENGL 291)
Introduction to technical writing and communication including preparation of reports, proposals, technical papers, abstracts and summaries of specific technical interest to the student. MLA documentation included. Prerequisite: ENGL 1301. Note: This course does not satisfy CCCC requirements for a sophomore literature course, nor does it substitute for ENGL 1302 in some degree plans. 3 credit hours.

ENGL 2322 British Literature I (ENGL 253)

A general survey of major works in British literature from its origin to the beginning of the Romantic movement. Analysis of these works in their historical, cultural and social contexts. Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2323 British Literature II (ENGL 254)

A general survey of major works in British literature from the Romantic period to the present. Analysis of these works in their historical, cultural and social contexts. Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2327 American Literature I (ENGL 255)

The study of major writers from the Colonial period to the beginning of the Civil War. The analysis and evaluation of these works in their historical, cultural and social contexts. Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2328 American Literature II (ENGL 256)

The study of major writers from the Realistic movement to the present. Evaluation and analysis of these works in their historical, cultural and social contexts. Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2332 World Literature I (ENGL 257)

Introduces the student to a variety of literatures beginning with the classical Greek period through the 16th century Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2333 World Literature II (ENGL 258)

Introduces the student to a variety of literatures beginning with the 17th century through the 20th century Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2371 Forms of Literature I - Short Story & Novel (ENGL 25 I)

A study of short stories, novels and non-fiction. Analysis and evaluation of major writers in these genres, their techniques and their contributions to our literary heritage. Prerequisite: ENGL 1302 or 2311.3 credit hours.

ENGL 2372 Forms of Literature II - Poetry & Drama (ENGL 252)

A study of poetry and drama, and a study of mythology as it relates to these genres. Analysis of our classical heritage, the origins of drama, the development of contemporary drama and film, and the elements and types of poetry. Prerequisite: ENGL 1302 or 2311. 3 credit hours.

ENGL 2389 Academic Co-op English

An instructional program designed to integrate on-campus study with practical hands-on work experience in English. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of English. Contact the CWE office. 3 credit hours.

ENGLISH AS A SECOND LANGUAGE

ESLC 0300 ESL Listening-Conversation I

This course is designed to develop the non-native speaker's competencies in English. The purpose of the course is to prepare students to function in an English speaking society This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLC 0305 ESL Listening-Conversation II

This course is a continuation of ESLC 0300 and is designed to develop the non-native speaker's competenaes in English. Its purpose is to prepare students to function in an English speaking society This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours. ESLC

ESLC 0310 ESL Listening-Conversation III

This course is a continuation of ESLC 0305 and is designed to develop the non-native speaker's competencies in English. Its purpose is to prepare students to function in an English speaking society This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLG 0300 ESL Grammar I

This course is designed to teach basic English grammar to speakers of other languages. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLG 0305 ESL Grammar II

This course is a continuation of ESLG 0300. It is designed to teach intermediate-advanced English grammar to speakers of other languages. This course may not be used to satisfy the require ments for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLG 0310 ESL Grammar III

This is a continuation of ESLG 0305. It is designed to teach advanced English grammar to speakers of other languages. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours. ESLR

ESLR 0300 ESL Reading I

This course is designed to develop fundamental reading skills for non-native speakers. The purpose of the course is to prepare students to read and comprehend the English language. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLR 0305 ESL Reading II

This course is a continuation of ESLR 0300 and is designed to develop reading competencies for the non-native speaker. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLR 0310 ESL Reading III

This course is a continuation of ESLR 0305 and is designed to develop reading competencies for the non-native speaker. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours. ESLW

ESLW 0300 ESL Writing I

This course is designed to develop the non-native speaker's competencies in writing in the English language. The purpose of this course is to prepare students to communicate through written words. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLW 0305 ESL Writing II

This course is a continuation of ESLW 0300 and is designed to develop competencies in writing in the English language. Its purpose is to prepare students to communicate through written words. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

ESLW 0310 ESL Writing III

This course is a continuation of ESLW 0305 and is designed to develop competencies in writing in the English language. This course may not be used to satisfy the requirements for an associate degree. Prerequisite: Placement through the ESL assessment. Lab required. 3 credit hours.

FIRE SCIENCE

FISC 1011 Firefighter Certification I (FISC 135)

First in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. An introduction to fire department organization, fire apparatus, fire science, firefighter safety, fire alarm and communications, report writing and emergency driving. Prerequisite: Admittance to the program. Lab required. 3 credit hours.

FISC 1012 Firefighter Certification II (FISC 136)

Second in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. A study of fire service hydraulics, water supplies, fire stream practices and fire hose. Prerequisite: FISC 1011. Lab required. 2 credit hours.

FISC 1013 Firefighter Certification III (FISC 137)

Third in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. A study of forcible entry techniques, rope practices, fire extinguisher applications, ventilation practices, ladder practices, self-contained breathing apparatus and the role of the fire service during civil disorders. Prerequisite: FISC 1012. Lab required. 2 credit hours.

FISC 1014 Firefighter Certification IV (FISC 138)

Fourth in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. A study of rescue practices, aircraft fire protection and rescue procedures, structure fire salvage and overhaul techniques and the operations of automatic sprinklers. Prerequisite: FISC 1013. Lab required. 2 credit hours.

FISC 1015 Firefighter Certification V (FISC 139)

Fifth in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. A study of inspection practices, hazardous materials, fire and arson investigation, pre-fire planning, bomb search investigations, emergency management operations and community relations. Prerequisite: FISC 1014. Lab required. 3 credit hours.

FISC 1016 Firefighter Certification VI (FISC 140)

Sixth in a series of courses preparing the student for certification as a Basic Firefighter by the Texas Commission on Fire Protection Personnel Standards and Education. An in-depth study of simulated emergency operations and hands-on live fire training exercises applying basic fire suppression principles and techniques. Prerequisite: FISC 1015 or approval from fire science discipline coordinator. Lab required. 1 credit hour.

FISC 1305 Fundamentals of Fire Protection (FISC 106)

History and philosophy of fire protection; review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection; current legislative developments and career orientation; recruitment and training for fire departments; position classification and pay plans; employee organization; a discussion of current related problems and review of expanding future fire protection problems. 3 credit hours.

FISC 1310 Fire Prevention (FISC 112)

The objectives and view of inspections, fundamental principles, methods, techniques and procedures of fire prevention administration. Fire prevention organization; public cooperation and image; recognition of fire hazards; insurance problems and legal aspects; development and implementation of a systematic and deliberate inspection program. Survey of local, state and national codes pertaining to fire prevention and related technology; relationship between building inspection agencies and fire prevention organizations. Engineering as a solution to fire hazards. Prerequisite: FISC 1305 or permission of Fire Science Program director. 3 credit hours.

FISC 1315 Fire Safety Education (FISC 116)
The study of the design, development and delivery of public fire and bum safety information and education programs including: methods of identification of fire and bum problems; the selection of target problems and strategies to affect reduction; methods of designing and implementing information and education programs; and methods of evaluating program impact. Study includes theoretical and practical skills training in individual, group and mass media communications, instructional **skills,** planning priorities and evaluation techniques. 3 credit hours.

FISC 1320 Fire Administration I (FISC 141)
In-depth study of the organization and management as related to a fire department including budgeting, maintenance of records and reports, and management of fire department officers. Personnel administration and distribution of equipment and personnel and other related topics, including relation of various government agencies to fire protection areas. Fire service leadership as viewed from the company officer's position. Prerequisite: FISC 1305 or permission of Fire Science Program director. 3 credit hours.

FISC 1325 Industrial Fire Protection I (FISC 121)
Specific concerns and safeguards related to business and industrial organizations. **A** study of industrial fire brigade organization and development, plant layout, fire prevention programs, extinguishing factors and techniques, hazardous situations and prevention methods. Gaining cooperation between the public and private fire department organizations. Study of elementary industrial fire hazards in manufacturing plants. 3 credit hours.

FISC 1330 Fire Protection Systems (FISC 117)
A study of basic built-in fire detection, alarm and extinguishing systems. An examination of the devices and systems installed in buildings **used** to protect life and property from fire and support the role of the fire department through early detection of f i and extinguishment. 3 credit hours.

FISC 1335 Building Codes and Construction (FISC 131)
Fundamental consideration and exploration of building construction and design with emphasis on fire resistance of building materials and assemblies, exposures and related data focused on fire protection concerns; review of related statutory and suggested guidelines, both local and national scope. Review of Model Building Codes and Life Safety Codes. 3 credit hours.

FISC 1340 Fire Cause and Origin Determination (FISC 133)
A study of the detection of arson, investigation techniques, case histories, gathering and preserving of evidence; preparing for a court case; selected discussion of laws, decision and opinions; kinds of arsonists, interrogation procedures, cooperation and coordination between fire fighters and arson investigators and other related topics, Prerequisite: FISC 1305 or permission of **Fire** Science Program director. 3 credit hours.

FISC 1450 Firefighting Tactics and Strategy (FISC 148)
Essential elements in analyzing the nature of fire and determining the requirements. Efficient and effective utilization of manpower, equipment and apparatus. Emphasis on pre-planning, study of conflagration problems, fire ground organization problem solving related to fire ground decision making and attack tactics and strategy Use of mutual aid and large scale command problems. Lab required. **4** credit hours.

FISC 2100 Seminar (FISC 296)
Designed to keep students informed on a variety of fire ground techniques developed to address problems encountered during fire suppression operations. May be repeated for credit. 1 credit hour.

FISC 2305 Chemistry of Hazardous Materials I (FISC 125)
Study of chemical characteristics and behavior of various materials that burn or react violently related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids and gases. Emphasis on emergency situations and the most favorable methods of handling f i fighting and control. Prerequisite: FISC 1305 or permission of Fire Science Program director. 3 credit hours.

FISC 2310 Chemistry of Hazardous Materials II (FISC 225)
Hazardous materials covering storage, handling, laws, standards and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuels, and radioactive materials. The formation of toxic fumes and health hazards is also **stressed.** Ignition and combustion characteristics of gases, liquids and solids related to free-burning fire and explosion phenomena. Familiarization with radiological instruments, human exposure to radiation, decontamination procedures, common **uses** of radioactive materials and operational procedures. Prerequisite: FISC 2305. 3 credit hours.

FISC 2315 Hazardous Materials III (FISC 226)
An in-depth study of the tactics used to correct problems encountered at hazardous materials incidents including: diking, drum/cylinder plugging and/or repair, evacuation procedures, **use** of monitoring equipment. Review of legislative mandates applicable to hazardous material incident responders. Students will have extensive "hands-on" experience throughout the **course** of instruction. Prerequisite: FISC 2310. 3 credit hours.

FISC 2320 Fire Administration II (FISC 241)
Study to include insurance rates and ratings; preparation of budgets, administration and organization of training in the fire department, city water requirements, fire alarm and communication systems; importance of public relations, report writing and record keeping; measurements of results, **use** of records to improve procedures and other related topics; legal aspects relating to fire prevention and fire protection with **stress on** municipal and state agencies; design and construction of fire department buildings. 3 credit hours.

FISC 2330 Introduction to CAMEO (Computer-Aided Management of Emergency Operations) (FISC 240)

An in-depth study of the CAMEO computer program and its usage for hazardous material incident response. Data manipulation within the CAMEO system for pre-incident planning, chemical listing, mapping and risk assessments are explored. Students will have extensive "hands-on" experience throughout the course of instruction. Prerequisite: FISC 2305. Lab required. 3 credit hours.

FISC 2335 Methods of Fire Service Instruction (FISC 229)

Principles of learning and teaching including instructor responsibilities, lesson plan design and development, motivation for learning, methods of teaching, effective use of instructional aids, safety considerations, evaluation techniques, record keeping and practice teaching. 3 credit hours.

FRENCH

FREN 1100 French Conversation I (FREN 293)

Intensive practice in conversational French. Prerequisite: FREN 1412 or consent of discipline coordinator. Co-requisite: FREN 2311. I credit hour.

FREN 1110 French Conversation II (FREN 294)

A continuation of French 1100. Prerequisite: FREN 1100. Co-requisite: FREN 2312. 1 credit hour.

FREN 1411 Beginning French I (FREN 191)

An introduction to the four basic **skills** of speaking, reading, writing, and listening, designed for students with little or no previous language training. Also includes an introduction to selected aspects of French civilization. Instruction is enhanced by the use of tapes, slides, computer software, and video cassettes. Lab required. 4 credit hours.

FREN 1412 Beginning French II (FREN 192)

A continuation of French 1411. Prerequisite: French 1411. Lab required. 4 credit hours.

FREN 2303 French Literature I (FREN 295)

A survey of French literature in its historical context from the sixteenth through the eighteenth century. Continued practice in the basic language skills. Reading of selected writers such as Ronsard, Molière, Voltaire. Prerequisite: FREN 2312. 3 credit hours.

FREN 2304 French Literature II (FREN 296)

A continuation of French 2303. A survey of French literature in the nineteenth and twentieth centuries with reading from representative writers such as Hugo, Baudelaire, and Camus. Prerequisite: FREN 2312. 3 credit hours.

FREN 2311 Intermediate French I (FREN 291)

Review and continued development of the four basic language skills with increased attention to reading and writing. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: FREN 1412 or consent of discipline coordinator. Co-requisite: FREN 1100. 3 credit hours.

FREN 2312 Intermediate French II (FREN 292)

A continuation of French 2311. Prerequisite: FREN 2311. Co-requisite: FREN 1110. 3 credit hours.

GEOGRAPHY

GEOG 1301 Physical Geography (GEOG 151)

Introduction to the study of the physical environment. Emphasis on climates, landforms, vegetation and spatial relationships of selected geographical regions of the world. Lab required. 3 credit hours.

GEOG 1302 Cultural Geography (GEOG 152)

Introduction to the study of the cultural and economic environment. Emphasis on origins, diffusion and distribution of races, religions and languages. Lab required. 3 credit hours.

GEOG 1303 World Regional Geography (GEOG 153)

A study of major developed and developing regions with emphasis on the awareness of prevailing world conditions and developments, including emerging conditions and trends, and the awareness of diversity of ideas and practices to be found in those regions. Lab required. 3 credit hours.

