

SAN DIEGO

CITY

COLLEGE

2007-2008 CATALOG

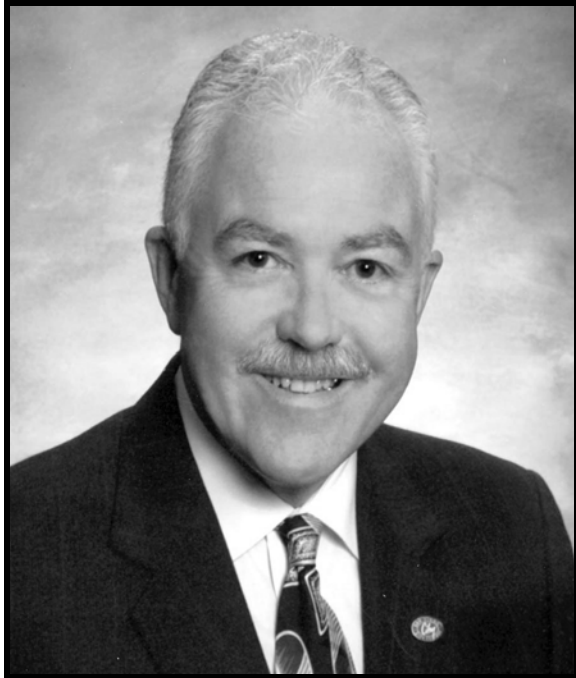
Fall 2007, Spring 2008, Summer 2008

1313 Park Blvd., San Diego, CA 92101
(619) 388-3400
www.sdcity.edu

Terrence J. Burgess, President

San Diego City College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 10 Commercial Blvd., Ste. 204, Novato, CA 94949, (415) 506-0234, an institutional accrediting body recognized by the Council for Higher Education Accreditation and the U.S. Department of Education.

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President's Message

Welcome to San Diego City College

Recently, San Diego City College was featured in the *New York Times* Education Life magazine as part of a PBS series noting the vital contribution of community colleges in our nation. City College continually strives to offer the highest level of instruction and student support services. Accredited by the Western Association of Schools and Colleges, your degree or certificate from City College certifies to transfer universities and employers that you have met the highest national standards.

With improving California community college finances, we are again hiring additional full-time instructors to complement our dedicated and award-winning faculty. One of the hallmarks of a community college education is that you are taught by professors with advanced degrees who choose to be in the classroom teaching, one on one, rather than conducting research.

As your college administration continually seeks new ways to accommodate your busy work and family schedules, we have added winter and spring

intersessions, as well as more topics and more class sections in the day, evening and online. You have your choice of 80 majors, 90 certificate program and more than 1,500 classes each semester.

Always at the forefront, our student services at City College continue to expand and improve. Through our \$2.2 million federal Title V grant, multiple programs have been developed to ensure our students succeed in college, including a growing emphasis on learning communities. In addition, our Student Ambassador Program offers new student orientations, our Transfer/Career Center offers guidance in transferring to a four-year university or into a career, and our Tutoring Services help you with any studying challenges. Our Financial Aid Office is also at the ready to answer your questions regarding available monies for college expenses.

Finally, you will notice robust activity around our 60-acre campus as we strive to improve college facilities. A comprehensive facilities master plan has been developed and will be implemented in stages over the coming two decades. Neighboring properties have been acquired to build out the campus, and programs will be grouped with similar disciplines in "clusters" to better utilize facilities and allow collaboration between students and faculty. New classrooms have been added to the Learning Resource Center and we look forward to the development of our multi-story Vocational Technology Building that will permit expansion of our Nursing Education, Cosmetology, and Photography programs. In addition to the new Harry West Gymnasium, our Health and Exercise Science facilities will be completely remodeled for students and faculty.

We are pleased you have chosen to join our college community to pursue your academic and career dreams. Good luck to you, and I look forward to meeting you on campus.

Terrence J. Burgess

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San Diego Community College District Board of Trustees (from left, back row) Rich Grosch, Marty Block, and Maria Nieto Senour. (front row) Peter Zschiesche, Chancellor Constance M. Carroll, and Bill Schwandt.

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 Director Dotti Cordell, RN, MFH
 Mental Health Specialist Cynthia Barton, LCSW

Accreditation

San Diego City College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, an institutional accrediting body recognized by the Council on Postsecondary Accreditation and the U.S. Department of Education. The college is accredited by the Office of Private Postsecondary Education for the training of veterans as well as by the U.S. Department of State and the U.S. Immigration Service for international student education. Courses paralleling university level work are accepted by the University of California, California State University, and by other universities and colleges.

Persons interested in the institution's accreditation and program approvals may review documents describing these activities in the President's Office. These documents will be available for such review at a mutually convenient time during regular business hours, and an appropriate interpretation of their contents will be provided if requested.

Disclaimer

The San Diego Community College District is governed by its Board of Trustees. No oral or written representation by any employee of the College is binding on the San Diego Community College District without the express approval of the Board of Trustees.

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Academic Calendar 2007-2008

Fall Semester 2007

16-WEEK SEMESTER: Fall Classes August 27, 2007 - December 19, 2007

SPECIAL DATES

Date to be determined	Final day to file an application for admission for the Fall semester and receive an appointment to register online. Applications filed after this date will be assigned a registration appointment at the time of application.
August 26, 2007	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
September 17, 2007	Constitution Day (Classes are in session)
October 19, 2007	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for June or Summer 2008 graduation in order to receive an evaluation prior to beginning of Spring semester.
November 12, 2007	Holiday - Veterans Day**
November 20, 2007	Classes not in session
November 21, 2007	Holiday - Admissions Day**
November 22 & 23, 2007	Holiday - Thanksgiving**
December 19, 2007 - January 1, 2008 . .	Winter Recess

Intersession 2008

Intersession: January 2, 2008 - January 26, 2008

SPECIAL DATES

Date to be determined	Final day to file an application for admission and receive an appointment to register online. Applications filed after this date will be assigned a registration appointment at the time of application.
January 21, 2008	Holiday - Martin Luther King**
January 27, 2008	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)

Spring Semester 2008

16-WEEK SEMESTER: Spring Classes . . . January 28, 2008 - May 24, 2008

SPECIAL DATES

Date to be determined	Final day to file an application for admission for Spring semester and receive an appointment to register online. Applications filed after this date will be assigned a registration appointment at the time of application.
January 27, 2008	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
February 15, 2008	Holiday - Lincoln's Day**
February 18, 2008	Holiday - Washington's Day**
March 17 - 22, 2008	Spring Recess
March 21, 2008	Holiday - Cesar Chavez Day**
March 31, 2008	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for June 2008 completion.
May 26, 2008	Holiday - Memorial Day**

** No Saturday or Sunday classes after a Friday holiday. No Sunday classes before a Monday holiday.

Note: Holidays apply to all sessions.

Summer Session 2008

Summer Classes: June 2, 2008 - August 9, 2008

SPECIAL DATES

June 1, 2008. RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)

July 4, 2008 Holiday - Independence Day**

July 31, 2008 Last day to file a petition for graduation for an Associate Degree or
Certificate of Achievement for Completion in Summer 2008.

** No Saturday or Sunday classes after a Friday holiday. No Sunday classes before a Monday holiday.

General Information



History

San Diego City College is a public, two-year community college administered by the San Diego Community College District. Other colleges in the same District are San Diego Mesa College and San Diego Miramar College. Continuing Education offers non-credit courses and has six major community locations, including the Educational Cultural Complex.

Chronology

1914 City College held its first classes in San Diego High School located across the street from the present campus. First known as a junior college; it was the third community college established in California.

1921 City College moved from the high school to share facilities with the State Normal School, a four-year teachers' college which became San Diego State University.

1939 San Diego Evening Junior College was created by splitting the institution into two entities, day and evening. The Evening component was created to meet the growing need for college courses for daytime working people.

1946 City College moved back to San Diego High School and reorganized into three branches: San Diego Vocational High School, San Diego College Arts and Science Center, and San Diego Evening Junior College.

1954 College renamed San Diego Junior College and Vocational School. The vocational reference was dropped in 1957 and it was known as San Diego Junior College until 1961 when it became San Diego City College.

1972 San Diego voters authorized a separate Community College District.

1973-74 A separate Board of Trustees was elected for the Community College District and the Board appointed its first Chancellor as the District's chief administrative officer.

1976 Educational Cultural Complex opened, built on 10 acres in southeast San Diego providing college credit courses, high school completion courses, skills training and continuing education courses.

1979-80 Evening College program merged with City College day program and other day programs at Mesa and City Colleges.

1989 City College celebrated its 75th anniversary.

1994 20th anniversary of Curran Plaza celebrated; plaque to former mayor Frank Curran dedicated; 80th birthday of City College cited.

1995 Schwartz Square dedicated in honor of Larry Schwartz, educator, facilitator, and negotiator.

Statement of General Education Philosophy

The general education program at the colleges in the San Diego Community College District is designed to broaden students' knowledge and their understanding of methods of gaining knowledge in a variety of disciplines and to develop students' abilities in critical thinking, in oral and written communication, and in mathematics.

The awarding of an Associate Degree symbolizes an attempt on the part of the college to lead students through patterns of learning experiences designed to develop an awareness of other cultures and times; to achieve insights gained through experience in thinking about ethical problems; and to develop the capacity for self-understanding. In addition to these accomplishments, students should possess sufficient depth in some field of knowledge to contribute to lifetime interest.

San Diego City College Philosophy

San Diego City College is a multicultural institution committed to providing open access to all who benefit from instruction and to meeting the diverse and ever-changing educational, cultural, and economic needs of the inner city and surrounding communities of San Diego. As City College prepares world citizens for the 21st century, we recognize that the aim of education is the development of the whole person, who is prepared to value citizenship and to participate in a global community. To improve access and achieve excellence, we acknowledge and affirm teaching and learning as our highest priority. We recognize that citizens in a free society must cherish and protect the tradition of academic freedom and responsibility. We further believe that people are our greatest resource, and to that end, are committed to developing an environment that cultivates understanding and respect for students, faculty, staff, and the community.

Mission

The mission of City College has as its highest priority student learning and achievement. City College provides:

- lower division general education courses that lead to Associate Degrees or transfer to a four-year college or university;
- vocational education programs that meet specific industry needs, upgrade the employment skills of students, and fulfill licensing requirements of the state of California as well as contribute to the economic development of our region; and
- important and essential student support services, basic skills instruction, and English as a Second Language to assist all students in meeting their educational goals.

Additionally, City College is committed to:

- the development of informed, active citizens who will be lifelong learners, engaged in the community, and literate in information technology;

- institutional community involvement, community development and community service;
- diversity in all of its manifestations;
- high quality instructional programs, essential student support services, including co-curricular and cultural activities; and
- a continuous campus-wide cycle of program review and assessment, planning, and resource allocation.

Disclaimer

While every reasonable effort has been made to ensure that statements in this catalog are accurate, it must be understood that the information contained herein is subject to change or elimination without notice by the administration of the San Diego Community College District. Students should consult the appropriate campus or department for current information, as well as for any special rules or requirements imposed.

Admissions and Registration



The College Matriculation Program

Steps to Student Success

The college matriculation program is designed to help students succeed in their academic program. To “matriculate” means to enroll and to commit oneself to an educational goal. The matriculation process requires a commitment on the part of the college as well as the student.

The steps in the matriculation process are:

- admission
- assessment
- orientation
- educational planning with a counselor
- follow-up of student progress

The matriculation program has been designed especially for students who intend to earn a certificate or degree at the college or to transfer to a four-year college or university. However, the services are available to all students admitted to the college.