GEOLOGY

GEOL 1401 Earth Science (PSCI 154)

Concepts of earth processes and relation to man including basic principles from physical and historical geology, oceanography and meteorology for the non-science major. Lab required. 4 credit hours.

GEOL 1402 Dinosaurs!

A study of the evolution, ecology, and extinction of the dinosaurs from a physical and historical geology perspective. Dinosaur controversies will be examined in light of recent evidence. Field trips and class projects will focus on dinosaur families and current topics. Lab required. 4 credit hours.

GEOL 1403 Physical Geology (GEOL 191)

Structure of the earth and its composition including topographic maps, rocks and minerals, and geologic processes. These processes are related to weathering, gradation by wind and running water, ground water, glaciers, oceans and volcanism. Lab required. 4 credit hours.

GEOL 1404 Historical Geology (GEOL 192)

The earth and its inhabitants as revealed in rocks and fossils. Brief survey of the plant and animal kingdoms, elementary principles of stratigraphy and a systematic study of the development of the earth from its origin as a planet to the present. Lab required. Prerequisite: GEOL 1403 or consent of instructor. 4 credit hours.

GEOL 2409 Rocks and Minerals Identification (GEOL 193)

The chemistry, classification, crystallography, identification and occurrence of minerals. The formation, classification and identification of igneous, sedimentary and metamorphic rocks will also be covered. This course is intended primarily for geology majors. Prerequisite: GEOL 1403. Lab required. 4 credit hours.

GEOL 2389 Academic Co-op Geology
An instructional program designed to integrate on-campus study with practical hands-on work experience in geology. In conjunction with class seminars, the individaul student will set specific goals and objectives in the study of geology. Contact the CWE office. 3 credit hours.

GERMAN

GERM 1100 Conversational German I (GERM 293)
Intensive practice in conversational German. Prerequisite: GERM 1412 or consent of discipline coordinator. Co-requisite: GERM 2311. 1 credit hour.

GERM 1110 Conversational German II (GERM 294)
Continuation of German 1100, intensive practice in conversational German. Prerequisite: GERM 1100. Co-requisite: GERM 2312. 1 credit hour.

GERM 1411 Beginning German I (GERM 191)
Introduction to the four basic skills of speaking, reading, writing, and listening. Designed for students with little or no previous language training. Also includes an introduction to German civilization. Instruction enhanced by the use of tapes, slides, computer software, and video cassettes. Lab required. 4 credit hours.

GERM 1412 Beginning German II (GERM 192)
Continuation of GERM 1411 with an emphasis on the reading of elementary texts. Prerequisite: GERM 1411 or equivalent. Lab required. 4 credit hours.

GERM 2303 German Literature I
Building on the language skills and vocabulary acquired in Intermediate and Conversational German, this course introduces students to German literary texts selected to increase reading and translating fluency Students will read and discuss the texts in German, though the translation of difficult passages and idioms into English will be part of the exercise. Prerequisite: GERM 1412 and permission of instructor. 3 credit hours.

GERM 2304 German Literature II
The continuation of GERM 2303 will introduce students to German literary texts selected to enhance their reading and translation ability while familiarizing them with some aspects of German literature and culture in the eighteenth, nineteenth, and twentieth centuries. Students will read and discuss the texts in German, though the translation of difficult passages and idioms into English will be part of the exercise. Prerequisite: GERM 2303 and permission of instructor. 3 credit hours.

GERM 2311 Intermediate German I (GERM 291)
Review and continued development of the four basic language skills with increased attention to reading and writing. Instruction enhanced by the use of tapes, slides, and other audio-visual aids. Prerequisite: GERM 1412 or consent of discipline coordinator. Co-requisite: GERM 1100. 3 credit hours.

GERM 2312 Intermediate German II (GERM 292)
Continuation of German 2311. Prerequisite: GERM 2311. Co-requisite: GERM 1110. 3 credit hours.

GOVERNMENT

GOVT 2301 American Government I (PLSC 261)
Introduction to the study of politics and government in the United States. Topics include the origin and development of constitutional democracy in the United States, emphasizing the constitutions of the United States and the state of Texas, federalism and intergovernmental relations, local government and the political process. (This course may not be taken if the student has received credit for Government 252 or Political Science 261.) Lab required. 3 credit hours.

GOVT 2302 American Government II (PLSC 262)
Examines the institutional structures of government at both national and state levels, including the legislative process, the executive and bureaucratic structures and the judicial process. Additional topics include civil rights and civil liberties, domestic policy, foreign relations and national defense. (This course may not be taken if the student has received credit for Government 251 or Political Science 262.) Lab required. 3 credit hours.

GOVT 2304 Introduction to Political Science (PLSC 155)
Introduction to the history and methods of political science. Includes an examination of the basic concepts of politics and political behavior, an overview of the history of the discipline, the scope and methods of political inquiry and an exploration of the basic models of politics that operate in the modem world. This course does not apply toward the Texas legislative requirement of 6 credit hours of American government for a bachelor degree. Lab required. 3 credit hours.

GOVT 2389 Academic Co-op Government
An instructional program designed to integrate on-campus study with practical hands-on work expeience in government. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of government. Contact the CWE office. 3 credit hours.

HEALTH SCIENCE

HLSC 1300 Medical Terminology (HLSC 132)
Study of the basic structure of medical words. Included are prefixes, suffixes, roots, combining forms and plurals. Emphasis on pronunciation, spelling and definition. Basic understanding of human anatomy and physiology and the terms relating to these and their medical applications are emphasized. 3 credit hours.

HLSC 2389 Academic Co-op Health Sciences
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is eamed for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

HISTORY

HIST 1301 U.S. History I (HIST 151)
History of the United States is presented focusing on the development of American characteristics and institutions; the forging of a new society from European, African and American cultures. Emphasis on the colonial and early national periods through the Civil War and Reconstruction HIST 1301 and HIST 1302 fulfill the Texas legislative requirement for 6 credit hours of history for baccalaureate degrees. Lab required. 3 credit hours.

HIST 1302 U.S. History II (HIST 152)
History of the United States from 1877 to the present day. Focus is on the development of American society in the twentieth century; response to the urban-industrial environment, the United States as a world power and post-World War II society. This course and HIST 1301 fulfill the Texas legislative requirement for 6 hours of history for baccalaureate degrees. Lab required. 3 credit hours.

HIST 2301 History of Texas (HIST 253)
History of Texas from the Spanish period to the present. Emphasis on the period of Anglo-American settlement, revolution, Republic and the development of the modern state. Lab required. 3 credit hours.

HIST 2311 Western Civilization I (HIST 251)
A survey of European civilization from ancient times to the Renaissance. Topics include Greece and Rome, the Church, feudalism, the commercial revolution, the Reformation and early colonial movement. Lab required. 3 credit hours.

HIST 2312 Western Civilization II (HIST 252)
Continuation of History 2311. Western Europe is surveyed from the Renaissance to the present. Topics include the Age of Revolution, the beginning of industrialism, the growth of nationalism and democracy in the 19th century, causes and consequences of the two world wars and modern Europe. Lab required. 3 credit hours.

HIST 2370 Studies in US. History (HIST 297)
A treatment of selected topics in the history of the United States. This course may be repeated for credit only when the course focuses on new topics. Prerequisite: 6 semester hours of history. Lab required. 3 credit hours.

HIST 2371 Advanced Studies in U.S. History (HIST 298)
In-depth study of selected topics in minority local, regional, national or international topics. This course may be repeated for credit only when the course focuses on new topics. Prerequisite: 6 semester hours of history. Lab required. 3 credit hours.

HIST 2389 Academic Co-op History
An instructional program designed to integrate on-campus study with practical hands-on work experience in History. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of History. Contact the CWE office. 3 credit hours.

HORTICULTURE LANDSCAPE TECHNOLOGY

HORT 1100 Horticulture and Landscape Technology Seminar (HLT 296)
A topic will be presented and a discussion led by each student during the semester. Topics based on the nursery and landscape industry. Credit based on presentation, class participation and a written paper. May be repeated for credit. Prerequisite/Co-requisite HORT 1300 and concurrent enrollment in another HORT course at CCCC. 1 credit hour.

HORT 1200 The Landscape Industry
The study of the landscape industry as a whole, including the introduction to landscape design, construction and management and general plant care. Special attention is focused on preparing students to take the Certified Landscape Professional exam administered by the Texas Association of Landscape Contractors. (Please note that other requirements may apply to the sitting of an individual.) There are no prerequisites for this course. Lab required. 2 credit hours.

HORT 1225 Irrigation Systems (HLT 220)
A comprehensive study of irrigation systems including equipment, design and performance. Includes residential and commercial applications. Lab required. 2 credit hours.

HORT 1300 Basic Horticulture (HLT 190)
Introduction to the culture of plants, including their distribution, factors which affect growth, plant structures, propagation and the impact of plants on the environment and the economy. Lab required. 3 credit hours.

HORT 1305 Soils and Plant Nutrition (HLT 125)
The study of different soil types and how they affect the availability of nutrients. Emphasis on making and keeping the soil healthy, proper drainage, and organic and inorganic properties in a soil. Includes the study of organic and inorganic fertilizers, soil additives, organic matter, proper horticultural practices and the role of micro and macro-organisms in the soil. Prerequisite/Co-requisite HORT 1300. Lab required. 3 credit hours.

HORT 1310 Plant Pests and Controls (HLT 126)
A comprehensive course in the pests that inhibit plant growth and production and the methods used to control them. Includes biological, chemical and integrated pest management (IPM) programs. Emphasis on beneficial insects, fungi and bacteria. Prerequisite/Co-requisite HORT 1300. Lab required. 3 credit hours.

HORT 1315 Interior Plants (HLT 117)
Students are introduced to plants which are utilized in interior landscapes and the special maintenance required. Particular attention is given to light and water requirements, temperature control, planting media and design of interior plantings. Lab required. 3 credit hours.

HORT 1320 Turf-Grass Science and Management (HLT 140)

Introduction to turf-grass science and management. Characteristics of turf-grasses, identification and culture are studied. Modem management practices are explained, including installation, renovation and maintenance. Identification and control of diseases and insects that affect turf-grasses will also be studied. Lab required. **3** credit hours.

HORT 1330 Native Plants of Texas (HLT 115)

A non-majors course devoted to the study of those plants which are considered native to the state of Texas. Includes identification and landscape use of native plank, and the concept of xeriscape. Lab required. **3** credit hours.

HORT 1335 Plants of North Texas (HLT 116)

A non-majors course devoted to the study of those plants used in the North Texas area, including trees, shrubs, groundcovers, vines and flowers. Includes identification, use and maintenance of plants. Lab required. **3** credit hours.

HOW 1400 Woody Plant Materials (HLT 191)

The study of the woody plants collected or grown for use in the landscape industry with an emphasis on the North Texas area. Includes trees, shrubs, woody vines and ground covers. Prerequisite/Co-requisite HORT **1300.** Lab required. **4** credit hours.

HORT 1401 Herbaceous Plant Materials (HLT 192)

The study of non-woody ground covers and vines, and annual and perennial flowers cultivated or collected for use in the landscape industry. Prerequisite/Co-requisite HORT 1300. Lab required. **4** credit hours.

HORT 2300 Introduction to Landscape Design (HLT 210)

An introductory course covering the history, basic drawing **skills,** graphic communication, site planning and the elements of landscape design. Prerequisite/Co-requisite HORT **1300.** Lab required. **3** credit hours.

HORT 2305 Floriculture (HLT 275)

Production of greenhouse crops, including flowering plank, herbs and interior plants. Emphasis on historical development, growing requirements and the marketing of greenhouse produced plants. Prerequisite/Co-requisite: HORT **2430.** Lab required. **3** credit hours.

HORT 2315 Landscape Management (HLT 260)

An introduction to landscape maintenance practices, including the proper care of trees, shrubs and turf. Includes organic and inorganic fertilization and pest control. Emphasis also placed on cost analysis, estimating and safety Prerequisite/Co-requisite: HORT **1300,** Co-requisite: **1400** and 1401. Lab required. **3** credit hours.

HORT 2320 Field Experience (HLT 290)

On-the-job experience in a work assignment related to student's field of study. C d i t is earned for completion of specific learning objectives and participation in an arranged weekly seminar. Students must work 20 hours per week and be concurrently enrolled in another horticulture course at CCCC. Prerequisite/

Co-requisite HORT 1300/Co-requisite: **1400,1401** and/or consent of the coordinator. 3 credit hours.

HORT 2400 Site Analysis and Surveying (HLT 230)

Analyzing a site to determine existing structures, plants, grades and potential problems. Emphasis on surveying, measurement and the mapping of existing conditions. Includes correct record keeping and area measurement. Prerequisite/Co-requisite HORT **1300.** Lab required. **4** credit hours.

HORT 2405 Landscape Construction (HLT 225)

Construction materials and their uses in the landscape industry, including soil preparation, wood, concrete and masonry construction, landscape lighting, pools and spas, and general construction details. Prerequisite/Co-reqisite: HORT **1300,** Co-requisite: **1400, 1401.** Lab required. **4** credit hours.

HORT 2410 Landscape Business Operations (HLT 235)

Detailed study of the structure of the landscape business including cost estimating, organization, equipment needs, interpretation of financial reports, marketing, and labor and equipment management. Emphasis on the different types of landscape operations, marketing, sales presentations, legal forms and contracts, construction law and safety Prerequisite/Co-requisite: HORT 1300, Lab required. **4** credit hours.

HORT 2415 Arboriculture (HLT 270)

Proper care of trees including pruning, spraying, fertilizing, protection during construction and removal of dead or diseased trees. Continued study of pests which attack trees, and the tools and equipment utilized by arborists included. Prerequisite/Co-requisite: HORT 1300, Co-requisite: **1310.** Lab required. **4** credit hours.

HORT 2420 Home Landscape Design (HLT 211)

Intensive course in landscape design. Emphasis on proper plant selection. Introduction to the development of the design beyond the conceptual stage, and general construction details. Prerequisite: HORT 2300. Lab required. **4** credit hours.

HORT 2425 Plant Propagation (HLT 265)

The principles and practices of sexual and asexual plant propagation, including grafting, budding, layering, cuttings and seed germination. Soil mixes, plant structures and the equipment and facilities for proper plant propagation discussed. Introduction to tissue culture. Prerequisite/Co-requisite: HORT 1300, Lab required. **4** credit hours.

HORT 2430 Nursery and Greenhouse Production (HLT 250)

The study of the production of nursery crops in the field, containers and greenhouse for use in the landscape industry. Includes equipment, materials, structures, management, financial considerations and marketing related to nursery production. Emphasis on field and outdoor container crops. Prerequisite/Co-requisite: HORT **1300,** Co-requisite: **1400, 1401.** Lab required. **4** credit hours.

HORT 2500 Practicum (HLT 293)

Intensive on-the-job training during a continuous 10-week period, required of all landscape technology majors. Students will have hands-on experiences in the landscape field and will be required to keep a journal of their experiences. Prerequisite: Consent of discipline coordinator. 5 credit hours.

HUMAN DEVELOPMENT

HDEV 0100 College Success Skills (HDEV 030)

Designed to assist students to acquire **skills** and information necessary to reach his/her educational objectives. The class **will** explore resources, programs and services available at CCCC which facilitate this process. (This course may not be used to satisfy the requirements of an associate's degree). 1 credit hour.

HDEV 0200 Study Skills (HDEV 010)

Designed to assist students in improving their study **skills** and habits. Various methods and techniques will be explored including: time management, notetaking, reading, communication, test preparation, test taking, problem solving and learning styles. (This course may not be used to satisfy the requirements of an associate's degree). **2** credit hours.

HDEV 0320 Managing Math Anxiety

Techniques will be taught in an effort to enable students to reduce anxiety through increased skill development in the areas of mathematics, study strategies, test-taking strategies, **anxiety** awareness, learning style awareness, relaxation and wellness. (This course may not be used to satisfy the requirements of an associate's degree.) **3** credit hours.

HDEV 1200 Career Planning and Development (HDEV 103)

Career choices will be explored in relationship to individual interests, values, skills and abilities. Group and independent activities will highlight occupational opportunities as well as establish long and short range career development strategies. **On** campus computerized career guidance will be explored. **2** credit hours.

HDEV 1205 Personal Development (HDEV 105)

Designed to enhance skills which lead to increased motivation and the development of a satisfying and healthy lifestyle. Topics include self-esteem, personal and educational goal setting, motivation, interpersonal relationships, societal influences, personal roles, and college survival. **2** credit hours.

HDEV 1300 Dweloping Leadership Potential (HDEV 102)

Concepts of leadership will be explored both theoretically and practically Topics include leadership style, strategies, problem-solving, decision-making, communication, value systems and group methods. These leadership skills can be applied to the student's personal, professional and business interactions. **3** credit hours.

HUMANITIES

HUMA I301 Introduction to the Humanities (HUM 151)

Designed to achieve a clearer understanding of the nature of humankind and fhe need to mate. Explores the relationship between one's own values, feelings, attitudes, ideas and cultural achievements. 3 credit hours.

HUMA 2389 Academic Co-op Humanities

An instructional program designed to integrate on campus study with practical hands-on work experience in humanities. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of humanities. Contact the CWE office. 3 credit hours.

INTERIOR DESIGN/COMMERCIAL (COMPUTER AIDED DRAFTING AND DESIGN)

INTD 1301 Applied Interior Design I (IND 121)

Provides information in planning interior floor plans an elevations with consideration to traffic **flow** and mom functions. Included is planning of traditional as well as contemporary interiors, multiple design solutions; coordination of schemes, styles and furnishings ranging from the single dwelling to the business and recreational complex. Prerequisite: CADD 1301 and ARTS 1316. 3 credit hours.

INTD 2302 Applied Interior Design II (IND 221)

Will apply knowledge and skills from INTD 1301 to advanced solutions to special problems of commercial and residential interiors, working drawings, specifications and client-designer communications. Prerequisite: INTD 1301. 3 credit hours.

INTD 2303 Applied Interior Design III (IND 222)

Designed to help the interior design student who is in the final semester prepare a portfolio of professional quality. The portfolio will be critiqued on a professional basis. Prerequisite: INTD 2302. Lab required. 3 credit hours.

JAPANESE

JAPN 1411 Beginning Japanese I (JAPN 191)

An introduction to the basic skills of speaking, reading, writing, and listening with attention to selected aspects of Japanese culture. Lab required. **4** credit hours.

JAPN 1412 Beginning Japanese II (JAPN 192)

A continuation of JAPN 1411. Prerequisite: JAPN 1411. Lab required. **4** credit hours.

JAPN 2311 Intermediate Japanese I

Continuing development of the four basic **skills** of speaking, reading, writing, and listening, emphasizing conversational and reading skills. Designed for students who have completed Beginning Japanese II. Additional Kanji structures are introduced. Also includes attention to selected aspects of Japanese culture. Prerequisite: JAPN 1412. Lab required. 3 credit hours.

JAPN 2312 Intermediate Japanese II

Continuing development of speaking, reading, writing, and listening, emphasizing conversational and reading skills. Designed for students who have completed Intermediate Japanese I. Additional Kanji and grammar structures are introduced. **Also** includes attention to selected aspects of Japanese culture. Prerequisite: JAPN 2311. Lab required. 3 credit hours.

JOURNALISM

(See Communications and **Photography**)

LEGAL ASSISTANT

LEGL 1301 Law and Judicial Systems (LEGL 131)

An introduction to the history of American law, law of evidence, civil and criminal procedure, and to various areas of both civil and criminal substantive law. Study of various personnel in the legal field, the unauthorized practice of law and legal ethics. Lab required. 3 credit hours.

LEGL 1302 Legal Research (LEGL 132)

Fundamentals of legal bibliography and legal research. Practical research problems utilizing legal books and sets of books. Techniques of legal analysis. Samples of various legal writings will be prepared by students. Lab required. 3 credit hours.

LEGL 1305 Law Office Management (LEGL 135)

Ethical considerations, office organization, specialized bookkeeping and accounting for attorneys, fees and billing procedures, scheduling and calendering, management of personnel, proofreading, management of investigations and file preparation, legal drafting, management and organization procedures for specialized areas of law, special considerations with respect to attorney's trust account, preparation of law office forms, checklists and files, and disbursement on behalf of clients. 3 credit hours.

LEGL 2301 Civil Procedure (LEGL 230)

Overview of civil litigation in both state and federal courts with particular emphasis on the areas in which a legal assistant can assist the trial attorney Particular attention is paid to preparation for litigation, discovery procedures (interrogatories, requests for admissions, depositions and documents production), pre-trial proceedings and trial. Preparation of various legal documents will be required. Lab required. 3 credit hours.

LEGL 2303 Family Law (LEGL 251)

Marriage, separation, adoption, divorce, custody, legitimacy, support and other related legal topics. Emphasis on Texas law: Texas Family Code, community property and case law. 3 credit hours.

LEGL 2304 Wills, Trusts and Probate (LEGL 252)

Fundamental principles of wills and trusts. The organization and jurisdiction of the Texas Probate Court, analysis of the administration of estates in Texas Probate, guardianships and independent administration of decedents' estates, and a review of estate and inheritance taxes. 3 credit hours.

LEGL 2306 Business Organizations (LEGL 261)

The legal structure of business organizations: corporations, joint stock companies, common law contracts, professional associations, proprietorships, limited partnerships and partnerships. 3 credit hours.

LEGL 2307 Tort and Insurance Law (LEGL 262)

Fundamental principles of the law of tort and insurance. Includes a study of the research and investigation techniques necessary for tort and insurance negotiation, settlement and litigation. 3 credit hours.

LEGL 2308 Business Legal Environment (LEGL 264)

Role of law in business and society, legal reasoning, sources of law, social policy and legal institutions, antitrust, security regulations, consumer protection, environmental law, worker health and safety employment discrimination, etc. 3 credit hours.

LEGL 7300 Cooperative Education I (LEGL 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prequisite: Consent of instructor. Contact the CWE office. 3 credit hours,

MARKETING

MRKT 1300 Fashion Marketing (MRKT 122)

Introduction into the field of fashion through the examination of modem merchandising techniques. Current trends and developments are covered, as well as the history of fashion merchandising. 3 credit hours.

MRKT 1305 Principles of Marketing (MRKT 228)

The scope and structure of marketing are examined. Marketing functions, consumer behavior, market research, sales forecasting, and relevant state and federal laws are analyzed. 3 credit hours.

MRKT 1310 Principles of Advertising (MRKT 227)

Introduction to the principles, practices and media of persuasive communication. Topics include buyer behavior, use of media and ad agency operations. 3 credit hours.

MRKT 1315 Principles of Selling (MRKT 222)

Students learn and practice selling techniques including outside and inside sales, telemarketing, presentations, reaching decision makers, closing sales, after-sale evaluations, and understanding buyers and consumers. 3 credit hours.

MRKT 1316 Sales Management (BSAD 226)

Leadership skills are studied, as they apply to understanding and managing sales personnel. Labs allow practice in selling, giving presentations, solving problems particular to sales settings and sales personalities, and internal reward systems. 3 credit hours.

MRKT 1320 Fashion Design (MRKT 126)

A basic course providing a background of knowledge specific to the fashion designer's job and responsibilities, its history and the relationship of apparel design to human needs from an industrial

point of view. Custom design, design for mass, line production, coordination, selection, color and texture are covered. There is no sewing involved in this course. **3** credit hours.

MRKT 1325 Fashion Buying (MRKT 220)
Covers the responsibilities of a buyer. Sources of buying information, selection of fashion merchandise, methods of inventory, elements of profit, pricing, markup and markdown are studied. Economic issues relating to domestic versus offshore apparel goods are researched. 3 credit hours.

MRKT 2300 Fashion Show Production (MRKT 225)
Production of an actual fashion show, including lighting, community involvement, marketing, modeling, apparel selection, set design, crew organizations election of primary target market. Offered only in spring semesters. Prerequisites: MRKT 1300, MRKT 1320, and MRKT 1325 or consent of instructor. 3 credit hours.

MRKT 2305 Market Research (MRKT 221)
Research techniques applied to problems of measuring market and sales potential, allocation of territories, demand for goods, consumer purchasing power, sales forecasts. Students learn use of library and other secondary sources, survey research and design of questionnaires, fundamentals of sampling and data analysis. 3 credit hours.

MRKT 2310 Promotion Techniques (MRKT 224)
Methods in how to manage promotion budgets, motivate and reward sales personnel, as well as construct and manage complete promotion programs. Emphasizes the interaction and coordination of promotional planning, implementation and evaluation with an organization's overall marketing strategy. Prerequisite: MRKT 1305, 1310 or consent of instructor. 3 credit hours.

MRKT 2315 Business Ethics (MRKT 223)
Ethical implications of current issues. Ethical and financial problems in operating businesses (locally, nationally internationally) are addressed. The course emphasizes social responsibility of business as will as ethical dilemmas of both buyers and sellers. 3 credit hours.

MRKT 2320 International Marketing (MRKT 226)
Introduction to marketing in an international, multicultural environment. Emphasis on cultural, corporate, and political differences and interactions in business milieu internationally. Prerequisite: MRKT 1305. 3 credit hours.

MRKT 2330 Marketing Special Topics (MRKT 297)
In-depth study of selected topics on current issues in marketing and marketing options. Course may be repeated for credit as topics vary Instructor permission required. 3 credit hours.

MRKT 7300 Cooperative Education I (MRKT 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

MRKT 7305 Cooperative Education II (MRKT 705)
Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: MRKT 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

MATHEMATICS
(For Managing Math Anxiety, see Human Development HDEV 0320)

MATH 0115 Introductory Geometry (MATH 070)
An introductory course in plane and solid geometry recommended for students who have not passed the TASP geometry mathematics requirement and required for students planning to take college algebra (MATH 1314), trigonometry (MATH 1316), or precalculus (MATH 2312) who have not passed high school geometry. Prerequisite MATH 0305 or equivalent. Lab required. 1 credit hour.

MATH 0300 Basic Mathematics (old title: Developmental Mathematics) (MATH 010)
The study of basic arithmetic operations with whole numbers, fractions, decimals, percent, basic geometry and an introduction to algebra including signed numbers, expressions and equations. This course may not be used to *satisfy* the requirements of an associate's degree. Lab required. 3 credit hours.

MATH 0302 Pre-Algebra
This course is designed to develop or review those mathematical skills required for success in beginning algebra. Prealgebra includes a review of arithmetic; an introduction to algebra involving operations with integers, simple algebraic expressions, and polynomials; solving linear equations; and geometric applications. This course may not be used to satisfy the requirements of an associate's degree. Lab required. 3 credit hours.

MATH 0305 Beginning Algebra (old title: Developmental Algebra) (MATH 020)
The study of signed numbers, expressions, linear equations and inequalities, polynomials, radicals, exponents, quadratic equations and graphing. This course may not be used to satisfy the requirements of an associate's degree. Prerequisites. MATH 0300 or MATH 0302 or equivalent. Lab required. 3 credit hours.

MATH 0310 intermediate Algebra (MATH 030)
The study of polynomials, rational expressions, radicals, exponents, quadratic equations and inequalities, systems of equations, functions, graphing, parabolas and circles. This course may not be used to satisfy the requirements of an associate's degree. Prerequisite: MATH 0305 or equivalent. Lab required. 3 credit hours.

MATH 1314 College Algebra (MATH 181)
Study of relations and functions, including linear, polynomial, rational, exponential and logarithmic, inverse functions, composition of functions, absolute value, theory of equations, complex numbers, systems of equations, matrices, progressions and the binomial theorem. Prerequisite: Two years high school algebra or equivalent within the last three years and one year of high school geometry or Math 0115. Lab required. 3 credit hours.

MATH 1316 Trigonometry (MATH 182)

Study of angular measure, functions of angles, identities, solution of triangles, equations, inverse trigonometric functions, complex numbers and polar coordiites. Prerequisite: Two years of high school algebra and one year of high school geometry within the last three years. 3 credit hours.