All students are encouraged to participate in the various components of the matriculation program.

Students who meet the following criteria are exempt from the matriculation process:

1) Admission

- No exemptions

2) Assessment

- Students with the following educational goals: preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship program
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students who have taken the placement tests within the last three years

3) Orientation:

- Students with the following educational goals: preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship program
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college or university

4) Counseling/Advising

- Students with the following educational goals: preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship program
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students who have taken the placement tests in the last three years

5) Follow-up

- No exemptions

Admission

Admission is open to anyone who meets one of the following criteria:

- Persons 18 years of age or older, or emancipated minors who do not possess a high school diploma or equivalent, may be admitted by the college under provisional admissions status.
- High school students requesting concurrent enrollment may be admitted as "special part-time" students subject to the following criteria:
 - a. Students must have completed the 10th grade.
 - b. A student may take a maximum of two courses not to exceed 8 units per semester or session. This maximum includes classes at City,

Mesa, Miramar Colleges and ECC (excludes High School Honors classes).

- c. High school students must satisfy prerequisites and eligibility requirements for each course.
 - d. Students must maintain a 2.0 grade point average each semester in all college work.
 - e. If the number of units of W, I and NC exceed 40%, in any semester or session, the student will be academically disqualified. Students whose grade point average falls below a 2.0, or who do not complete 60% of all units attempted, will not be permitted to re-enroll without approval from a college counselor.
 - f. Enrollment in Physical Education classes will not be permitted.
 - g. The course is advanced scholastic or technical.
 - h. The course is not available at the school of attendance.
 - i. Students will be given college credit for all courses. Grades will be part of the student's permanent college record.
- Persons who are under 18 years of age who do not have a high school diploma and are not enrolled in a high school may be admitted as a special full-time student pursuant to Education Code §48800.5 subject to approval of the high school governing board and the college President where the student is planning to attend. Special full-time students will be admitted under provisional admission status.
 - Persons who do not meet one of the admission criteria stated above will not be admitted under any circumstances.

All new students must file an application for admission. Students who have not been in continuous attendance for one year must file a new application for admission.

Apply Online

Applications for admission to San Diego City, Mesa and Miramar Colleges are available on the Internet. Students access the online application at <http://studentweb.sdccd.edu>.

Important Reminder: Every male citizen of the U. S. and male immigrant residing in the U. S., ages 18 through 25, must register with the Selective Service.

Assessment

Assessment is a tool used to assist students in selecting courses best suited to their abilities and educational goals. Specifically, assessments help students identify their skill levels in English, mathematics, and ESOL.

Assessment is a process that includes tests and other measures and is intended to assist students in meeting course prerequisites. Students may also meet course prerequisites based on other factors such as past educational achievements in mathematics or English or course completion, and other standardized tests.

In order to ensure proper course selection, all new students should go through assessment and orientation unless they already possess an associate degree or higher.

Testing accommodations are available to students with disabilities. Contact the Disability Support Programs and Services (DSPS) office at (619) 388-3513 for assistance.

Orientation

The orientation provides important information to students about the programs and services available at the college as well as strategies for student success. Orientation includes assessment and program planning. Matriculating students who have been admitted to the college are expected to attend an assessment/orientation session before registering for classes.

For additional information call (619) (619) 388-3540 or stop by the Testing Office on campus in room A-110.

Educational Planning

The Student Education Plan (SEP) is an important tool to assist students in successfully attaining their goals without wasted time and effort. Counseling and career planning services are available to help students make wise choices concerning the programs and courses available.

The Student Education Plan (SEP) is an agreement which contains the official requirements for graduation and/or transfer. **All transcripts of prior college work must be on file and evaluated by the Evaluations Office before an official education plan can be prepared.** See the Graduation section on page 74 for graduation filing requirements.

A SEP typically lays out a program of study for a four or six semester period. These plans allow students to determine how long it will take to complete a program of study and to be sure that all program requirements can be met within a particular period of time. Education plans may be changed. The student should review plans periodically with a counselor. They are revised as a student's goals or objectives change.

Assessment of interests and aptitudes is also available to those students who want more information or assistance in order to choose the "right" programs or courses.

Course Numbering System

The course numbering system has meaning with regard to level and transfer. See the description below:

- **1-49** Basic Skills or college preparatory courses. Credit does not apply toward an associate degree or transfer to a four-year college or university.
- **50-99** Course credit applies toward the associate degree but does not transfer to a four-year college or university.
- **100-299** Course credit applies toward the associate degree and credit is intended for transfer to a four-year college or university. (Some courses may be identified as associate degree.) Final decision in regard to transferability rests with the receiving institution.
- **300-399** Apprenticeship and in-service courses. See Catalog course description to determine credit for Associate Degree or Transfer.

Apprenticeship 345, 349, 349-D, DSPS 065, Field Experience/Internship 275, Independent Study 290, Individualized Instruction 296, Special Topics 23, 63, 265, Tutoring 044, and Work Experience courses 270, 272, 274, have Districtwide designated numbers.

Follow-up Services

Follow-up services are available to all students as part of the college's commitment to student success. These services include a periodic review of student progress and education plans to assist students in reaching their educational goal. Students who need additional support services will be referred to those services.

Registration

With the exception of Special-Admit High School students, all students receive an appointment to

register online using Reg-e. Special-Admit High School students must enroll in person at the time of their registration appointment.

By using the combined schedule of classes and Reg-e, a student can enroll in any available course offered at ECC, City, Mesa, or Miramar Colleges. The class schedule is also available on the web at: <http://www.sdccd.edu/schedule>

Reg-e is easy to use. Instructions for using Reg-e are on the registration site.

The following information and services are available through Reg-e:

- registration
- a record of the student's class schedule, fees, and payment deadlines
- cancellation of registration
- adding and dropping classes
- academic deadlines and calendar
- grade information
- academic history
- purchase of parking permits
- purchase of an Associated Students college membership

Online Registration (Reg-e)

Students can register for classes using Reg-e, the San Diego Community College District's online registration system. Students can visit the Student Web Services at: <http://studentweb.sdccd.edu> and click on the Reg-e icon. Full instructions will lead students through the process.

Class Schedules on Internet

Up-to-date class schedule information and course descriptions for each campus is available on the Internet at www.sdccd.edu/schedule. This web site displays new classes, cancellations, and changes after the printed schedule has been distributed. A search engine allows students to search for classes by academic subject, by time and day, or by key words.

Wait List

Students who attempt to register in a class that is closed may select the option to have his/her name placed on a Wait List.

IMPORTANT NOTE: Wait Listing is not a guaranteed priority for enrollment.

Criteria:

- Students may place their name on only one Wait List for a specific subject and course number.
- Students must meet course prerequisites to be placed on the Wait List.
- Students who are on a Wait List and later enroll in another section of the same subject and course number will be automatically removed from the Wait List.
- Students will be told their priority number on the Wait List.
- Students can check their priority number on Reg-e.
- Students have the option to remove themselves from the Wait List at any time.
- Wait List capability is available online.
- There is a limit to the number of students allowed on each Wait List.
- Wait listed students will be given first priority to add their waitlisted class if a space becomes available.
- The college will attempt to notify students that a space is available via e-mail and telephone according to their priority number; however, it is the students' responsibility to check the status of their waitlisted classes on Reg-e daily.
- Upon notification, students will be given five (5) business days, including the day of notification, to add the waitlisted class. (An add code is not required.)
- If students do not add their waitlisted class within the 5-day period, they will be removed from the Wait List and lose their priority.
- It is the Student's responsibility to check their e-mail and/or Reg-e, weekly for the status of their waitlisted class(es).
- Students remaining on the Wait List after classes begin, MUST attend the first class meeting (and be on time) to have their Wait List priority considered.

Note: Students enrolled in SDCCD Online courses must contact the instructor on the first day of class via e-mail if they wish to have their Wait List priority considered.

Adding Classes

Students may add classes online until the deadline date published in the schedule of classes. Students will not be allowed to add classes beyond the published deadline.

To add a class once the semester has begun, students must obtain an add code from the instructor, then must process and pay for the added class through Reg-e. A student may also pay at the Accounting Office, Room A-114.

Students are not officially enrolled until the add code is processed through Reg-e and fees are paid in full. Add codes for Special-Admit part-time high school and Joint Diploma students must be processed in person in the college Admissions Office prior to the add deadline.

If an instructor finds that a student has given his or her add code to another student, the instructor should administratively drop the student who was not issued the add code.

Dropping Classes

Students may drop or withdraw from classes online until the deadline dates published in the schedule of classes. Deadline dates not published in the schedule of classes are available in the Admissions Office or online at <http://studentweb.sdccd.edu>

It is the student's responsibility to drop classes. If a student remains on the class roster beyond the withdrawal deadline, the student will receive a letter grade even if he or she has stopped attending class.

***NOTE: The "withdrawal" deadline for the 16 week primary session is the Friday of the 10th week of instruction. Consult the class schedule for the published dates <http://studentweb.sdccd.edu>**

Administrative Drop

Registration may be administratively cancelled for the following reasons:

- 1) failure to pay all mandatory fees in accordance with the fee payment schedule;
- 2) using an add code issued to another student;
- 3) failure to meet the terms and conditions of a fee deferment;
- 4) failure to meet academic or progress standards;
- 5) denial of a "Petition to Challenge a Prerequisite."

Exclusion from Classes

A student may be excluded from class or the college whenever the student:

- 1) Exhibits behavior which interferes with the educational process. An instructor may remove a student from two class sessions for disruptive behavior. (Refer to Policy 3100: Student Rights, Responsibilities and Administrative Due Process); or
- 2) Is found to have a communicable disease which requires isolation pursuant to a directive from the County Department of Public Health.

Children in Classrooms

No children are allowed in any classroom, including the Learning Resource Center (LRC) or to be left unattended on the campus.

Minor Children on Campus

Minor children who are not enrolled are not permitted in any classroom at any time.

Minor children who are not enrolled are not to be left unattended at any time while on the campus.

Study Load Limit

The maximum study load for a semester is 20 academic units exclusive of physical education activity units and/or 25 units including physical education. In special circumstances, in which a student has an exceptional record of academic achievement, the Counseling Department may consider a request to increase this limit.

Students are reminded that each unit of credit is calculated to involve a total of at least three hours of classroom and outside time per week. Thus, a 20-unit study load represents a 60-hour work load each week. Students working full-time are advised NOT to attempt a full-time college program.

Twelve units of credit is considered a minimum full-time program during a semester; nine units is three-quarters time and six units, half-time.

The maximum study load for summer session is 12 academic units excluding physical education and/or 15 units including physical education.

Priority Enrollment System

Consistent with state law and the goal of providing a fair and equitable registration system for all students, the San Diego Community College District has established the following priority system for assigning

registration appointments for Fall and Spring semesters.

Priority Group

- 1) EOPS and DSPS students
- 2) Continuing students
- 3) New matriculating students
- 4) New and returning students
- 5) Students possessing a baccalaureate or higher degree who are not matriculating*

* Students with a baccalaureate degree or higher will move into one of the other four groups once they have completed an education plan.

Within each priority group above, students are prioritized according to cumulative units, including transfer units and work in progress. Students who have completed an education plan will receive priority within each range. New students are assigned an appointment on a first-come, first-served basis.

Range

- 50.0-69.9 units
- 70.0-89.9 units
- 30.0-49.9 units
- 15.0-29.9 units
- 00.0-14.9 units
- 90+ units

The priority system for the Summer session is:

- 1) EOPS and DSPS students
- 2) Continuing students
- 3) New and returning students
- 4) Open registration

Change of Name, Mailing or E-mail Address

All students must report immediately any change of address to the college Admissions Office or online at <http://studentweb.sdccd.edu>. Failure to provide this information will result in delays in registration, and other important information sent by the college. Name changes must be supported with legal documentation and a picture ID and reported in person at the Admissions Office.