MATH 1324 Pre-Calculus for Business and Economics (MATH 151)

Designed for non-math majors which includes a study of equations, inequalities, functions, matrices, linear programming including the simplex method, probability and statistics. Prerequisite: Two years high school algebra or equivalent within the last three years. Lab required. 3 credit hours.

MATH 1325 Calculus for Business and Economics (MATH 152)

A continuation of MATH 1324; a study of finite differential calculus, finite integral calculus, including exponential and logarithmic functions, functions of several variables and basic differential equations. Prerequisite: MATH 1324 within the last three years. Lab required. 3 credit hours.

MATH 1332 Contemporary Mathematics (MATH 150)

Intended for general liberal arts or non-engineering technical students. Topics include solving equations, graphs and functions, scheduling, circuits and other math topics in management science, counting methods, probability and consumer mathematics. Prerequisite: Two years high school algebra or equivalent within the last three years. 3 credit hours.

MATH 1342 Statistics (MATH 153)

Study of data collection and tabulation, measures of central tendency correlation, linear regression, statistical distributions, probability and hypothesis testing with applications in various fields. Prerequisite: Two years of high school algebra or equivalent within the last three years. Lab required. 3 credit hours.

MATH 1348 Analytic Geometry (MATH 183)

Study of lies, distance, conics, transformation of coordinates, polar coordiites, parametric equations and other selected topics. Prerequisite: MATH 1314 and 1316 or four years of standard high school math within the last three years. 3 credit hours.

MATH 2312 Pre-Calculus for Mathematics and Sdence (MATH 187)

Study of the algebra of functions and analytic geometry. Includes polynomial, rational, exponential, logarithmic and trigonometric functions, complex numbers, vectors, and the study of conics, transformation of coordinates, rotation of axes, polar coordinates and parametric equations. The emphasis will be on mathematical reasoning and problem solving in preparation for calculus. Prerequisite: MATH 1314 or equivalent within the last three years. Lab required. 3 credit hours.

MATH 2318 Unear Algebra (MA   292)

Study of linear equations, matrices, real vector spaces, linear transformations and eigenvectors. Prerequisite MATH 2414 within the last three years. 3 credit hours.

MATH 2320 Differential Equations (MATH 293)

Study of ordinary differential equations including systems of equations, linear equations, separation of variables, series solutions, uniqueness of solutions, initial value problems, transform methods and singular points. Prerequisite: MATH 2414 within the last three years. 3 credit hours.

MATH 2413 Calculus I (MATH 191)

Study of limits, continuity, the derivative, applications of the derivative, the indefinite and definite integral, and derivatives and integrals of trigonometric, logarithmic and exponential functions. Prerequisite: MATH 2312 or equivalent (high school analysis or precalculus) within the last three years. Lab required. 4 credit hours.

MATH 2414 Calculus II (MATH 192)

Study of calculus of inverse functions, applications of integration, techniques of integration, infinite series, differential equations and polar functions. Prerequisite: MATH 2413 within the last three years. Lab required. 4 credit hours.

MATH 2415 Calculus III (MATH 291)

Study of vectors in two and three dimensions, vector-valued functions, functions of several variables, multiple integration and the calculus of vector fields. Prerequisite: MATH 2414 within the last three years. Lab required. 4 credit hours.

MATH 2389 Academic Co-op Mathematics

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

MUSIC

BUSI 2379 Business of Music I

The world of the music industry is presented. Careers, publishing, promotion, copyrights, agents, showmanship and management for large and small ensembles are discussed. 3 credit hours.

BUSI 2378 Business of Music II

A further study of theory and practice of music business management with hands-on experience planning and managing performers' careers. 3 credit hours.

MUSI 1116 Aural Skills I

Skills developed include sight-singing, solmization, melodic and harmonic dictation. Co-requisite: MUSI 1311. 1 credit hour.

MUSI 1117 Aural Skills II

A continuation of MUSI 1116 with further emphasis on diatonic sight-singing and dictation. Co-requisite: MUSI 1312. 1 credit hour.

MUSI 1131 Ensemble (MUS 170)

Small instrumental ensembles. Membership is through audition by the appropriate director. This course may be repeated for adit. 1 credit hour.

MUSI 1159 Vocal Ensemble (MUS 180)
The Collin County Vocal Ensemble (known as "Expressions") is an ensemble of approximately 12-16 mixed voices and rhythm section. Repertoire includes literature appropriate for the smaller emsemble of all styles with a major emphasis on vocal jazz styles. A number of performances are given each semester. Prerequisite: Audition. Co-requisite: MUSI 2143 Collin County Chorale. This course may be repeated for credit. 1 credit hour.

MUSI 1162 Vocal Diction I
Principles of basic pronunciation and enunciation in English and Italian. Phonetic study with practical application to vocal literature. 1 credit hour.

MUSI 1165 Vocal Diction II
Principles of basic pronunciation and enunciation in German and French. Phonetic study with practical application to vocal literature. 1 credit hour.

MUSI 1171 Leisure Piano I (MUS 161)
Introduction to fundamentals of keyboard technique for the non-music major. May be repeated for credit. 1 credit hour.

MUSI 1172 Leisure Piano II (MUS 162)
Continuation of Leisure Piano I with emphasis on development of sight reading skills, repertoire and keyboard technique. May be repeated for credit. 1 credit hour.

MUSI 1173 Secondary Applied Music (MUS 191)
Private instruction in the area of the student's concentration, consisting of one 25 minute lesson per week. Audition required. Fee required. 1 credit hour.

MUSI 1181 Beginning Piano I
Introduction to fundamentals of keyboard as required of music majors, but open to all students. Five finger major and minor positions, two octave major scales, arpeggios, sight reading, elementary chord progressions, elementary piano repertoire. May be repeated for credit. Lab required. 1 credit hour.

MUSI 1182 Beginning Piano II
A continuation of MUSI 1181 with further development on two octave minor scales, arpeggios, diatonic chord progressions and piano repertoire. May be repeated for credit. Prerequisite: MUSI 1181. Lab required. 1 credit hour.

MUSI 1183 Class Voice (MUS 155)
Class instruction in the fundamentals of singing including breath support, correct vocal production and diction. For the non-music major. This course may be repeated for credit. 1 credit hour.

MUSI 1192 Class Guitar I (MUS 157)
Class instruction in the fundamentals of beginning guitar. For the non-music major. This course may be repeated for credit. 1 credit hour.

MUSI 1193 Class Guitar II (MUS 158)
Continuation of Class Guitar I employing advanced reading skills, chord structures and techniques. This course may be repeated for credit. Prerequisite: MUSI 1192. 1 credit hour.

MUSI 1263 Improvisation (MUS 260)
The creation of spontaneous melodic and harmonic ideas and the translation of these ideas into notation are emphasized. Using scales and modes, the instrumentalist improvises on his or her instrument, the vocalist utilizes scale singing techniques. Prerequisites: MUSI 1312 and MUSI 1117 or demonstrated competence. Lab required. 2 credit hours.

MUSI 1271 Introduction to Synthesis and MIDI (MUS 167)
Introduces the elements of sound synthesis and electronic music. Lecture and demonstration topics include basic waveform creation, basic sequencing and drum machines, MIDI and SMPTE and associated synthesizer technology. Lab required. 2 credit hours.

MUSI 1272 Advanced Synthesis and MIDI (MUS 168)
Further study of the elements of sound synthesis, electronic music and computer control. Lecture and demonstration topics include timbre design and computer synthesis control. Prerequisite: MUSI 1271. Lab required. 2 credit hours.

MUSI 1273 Applied Music Major
Private instruction in the area of the student's concentration, consisting of one 50 minute lesson per week. Audition required. Fee required. 2 credit hours.

MUSI 1286 Introduction to Songwriting
An entry level course in the fundamentals of songwriting with emphasis on the skills needed to write good melodies, lyrics, and accompaniments. Topics to be discussed include song forms, phrasing, cadences, the ingredients of a song, rhythmic implications of lyrics, melody composition, compositional manipulations and writing accompaniments. 2 credit hours.

MUSI 1287 Introduction to Composition
An entry level course in the fundamentals of composition with emphasis on the skills needed to compose pieces and get them performed. Topics to be discussed include: basic form and analysis, phrasing, cadences, harmonic rhythms, melody composition, compositional manipulations and writing accompaniments. 2 credit hours.

MUSI 1301 Music Fundamentals (MUS 140)
An introduction to the elements of music theory: scales, intervals, keys, triads, elementary ear training, keyboard harmony, notation, meter and rhythm. 3 credit hours.

MUSI 1306 Music Appreciation (MUS 181)
Understanding music through the study of cultural periods, major composers and musical elements. 3 credit hours.

MUSI 1310 Music in America (MUS 145)
In-depth study of various types of music in America. Specialized topics include:

History of Jazz
The study of the development of jazz music in the 20th century through text, audio and video recordings. Covers the personalities and elements that shaped jazz and the social issues of the times as displayed by the music of each decade. 3 credit hours.

History of Rock and Roll

An in-depth study of the history of popular music in America. An investigation that focuses on rock'n'roll, its commercialization, social impact, the development of various styles of rock'n'roll, artists within each style, their influences, and the role of technology in the music industry 3 credit hours.

MUSI 1311 Music Theory I

A continuation of MUSI 1301 with further emphasis on modes, transposition, non-harmonic tones, phrase structure, musical textures, four-part voice leading, and keyboard harmony Prerequisite: MUSI 1301. Co-requisite: MUSI 1116. 3 credit hours.

MUSI 1312 Music Theory II

Development of melody harmonization through the understanding of harmonic progression, usage of seventh chords, elementary modulation, secondary harmonies, and large formal divisions. Prerequisite: MUSI 1311. Co-requisite: MUSI 1117. 3 credit hours.

MUSI 1371 Audio Engineering I

Introduction to the concepts and techniques of audio recording including operation of recording equipment, session procedures, simultaneous recording and multitrack recording. Lab required. 3 credit hours.

MUSI 1372 Audio Engineering II

Continuation of MUSI 1371, studying advanced recording studio techniques and practical application of basic skills. Prerequisite: MUSI 1371. Lab required. 3 credit hours.

MUSI 1386 Arranging (MUS 255)

Class instruction in music arranging and composition. Techniques of transposition for various instruments, music transposition techniques including computer music printing, common notational practices and alternative scoring techniques are offered through lectures and analysis of existing scores. Prerequisites: MUSI 1312 and MUSI 1117 or demonstrated competence. Lab required. 3 credit hours.

MUSI 2116 Aural Skills III (MUS 252)

Aural study of superimposition, singing modulations to closely related keys, melodic and harmonic modulations, compound intervals. Prerequisite: MUS 1117. Co-requisite: MUSI 2311. 1 credit hour.

MUSI 2118 Aural Skins IV (MUS 254)

Singing remote modulations and difficult melodies. Aural study of unusual and mixed meters; altered chords; 9th, 11th and 13th chords. Prerequisite: MUS 2116 Co-requisite: MUSI 2312 1 credit hour.

MUSI 2124 Band (MUS 160)

The band studies and performs a wide variety of music in all areas of band literature, This course may be repeated for credit. 1 credit hour.

MUSI 2143 Choir (MUS 150)

A wide variety of music representing the choral literature is studied and performed. This course may be repeated for dit. 1 credit hour.

MUSI 2181 Beginning Piano III

A continuation of MUSI 1182. Development of three octave scales and arpeggios, accompaniment patterns, intermediate and 20th century piano repertoire, advanced sight reading skills. Prerequisite: MUSI 1182. May be repeated for credit. Lab required. 1 credit hour.

MUSI 2182 Beginning Piano IV

Final semester in the beginning piano sequence and designed to prepare music majors for piano barrier exams. Culmination of skills including scales and arpeggios four octaves hands together, advanced chord progressions, more difficult piano repertoire and competency at sight reading. Prerequisite: MUSI 2181. May be repeated for credit. Lab required. 1 credit hour.

MUSI 2308 Introduction to Music Literature

Study of selected works in music leterature from major periods of music history Topics include musical styles, forms, and composers from the Medieval period to the present. Guided listening experiences are an important part of the course. Required of all music majors. Sophomore standing is encouraged. 3 credit hours.

MUSI 2311 Music Theory III

A continuation of music theory through chromatic harmony, modulation, larger forms and thematic development. Prerequisite: MUSI 1312. Co-requisite: MUSI 2116. 3 credit hours.

MUSI 2312 Music Theory IV (MUS 253)

A continuation of MUS 2311 including melody, harmony, tonality and the formal processes of 20th century music. Prerequisite: MUSI 2311. Co-requisite: MUSI 2118. 3 credit hours.

MUSI 2350 Audio for Multimedia I

An exploration of the physical properties of sound and how it is recorded, edited, and manipulated in existing digital audio mediums. Designed for use in multimedia applications such as theatre, video and computer programs. Students are shown how to interact with sound designers and researchers and how to develop soundscapes that communicate in a multimedia experience with graphics, video, and text. Students will also research resources for copyright free sound clips. Lab required. 3 credit hours.

MUSI 2351 Audio for Multimedia II

An exploration of techniques used to process, store, synchronize, and transmit audio signals and MIDI data. Discuss different formats used for various animation and multimedia software. Study the difference in sound quality of CD-ROM, television, and video. Prerequisites: MUSI 2350, AGDT 1310, COSC 1306. Lab required. 3 credit hours.

MUSI 2371 Audio Engineering III (MUS 295)

Continuation of MUSI 1372, studying advanced recording studio technqiues and practical application of basic skills. A comprehensive study of the theory of studio, microphone and digital audio multi-track mix-down equipment and technqiues, to include repair, maintenance, and troubleshooting. Prerequisite: MUSI 1372 or demonstrated competence approved by instructor. 3 credit hours.

MUSI 2372 Audio Engineering IV (MUS 297)

This course reinforces by application and demonstration the theory and skills obtained in Audio Engineering III with emphasis on audio production, management of the recording studio and audio post production for video. Prerequisite: MUSI 2371 or demonstrated competence approved by instructor. 3 credit hours.

MUSI 2389 Academic Co-op Music

An instructional program designed to integrate on-campus study with practical hands-on work experience in Music. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Music. Contact the CWE office. 3 credit hours.

NURSING

NURS 1800 Nursing I (NURS 147)

Basic course in nursing on which all other courses build and expand. Introduction to the nursing process as a problem-solving method to develop the communicative and technical skills necessary to meet basic human needs. Concepts of illness, stress adaptation, culture, and death and dying are introduced. Through content and selected clinical experiences, students develop the ability to plan and implement nursing care for all age groups and develop skills common to all patients. Fundamental nursing skills are developed to care for clients in all age groups. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2420, and MATH 1324, MATH 1342 or MATH 1314. A grade of C or better is required to progress to NURS 1805. Lab required. 8 credit hours.

NURS 1805 Nursing II (NURS 148)

Advanced assessment skills. Application of family-centered nursing care with a focus on normal maternal and child health. Concepts of illness in all age groups include problems that alter mobility (musculo-skeletal system) and problems at the reproductive body systems. Principles of nutrition, pharmacology and medication administration are included. A unit on the surgically induced client is also introduced. Prerequisites: NURS 1800. A grade of C or better is required to progress to NURS 2400. Lab required. 8 credit hours.

NURS 2400 Nursing III (NURS 244)

Theoretical content begins with disturbances in feelings, thoughts and behaviors and introduces interferences with basic human needs related to problems of the upper and lower and gastrointestinal body systems. Clinical experience in a mental health facility is included as a follow-up theory in mental health. Prerequisites: NURS 1805, PSYC 2314.. A grade of C or better is required to progress to NURS 2900. Lab required. 4 credit hours.

NURS 2900 Nursing IV (NURS 259)

Theoretical content includes major health problems of all age pups. Theory focuses on the problems of clients with disturbances of the liver and biliary respiratory, renal and cardiovascular systems. More complex approaches to the nursing process encourage students to assimilate and synthesize nursing care planning. Intravenous therapy concepts, skills, maintenance and care are introduced. Prerequisites: NURS 2400. A grade of C is required to progress to NURS 2905. Lab required. 9 credit hours.

NURS 2905 Nursing V (NURS 269)

A continuation of Nursing IV. Focuses on the problems of clients with disturbances of the nervous, endocrine, integumentary body systems, communicable diseases and the complex problems of burns. Complex approaches to the nursing process, managing client care and team nursing encourage students to assimilate and synthesize nursing care planning and implementation and evaluation. Facilities used for laboratory practice include various community health agencies. Seminar sessions enable students to review professional, ethical and legal aspects of the responsibilities of the registered nurse. To prepare the student for the graduate role, a preceptorship of clinical practice is done in the hospital *settings.* Each student assumes the responsibilities of the graduate nurse under the supervision of a registered nurse. Prerequisites: NURS 2900. A grade of C is required in order to graduate. Lab required. 9 credit hours.

OFFICE ADMINISTRATION

OFAD 1200 Computer Keyboarding (OFAD 133)

Designed to learn the computer keyboard by touch using computer-assisted instruction. Lab required. 2 credit hours.

OFAD 1210 Records Management (OFAD 131)

Classifying documents using basic filing systems; selecting equipment and supplies; analysis and revision of files; *survey* of systems using electronics and micrographics. Lab required. 2 credit hours.

OFAD 1211 Proofreading/Editing (OFAD 132)

Designed *to* learn proofreading and editing skills necessary to assure accuracy in written documents and business correspondence. Lab required. 2 credit hours.

OFAD 1301 Beginning Keyboarding (OFAD 120)

Begiiing instruction for students with no previous typing instruction. Touch keyboarding techniques are developed skills in centering, tabulating, formatting correspondence and formatting manuscripts are introduced. Lab required. 3 credit hours.

OFAD 1302 Intermediate Keyboarding (OFAD 121)

Designed to increase speed and accuracy and improve typing production rates of business correspondence, tables, forms and reports. Prerequisite: OFAD 1301 or one year of high school typing. Lab required. 3 credit hours.

OFAD 1310 Medical Insurance Coding

Designed to acquire skill and knowledge of medical claims coding in order to process claims for payments or benefits to meet insurance company standards (ICD-9, CPT, and others). Prerequisite: HLSC 1300. Lab Required.

OFAD 1315 Electronic Calculator (OFAD 134)

Principles, procedures and techniques of operating the electronic printing calculator: emphasis on speed, accuracy, memory functions and common business math applications. Lab required. 3 credit hours.

OFAD 1320 Business Correspondence (OFAD 135)

Compose and evaluate effective business documents including letters, memos, reports, minutes and other correspondence. Prerequisite: ENGL 1301, OFAD 1302 or 1331. 3 credit hours.

OFAD 1325 Office Support Software (OFAD 220)

Designed to teach office applications using administrative support software programs determined by local area business needs. (See appropriate class schedule for software offered.) Course may be repeated for credit as software changes. Prerequisite: OFAD 1301 or one year high school typing. Lab required. 3 credit hours.

OFAD 1331 Beginning Word Processing (OFAD 223)

Designed to develop basic word processing skills for employment purposes or personal use. Emphasis on creating and revising documents using beginning level applications. Software is state-of-the-art and subject to change reflecting business demands. See class schedule for software offered. Course may be repeated for credit as software changes. Prerequisite: OFAD 1301 or one year of high school typing and 35 WPM. Lab required. 3 credit hours.

OFAD 1332 Intermediate Word Processing (OFAD 224)

Designed to learn the advanced features of a comprehensive word processing program using intermediate level output applications including multi-page text, document assembly (macros), merges, file/sort and forms. Software is state-of-the-art and subject to change reflecting business demands. See class schedule for software offered. Prerequisite: OFAD 1302, 1331 and 50 WPM. Lab required. 3 credit hours.

OFAD 2303 Advanced Keyboarding (OFAD 122)

Specialized instruction emphasizing mailable production of simulated office projects. Computers and interactive software are used for speed building to achieve individual speed and accuracy goals. Prerequisite: OFAD 1302 or 1331. Lab required. 3 credit hours.

OFAD 2305 Machine Transcription (OFAD 225)

Instruction and practice in machine transcription of letters, memos and reports. Language, vocabulary and proofreading skills are reviewed. Specialized content for legal and medical programs. Prerequisite: OFAD 1302 or 1331. Lab required. 3 credit hours.

OFAD 2306 Medical Transcription I

Designed to develop basic level transcription skill transcribing chart notes, initial office evaluations, letters, history and physical examinations, consultations, emergency room reports, and discharge summaries using authentic physician dictation by medical specialty. Prerequisite: HLSC 1300, OFAD 1302 or 1331. Lab required. 3 credit hours.

OFAD 2307 Medical Transcription II

Designed to develop intermediate level transcription skills transcribing all major report categories from five medical specialties. Prerequisite: OFAD 2306. Lab required. 3 credit hours.

OFAD 2315 Office Procedures (OFAD 230)

Acquaints students with the varied aspects of office routines. Emphasis is on time management, mail responsibilities, telephone techniques, communication, job application/interviewing, critical thinking skills, decision making, ethics, office etiquette, and other topics associated with office technology. Prerequisite: OFAD 1302. Lab requited. 3 credit hours.

OFAD 2333 Advanced Word Processing (OFAD 226)

Designed to develop advanced skills in word processing using applications and desktop publishing projects requiring critical thinking and decision-making as expected in the work place. Prerequisite OFAD 1302 or 1332 and 55 WPM. Lab required. 3 d i t hours.

OFAD 7300 Cooperative Education I (OFAD 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 d i t hours.

OFAD 7305 Cooperative Education II (OFAD 705)

Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: OFAD 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

PHILOSOPHY

PHIL 1301 Introduction to Philosophy (PHIL 151)

An introduction to critical and reflective thinking as applied to basic problems of existence and the meaning of human life. Selective philosophical problems are examined through the views of major philosophers. Studies will include ancient, medieval and modem thought. 3 credit hours.

PHIL 1304 Comparative Religion (PHIL 154)

A study of religious traditions: Eastern and Western, ancient and modem. Special emphasis on such topics as the nature of God, religious experience, immortality and human freedom. 3 credit hours.

PHIL 2303 Logic (PHIL 152)

An introduction to symbolic logic. Emphasis on logical argument, fallacies, inductive and deductive proof, and correct reasoning. 3 credit hours.

PHIL 2306 Ethics (PHIL 153)

An introduction to moral philosophy Examines moral problems through a variety of ethical systems. Topics include the nature of good and evil, abortion, bioethics, sexuality and world hunger. 3 credit hours.

PHIL 2307 Social and Political Philosophy (PHIL 251)

Theoretical foundations of governmental systems. Philosophers such as Plato, Hobbes, Locke, Kant and Nozick will be considered. 3 credit hours.

PHOTOGRAPHY

COMM 1316 Photo Illustration (PHO 290)

Problems and practices of photographers in news photography and in advertising. Single, multiple and electronic flash will be studied and put to use. Emphasis on lighting, large format cameras and product photography Prerequisite: ARTS 2356 or consent of instructor. Lab required. 3 credit hours.

COMM 1317 News Photography (PHO 291)

Problems and practices of photographers on newspaper and magazine news publications. Shooting under different lighting and using flash and electronic flash will be studied. Emphasis on work under pressure and high-speed processing. Prerequisite: ARTS 2356. Lab required. 3 credit hours.

ARTS 2356 Photography I (PHO 180)

Introduction to photography including basic camera operations, darkroom techniques, with emphasis on visual imagination and design. Lab required. 3 credit hours.

ARTS 2357 Photography II (PHO 181)

Intermediate level course with continued emphasis on darkroom proficiency. Learning color photography will constitute a major part of the curriculum. Beginning study of the zone system of exposure and introduction to large format cameras. Prerequisite: ARTS 2356. Lab required. 3 credit hours.

ARTS 2370 Photography Portrayal (PHO 280)

Exploration of various photographic portrait styles, including both commercial and personal aspects of photographing the human subject. Included will be documentary photography of people, the environmental portrait and studio portraits. Creative approaches to the subject are encouraged. Prerequisite: ARTS 2356 or equivalent. Lab required. 3 credit hours.

ARTS 2371 Contemporary Studies in the Visual Arts Photography (PHO 281)

In-depth study of concerns and practices in the visual arts. This course may be repeated three times for credit. Specialized topics of study include:

Advanced Black-and-White Photography

Study and use of large format cameras, custom paper and film developers, and application of the zone system in photography. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Advanced Color Photography

Study of aesthetic and technical elements inherent to color image making. Historical background combined with current trends make up a foundation for critical exploration into this medium. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Advanced Portrayal

Advanced portraiture with professional photographer's approach. Includes advanced studio techniques working with color and black-and-white materials. Emphasis on development of personal style. Prerequisites: ARTS 2356, 2357 and 2370. Lab required. 3 credit hours.

Alternative Processes

Experimental, antique and non-silver printing processes and unconventional modes of presentation. The Gum-Bichromate process, the Cyanotype, the Kwik-Print, the Van Dycke and other alternate processes. Prerequisite: ARTS 2356 (ARTS 2357 also recommended). Lab required. 3 credit hours.

Architectural Photography

Exploration into the production of architectural images that go beyond mere documentation. Aesthetics, art, expression, communication, imagination, abstraction, reality, drama and emotion are a few of the dimensions discussed focusing on sensitive photographs not dependent on the quality of the subject matter. Technical considerations include view camera technique. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Collage/Montage

Contemporary aesthetic issues involving the use of multiple images and mediums. Students will be challenged to expand the information content and complexity of their photographic images. Prerequisites: ARTS 2356, 2357. Lab required. 3 credit hours.

Digital Photography I

An overview of and hands-on experience with digital photography Students will use a variety of image-capture devices, both digital and traditional; enhance and manipulate images with a core of Photoshop. Prerequisites: ARTS 2356 and AGDT 1310. Lab required. 3 credit hours.

Digital Photography II

Advanced-level electronic imaging. Increased hands-on experience using the digital camera, scanners, Photoshop and high-end image manipulation of large digital files. Prerequisite ARTS 2371, Digital Photo I Lab required. 3 credit hours.

Documentary Photography

Extension of the great documentary tradition. Production of social documentary photographs centered on a community phenomenon or dealing with issues in the urban area. Prerequisite: ARTS 2356 (ARTS 2357 also recommended). Lab required. 3 credit hours.

Fashion Photography

Study of historical and current advertising fashion techniques. Emphasis on cultural contributions and outside artistic influence. Studio and location techniques considered. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Hand-Coloring Photography

Instruction will include archival processing photograph; toning; photographic papers for hand-coloring; techniques; and subject material. Demonstrations, lectures, slides, field trips and shooting will be used in instruction. Prerequisite: ARTS 2356. Lab required. 3 credit hours.

Infared Photography

Will cover various methods and techniques involving the use of this scientific material for artistic purposes. Lab required. 2 credit hours. Landscape Photography Exploration into the aesthetic and technical aspects of landscape as a subject. Eighteenth century through modernist and post-modemist approaches to the idea of landscape as a primary source of meaning from both conceptual and design standpoints are examined. Prerequisite: ARTS 2356. Lab required. 3 credit hours.

Large Format Photography

Examination of the technical requirements of largeformat cameras and the resulting aesthetic contribution to the photw graphic image. Zone system image management, photo chemistry, darkroom procedures and contact printing are among the concepts investigated. Prerequisites ARTS 2356 and 2357. Lab required. 3 credit hours.

Night Photography

This course will introduce the student to a new photographic envirorment along with its accompanying technical requirements. A series of assignments will explore various attificial/available light sources and the special techniques required to make pictures in this challenging situation. Lab required. 3 credit hours.

Photographic Book Making

A disciplined craft approach to the presentation of a visual art in the book form. Students will address the special problems related to the preparation of an image book including editing, sequencing, overall design considerations and book construction methods. Lab required. 3 credit hours.