Prerequisites, Corequisites, Limitations on Registration and Advisories

PLAN AHEAD! All prerequisites, corequisites, and limitations on enrollment stated in the course descriptions listed in this catalog will be strictly enforced at the time of registration. Students who do not meet the prerequisite requirements according to college records will not be permitted to register for the course. Students who believe they have met the prerequisite at another institution are strongly advised to have all transcripts of prior college work evaluated and on file well in advance of registration to minimize registration delays.

Note: Unofficial transcripts are accepted for prerequisite clearance.

Students should plan their schedules early and see a counselor for assistance.

PREREQUISITES are courses that must be completed with a “C” or better prior to registration in a specific course.

COREQUISITES are courses that are required to be taken the same semester as another course.

LIMITATIONS ON ENROLLMENT are other restrictions that are stated in the course description such as “not open to students with credit in...”

ADVISORIES are departmental recommendations to be completed prior to enrolling in the course. Advisories do not prevent a student from enrolling, but are strongly encouraged by the department for a student’s academic success.

Challenge Procedures

Students who believe they have sufficient grounds may challenge a prerequisite, corequisite, or limitation on enrollment in a specific course (the student does not get units for a challenged class). A student may obtain a Petition to Challenge in the Admissions Office and a copy of Procedures 5500.2. The completed petition must be filed in the Admissions Office no later than ten working days prior to the published add deadline for the course being challenged. Students who challenge a

prerequisite or corequisite after the start of the semester must obtain an add code issued by the instructor prior to completing the petition. Contact the Admissions Office for additional information. For credit by examination, please refer to page 54.

Residency

Residency is determined when a student applies for admission to the College. The following paragraphs summarize the rules and regulations related to student residency for tuition purposes. Details are found in the CA Education Code, section 68000 and Title 5, sections 54000-54072.

Residency Status

Every person who is married or is age 18 or older and under no legal restriction may establish residence. Certain minors may also establish residence.

A California “resident” is a person who has resided in the state for more than one year prior to the residence determination date and shows “intent” to make the State of California their permanent residence.

An undocumented student is precluded from establishing residency. Restrictions also apply to some visas, please see the Residency Office.

The residence determination date is the day immediately preceding the first day of classes for each semester.

Factors Considered to Determine Residency

No one factor determines residency. The following factors are called “indices of intent.” They, along with a person’s presence in California, are among the factors considered in determining California residency:

- Filing California state income taxes as a resident
- Possessing a California driver’s license and a vehicle registered in California
- Voting in California
- Owning residential property in California for personal use
- Being licensed to practice a profession in California
- Having an active checking and/or savings account in a California bank
- Showing California on military records (Leave and Earnings Statement)

- Possessing a marriage license or a divorce decree issued in California
- Having paid nonresident tuition in another state

Exceptions to Residency Requirements

Several exceptions to the residency rules apply. They include, but are not limited to, the following:

- Active duty military personnel stationed in California
- Dependents of active duty military personnel stationed in California.
- Certain minors who remained in California when their parents moved
- Self-supporting minors
- Full-time employees of the college or a state agency, or a child or spouse of the full-time employee

Nonresident Students

A student's residency status is determined at the time of application. Nonresident students must pay nonresident tuition in addition to the enrollment fee and other fees for credit classes. Tuition must be paid in full at the time of registration.

Assembly Bill (AB) 540

Assembly Bill 540 exempts nonresident students, U.S. citizens, and permanent residents who meet the following criteria, from paying nonresident tuition:

- have attended high school in California for three or more years;
- have received a high school diploma or equivalent, including certification of graduation from a California high school;
- have registered as an entering student at, or concurrent enrollment at an accredited institution of higher education in California.
- must file an affidavit with the college stating that he or she has filed an application to legalize his or her immigration status.

This provision applies to students attending community college after January 1, 2002. For additional information contact the college Residency Office.

Incorrect Classification

A student incorrectly classified as a California resident is subject to reclassification as a nonresident and payment of all nonresident tuition. If incorrect classification results from false or misleading facts, a student may be excluded from classes or the college upon notification.

Reclassification

Reclassification to resident status must be requested by the student. Financial independence during the current year and preceding two years will be considered at the time the student requests reclassification. Information regarding requirements for reclassification is available in the Residency or Admissions Office.

Tuition will not be refunded to a student classified as a nonresident due to lack of documentation if, at a later date, documentation is presented for a previous semester.

Appeals

To appeal a residency determination decision, a student may file a Residency Determination Appeal form with the college Admissions and Records Supervisor.

Limitation of Residency Rules

Students are cautioned that this summary of rules regarding residency determination is by no means a complete explanation of their meaning or content.

For further information, contact the residency clerk in the Admissions Office. Changes may have been made in the statutes and in the regulations since this catalog was published.

False Information

Providing false information necessary for establishing residency will result in disciplinary action up to and including dismissal from the college.

Contact the Admissions Office for more details.

International Students

(F-1 Visa Students)

San Diego City College will accept a limited number of nonimmigrant F-1 visa students. Acceptance into a

program at the college is necessary before U.S. Citizenship and Immigration Services (formerly INS) Form I-20 (certificate of eligibility) is issued by the college Admissions Office. The decision to grant an acceptance will be based on all evidence received prior to the deadlines. Students may contact the International Student Admissions Office at the following address to request forms or information:

International Student Admissions Office
(619) 388-3476

San Diego City College
1313 Park Blvd.
San Diego, CA 92101

General Information

- 1) An international student must register for and maintain a minimum of 12 units each semester while at City College. Part-time F-1 status will not be approved. The registration status and academic performance of all international students will be monitored by the college.
- 2) A recent photograph must be submitted with an application (passport size is acceptable).
- 3) Prospective international students are advised that they must comply with all requirements of the U.S. Citizenship and Immigration Services (formerly INS) and of San Diego City College to be admitted as international students.
- 4) A transfer student from another accredited United States college or university must:
 - a. follow set transfer procedures of the U.S. Citizenship and Immigration Services (formerly INS); and
 - b. have pursued a full-time course of study with a minimum GPA of 2.0 (C) at the college the student was last authorized to attend. (An official transcript must be filed).

Admission Requirements

Application Fee: All international students are required to pay a \$100.00 non-refundable application fee. Upon admission to the college, the fee will be applied toward the first semester nonresident tuition. The fee is valid for up to one year from the date processed.

Admission for Fall Semester: Students must complete all admissions requirements no later than May 1 to be admitted for the fall semester. Since the processing of

an application normally requires a minimum of three to five months, students are strongly encouraged to file an application by March 1 of the current year. Students who meet the May 1 deadline will be notified as soon as possible of their admission status.

Admission for Spring Semester: Students must complete all admissions requirements no later than October 1 to be admitted for the Spring semester. Students who meet the October 1 deadline will be notified as soon as possible of their admission status.

Academic Achievement

- 1) An international student must have graduated from high school (or its equivalent) with a GPA of 2.0 ("C") or better, or have obtained a GED certificate (General Education Development).
- 2) Official transcripts of all previous secondary and college/university education must be submitted, including an English translation of the transcript, before an application will be considered.

English Proficiency Requirements

To be considered for admission, an international student whose native language is not English must take an International Test of English as a Foreign Language (TOEFL) and score a minimum of 500 on the paper-based test, 173 on the computerized version, or 61 on the internet-based test. For questions regarding the TOEFL test, please visit the Educational Testing Service website at www.ets.org/toefl/. Institutional reports or photocopies will not be accepted. Students may petition to waive the TOEFL requirement under one of the following conditions:

- 1) completion of a transfer level college English composition course at an accredited United States institution with a grade of "C" or higher;
- 2) completion of ESL assessment and placement at a level of English 40 (formerly English 62) or higher; in addition, the student must take the prescribed course work at the level of assessment; or
- 3) a minimum ACT verbal score of 19 or SAT verbal score of 450.

Advanced Degrees: An international student in possession of an associate degree or its equivalent (completion of about 60 semester units) may be determined to be beyond the course offerings of City college and is encouraged to apply to a four-year college or university.

Financial Resources

- 1) Each international student must submit verification of sufficient financial resources. The verification must indicate the ability of the student to finance each year's education and living expenses to the satisfaction of the International Student Advisor (normally \$17,500 a school year for two semesters).
- 2) An international student attending the college must pay all mandatory fees, including nonresident tuition, enrollment fees, and health services fees.
- 3) Financial aid is not available to F-1 visa international students.
- 4) An international student may not accept off-campus employment while attending college unless approval is granted by the U.S. Citizenship and Immigration Services (formally INS) and the International Student Advisor.

Health Clearance

- 1) Students must be in good health and free of communicable diseases. The "Report of Health Examination" form or a medical examination report by a physician must be submitted prior to admission. The medical examination must certify immunization against polio, diphtheria, measles, rubella, and tetanus, and must provide tuberculosis clearance.
- 2) Each student must present and maintain satisfactory evidence of an active medical insurance policy while in attendance.

Housing

The college is located near public transportation and housing. The college does not provide or assist with housing. Housing is the responsibility of the student.

Visa Students (other than F-1)

All other visa categories or immigrant classifications, other than F-1, must see the Residency Office.

Students who are residing in the United States on other than F-1 student visas must comply with all restrictions on total units enrolled as specified by the U.S. Citizenship and Immigration Services (formerly INS).

Fees

Community College Enrollment Fee

The **enrollment fee** is assessed of all students, including nonresidents. The fee is currently \$20.00 per unit.

- Waiver of the enrollment fee is available to students who petition and qualify as recipients of benefits under the Temporary Assistance to Needy Families (TANF) program, the Supplemental Security Income/State Supplementary (SSI) program, or the General Assistance program.
- Indentured apprentices are exempt from enrollment fees for Apprenticeship Program classes only.
- Financial Aid may be available to students who qualify for assistance.

Health Services Fee

All students are assessed a mandatory fee for health services and accident insurance, whether or not they choose to use the health services available to them. The health services fee is currently \$13 per semester for spring/fall (\$10 for summer session). The following students are exempt from the health fee:

- Students who meet the income standards for the Board of Governor's Waiver (**BOGW-A Only**). *Contact the Financial Aid Office for eligibility determination.*
- Students attending under an approved apprenticeship program.
- Students who depend on prayer for healing, in accordance with the teachings of a bonafide religious sect, denomination, or organization, may petition to have the fees waived. To apply for an exemption contact the Admissions Office.

For more information, contact the Admissions Office.

Nonresident Tuition

In addition to the enrollment fee and health fee, tuition is charged to students who are not legal residents of California for tuition purposes. The 2007-2008 non-resident tuition fee is \$163.00 per unit.

Liability Insurance

Students enrolled in occupational courses that require direct clinical practice must pay a fee for liability insurance. Liability insurance fee is automatically assessed at the time of registration. The current fee is \$7.00 per semester.

Additional Fees

Parking

Automobile permits per semester
(hanger included). \$30.00

Carpool permits per semester
(Mesa only). \$30.00

Motorcycle permits per semester. \$15.00

Transcript of Record \$5.00
(after two have been issued free of charge)

Loss or damage of equipment and books cost

A.S. College Membership (per academic year) . . \$8.00

Credit by Examination. \$20.00/unit

Student Representation Fee \$1.00

Note: Students receiving public assistance, or who are determined eligible for financial aid, may purchase a single car permit for \$20.

All fees are subject to change.