Platinum/Palladium Photography

Review of the history of nonsilver photography with emphasis on platinum/palladium processes. Examination of the various techniques in non-silver printing, learning to *mix* the emulsion from the basic compounds, learning the results from different paper surfaces and different developing agents. Creative experimentation will be encouraged. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Portfolio

Advanced photography for development of a strong portfolio of images, either commercial or fine arts. Outcome will be a portfolio of high quality images that can be shown for the purpose of obtaining commercial contracts or exhibitions. Prerequisites: ARTS 2356 and 2357 and one advanced photography course. Lab required. 3 credit hours.

Portrayal/Lighting the Subject

The emphasis in this course will be on lighting people in the studio and in the environment. Color and B&W films will be covered. Students will be required to successfully complete individual folio of final images and to complete individual assignments that result from problem solving. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Seminar/Portfolio

Designed to provide advanced artists with continuous critical feedback on work in progress. Weekly group critiques will be alternated with panel discussions, guest lecturers and museum/gallery visits. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

Series/Sequence Photography

The investigation of photographic images in context to the post modem concepts of series, sequence and scale. Lab required. 3 credit hours.

View Camera/Zone System

Examination of the technical requirements of largeformat cameras and the resulting aesthetic contribution to the photographic image. Zone system image management, photo chemistry, darkroom procedures and contact printing are among the concepts investigated. Prerequisites: ARTS 2356 and 2357. Lab required. 3 credit hours.

ARTS 2372 History of Photography (PHO *298*)

A study of the emergence and development of the first technological art form. Emphasis is placed upon the aesthetic and scientific issues that shape the visual literacy of today's society. From early woodcuts to high tech computer imaging, the information age is scrutinized in order to understand and appreciate photography's growing importance within the visual arts. 3 credit hours.

ARTS 7310 Photography Internship

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite Consent of instructor. Contact the CWE office. 3 credit hours.

PHYSICAL EDUCATION AND HEALTH
(Also See Dance)

PHED 1100 Beginning Weight Training and Conditioning (HPED 140)

An introductory course in weight training and body building to learn the basic techniques for strength development and cardiovascular conditioning. The use of the universal weight machine, freeweights, dumbbells, bicycle ergometers, rowing machines and a treadmill are utilized to establish individual fitness program. 1 credit hour.

PHED 1102 Intermediate Weight Training and Conditioning(HPED 141)
Advanced techniques in strength development and cardiovascular conditioning assists individuals in establishing their own fitness program. Prerequisite: PHED 1100 or instructor's permission. 1 credit hour.

PHED 1103 Advanced Weight Training and Conditioning (HPED 142)
Weight training program tailored to the individual who has experience in proper techniques and conditioning and wants to continue in an excelled program. Prerequisite: PHED 1102 or consent of instructor. 1 credit hour.

PHED 1104 Beginning Jogging and Fitness (HPED 143)
Develops cardiovascular endurance, flexibility and strength through jogging, stretching and weight trainiig. Physical fitness assessment leads to development of an individual fitness program. 1 credit hour.

PHED 1105 Intermediate Jogging and Fitness (HPED 144)
An accelerated fitness program structured for further improvement in cardiovascular endurance, flexibility and strength. Prerequisite: PHED 1104 or instructor's permission. 1 credit hour.

PHED 1106 Walking and Fitness (HPED 145)
The student will improve cardiovascular, muscle toning and flexibility through a vigorous walking and conditioning program. 1 credit hour.

PHED 1107 Cycling (HPED 146)
An introductory course in cycling to learn the basic techniques of bicycling and improve cardiovascular conditioning. Students are required to have their own bicycle. 1 credit hour.

PHED 1108 Cross Training I (HPED 148)
Extensive course offering training techniques and strategies for multi-sport aerobic activities. Involves a weight training program specifically designed to build strength and a cunning program that will include intervals, hills and speed work for the cross training athlete. Concurrent enrollment in PHED 1109 recommended. 1 credit hour.

PHED 1109 Cross Training II (HPED 149)
Extensive course offering training techniques and strategies for multi-sport aerobic activities. Involves competitive swimming and cycling workouts emphasizing technique and improvement. Students are required to have their own bicycle. Concurrent enrollment in PHED 1108 recommended. 1 credit hour.

PHED 1111 Basketball (HPED 150)
Fundamental skills and strategies are reviewed through knowledge of the history rules, terminology. Students then participate in game situations. 1 credit hour.

PHED 1112 Soccer (HPED 152)
Develops the basic skills and strategies through knowledge of the history, rules and terminology are taught along with participation in game situations. 1 credit hour.

PHED 1113 Softball (HPED 154)
Fundamental skills including throwing, batting, fielding and base running as well as knowledge of the rules and terminology are emphasized along with participation in game situations. 1 credit hour.

PHED 1114 Volleyball (HPED 156)
Individual skills and techniques, application of rules and an introduction to offensive and defensive strategies are stressed in this course. 1 credit hour.

PHED 1115 Archery (HPED 115)
Provides instruction in the basic techniques, mles and *scoring.* The history and terminology of archery are also investigated. 1 credit hour.

PHED 1116 Badminton (HPED 116)
History, rules, basic strokes and strategies in singles and doubles play are emphasized through intra-class competition. 1 credit hour.

PHED 1117 Beginning Tennis (HPED 117)
Introduction to the rules, scoring and fundamental techniques for beginners are stressed. Participation by skill level for singles and doubles play is made to ensure vigorous activity for fitness. 1 credit hour.

PHED 1118 Intermediate Tennis (HPED 118)
Develops and improves each skill level in serving, forehand and backhand drives, lobs and volleys. Performance strategies for both singles and doubles are drilled. Prerequisite: PHED 1117 or consent of instructor. 1 credit hour.

PHED 1119 Advanced Tennis (HPED 119)
Emphasizes advanced techniques and strategies for the competitive tennis player. Provides theory and practice drills for advanced players who ultimately compete in singles and doubles tournaments. Prerequisite: PHED 1118 or consent of instructor. 1 credit hour.

PHED 1120 Beginning Racquetball (HPED 120)
Instruction in rules and basic skills. Develops the fundamental techniques of court play for beginners. Participation by skill level assures vigorous activity to develop cardiovascular fitness. 1 credit hour.

PHED 1121 Intermediate Racquetball (HPED 121)
Drills in serving, forehand and backhand drives, kill shots. Z shots and lobs help develop strategies for singles and doubles play Prerequisite: PHED 1120 or consent of instructor. 1 credit hour.

PHED 1122 Advanced Racquetball (HPED 122)
Advanced drills for competitive racquetball players stress techniques and strategies needed for tournament competition. Prerequisite: PHED 1121 or consent of instructor. 1 credit hour.

PHED 1123 Beginning Golf (HPED 123)
Basic fundamentals, knowledge of the history, terminology and scoring of golf are stressed. 1 credit hour.

PHED 1124 Intermediate Golf (HPED 124)
Advanced skill techniques and strategies of golf are developed. Prerequisite: PHED 1123 or consent of instructor. 1 credit hour.

PHED 1125 Bowling (HPED 126)
Ball selection, stance, four step approach, rules and scoring procedures are taught. Emphasis is placed on game situations. 1 credit hour.

PHED 1126 Self Defense (HPED 170)
A basic understanding and practical application of fundamental self defense techniques through physical conditioning includes balance, focus, breath control, block and counter, avoiding attack, striking, thrusting and kicking. 1 credit hour.

PHED 1127 Beginning Karate (HPED 171)
Introduction to basic techniques, formal exercises and sparring techniques for the beginner. 1 credit hour.

PHED 1128 Intermediate Karate (HPED 173)
Intermediate **skills** and techniques of karate. 1 credit hour.

PHED 1131 Beginning Swimming (HPED 160)
Non-swimmers and beginners are taught basic swimming skills and strokes. Personal safety skills and confidence in the water are emphasized. 1 credit hour.

PHED 1132 Intermediate Swimming (HPED 161)
Includes further stroke development in front and back crawl, side stroke, breast stroke, diving and some competitive swimming techniques. Development of cardiovascular endurance is **stressed** through lab swimming. Prerequisite: PHED 1131 or instructor's permission. 1 credit hour.

PHED 1134 Advanced Life Saving (HPED 163)
Skills, methods and techniques involved in lifesaving and water safety are reviewed. Successful completion leads to American Red Cross Lifesaving Certification. Prerequisite: Ability to swim 500 yards continuously using following strokes: back, breast, crawl and side, or PHED 1132. 1 credit hour.

PHED 1135 Water Safety Instruction (HPED 164)
Successful completion of the course allows the student to take **the** standardized test given by the American Red Cross examiners for certification as a water instructor. Prerequisite: Current American Red Cross Senior Lifesaving Certificate. 1 credit hour.

PHED 1151 Beginning Scuba (HPED 165)
The course is divided into academic training and confined-water training. All equipment is supplied except mask, fiis, boots and snorkel. Students completing course requirements are eligible to perform **the** open water training for Professional Association of Diving Instructors (PADI) certification as a basic scuba diver (not a course requirement). Permission of PHED coordinator required. 1 credit hour.

PHED 1152 Advance Open-Water Scuba (HPED 166)
Advance open-water scuba combines advance scuba techniques and rescue diving. Scuba techniques include natural and compass navigation as well as night and deep water diving. The rescue diving techniques include rescue diver **exercises** in water emergency management and diving first aid. Prerequisite Permission of PHED coordinator required. 1 credit hour.

PHED 1238 Concepts of Physical Fitness and Wellness
This course will introduce the basic concepts of fitness, nutrition, health promotion and disease prevention. The students will gain knowledge to make intelligent choices that contribute to a healthy lifestyle. The course will incorporate both lecture and physical activity laboratories. 2 credit hours.

PHED 1301 Introduction to Physical Education (HPED 101)
Designed as a career orientation in health, physical education and recreation. The history, philosophy and principles including teacher qualifications, vocational opportunities and skills testing are emphasized. 3 credit hours.

PHED 1304 Personal Health (HPED 103)
Provides an in-depth look at the basic principles of maintaining good health throughout life. The topics cover all aspects of personal health such as mental, consumer and environmental health; physical fitness, nutrition and drug education. 3 credit hours.

PHED 1306 Safety and First Aid (HPED 106)
Students learn to recognize, evaluate and prioritize the first aid needs of individuals in emergency situations. Lectures, demonstrations and practical experience provide qualified students with American Red Cross certification. 3 credit hours.

PHED 1308 Sports Officiating (HPED 104)
Knowledge and practice in officiating volleyball, basketball and other appropriate sports are stressed. Students are expected to officiate tournaments and intramural games. Lab **required.** 3 credit hours.

PHED 2389 Academic Co-op Physical Education
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

PHYSICS

PHYS 1401 General Physics I (PHYS 191)
Algebra-based physics course for the science major in areas such as biology, medicine, pharmacy. Topics include laws of motion of objects, heat, work and energy, and sound. Prerequisite Two years of high schwl algebra and trigonometry recomended (or equivalent.) Lab required. 4 credit hours.

PHYS 1402 General Physics II (PHYS 192)
A continuation of Physics 1401. Includes topics of electricity magnetism, light, optics, relativity and atomic physics. Prerequisite: PHYS 1401. Lab required. 4 credit hours.

PHYS 1411 Elementary Astronomy (PSCI 153)

Introduction to the solar system, stars, stellar groupings and galaxies; telescopes and other astronomical instruments are discussed. Physical characteristics of the motion of bodies in the solar system are studied along with stellar evolution, supernova, black holes, neutron stars, comets and pulsars. Laboratory exercises, night observations, planetarium and observatory visits all combine to enhance lecture material. Prerequisite: MATH **0305** or equivalent. Lab required. **4** credit hours.

PHYS 1415 Physical Science I (PSCI 151)

Survey of the principles of physics and chemistry Topics include: heat, light, sound, matter, Newtonian physics, electricity and magnetism, gas laws and optics. Prerequisite: MATH **0305** or equivalent. Lab required. **4** credit hours.

PHYS 2425 College Physics I (PHW 291)

A calculus-based analysis of classical physics designed to meet the needs of science majors in fields such as physics, computer science and engineering. Topics include laws of motion, force, momentum, work and energy, angular momentum, and rotational and oscillatory motion. Laboratory experiments reinforce concepts presented in lecture. Prerequisite: MATH **2413.** Co-requisite: MATH **2414.** Lab required. **4** credit hours.

PHYS 2426 College Physics II (PHYS 292)

A continuance of Physics **2425** that addresses electric fields, AC and DC currents, dielectrics, magnetic fields, magnetic properties of matter, inductance, electromagnetism, properties of waves and optics. Laboratory experiments reinforce prinaples presented in lecture. Prerequisite: PHYS **2425.** Lab required. **4** credit hours.

PHYS 2389 Academic Co-op Physics

An instructional program designed to integrate on-campus study with practical hands-on work experience in Physics. In conjunction with class a seminars, the individual student will set specific goals and objectives in the study of Physics. Contact the CWE office. **3** credit hours.

PSYCHOLOGY

PSYC 2301 General Psychology (PSYC 151)

Introduces the student to the major topics in scientific psychology as applied to human behavior. Topics include research methods, physiological factors, learning, motivation, emotions, personality, adjustment, stress, psychological disorders and therapies. Application of these principles will be made to the human experience. Lab required. **3** credit hours.

PSYC 2302 Applied Psychology (PSYC 121)

Application of psychological principles to issues of human relations in organizational settings. Emphasis on self-understanding, inter-personal relations, and career development. Lab required. **3** credit hours.

PSYC 2306 Human Sexuality (PSYC 153)

Designed to assist the student in the understanding of human sexuality including an appreciation of different approaches to sexuality as well as an awareness of one's **own** sexuality and its impact on adjustment to life. A student may register for this course as PSYC **2306** or SOCI **2306,** but not for both. **3** credit hours.

PSYC 2314 Life Span Psychology (PSYC 251)

A life-span approach to human development studying the processes of life from conception through adulthood and aging. Information on physical, cognitive and psychosocial aspects of human growth, development and behavior is included. Application of these principles will be made to daily lifestyles. Prerequisite PSYC **2301.** Lab required. **3** credit hours.

PSYC 2315 Psychology of Adjustment (PSYC 155)

Psychological theory will be presented enabling students to gain insight into adjustment topics that can be applied to their **own** lives and the lives of those around them. **3** credit hours.