Students are expected to buy all books and supplies needed for their courses. Certain occupational programs may require additional expenditures for tools, uniforms and/or liability insurance.

Student Representation Fee: All students attending college classes are required to pay a \$1.00 student representation fee. This fee is expended by the college solely for the purpose of student advocacy efforts to Federal, State and local governments. Students have the right to refuse to pay the fee for religious, moral, political or financial reasons.

Note: A \$10.00 fee will be assessed for any returned checks. The Bookstore fee for returned checks is \$25.00.

Refunds

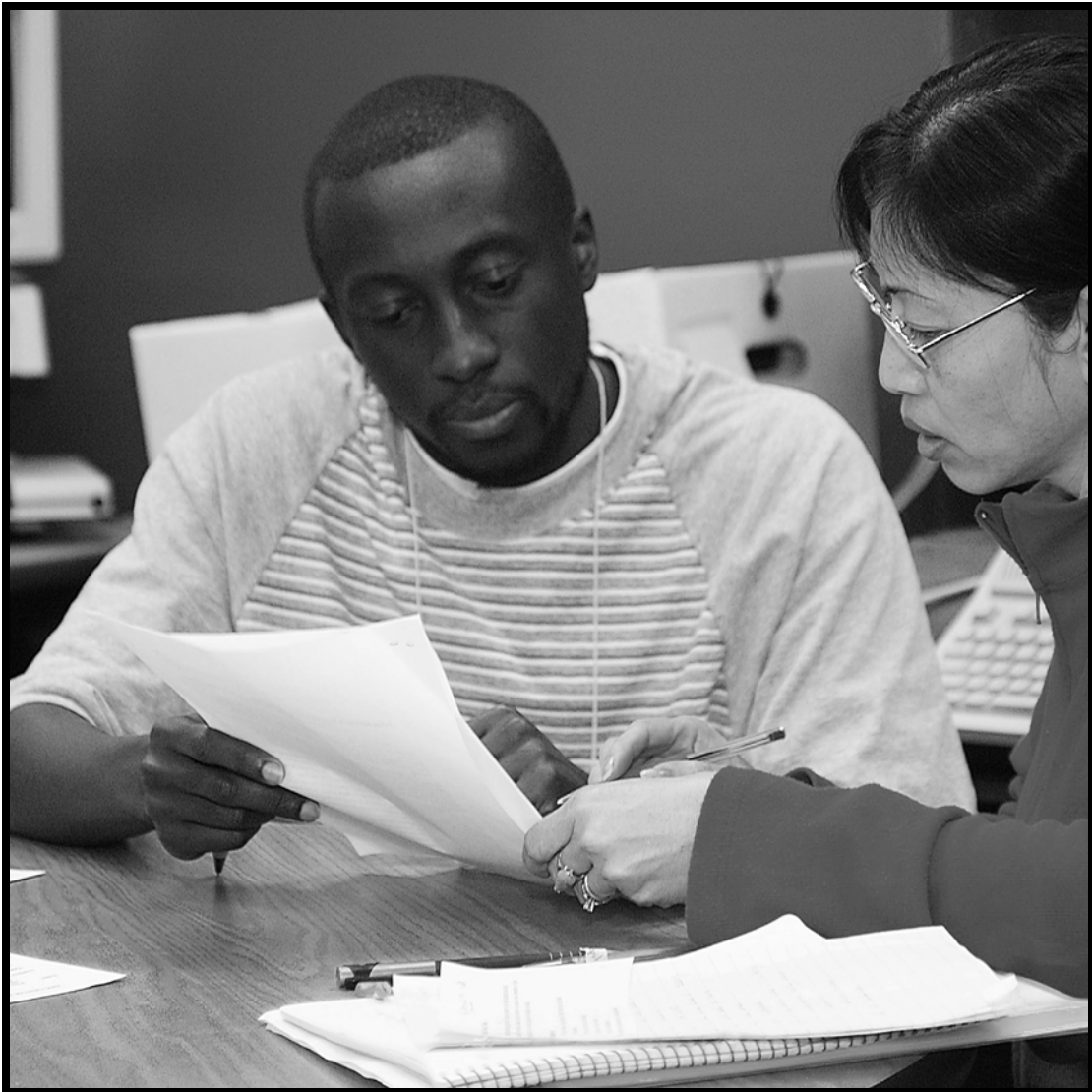
- 1) Fees will be refunded to students who **reduce their program** in accordance with the following schedule:
 - Classes 1 week or shorter in duration, see Admissions for refund deadline dates.
 - Short-Term Sessions (less than 16 weeks) - Monday of second week
 - Primary Session (16 weeks or more) - Monday of third week
- 2) Students who are administratively dropped when a Petition to Challenge is denied will receive a full refund of the class(es) petitioned.
- 3) Students who are academically disqualified and administratively dropped will receive a full refund.

No refund is given for classes dropped after the deadline.

Students with a valid address on file and who do not have an outstanding financial obligation to the district will receive a refund in the mail or credit to their credit card. Refunds will be automatically sent to students after the add/drop deadline. For payments by check, there is a five week waiting period for checks to clear the bank before refunds will be processed.

NOTE: Students who drop all classes and wish to receive a refund must also submit their parking permit before the refund will be granted. If the permit is not returned within the two-week refund period, the student will not receive a refund for the permit.

Student Services



Counseling Services

Counseling Department

Counselors offer a variety of counseling services to students in order to assist and facilitate both personal and academic student growth. The Counseling Office is located in Room A110 and maybe contacted at (619) 388-3540. The following services are provided to new, continuing, transfer, and returning students.

Academic Counseling - Students are encouraged to speak with counselors regarding any academic planning issues which may arise during their time at San Diego City College. Counselors will assist with identifying academic goals, developing computer generated student education plans usually through a scheduled appointment.

Career Counseling - Counselors offer guidance to those students who are uncertain of their career path. Students are encouraged to explore career possibilities through the guidance of career counselors, use of research materials and career assessment inventories.

Personal Counseling - Students can also receive personal counseling from the Counseling Office. Counselors will provide support to those students with issues arising from managing the stress of school life and personal life. Personal counseling sessions will be kept confidential.

Walk-in counseling - A 5 - 15 minute walk-in session is available through the academic year to students with short questions. Students may walk into the counseling office and speak with a walk- in counselor on a first come, first-served basis.

Transfer Counseling - Through scheduled appointments students will learn how to successfully transfer to a four-year university. They will receive assistance in researching and choosing the right university based on their individual needs.

Academic Skills Assessment - Students can sign up for the academic skills assessment which includes the Math and English Placement Tests. Students who have taken Math and English courses or placement tests from another college or university may not need to take a placement test at San Diego City College.

Note: If the student's educational objective is to receive an Associate Degree, a Certificate of Achievement, or to satisfy transfer requirements to a four-year college or university, the student must send all their official transcripts to the District.

Courses in College Success and Career Planning are offered in Personal Growth listed in the schedule of classes.

Student Transition Services

The Student Transition Services department provides programs, services, and information resources that enable students to prepare for their future after City College. The department includes the Transfer/Career Center and the Cooperative Work Experience Program.

Transfer/Career Center

The Transfer/Career Center is a resource center that assists students in planning their transition to a new career, new job, or transfer to a four-year university. The Center also administers guaranteed transfer admission programs to selected universities. The Transfer/Career Center offers assistance in the following areas:

Transfer Resources

- Learn about transfer
- Choose a major
- Choose a transfer university
- Transfer guarantee programs
- Transfer dates & deadlines
- Contact a transfer university
- Transfer coursework requirements
- Apply for admission
- Apply for financial aid
- Apply for scholarships

Career/Employment Prep Resources

- Career assessment/exploration
- Research occupations
- Learn about training programs
- Research potential employers
- Find an internship
- Search for jobs
- Create a resume
- Create a cover letter

- Prepare to interview

The Transfer/Career Center is located in room A-111, (619) 388-3722, www.sdcity.edu/transfer.

Cooperative Work Experience Program

The Cooperative Work Experience Program awards college credit for learning experiences that take place on a job or internship. The goals and assignments for completion of work experience courses are formulated with the student's workplace supervisor under the direction of the course instructor. More information on Work Experience courses is available in the Programs of Instruction section of the catalog under courses numbered 270 or 272. Course enrollment is limited and may not be available to all students.

To learn more about Cooperative Work Experience or to apply for enrollment in a Work Experience course, visit the Transfer/Career Center in room A-111, (619) 388-3722.

English for Speakers of Other Languages (ESOL)

The English as a Second Language Program is designed to prepare students to read, write, speak and listen at a level that enables them to succeed in college courses. The program consists of four levels and the student is assigned a level based on the result of his/her placement test. Students interested in enrolling in ESOL courses should schedule an assessment test for placement into the appropriate skill level.

For more information on the English as a Second Language Program, students should contact the college Counseling Office.

Puente Project

A-110 (619) 388-2758

The Puente Project, co-sponsored by the University of California and the Community Colleges, is an academic preparation, retention and transfer program. Puente is a year-long program in which students participate in three components:

- Writing - students enroll in English 51 for the Fall and English 101 for the Spring semester. Course materials focus on Latino/Chicano literature & experience to enhance writing skills.

- Counseling - academic, personal, transfer and career counseling is offered. Students enroll in PERG 127 for the fall semester.
- Mentoring - students are exposed to various career options through their close involvement with mentors.

Materials utilized in the Puente Project come from the Latino/Chicano perspective. Classes are open to all students. If interested in participating, please stop by the Counseling Office, A-110, and speak to the Puente Counselor or visit our website: www.sdcity.edu/puente.

TRIO/ASPIRE

TRIO/ASPIRE is a federally funded program, which strives to enhance self-esteem, improve retention and persistence, help raise grades and increase graduation/transfer rates. The following services are available to the participants of the program: Tutoring, Counseling, Computer Laboratory, and Graduation/Transfer Assistance Workshops.

Eligible participants should be highly motivated City College students who meet one of the following criteria: a first generation college student, a low-income student, or a student registered with the Disability Support Programs and Services. Applications for new participants are accepted at the beginning of each semester. For additional information, contact the TRIO/ASPIRE program in L-128 at (619) 388-3407.

Disability Support Programs and Services (DSPS)

City College provides programs and services for students with disabilities in compliance with State and Federal legislation including Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA). Student participation in the program is voluntary.

Eligible students who have a verifiable disability qualify for support services through the Disability Support Programs and Services (DSPS) Department. The programs and services are designed to support students in the achievement of their academic and vocational goals. Specialized classes for students with disabilities are available to support the college academic and

vocational programs through DSPS, Computer, Business Technology and Education, Personal Growth, and Health and Exercise Science Departments. Services provided include priority enrollment, readers, interpreters for deaf students, note takers and/or note taking materials, use of special equipment and adaptive devices, and specialized counseling and referral. Liaison with community agencies is also an important component of the program.

Academic accommodations such as the use of tape recorders or brailers in the classroom and the modification of test-taking procedures may be arranged. The campus is physically accessible.

Anyone interested in applying for services or obtaining further information may visit the Disability Support Programs and Services Department in A-115, our website www.sdccity.edu/studentresources/dsps/, or call (619) 388-3513 or tty (619) 388-3313.

Extended Opportunity Programs and Services (EOPS)

What is EOPS?

EOPS is a state-funded student support services program. Its purpose is to provide special recruitment, retention, and transition services to eligible students. The services offered are “above and beyond” those offered by the college’s Student Services division. The primary services include assistance in the following areas: priority enrollment, book service program, counseling/advisement, preparation for transition to four-year schools/the workplace, and financial assistance. For detailed information on all services offered and application procedures, please contact the EOPS Office in A-113 or call (619) 388-3209.