PSYC 2316 Psychology of Personality (PSYC 253)

An in-depth study of theories of personality with practical application of each. Methods of personality measurement and assessment are also included. Prerequisite: PSYC **2301.** Lab required. **3** credit hours.

PSYC 2319 Social Psychology (PSYC 252)

Research and theory regarding social factors that influence human behavior. Focuses on attitudes, interpersonal attraction, aggression, conformity, communication, values, roles and group processes. Application of these principles will be made to the human experience. Prerequisite: PSYC **2301** or SOCI **1301.** Lab required. **3** credit hours.

PSYC 2370 Drug Use and Abuse (PSYC 255)

A view of the individual, the substance and the cultural context in which they interact. This course is designed to provide a basic understanding of the psychopharmacology of drugs used and abused in today's society. The emphasis of the study will be the major perspectives of drug use including legal, moral, public health/disease model/psycho-social and socio-cultural. **3** credit hours.

PSYC 2371 Selected Topics in Psychology (PSYC 297)

An in-depth study of selected topics on current issues in psychology. Course may be repeated for credit as topics vary. **3** credit hours.

PSYC 2389 Academic Co-op Psychology

An istructional program designed to integrate on-campus study with practical hands-on work experience in Psychology In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Psychology. Contact the CWE office. **3** credit hours.

READING

READ 0100 Developmental Reading I

Designed to raise the reading level of students reading on levels 6 through 7 by improving skills in vocabulary and comprehension. A modular approach following individual prescription is used. This class may not be used to satisfy the requirements of an associate degree. Prerequisite: Assessment. **1** credit hour.

READ 0105 Developmental Reading II

Designed to raise the reading level of students reading on levels 8 through 9 by improving skills in vocabulary and comprehension. A modular approach following individual prescription is used. This course may not be used to satisfy the requirements of an associate degree. Prerequisite: Assessment. 1 credit hour.

READ 0110 Developmental Reading 111

Designed to raise the reading level of students reading on levels 10 through 12 by improving skills in vocabulary and comprehension. A modular approach following individual prescription is used. This course may not be used to satisfy the requirements of an associate degree. Prerequisite: Assessment. 1 credit hour.

READ 1300 Analytical Reading and Critical Thinking

Inquiry to improve comprehension in non-fiction material. The development of interpretive comprehension skills and expansion of these skills into higher level analysis, synthesis and evaluative processes will be emphasized. Prerequisite: Assessment. Lab required. 3 credit hours.

REAL ESTATE

RLST 1301 Real Estate Principles I

Fundamental prinaples of real estate with emphasis on read property interests and ownership, the Texas Real Estate License Act, forms of ownership, legal descriptions, taxes, liens, contracts, fair housing, credit and community reinvestment. (Core Course) 3 credit hours.

RLST 1302 Real Estate Principles II

Fundamental principles of real estate with emphasis on appraisal, finance, titles and transfers, closings, leases and property management, controls on land use, investments, fair housing, credit and community reinvestment. (Core Course) 3 credit hours.

RLST 1303 Law of Agency

A study of the principal-agent relationship, including duties, authority, creation and termination. he relationship between the broker and the buyer and seller, and between other brokers and their salesmen are studied. Topics include deceptive trade practices, employment and antitrust law, and ethics. (Core Course) 3 credit hours.

RLST 1305 Real Estate Math (RLST 136)

Review of mathematical logic and arithmetic skills including percentages, interest, time-valued money, depreciation, amortization, proration and estimation of closing statement. Includes use of TI Business Analyst 2 + calculator. (Core Course) 3 credit hours.

RLST 1310 Real Estate Appraisal (RLST 135)

Includes the central purposes and functions of an appraisal, social and economic determinant of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations and reporting. (Core Course) 3 credit hours.

RLST 1315 Promulgated Contract Forms (RLST 139)

The course covers all aspect of real estate contracts, including the unauthorized practice of law, the broker-lawyer committee, current promulgated forms, case studies involving use of forms and hands-on experience in the preparation and use of the promulgated forms. (Core Course) 3 credit hours.

RLST 1320 Real Estate Sales and Marketing (RLST 138)

Includes real estate professionalism and ethics, characteristics of successful salespeople, time management, psychology of marketing, listing procedures, advertising, negotiating and closing, financing and the Deceptive Trade Practices-Consumer Protection Act. (Core Course). 3 credit hours.

RLST 2101 Real Estate Special Topics I (RLST 297)

This course is designed to provide current legal, judicial, legislative and regulatory information for the real estate licensee, as well as, the advanced real estate student. Prerequisites and topics covered will be annotated in each semester's class schedule. Course may be repeated for credit as topics vary. (Related Course). 1 credit hour.

RLST 2104 Appraisal Ethics - USPAP

The course offers the history of professionalism in appraising, federal appraisal legislation, the Appraisal Foundation, the Uniform Standards of Professional Appraisal Practice and Appraisal Organizations' Code of Ethics. (Related Course) 1 credit hour.

RLST 2302 Real Estate Special Topics II

This course is designed to provide current legal, judicial, legislative and regulatory information for the real estate licensee, as well as, the advanced real estate student. Prerequisites will vary based on topics covered and will be annotated in each semester's class schedule. Course may be repeated for credit as topics vary. (Related Course). 3 credit hours.

RLST 2305 Real Estate Investments (RLST 234)

Financing, evaluation and management of real estate investments. Real estate investment characteristics, techniques of investment and analysis, discount and nondiscounted investment criteria, time-valued money, leverage, tax shelters and consideration, investment risks and applications to property tax. (Cor Course). 3 credit hours.

RLST 2310 Real Estate Finance (RLST 235)

Includes monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, Equal Credit Opportunity Acts, Community Reinvestment Act and State Housing Agency. (Cor Course). 3 credit hours.

RLST 2315 Real Estate Property Management (RLST 236)

Includes the role of a property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws and the Fair Housing Act. (Core Course). 3 credit hours.

RLST 2320 Real Estate Law (RLST 237)

Includes the legal concepts of real estate, land description, real property rights and estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures and evidence of titles. (Core Course). 3 credit hours.

RLST 2325 Real Estate Commercial (RUT 241)

A study of the commercial class of real estate, considering the developing, appraising, marketing, contracting and financing functions related to business properties, including office building, shopping centers, stores, hotels and parking facilities. (Related Course). 3 credit hours.

RLST 2330 Real Estate Financial Analysis (RLST 242)

Financial applications useful to real estate professionals, real estate students and serious real estate investors. The emphasis is on the use of hand-held HP-17B2 or HP-19B2 calculators as a tool to analyze the many financial problem situations that agents encounter in the business. Topics include loan calculation, net present value, internal rate of return, discounting, depreciation, programming techniques and more. (Related Course). MUST have a HP-17B2 calculator or HP-19B2 calculator. 3 credit hours.

RLST 2335 Real Estate Brokerage (RLST 251)

Study of the brokerage business including planning and organization, operational policies and procedures, personnel recruiting, selection and training, record keeping and control analysis of real estate firm, criteria for expansion and a study of the law of agency. (Core Course). Prerequisite: RLST 1302. 3 credit hours.

RLST 7300 Cooperative Education I (RLST 700)

Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

RLST 7305 Cooperative Education II (RLST 705)

Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: RLST 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

RESPIRATORY CARE

RTTP 1010 Respiratory Clinical Practicum I (RTTP 114)

Students apply skills learned in didactic and practiced in the laboratory in a clinical hospital setting. Lab required. 4 credit hours.

RTTP 1015 Respiratory Clinical Practicum II (RTTP 123)

Continues RTTP 1010, providing students with practical experience in those skills acquired in the previous semester. 2 credit hours.

RTTP 1020 Respiratory Clinical Practicum III (RTTP 125)

Continues RTTP 1015 providing student with opportunities to apply those skills acquired during the previous semester along with the following new skills basic pulmonary function testing, arterial blood gas procurement and critical care. 3 credit hours.

RTTP 1200 Cardiopulmonary Anatomy and Physiology (RTTP 112)

Provides an advanced understanding of the anatomy and physiology of the cardiovascular, pulmonary. renal and nervous systems. 2 credit hours.

RTTP 1205 Respiratory Pharmacology (RTTP 122)

Provides a working knowledge of basic drugs used by the therapist related to respiratory care patients. 2 credit hours.

RTTP 1220 Respiratory Chemistry/Physics (RTTP 113)

Provides an understanding of basic math, physics laws and chemistry prinaples as they apply to the field of respiratory care. Prerequisite: MATH 1314 or 1324. 2 credit hours.

RTTP 1400 Fundamentals of Respiratory Care I

Develops a safe working knowledge of the function, usage and troubleshooting of fundamental respiratory care equipment. 4 credit hours.

RTTP 1405 Fundamentals of Respiratory Care II (RTTP 124)

Focuses on critical care, including airway care and classification and application of mechanical ventilators. Lab required. 4 credit hours.

RTTP 1410 Fundamentals of Respiratory Care III

Includes continuation of mechanical ventilation, respiratory disease, and introductory neonatal and pediatric respiratory care. Lab quid. 4 credit hours.

RTTP 1415 Respiratory Disease

Builds on a basic understanding of physical assessment, the disease process as it related to the cardiopulmonary system and proper recognition of the signs and symptoms of the disease and the recommended treatment. In addition, there will be a presentation of spirometry and arterial blood gas interpretation. 4 credit hours.

RTTP 2010 Respiratory Clinical Practicum IV (RTTP 213)

Application of advanced respiratory techniques to include advanced critical care, roentgenographic patterns of respiratory disease, neonatal care and post-operative care of cardiopulmonary patient. 2 credit hours.

RTTP 2015 Respiratory Clinical Practicum V (RTTP 223)

This course is a completion of the clinical experience to prepare the student to perform as an advanced respiratory care practitioner. 2 credit hours.

RTTP 2210 Advanced Respiratory Care I

Includes advanced assessment techniques: CXR evaluation, capnograph, pressure, flow, and volume curves. Special procedures including chest tubes, thoracentesis, and bronchoscopy. Also includes advanced pulmonary function testing. Lab required. 4 credit hours.

RTTP 2215 Advanced Respiratory Care II

Provides an understanding of areas of clinical medicine and their application to respiratory care. Emphasis on the application of

management techniques to pulmonary disease. Lab required. 3 credit hours.

RTTP 2300 Cardiopulmonary Dynamics (RTTP 215)
Provides a working knowledge of advanced cardiac diagnostic techniques to include 12 lead ECC interpretation and hemodynamic measurements. 3 credit hours.

RTTP 2310 Perinatal Respiratory Care
Continues neonatal and pediatric respiratory care, includes neonatal and pediatric respiratory disease, assessment techniques, and mechanical ventilation. 3 credit hours.

RUSSIAN

RUSS 1411 Beginning Russian I (RUSN 191)
Introduction to the basic skills of speaking, reading, writing, and listening, designed for students with little or no previous language training. Includes an introduction to Russian culture. Instruction is enhanced by the use of audio tapes, slides, computer software, and video cassettes. Lab required. 4 credit hours.

RUSS 1412 Beginning Russian II (RUSN 192)
A continuation of Russian 1411. Prerequisite: RUSN 1411 or equivalent. Lab required. 4 credit hours.

RUSN 2311 Intermediate Russian I
An intensive review of Russian grammar followed by continued development of speaking, listening, reading, and writing skills. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: RUSN 1412 or equivalent. 3 credit hours.

RUSS 2312 Intermediate Russian II
Continued intensive review of Russian grammar followed by continued development of speaking, listening, reading, and writing skills. Instruction enhanced by slides, tapes, and other audio-visual aids. Prerequisite: RUSN 2311 or equivalent. 3 credit hours.

SIGN LANGUAGE

SGNL 1401 Beginning Sign Language I (ASL I)
Introduction to American Sign Language and Deaf Culture. Includes a brief history of sign, introduction to Deaf Culture, development of expressive and receptive sign skills, manual alphabet, numbers and sign vocabulary. This class is conducted primarily without voice (there will be some verbal time allowed). Lab required. 4 credit hours.

SGNL 1402 Beginning Sign Language II (ASL II)
Continuation of SGNL 1401. Includes sign vocabulary, numbers, fingerspelling and Deaf Culture. Also includes an emphasis on enhancement of receptive skills, further development of expressive skills, application of rudimentary syntactical and grammatical structure and application of differences and similarities between the Deaf and Hearing Cultures. This class is conducted primarily without voice (there will be some verbal time allowed). Lab required. 4 credit hours.

SGNL 2301 Intermediate Sign Language I (ASL III)
continuation of SGNL 1402. Includes the integration of ASL expressive and receptive skills using bilingual techniques. Also includes vocabulary expansion, idioms, manual and non-manual aspects of ASL, ASL linguistics, cross-cultural communication and cultural knowledge. This class is conducted primarily without voice. Lab required. 3 credit hours.

SGNL 2302 Intermediate Sign Language II (ASL IV)
Continued integration of ASL expressive and receptive skills using bilingual techniques. Continued vocabulary expansion, idioms, manual and non-manual aspects of ASL, ASL linguistics, cross-cultural communication and cultural knowledge. Application of basic interpreting skills, both receptive and expressive, with appropriate NRID guidelines regarding ethical behavior. This class is primarily conducted without voice, and students will be afforded the opportunity to interpret guest speakers. Lab required. 3 credit hours.

SMALL BUSINESS MANAGEMENT

SBMT 1300 Small Business Management I (SBMT 121)
Introduction to planning, establishing and operating a small business. Includes constructing a business plan. 3 credit hours.

SBMT 1305 Small Business Financing (SBMT 221)
Financial planning, use of financial data, forecasting financial needs, control of cash and other assets, capital budgeting, acquisition valuation, financial sources. 3 credit hours.

SBMT 1310 Principles of Retailing (SBMT 222)
Introduction to the operation of the retail system of distribution including consumer demand, site location, store, layout and credit practices. 3 credit hours.

SBMT 2300 Small Business Management II (SBMT 223)
Continued study of elements introduced in SBMT 1300. In addition, such topics as promoting a small business, hiring and managing people, product and services marketing, and record keeping are explored. Prerequisite: SBMT 1300 or consent of instructor. 3 credit hours.