You may be eligible if you are enrolled full-time (at least 12 units). At least 9 of these units must be taken at City College. In addition you must meet all of the following criteria:

- 1) You are a resident of the state of California, as determined by the Admissions Office.
- 2) You are (or plan to be) a full-time student.
- 3) You qualify to receive a Board of Governors Waiver A or B.
- 4) You have not completed 70 (or more) units of

degree-applicable college course work. This includes courses taken at other colleges.

- 5) You are determined to be educationally disadvantaged by meeting any one of the following criteria:
 - a. You do not qualify to enroll for the minimum level English or mathematics courses required for your degree objective.
 - b. You have not fulfilled the requirements for a high school diploma or General Educational Development (GED).
 - c. Upon graduation from high school your high school grade point average (GPA) was 2.5 or less on a 4.0 scale.
 - d. You have been enrolled in a Math or English course, or program that is considered to be developmental or remedial.
 - e. You have been enrolled in an English as a Second Language (ESL) class or program.
 - f. In the judgment of the EOPS director, using state guidelines, you are determined to be educationally challenged.

Cooperative Agencies Resources for Education (CARE)

EOPS students who are single parents, have a child less than 14 years of age, and receive public assistance are encouraged to apply for the program’s Cooperative Agencies Resources for Education (CARE) component. CARE provides additional support services, including grant funds, to address those needs that are unique to single parents.

How to Apply

Students interested in applying for the EOPS program must complete an EOPS application and the Free Application for Federal Student Aid (FAFSA). These applications are available in the EOPS and Financial Aid Offices. Students should apply early to ensure that they receive consideration for all services. It is recommended that students complete the FAFSA by the priority filing date published by the Financial Aid Office.

Summer Readiness Program (SRP)

SRP is a summer orientation for first-time college students. Participating students attend classes four days each week for eight weeks. The course work includes material designed to develop and enhance college survival skills. In addition to the course work, a full compliment of EOPS services is provided.

Applications are usually available in early January and accepted until the end of the first week of April. Interested applicants should contact the EOPS Office for details.

City College Title V Program -- *Engage, Educate, Empower*

Recognized as an Hispanic Serving institution, City College is a recipient of a Title V grant from the U.S. Department of Education. The goals of the Title V program are focused on the academic achievement and success of students. Specific program activities are focused on the development of an Academic Success Center, faculty development, and enrollment management. For additional information, please contact the Title V Activity Manager at (619) 388-3202.

Financial Aid

A-113 (619) 388-3501

The Financial Aid Office is committed to assisting students who might otherwise be unable to continue their education because of financial disadvantage.

Financial Aid funds are administered in accordance with a nationally established policy of financial assistance for education. The basis of this policy is the belief that students and their parents have the primary responsibility for meeting educational costs. The amount of the contribution expected from students and their family is determined by careful analysis of family financial strength taking into consideration net income, number of dependents, allowable expenses, indebtedness, and assets. The U.S. Department of Education, in cooperation with congress and educational agencies, has established procedures which are used in making an evaluation of the amount families can be expected to contribute.

Application

Application materials are available on January 1st for the following academic year. The priority filing date for aid is April 15. Students filing their application by this date will be considered first in the award process. The Cal Grant deadline is March 2. However, applications for financial aid are accepted throughout the school year until June 30, 2008.

Prospective students do not have to be accepted for admission to City College to apply for financial aid. In fact, students should apply for aid as soon as the applications are available whether or not they have been admitted to the college, since the application process for federal aid can take up to 12 weeks. However, students must be enrolled in order to be offered any financial aid funds.

All financial aid applicants must complete the Free Application for Federal Student Aid (FAFSA). The completed application (FAFSA) should be mailed directly to the processor according to the instructions. FAFSA now available on the World Wide Web at www.fafsa.ed.gov.

Academic transcripts from prior colleges attended must be submitted before the processing of a financial aid application can be completed. Academic transcripts must be submitted directly to the District Records Office.

Eligibility

In order to be eligible to apply for financial aid, a student must be a citizen or permanent resident of the United States or be in the country for other than a temporary purpose with the intention of becoming a permanent resident.

Eligible non-citizens must provide proof of permanent residency for Federal Aid (Alien Registration Cards, I-94, I-155, I-688, or U.S. Immigration and Naturalization letter granting asylum, etc.). F-1 Visa students are not eligible for financial aid at City College. For further information regarding other eligible immigration status, contact the Financial Aid Office.

Students who do not have a high school diploma or equivalent are required to demonstrate "Ability to Benefit" from instruction. Information is available in the Financial Aid Office.

Awards

Awards take the form of a "package" of financial aid, usually consisting of grant money and work-study, depending on the financial need of the applicant and availability of funds. Awards may be adjusted at any time upon notice of receipt of resources not previously reported or a change in enrollment status. Revisions to awards may be possible because personal financial circumstances are so unpredictable. **If funding is available, aid for valid educational expenses not already covered in the student cost budget may be increased.**

Financial aid checks are usually ready for disbursement approximately four or five weeks after the start of classes. Pell Grant disbursements are based on enrollment levels at the time of payment and will not be adjusted. However, SEOG, Cal Grant and loan payments will be adjusted according to enrollment status. If you withdraw from classes after aid has been disbursed to you, you may be required to repay all or part of this aid. (see "Return of Title IV Funds" on page 32)

An automated system is available in the college bookstores to allow California resident students, who are enrolled in at least six units, to use a portion of their estimated Pell Grant to purchase books and supplies one week prior, and two weeks after, the start of the semester. Funds will be set aside from each eligible student's Pell Grant and placed in a special account in the bookstore. This account may be used for the purchase of books and supplies until the funds are exhausted. The account is valid at the City, Mesa, and Miramar College and ECC bookstores, regardless of where students are taking classes.

Student will be responsible for paying back the Bookstore Pell grant if student does not attend classes.

Students who elect not to purchase books from the college bookstore, or have any funds remaining on account, will receive the funds in the mail with the remainder of their Pell Grant award according to the Pell Grant payment schedule for the semester.

Students must be making satisfactory academic progress as determined by the Standards of Satisfactory Academic Progress for Financial Aid Recipients. Copies are available in the Financial Aid Office.

Return of Title IV Funds

Federal law requires that if a student receives a Federal grant and then drops/withdraws from all his/her classes, he/she may owe money back to the Federal Government.

Note that the earlier a student drops/withdraws, the more money he/she may have to pay back.

- If a student receives **LOAN** money and withdraws, he/she may **pay back** the money according to the normal rules of the loan program.
- If a student receives **WORKSTUDY** money and withdraws, he/she **does not owe** anything back and

may keep the salary earned, but must stop working immediately.

For more detailed information, contact the Financial Aid Office.

Financial Aid Programs Available

Following is a basic description of the programs available. Contact the Financial Aid Office for detailed descriptions and eligibility requirements.

Enrollment Fee Assistance: Board of Governors Waiver (BOGW)

State law requires that students attending the college pay an enrollment fee. Students enrolled in credit classes are currently required to pay \$20 per unit.

The college offers the Board of Governors Waiver (BOGW), a state-funded program which will waive the enrollment fee for all eligible applicants. **Effective Fall 2006, students who are eligible for a Board of Governors Waiver will be required to pay the health fee.** The health fee will no longer be waived for students who are eligible for a BOGW other than students who are eligible for a BOGWA (TANF/CalWorks, SSI/SSP, or General Assistance).

If you are a California resident, you will qualify for a BOGW if any ONE of the following statements applies to your current status:

- You have already qualified for financial aid, such as a Federal Pell Grant or a Cal Grant.
- You have need as determined by Federal Methodology.
- You or your family are receiving TANF (Temporary Assistance to Needy Families), SSI (Supplemental Security Income), or General Assistance/General Relief.
- You have a letter from the Department of Veterans Affairs certifying that you meet the eligibility requirements of "certain disabled veterans, dependents of certain deceased or disabled veterans."
- You are a dependent of a deceased or disabled veteran of the California National Guard. You must submit a letter of certification from the California National Guard Adjutant General's Office.

- You meet the following income standards:

Number in Household (including yourself)	Total Family Income for 2006 (adjusted gross income and/or untaxed income)
1	\$14,700 or less
2	\$19,800 or less
3	\$24,900 or less
4	\$30,000 or less
5	\$35,100 or less
6	\$40,200 or less
7	\$45,300 or less
8	\$50,400 or less

Add \$5,100 for each additional family member.

To determine your eligibility for the Board of Governor's Waiver based on the above income standards, you will be considered independent if:

- You do not live with your parents or your parent's registered domestic partner
- You were not claimed as an exemption on any federal income tax filed by your parents or your parent's registered domestic partner in 2006

Federal Pell Grant

The Federal Pell Grant is the largest federal grant program and is the foundation of a student's total "aid package." Eligibility is determined by the federal government using a standard formula for all applicants.

Enrollment status will be frozen after the add/drop period and will be the basis for Pell disbursement. Once the Pell Grant award has been processed it will not be adjusted for additional units added during the semester.

Academic Competitiveness Grant (ACG)

The Federal Academic Competitiveness Grant is a new program designed to provide additional grant money to students that have completed their state's high school graduation requirements on, or after January 1, 2005, and have completed a rigorous high school curriculum as designated by their state. The high school is responsible for certifying completion of the rigorous high school curriculum. The ACG grant is limited to the first two academic years of College. Eligible students must be US Citizens, enrolled in 12 units (full-time), and be receiving Pell Grant funds at the same time. The grant amount may range from \$375 -\$750 for first year students and from \$650-\$1,300 for second year

students. Eligibility ends once the student has completed 48 units of college work. **If you have a bachelor's degree, you are not eligible for an ACG Grant.**

Federal Supplemental Educational Opportunity Grant (FSEOG)

FSEOG is a federal grant program designed to assist students who have the greatest demonstrated financial need. Awarding of FSEOG funds is determined by the Financial Aid Office based on available resources.

Cal Grants

The Cal Grant program is administered by the California Student Aid Commission to help low-income students attend college. Students at the college may receive Cal Grant B or C.

- To be eligible for Cal Grant B a student must be a California resident and pursuing an undergraduate academic program of not less than one academic year.
- Cal Grant C is designed for students enrolled in a vocational program who are California residents from a low or middle-income family.
- See the Financial Aid Bulletin for important dates and deadlines.

Chafee Grant Program

The Chafee Grant is a federal program that is administered by the California Student Aid Commission to provide financial assistance to prior Foster Youth. The applicant must be certified by the State Department of Social Services of their Foster Youth status prior to reaching age 16. The grant has no citizenship requirement; however, non-citizens without a valid Social Security Number must call the CSAC for additional steps and information. The program awards a maximum of \$5,000 per academic year. Renewal applicants must maintain satisfactory academic progress as defined by the school.

Federal Work Study

Federal Work Study (FWS) allows students the opportunity to earn part of their financial aid by working in assigned jobs, both on and off campus. The salary received is at least equal to the current minimum wage, but many Federal Work Study jobs pay more than minimum wage. Federal Work Study differs from the other financial aid programs in that a student is allocated a certain amount of money to earn. As work on the job is completed, a time card is submitted for

the hours worked just as at a regular job. Once a month the student receives a paycheck for the hours worked. Once the amount allocated in the financial aid package is earned, the job ends.

Scholarships

Students are encouraged to apply for scholarships, which are available for students who meet the qualifications. These awards are donated by individual contributors, clubs and organizations both on campus and in the community. Amounts are determined by the donors and vary. Qualifying criteria may include that the student meet financial need, a designated grade point average or other requirements to be eligible for consideration. Scholarship applications may be obtained from the City College Office of Student Affairs, Room D-106 or at the website: <http://www.sdcc.edu/scholarships>

Student Loans

Applicants for student loans will be subject to college policy requirements regarding enrollment status, length of attendance, number of units completed, and total amount of previous loans.

Contact the Financial Aid Office for other requirements.

Federal Direct Loan (Subsidized)

The Federal Direct Loan is a new federal loan program that replaced the Stafford Loan program. Instead of borrowing from a bank, students borrow directly from the Federal Government.

A community college student may borrow \$3,500 as a first year student and \$4,500 as a second year student. A student may not borrow more than a total of \$23,000 as an undergraduate student. The interest rate is a fixed rate. Borrowers are required to pay an origination and insurance fee which is currently 3%. These fees are deducted from the proceeds of the loan.

To qualify, a student must be enrolled in at least six units and must demonstrate financial need through the federal methodology. To apply for a Federal Direct Loan, students must complete a FAFSA. All new applicants must also complete a mandatory loan entrance counseling session. The counseling session is required even if a student has attended a Stafford loan workshop in the past. You may complete the entrance counseling session on-line at www.dlservicer.ed.gov (and click on Entrance Counseling). The Financial Aid Office will be notified when the session has successfully

been completed. In addition, you must fill out a Loan Request Form from your Financial Aid Office.

Borrowers may also be required to submit a student education plan. The actual loan amount for which a student is eligible will be determined by the Financial Aid Office. Students must have financial need to qualify and must repay the loan. Checks will be disbursed twice per loan period. Checks to first-time students or first-time borrowers will be disbursed 30 days after the start of the semester.

For additional information, contact the Financial Aid Office.

Federal Direct Loan (Unsubsidized)

Effective July 1, 1999, City College, Mesa College and Miramar College will no longer participate in the Unsubsidized Federal Direct Loan Program.

Plus Loan

Parents of dependent undergraduate students may borrow from the PLUS loan program. The amount borrowed may be up to the cost of attendance minus any financial aid. Checks will be co-payable to the parent and the institution. Parents must begin repayment within 60 days of receiving full dispensation of the loan. The interest rate is a fixed rate. Borrower must meet all other financial aid eligibility requirements, including completing the FAFSA.

Student Emergency Loans

Short term loans for limited amounts of money are available to students in emergency situations. Contact the Student Affairs Office at City for further information.

To be eligible, students must be enrolled in at least six units and have attended City, Mesa, or Miramar College at least one semester within the last three years.

National Student Clearinghouse

All current SDCCD student's enrollment levels are automatically sent to the National Student Clearinghouse. Submission and disclosure of enrollment levels is a federal requirement for students with current and past student loans according to regulations. Enrollment information for students with no prior or current student loan history is protected from disclosure by the contractual agreement between the National Student Clearinghouse and the San Diego Community College District. For more information, please contact your campus Financial Aid Office.

New Horizons Program

The New Horizons Program assists students in completing their educational goals by providing support services such as textbook loans, public transportation assistance, student academic planner, nontraditional career information, life skills and job search information, and referrals to campus and community programs/services.

To qualify for the New Horizons Program, students must be enrolled in a vocational major certificate program and be eligible for the Board of Governors Waiver (BOGW), and be one or more displaced homemaker, disabled student, student enrolled in a nontraditional program, or student enrolled in remedial English and/or Math.

Anyone interested in program services may call (619) 388-3424 or stop by the office located in L-201.

Veterans and Service Members

Veterans Center Military Service Connected Benefit Programs

The San Diego Community Colleges have been approved to offer military service connected benefit programs leading to a certificate, an associate degree or transfer to a four-year institution. The Veterans Affairs Office staff provides counseling and guidance to veterans and assists them in the selection of educational programs which qualify for veterans benefits. The final responsibility for monitoring the process of qualification for educational benefits resides with the individual. Each veteran must read, understand, and comply with the many rules, regulations, and procedures that influence the benefit process.

Failure to take the proper classes can result in an overpayment and the reduction or termination of benefits.

Disabled Veterans

Veterans who qualify for educational benefits as disabled veterans may be entitled to special educational benefits. Veterans should visit the Veterans Administration Regional Office, 8810 Rio San Diego Drive, San Diego, CA, 92108, to determine their

eligibility for disabled status (Telephone: 1-800-827-1000).

Veterans with disabilities are encouraged to pursue services offered through Disability Support Programs and Services, A-115.

Veteran Dependent Exemption

Children and spouses of U.S. Veterans with service connected disabilities may be eligible for waiver of college fees and/or for a small monthly payment. For more information see the Veterans Affairs Office.

Liability

The veteran assumes full liability for any overpayment of veterans benefits.

All persons receiving educational benefits must report to the Veterans Affairs Office after enrollment **every semester** to continue their benefits. In addition, a Student Education Plan (SEP) must be on file by the end of the first semester; otherwise, certification of VA benefits will be delayed for the second semester. This plan must be developed and reviewed by a counselor.

Number of Units Required

For students enrolled in a degree program, the following number of units are required each semester to qualify for educational and training allowance:

12 units or more	full allowance
9 - 11.5 units	three-fourths allowance
6 - 8.5 units	one-half allowance
2 - 5.5 units	one-quarter allowance*

* Chapters 32 and 1606 only.

Short-term and summer session courses are computed proportionately for payment purposes.

Withdrawal/Change of Classes

Veterans are required to notify the campus Veterans Affairs Office when they stop attending class, withdraw from the college, or add or drop a class. Such changes should be reported immediately after completing the add/drop procedure through ClassTalk or Reg-e. Failure to comply with this regulation will be grounds for decertification.

Veterans Academic Progress

A veteran student on Academic or Lack of Progress probation status will be disqualified when his/her grade point average (GPA) falls below 2.0 for two consecutive semesters. The College Veterans Affairs Office is required to notify the Department of Veterans Affairs

(DVA) of this status. The DVA will terminate benefits unless it can be shown that the student is pursuing an appropriate objective and has a reasonable chance for success in the chosen program. Please contact the Veterans Affairs Office for more information.

Repeated Classes

Veterans may not receive benefits for a repeat of a course in which a grade of "A," "B," "C," "D," or "CR" has already been earned. Although District policy allows a student to repeat a course in which a "D" grade has been received, the course may be certified for benefits only if this catalog states that a grade of "C" or better in that course is required to earn a degree or meet a prerequisite.

Work Experience

The Work Experience program grants college credit for learning that takes place at a job or internship. Veterans may be approved for Work Experience classes only if it is required for their major or electives are available according to their education plan. Total Work Experience coursework may not exceed four units per semester, four courses, or 16 total units.

Transcripts

All official transcripts of prior college work and military schools, including copies of form DD214 or DD295 covering all periods of military service, must be on file in the Records Office by the end of the first semester of attendance at this college. Certification for benefits for the second semester will be withheld if transcripts are not received. Visit the Veterans Affairs Office for necessary forms.

Learning Resources

Learning Resource Center

San Diego City College Learning Resource Center, "R" building, is located on the southwest corner of campus on Park Boulevard between B and C Streets. Commanding dramatic views of the San Diego downtown skyline and the Coronado Bay Bridge, students and faculty are drawn here for study and research.

The main and upper level house circulation, reference, technical services, a copying and microform center, the print collection, student group study rooms, and the "smart" library instruction classroom. The lower level includes the Independent Learning Center, the Multimedia Center, a state-of-the-art videoconference

room and City SITE, the faculty and staff development center. Comfortable lounge environments, ergonomic reading tables and seating are provided throughout the three floors.

Students of the college and the San Diego Community College District will find a wide variety of materials and services which are helpful for completing research papers, course projects and homework assignments within the three major components of the Center.

Library

The library program offers a collection of 65,000 books, 229 periodical titles and a growing number of full-text electronic databases, links to other resources on the Internet and to the online library catalog. Reference services are available to help students locate library materials. Bibliographic research instructional sessions can be scheduled by instructors to teach students in the most effective use of library resources.

Independent Learning Center

The Independent Learning Center (ILC) has three major functions:

- 1) It provides word processing facilities and Internet access for students (includes business and computer science application programs for the PC).
- 2) It is the primary facility in which students complete 296 individual instruction courses.
- 3) It offers independent learning materials for many courses in a variety of formats such as videotapes, audiotapes, and computer materials.

The ILC is located in the Learning Resource Center, lower level in rooms R-105 to R-107.

Multimedia Center

The Multimedia Center incorporates cutting edge educational technology for classroom, Library, and distance learning. The center has LCD computer projectors coupled with the latest laptops/lifebooks that allow instructors and students to project PowerPoint presentations, download Internet software and show either video or DVD media.

Other mediated technologies include videoconferencing (two-way audio/video technologies), satellite downlinks for instructional support, audio and visual duplication technologies, computer editing technologies, and the maintenance of audio-visual equipment including video-data projectors such as digital video cameras and digital cameras with SD-R/RW Discs.

Tutorial/Learning Center

The Tutorial/Learning Center is located in Room L-214 on the second floor at the west end of the L-Building. The Center is dedicated to providing high quality academic support to students in art, science, vocational, and technological courses. The goal is for each student to become an independent learner, who will succeed in the collegiate setting.

The Tutorial/Learning Center is located in Room L-214 on the second floor, west end of the L-Building. The Center is dedicated to providing high quality academic support to students in art, science, vocational, and technological courses. The goal is for each student to become an independent learner, who will succeed in the collegiate setting.

Peer tutors are carefully selected and professionally trained for most college subjects. Many are bilingual to help with language barriers. They provide **FREE** individual and small group tutoring in most subject areas. All City and ECC college students may sign up for appointments and walk-in. Study group sessions facilitated by a tutor are available for high demand courses. Online tutoring is also available on limited subjects.

Special assistance is provided for vocational, DSPS, CalWORKS and EOPS students.

The Tutorial/Learning Center offers **FREE** one-hour academic skill workshops such as note-taking, test-taking, memory enhancement and time management to strengthen student learning skills.

The current hours of operation are Monday through Thursday 9:00 a.m. to 7:00 p.m., Friday 9:00 a.m. to 3:00 p.m.

Center for Reading, Writing, English as a Second Language (ESOL), and Critical Thinking

The Center for Reading, Writing, ESOL, and Critical Thinking is located in the upper level of the C building in Room C-226. The Center offers peer tutoring in reading, writing, and critical thinking assignments in classes across the curriculum. Tutors can provide assistance on a wide variety of assignments at any stage of the writing process. No appointments are taken; tutors see students on a walk-in basis. The Center is a free service to City College students. Hours, which may vary from semester to semester, are posted outside the Center.

Mathematics Center

The Mathematics Center provides two services to students: walk-in tutoring and self-paced math courses. The Center, located in T-208, is open both day and evening hours. Tutoring is available to all City College students. The tutors include trained student tutors and Math Department faculty.

Tutoring is on a first-come, first-served basis.

The self-paced mathematics courses provide students with a flexible alternative to the traditional lecture courses for Math 035, 095, and 096. The courses are open-entry/open-exit and self-paced. A variety of learning resources are available including video lectures and computer tutorials keyed to the student's textbook, live and videotape workshops, on-line testing for immediate feedback, tutors and an on-site counselor.

For additional information, come to Room T-208, or call (619) 388-3583.

Computer Services

The use of District computer equipment is limited to District staff and students.

Student Health Services

Medical/Nursing Services in A-116 (619) 388-3450

Mental Health Services in A-221 (619) 388-3539

City College's Student Health Services mission is to provide medical and psychological care; services and education in a culturally competent manner, to enhance students' ability to both advocate and care for themselves. Student Health Services' mission is in concert with City College's mission to assist the student to maintain wellness, thereby strengthening student learning, retention and success. Supporting the physical, emotional, and social well being of students through accessible, high-quality health programs and services is Student Health Services priority.