SBMT 7300 Cooperative Education I (SBMT 700)
Under supervision of the college and the employer, students combine classroom learning with career related work experience. Credit is earned for completion of specific learning objectives and seminar participation. Prerequisite: Consent of instructor. Contact the CWE office. 3 credit hours.

SBMT 7305 Cooperative Education II (SBMT 705)
Continuation of supervised on-the-job experience and career related activities. Requires new learning objectives and seminar participation. Prerequisite: SBMT 7300 and consent of instructor. Contact the CWE office. 3 credit hours.

SOCIOLOGY

SOCI 1301 Introduction to Sociology (SOC 151)
An introduction to the social science which focuses on external influences on human behavior originating from people in our daily lives and from events occurring on a societal or global scale. The following aspects of social life will be applied to the human experience social forces, global interdependence, culture, socialization, social interaction, deviance, social stratification, race relations, gender and sexuality Lab required. 3 credit hours.

SOCI 1306 Social Problems (SOC 152)
An in-depth examination of selected social problems, their nature, cause, extent and effect upon society Emphasis will be on the study of specific social problems of the local area. Topics include: abortion, suicide, family violence, sexual variance, and crime and punishment. Lab required. 3 credit hours.

SOCI 2301 Marriage and Family (SOC 251)
A functional and empathetic approach to understanding the structural developmental and institutional aspects of marriage and the family. Emphasis on the American family with consideration given to courtship, mate selection, marriage and its dynamics, conflict, family violence, child-rearing patterns, the later years of marriage, divorce and remarriage. Lab required. 3 credit hours.

SOCI 2306 Human Sexuality (SOC 153)
Designed to assist the student in the understanding of human sexuality including an appreciation of different approaches to sexuality as well as an awareness of one's own sexuality and its impact on adjustment to life. A student may register for this course as PSYC 2306 or SOCI 2306, but not for both. 3 credit hours.

SOCI 2319 Minority Studies (SOC 253)
The historical, economic, social and cultural development of minority groups in American society Includes the causes and consequences of prejudice and discrimination. Lab required. 3 credit hours.

SOCI 2371 Selected Topics in Sociology (SOC 297)
An indepth study of selected topics on current issues in sociology. Course may be repeated for credit as topics vary 3 credit hours.

SOCI 2389 Academic Co-op Sociology
An instructional program designed to integrate on-campus study with practical hands-on work experience in Soliology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Sociology. Contact the CWE office. 3 credit hours.

SPANISH

SPAN 1411 Beginning Spanish I (SPAN 191)
An introduction to the four basic skills of speaking, reading, writing and listening. Designed for students with little or no previous language training. Includes an introduction to aspects of Hispanic civilization. Instruction enhanced by the use of slides, tapes, computer software and video cassettes. Lab required. 4 credit hours.

SPAN 1412 Beginning Spanish II (SPAN 192)
A continuation of Spanish 1411. Prerequisite: SPAN 1411 or consent of discipline coordinator. Lab required. 4 credit hours.

SPAN 2171 Conversational Spanish I (SPAN 293)
Intensive practice in conversational Spanish. Prerequisite: SPAN 1412 or consent of discipline coordinator. 1 Credit hour.

SPAN 2172 Conversational Spanish II (SPAN 294)
A continuation of Spanish 2171. Prerequisite: SPAN 2171. Requires consent of discipline coordinator. 1 credit hour.

SPAN 2311 Intermediate Spanish I (SPAN 291)
An intensive review of Spanish grammar followed by continued development of speaking, listening, reading and writing skills. Instruction enhanced by the use of slides, tapes and other audio-visual aids. Prerequisite: SPAN 1412 or consent of discipline coordinator. 3 credit hours.

SPAN 2312 Intermediate Spanish II (SPAN 292)
A continuation of Spanish 2311. Extensive written and oral work and extensive reading of literary works in Spanish of moderate difficulty. Prerequisite: SPAN 2311. 3 credit hours.

SPAN 2321 Spanish Literature I (SPAN 295)
A study of Spanish literature from its origin to 1700 through lectures, discussions and reading of major literary works. Some attention will also be given to the historical context of each work Prerequisite: SPAN 2312 or consent of instructor. 3 credit hours.

SPAN 2322 Spanish Literature II (SPAN 296)
A study of Spanish literature from 1700 to the present. Discussions, lectures and readings of major literary works with some attention to historical contexts. Prerequisite: SPAN 2312. 3 credit hours.

SPEECH
**(Also see Communication)**

SPCH 1144 Forensics Workshop (SPCM 192)
Preparation and practice in debate and contest speaking activities; participation in intercollegiate and inter-squad forensics activities; involvement in supervised research and the development of specialized contest speaking skills. Course may be repeated for credit. Prerequisite: SPCM 1315 or consent of instructor. 1 credit hour.

SPCH 1311 Fundamentals of Speech Communication (SPCM 151)
Survey of basic factors affecting human interaction through communication; emphasis on the development of oral communication competencies; practice in delivering oral presentations. 3 credit hours.
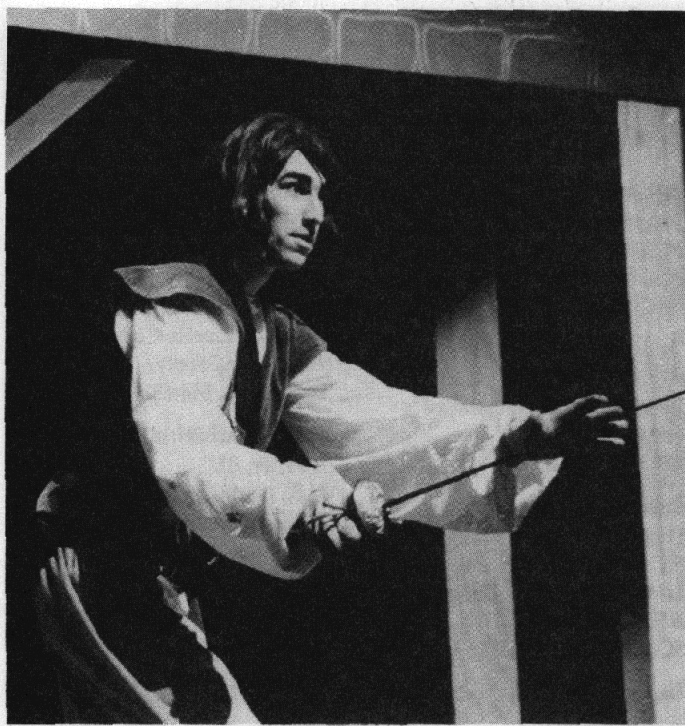
SPCH 1315 Public Speaking (SPCM 152)

Study and practice in the preparation and delivery of oral presentations; practice in different types of speeches and forms of delivery; evaluation of speakers and speeches. 3 credit hours.

SPCH 1318 Interpersonal Communication (SPCM 294)

The study of verbal and nonverbal communication as it primarily relates to persons in relationships. Emphasis in interpersonal contexts such as gender communication, familial relationships and intercultural communication. 3 credit hours.

SPCH 1321 Business and Professional Speaking (SPCM 293)

Study of the importance of oral communication in business; practice in small group communication; study of the relationship of communication to organizational conflict, management and international business; practice in conducting and participating in business interviews and presentations. 3 credit hours.

SPCH 1371 Public Speaking II (SPCM 153)

Advanced skills and techniques of speaking. Includes impromptu and extemporaneous speaking, congressional speaking and the use of parliamentary procedure, and speaking before large audiences. Prerequisite: SPCM 1315 or consent of instructor. 3 credit hours.

SPCH 2341 Oral Interpretation (SPCM 291)

Introduction to the techniques of interpretation; preparation, analysis, reading of poetry, prose and dramatic literature; analysis and criticism of a variety of literary forms. Prerequisite: SPCM 1315 or consent of instructor. 3 credit hours.

SPCH 2370 Language and Communication (SPCM 292)

Appreciation of interdisciplinary approaches to the study of language; comprehension of viewpoints offered by various fields. Prerequisite: SPCM 1311 or consent of instructor. 3 credit hours.

SPCH 2389 Academic Co-op Speech

An insturctional program designed to integrate on-campus study with practical hands-on work experience in Speech. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Speech. Contact the CWE office. 3 credit hours.

THEATRE
(See Drama)

STAFF AND FACULTY DIRECTORY

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GLOSSARY

Academic Advising - Process in which students interact with college staff/faculty advisers in decision-making, problem-solving, and long-range planning related to the student's academic goals.

Advanced Placement - Credit that may be earned through standardii tests offered through high schools.

Adviser - A member of the college staff who will assist you with information about CCCC and various academic programs.

Add ~ To enroll in another course after your original registration within a specific time frame.

Articulation Agreement ~ After completing an associate degree at CCCC, the entire degree will be used at a four-year institution to satisfy requirements for a bachelor's degree.

Assessment - A method to determine your preparation for college-level course work.

Attempted Hours - The number of hours a student has enrolled in at CCCC, including college-level and developmental course work.

Audit ~ To take a credit course without receiving a grade or credit. *An* audit fee is charged.

Behavioral Science ~ A science examining human activities in an attempt to understand man's social behavior. Includes subjects such as psychology and sociology.

Blue Book – Paper used for essay tests available in the college Bookstore.

Class Schedule ~ List of courses and sections for a specific semester, including names of instructor, day, hour and place of class meetings, etc. *Also* includes detailed registration procedures, general information and tuition and fees.

CLEP - "College Level Examination Program." A series of standardized tests for college credit.

Concurrent Enrollment - The status of students who are enrolled in a CCCC course while they are still classified as high school students, or simultaneously enrolled at CCCC and a four-year institution.

Core ~ Refers to a common *set* of courses required for a degree.

Co-requisite ~ Refers to two courses that must be taken simultaneously during the same semester.

Course Load ~ The number of semester hours for which a student enrolls in a given term.

Credit – Units assigned to each course.

Credit by Exam - Exams offered through the college that allow you to receive d i t for specific courses.

Credit Hour ~ Varies by course, but generally refers to the number of hours you will spend in a specific course each week.

Curriculum ~ All the courses offered through the college.

Dean/Director – The administrative head of a division or department

Degree Plan - The list of courses required for a specific degree, usually outlined in the CCCC catalog

Drop - Deleting one or more courses prior to the term's census date.

Earned Hours ~ The number of hours a student successfully completes, including college-level, developmental, non-traditional and transfer work.

Electives - Credit that does not count toward a major but which is required for a degree.

Fee - A charge for services, labs, etc. that is added to tuition.

Freshman ~ A student's classification until 30 credits are earned.

Full-Time - To be enrolled in 12 or more credit hours during the fall and spring semesters, or six or more hours in a five-week semester summer.

GPA/Grade Point Average ~ A calculation made each semester that summarizes grades and credit hours.

Grade Points ~ The value given to each letter grade to calculate the GPA. It is calculated by dividing the total number of grade points by the total number of semester hours attempted. The cumulative GPA is based upon work taken at CCCC.

Humanities – The branch of learning exploring human thought and relations.

Internship - At CCCC internships are associated with academic (or transfer courses) offered in the Associate of Science or Associate of Arts programs. Students earn three semester hours of credit for 16 classroom hours and 320 lab hours acquired at a worksite. Employment must relate to the student's area of study and the student must be concurrently enrolled in another credit course

Labs - A teaching component which occurs both inside and outside the classroom that enhances the learning experience.

Lab Sciences - Science courses utilizing scientific principles for experimentation and research.

Major ~ Your subject area of specialization.

Mini-semester ~ Courses that are offered with start and end times that vary from the "regular" semester.

Non-advanced Courses ~ Courses offered on the freshman and sophomore levels (1000 and 2000 series).

Non-credit Course ~ A course for which no credit can be earned.

Orientation - Sessions to provide information about an institution and how colleges work

Overload ~ Course load of more semester hours than students are normally permitted to schedule in a given period, requiring approval of a college dean.

Part-time ~ To be enrolled in less than 12 credit hours in the fall and spring semesters or less than six hours in a five-week semester summer.

PIN (Personal Identification Number) ~ Needed for TEX Registration *One* PIN is assigned to you for your tenure at CCCC.

Prerequisite ~ Refers to a course that must be taken before you can enroll in a subsequent course.

Probation ~ A way to warn a student that his/her grades are below a certain standard. Probation may also be for disciplinary reasons.

Quality Hours ~ The number of college-level hours a student complete, at CCCC, excluding developmental, nontraditional and transfer work. These hours are used in calculating a student's CCCC grade point average.

Recitation ~ Required in biology and chemistry courses, one hour per week in which experiential learning reinforces topical course material. Critical thinking and analytical skill building are strengthened.

Records, Permanent - Cumulative record of students' courses, grades, credits, classification, address, social security number, etc.

Regular Registration - Enrollment at the beginning of semester, including selection of classes and payment of fees and tuition.

Section - A number used during registration to differentiate between days, times, mom numbers. and professors of the same course.

Semester Hour - A unit of measurement of college work equivalent to one hour of class work. A three–hour course is equivalent to three lecture hours per week.

Sophomore - The classification used for students who have earned 30 credit hours or more.

Suspension - Dismissing a student whose grades have fallen below a certain standard. Suspension may also be for disciplinary reasons.

Syllabus - An outline, usually presented on the first day of class, covering course topics, textbooks required attendance and grading policies.

TEX - CCCC's "Telephone Express" Registration Allows almost all students to register before Regular Registration by telephone. A Personal Identification Number (PIN) must be received by the student before TEX registering.

Texas Academic Skills Program (TASP) - Testing component designed to ensure that all students attending public institutions of higher education in Texas have the reading, mathematics, and writing skills necessary to perform college-level work.

Transcript - The official record of all course work at a particular institution

Transfer Agreement - The majority of lower-level requirements, including technical courses, can be satisfied at CCCC before transferring to a four-year institution. The student follows the specific degree plan for each agreement.

Transfer Courses - Courses that should transfer to other colleges or universities.

Withdrawal ~ To withdraw from one or more courses enrolled in for a particular semester after the term's census date.

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