For the protection of college students and personnel, students may be asked to supply health records. In addition, the college may require health consultations and physical examinations when they appear necessary. Legal injection of prescribed medications must occur in the Health Center for safety purposes. All students are strongly encouraged to obtain immunizations against communicable diseases as recommended by public health authorities.

The Student Health Program is comprised of both medical and mental health components. Program level goals for both areas are to:

- Help students achieve physical, psychological, and emotional health in order to reach academic and personal goals and to develop positive health behaviors.
- Model and teach self-advocacy for mental and physical health.
- Provide students with resources, education, and referrals for medical and mental health related topics of importance to the student.
- Provide quality mental and medical health care focused upon the particular health needs of the City College student population.
- Create a caring and supportive environment of health promotion and disease prevention.
- Provide no or low cost physical and mental health care to all registered City College students.

Health services are provided by registered nurses, nurse practitioners, and a physician. Health services include:

- Assessments, histories and physicals
- Select laboratories
- Emergency care/first aid
- General medical and nursing care
- Immunizations/TB tests
- Health Counseling/Medical referrals
- Blood pressure monitoring and counseling
- Substance abuse referrals
- Sexually Transmitted Infection (STI) Information, Testing and Referral
- Women's Health and Family Planning

Mental Health Services are provided by a licensed Clinical Social Worker, Master level staff, and graduate interns and include:

- Crisis intervention and referral
- Individual short and long term therapy
- Group therapy services

- Cognitive behavioral therapy targeted at specific school related problems such as test-taking anxiety, performance anxiety, math anxiety, panic disorder, etc.
- Medical Social Work
- Faculty consultations
- Disciplinary evaluations/behavioral contract compliance
- Psychoeducational seminars

Student Accident Insurance/Claims

The Student Accident Insurance Plan provides coverage for on-campus or college-related injuries. This insurance covers most reasonable charges. The student, however, is ultimately responsible for any medical expenses incurred.

Student Accident Insurance is co-insurance. Students covered by a primary health organization or any other type of medical insurance should first seek treatment and payment from the provider or insurance company. All student claims are made through the Student Health Services office in A-116.

Child Development Center

The Child Development Center offers an educational program for children six weeks to five years old. Enrollment is limited to children of parents attending day classes at City College. Parents must participate at the center three hours per week each semester their child is enrolled and must take Child Development 160 and 161 the first year they enroll a child in the program. Applications for enrollment are accepted for the first two weeks in July for fall enrollment, the first two weeks in December for spring enrollment, and the first two weeks in May for summer enrollment. The Center is located at 16th and B streets. For additional information, call (619) 388-3205 or drop by (License Numbers 370805154 and 370806172).

The Center is accredited by the National Association for the Education of Young Children (NAEYC).

Evening child development services are available for families that meet Head Start criteria.

Student Affairs/ Campus Life

The Office of Student Affairs provides a variety of services designed to provide students with a well-balanced academic and extra-curricular college experience.

Student leadership, clubs and organizations, cultural events, graduation and other support services are offered through the Office of Student Affairs.

For scholarship information, emergency book loans, fee deferments and information about other support services, contact The Office of Student Affairs in room D106.

Associated Students (AS) Student Government

The Associated Students is the governing body that finances, organizes, and directs many student-sponsored programs and activities at City College. Elections are held annually for Associated Student President and other officers. Any student with a current City College ID card may vote in the elections.

Current district policy allows the elected Associated Student President to share the responsibility of the Student Trustee. The Student Trustee is a non-voting member of the Board of Trustees of the San Diego Community College District and represents the student voice on the Board.

Any student who participates in student government may not have any Policy 3100 violations of suspension or greater, as stated on their official student record.

Associated Students Membership

Support your student body by purchasing an AS membership. The membership entitles you to special benefits and privileges. The revenues go back to support various campus events and activities. See the Associated Students office, D-105A for a list of current benefits.

Student Organizations

There are over 20 active student organizations on campus reflecting the diversity of interest of the student body. Students wishing to charter or register new organizations should contact the Student Affairs Office in D-106.

Athletics

San Diego City College is a member of the Pacific Coast Conference for the following sports: men's and women's soccer, men's and women's cross country, men's and women's basketball, women's softball, men's and women's tennis, men's baseball, men's and women's volleyball, and women's badminton.

Participation in intercollegiate football and track & field is available in the San Diego Community College District located at Mesa College. The Pacific Coast Conference includes the following colleges: Cuyamaca, Grossmont, Imperial Valley, MiraCosta, Palomar, San Diego Miramar, San Diego Mesa, and Southwestern.

Students must meet academic requirements established by the California Association of Community Colleges and pass a physical examination before they are determined to be eligible to participate in Conference sports. Academic eligibility includes enrollment as a full-time student during the season of the sport and a minimum 2.0 grade point average. For more information, contact the Athletic Program Coordinator's Office, or call (619) 388-3486.

Physical Education Classes/ Intercollegiate Sports Disclaimer

Participation in all sports and physical education activities involves certain inherent risks.

Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system; and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports.

Students are strongly advised to consult a physician prior to participating in any physical education activity.

Performing Arts

The City College Department of Visual and Performing Arts offers students the opportunity to present plays several times a year and sponsors student performances in music and dance which are open to the public as well as the college community.

Journalism

College Newspaper

The college newspaper, City Times, provides students the opportunity for class workshops and actual experience in writing, editing, and producing a newspaper.

CityWorks

CityWorks is San Diego City College's creative arts annual anthology which features artwork, poetry and prose from students and the community. Each October, the staff seek artists, writers, poets, journalists, editors, graphic designers, photographers, and other creative people to seek submissions for the issue, which is published each spring. For more information, call (619) 388-3437.

Support Services

Campus Bookstore

The City College Bookstore located on campus, stocks ALL required and optional textbooks and academic supplies. In addition, the Bookstore also carries a large assortment of school supplies, software, emblematic clothing, gifts, and snacks. Faculty, students, and staff can save 30% - 60% on academically priced software.

Note: The bookstore fee for returned checks is \$25.00.

The City Bookstore buys back textbooks everyday. For the best return on your investment, sell your books for cash during finals week.

*Hours of operation are extended during the first few weeks of each semester. Regular Semester Hours are as follows: Monday - Thursday 7:45 AM - 7:00 PM, Friday 7:45 AM - 12:00 Noon

Mesa Bookstore Hours:

Monday - Thursday 7:45 AM - 7:00 PM, Friday 7:45 AM - 12:00 PM.

Miramar Bookstore Hours:

Monday - Thursday 9:00 AM - 7:00 PM

Friday - Closed

* Hours are subject to change

Cafeteria

The cafeteria is located in D-123 and serves both day and evening students.

College Police Department

T-211

The College Police Department is responsible for providing public safety, law enforcement and crime prevention services. Its mission is to maintain peace and order and a safe learning environment for all members of the campus community. It is also responsible for administering the campus parking program, lost and found and building security program.

Emergency services are provided 24 hours a day. Police business offices are open as follows:

City College (T-211)	
7:00 AM - 8:00 PM	Monday - Thursday
7:00 AM - 3:00 PM	Friday

Mesa College (J-202)	
7:00 AM - 10:00 PM	Monday - Thursday
7:00 AM - 4:30 PM	Friday

Miramar College (B-102)	
Monday - Thursday	
7:30AM - 1:00PM and 2:00PM - 7:00PM	
Friday	
7:30AM-1:00PM and 2:00PM - 4:30PM	

For information and general assistance, call (619) 388-3461. For POLICE assistance, call (619) 388-6405.

Police Escort and Related Services

The college police are available to provide escort, dead battery and vehicle lockout service during regular hours of operation as published above. Students who wish to use these services should go to the College Police Office at the following locations for assistance:

City College.....	T-211
Mesa College	J-202
Miramar College	B-102

Escorts and police services at other campuses are available anytime by calling College Police Dispatch at (619) 388-6405.

Parking

Student parking permits are available for purchase during registration through Reg-e or at the campus accounting office. Permits paid for before classes begin are generally mailed and those purchased after classes begin must be picked up. Read instructions carefully to determine your method of delivery. You do not need a permit in student lots for the first two weeks of each sixteen-week semester. Check in College Police for parking permits not received before the grace period

ends. Parking permits are not required in student lots from 12noon - 6p.m. daily or on Saturdays, Sundays or College Holidays including winter break and spring break. Students may not utilize staff/faculty parking areas unless they are the owner of a valid state issued disabled placard. Owners of valid disabled placards may also park at meters without paying and are not required to buy a parking permit.

There are visitor parking meters at each campus. Student may not utilize meters that are posted for visitor use only. All meters require deposit of coins. Permits are not valid at meters. Mesa and Miramar colleges have pay & display machines for visitor and student use. Pay & display permits are only valid in student parking lots.

For additional information on parking visit your campus police office or call parking services at (619) 388-6415.

Vehicle Immobilization/Booting/ Towing/Hold

Vehicles that accumulate five (5) or more unpaid parking citations are subject to immobilization (booting) of their vehicle and/or impound (towing) at owners expense. In addition a hold may be placed on the vehicle registration. If a vehicle accumulates \$100 or more in outstanding fines a hold may be placed on student records/grades.

Emergency Calls

The college will not interrupt classroom instruction to deliver messages, except in extreme emergencies. All calls/inquiries should be referred to the College Police Dispatch at (619) 388-6405.

Academic Information and Regulations



Academic Information

SDCCD Online Learning Pathways

San Diego City, Mesa, and Miramar Colleges

QUALITY ONLINE LEARNING

Learn anytime, anywhere with our convenient, flexible online courses that fit your busy schedule. Enjoy interactive communication with your classmates and instructor as you complete your coursework in an engaging, supportive learning environment. Our quality online courses are developed and taught by experienced instructors from our three colleges - City College, Mesa College, and Miramar College.

Want to get started? Find out if online learning is for you at <http://www.sdccdonline.net/newstudents.htm>

Get ready for online learning success! Visit <http://www.sdccdonline.net/students/training/>

Online students receive 24/7 Technical Support at <https://www.sdccdonline.net/help> or by calling toll free (866) 271-8794. For login instructions visit <http://www.sdccdonline.net/login>.

Honors

The Honors Program is open to any student who meets appropriate general and departmental criteria. Honors classes are designed to provide strongly motivated students with a more in-depth or cross-disciplinary curriculum and a highly interactive classroom experience.

The Honors core curriculum, "A World of Ideas," is intended for prospective transfer students who are



interested in a multicultural, multinational perspective in their courses. The goal of the program is to facilitate and increase transfer to the University of California, California State University, and distinguished private universities, as well as to enhance employability for vocational students.

Special transfer agreements also exist for City College Honors students at the following four-year colleges and universities: UCLA, UC Santa Cruz, UC Irvine, UC Riverside, USC, Pomona College, Occidental College,

SDSU, Pepperdine University, Chapman University, Whitman College and Pitzer College. For information on eligibility requirements and course offerings, see the schedule of classes or call (619) 388-3512.

Off Campus Programs

City College offers credit courses at various locations throughout San Diego such as the Educational Cultural Complex (ECC), military bases, Hoover High School, and other educational and social service agency sites. These classes are open to all City College students and are designed to provide an opportunity for students to attend classes in the community that are short term, easily accessible, and have convenient parking. Off Campus courses are listed in the class schedule each semester under the subject in which they are offered. Classes held at the ECC location are also listed in the ECC section of the class schedule. If you have questions about enrolling in off campus classes, call the Off Campus Programs office at 388-3207 or 388-3386.

Study Abroad Programs

San Diego City College offers students the opportunity to study in different countries around the world in order to develop global competencies and to increase cultural awareness while making progress towards completion of academic goals.

Classes are held at educational institutions in the host country. Field trips, excursions, and visits to sites of cultural and historical interest are components of the program. Housing arrangements include family homestays, student apartments, and/or residence halls. Costs vary from \$5,200 to \$5,800 for semester programs and are less for summer programs. Financial aid is available for semester programs for students who qualify.

Semester Abroad Programs: San Diego City College, through a Study Abroad Consortium, offers academic programs every semester in countries such as the United Kingdom, Costa Rica, Australia, France, and Italy. Courses are taught by faculty from community colleges in the San Diego area. New sites abroad are continually considered. Classes offered abroad meet general education requirements, are mostly CSU and UC transferrable, and are selected to take advantage of the host country's history, environment, and culture.

Summer Abroad Programs: Programs approximately 4 weeks in length are often available during the summer for college credit. Cuernavaca, Mexico was the location for summer 2002 and summer 2004.

Contact Information: Additional information is available from the International Education Coordinator at (619) 388-3652.

Dean's List

A Dean's Honor List is compiled at the close of each academic year (Fall and Spring). To be eligible for the Dean's Honor List, a student must complete 12 units or more during the academic year and have earned a grade point average of 3.5 or better.

Cooperative Work Experience

Under certain circumstances, students can receive academic credit for their current employment or volunteer service. For registration information, call (619) 388-3475 or contact the Work Experience Office in A-111 at the beginning of each semester.

Distance Education

For those students who need (because of child care, health, or scheduling problems) an alternative way to attend college, City College offers a broad range of courses on-line. The majority of instructional time will be spent viewing the programs and completing assigned readings in the text and/or workbook, however, these courses also meet on campus several times during the semester.

Check the current schedule of classes for a listing of Distance Education courses. For more information, please contact the Distance Education Office at (619) 388-3534.

Class Attendance

Enrollment in college assumes maturity, seriousness of purpose, and self-discipline. Every student is expected to attend each meeting of all classes for which he/she is registered, to arrive on time, and to stay for the full class period. The college recognizes that absences occur as a result of circumstances beyond a student's control as well as from a student's failure to accept responsibility for attending class regularly. It is with the intent of providing for the orderly management of the colleges that the Board of Trustees established the following rules:

- 1) Attendance shall be taken and recorded at each regularly scheduled class meeting.
- 2) Instructors may excuse absences when the absence results from illness, accident, religious observances, holidays, other circumstances beyond the

student's control, or participation in authorized professional or college activities.

- 3) Instructors shall determine what work should be made up.
- 4) Any student absent from the first meeting of a class may be dropped by the instructor.
- 5) All rosters shall be cleared of inactive enrollment as of the census date. Inactive enrollment results when students do not attend the first class meeting, or when students have accumulated unexcused absences in excess of 12% of the total class hours.
- 6) Any student accumulating absences that exceed 6% of the total hours a class is scheduled to meet during its full term may be dropped by the instructor.

Note: It is the student's responsibility to drop by the withdrawal date or a letter grade will be assigned.

- 7) FOR VETERANS ONLY: To satisfy Veterans reporting requirements, **the interval between the last date attended and the date dropped** (the date the drop is processed) shall not exceed 22 calendar days.
- 8) Tardiness and leaving class early may be treated in the same manner as are absences.
- 9) All drops (administrative, instructor, or student initiated) shall be recorded on the student's record in the same manner.
- 10) Final grades may be affected by attendance to the extent that the instructor has included attendance in the "method by which the final grade is determined" and has provided this information to the students in the course syllabus.

Grading System

Unit of Credit: A unit of credit represents one hour of lecture or recitation and two hours of preparation per week, or three hours of laboratory per week for one semester.

Academic Grades

Grade	Standing	Grade Points per Unit
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing - less than satisfactory	1
F	Fail	0

CR	Credit	Units earned not counted in GPA
NC	No Credit	Units not counted in GPA

The grade point average (GPA) is determined by dividing the total grade points earned by the total grade point units completed as listed in the chart above.

Administrative symbols: CR/NC - Credit/No Credit; I - Incomplete; W - Withdrawal; IP - In Progress; RD - Report Delayed. Administrative symbols are not used in the computation of GPA. See below for further explanation.

Credit/No Credit (CR/NC) is a nonpunitive grading system where such units earned will be counted in satisfaction of curricular requirements but will be disregarded in determining a student's grade point average. For more specific information, refer to the discussion of the "Credit/No Credit Grading Policy" on page 46.

Incomplete: A symbol of "I," Incomplete, may be assigned by an instructor when a student has been unable to complete academic work for unforeseeable emergency and/or justifiable reason at the end of term. A copy of the "Assignment of Incomplete" form will be mailed to the student and the original retained in the Office of the Vice President, Student Services. A final grade will be assigned when the work stipulated has been completed and evaluated by the instructor or when the time limit for completion of the work has passed. An "I" must be made up no later than one year following the end of the term in which it was assigned. In the event of unusual, verifiable circumstances beyond the student's control, a petition may be filed in the Office of the Vice President, Student Services for extension of the one-year time limit. Course repetition is not permitted to remove an Incomplete.

Withdrawal: An official withdrawal from classes may be requested by the student or initiated on his/her behalf by the instructor or Vice President, Student Services.

The following conditions apply to official withdrawal:

- 1) No record of the class will be entered on the student's permanent record if the official withdrawal is made by the deadline to drop without a "W" being recorded as published in the schedule of classes.
- 2) If the withdrawal is made after the deadline for withdrawing without a "W" and prior to the dead-

line for withdrawal published in the class schedule for that session, a "W" will be recorded on the student's permanent record. No exceptions to this policy will be made. Petitions will not be accepted for exception to policy.

- 3) A student attending a session after the deadline for withdrawal will not be eligible to receive a "W" and must be assigned an academic grade or other administrative symbol by the instructor. Exceptions to this policy will be made only upon verification of extreme circumstances beyond the control of the student. Petitions requesting exception must be filed in the Admissions Office.
- 4) Withdrawal (W) symbols will be used in the calculation of lack of progress probation and disqualification status.
- 5) Students on active duty or reserve duty may petition for a "military" withdrawal. This withdrawal is not calculated in the determination of academic progress and is noted on the student's academic record.

In Progress: A symbol of "IP," In Progress, will be assigned when a class extends beyond the normal end of a semester or summer session, that is, when the class "carries over" from one term to the next. The appropriate grade, however, shall be assigned and appear on a student's record for the term during which the course is completed. The "IP" will remain on the academic record. The "IP" shall not be used in the calculation of a student's grade point average.

Grade Challenge

Final grades will be issued at the end of each semester. In the absence of mistake, fraud, incompetence, or bad faith, the determination of the student's grade by the instructor shall be final once they have been recorded by the Registrar's Office.

A student may challenge a grade or request a change to his/her academic record within two years from the date of issuance. Requests beyond two years will not be accepted. Students wishing to challenge a grade should first attempt to resolve the challenge informally with the instructor. Grade challenges must be processed under District Procedure 3001.2, Grade Challenge Procedure. Copies of Procedure 3001.2 are available in the Office of the Vice President, Instruction.

Credit/No Credit Grading Policy

Consistent with District policy, a student in good standing may elect to be graded on a Credit/No Credit

basis in a course. A grade of "Credit" (CR) shall be awarded only for work which otherwise would have received a grade of "C" or better. Work that would have received a "D" or "F" will be graded "No Credit" (NC). The units earned will be counted in satisfaction of program requirements, but will be disregarded in determining a student's grade point average.

IMPORTANT: Students who plan to transfer to a four-year institution should review the Credit/No Credit acceptance policy of the transfer institution prior to petitioning for this grading option. Restrictions in the San Diego Community College District also apply.

Limitations:

- 1) No course required in the student's major may be taken for Credit/No Credit. Some departments may limit this option further.
- 2) No more than 12 units of a student's coursework completed in the San Diego Community College District may be graded on a Credit/No Credit basis. Courses offered only on a Credit/No Credit basis are excluded from this limit.

Conditions:

- 1) Students who wish to be graded on a Credit/No Credit basis must submit a petition to the Admissions Office by the deadline date listed in the schedule of classes. **No exceptions to the deadline will be made.**
- 2) An evaluation on a Credit/No Credit basis may not later be changed to a letter grade nor may the reverse occur. **No exceptions to this condition will be made. Petitions will not be accepted for exception to policy.**

There are courses in which Credit/No Credit grades are used exclusively; these are designated in the catalog course description by the statement "Credit/No Credit Only." In addition, there are courses which cannot be taken on a Credit/No Credit basis; these are designated in the course description by the statement "Letter Grade Only."

Standards of Academic Progress

Students are in good academic standing when they have a 2.0 grade point average or higher and have

completed at least 60% of units they have attempted. There are two kinds of probation and disqualification, one based upon GPA (Academic Performance) and the other based upon the number of units completed (Progress Performance).

Certain programs may have more stringent standards for academic progress. Consult the program director for more information.

Students enrolled in the core curriculum of medically-related programs will be governed by the probation and disqualification policies as outlined in the program policy manuals that reflect the tenets of safe medical practice and respond to program accreditation guidelines.

Academic Probation*

Students whose grade point average falls below a 2.0 after completion of 12 units in the San Diego Community College District will be placed on academic probation and remain there until their overall GPA reaches or exceeds 2.0.

Academic Disqualification

A student on academic probation status is disqualified when his/her non-cumulative GPA falls below 2.0 in a subsequent semester. An enrollment hold will be placed on the student's record. Students who are disqualified after registering for the subsequent semester will be administratively dropped from all classes.

Lack of Progress Probation*

A student who has attempted a total of 12 or more units as shown by the official academic record, shall be placed on lack of progress probation when the percentage of all (cumulative) units for which entries of "W," "I," and "NC" are recorded reaches or exceeds 40%.

Lack of Progress Disqualification

A student who has been placed on lack of progress probation shall be disqualified and an enrollment hold placed on the student's record when the percentage of units for which entries of "W," "I," and "NC" are recorded in a subsequent semester (not-cumulative), reaches or exceeds 40%. Students who are disqualified after registering for the subsequent semester will be administratively dropped from all classes.

* EXCEPTIONS:

Provisional, Joint Diploma and Special Admit High School students who do not maintain good academic

standing will be automatically disqualified.
PROBATIONARY STATUS WILL NOT APPLY!

- If Disqualified;
 - Special Admit High School students will not be permitted to re-enroll without approval from a high school counselor.
 - Joint Diploma students must see a JD counselor for readmission.

Readmission After Disqualification

Note: Disqualification status is determined based upon Progress Performance, Academic Performance, or a combination of both.

• First Disqualification

Students who wish to be considered for readmission after the first disqualification will be required to meet with a counselor and develop a Student Success Plan prior to being readmitted. Students who are disqualified after registering for the next semester will be administratively dropped from all classes.

• Second Disqualification

Students who are disqualified a second time will be required to sit out for one semester. Students who are disqualified after registering for the next semester will be administratively dropped from all classes.

• Third Disqualification

Students who are disqualified a third time (and each disqualification thereafter) will be required to sit out for one year. Students who are disqualified after registering for the next semester will be administratively dropped from all classes.

Academic Regulations

Honest Academic Conduct

Honesty and integrity are integral components of the academic process. Students are expected to be honest and ethical at all times in their pursuit of academic goals in accordance with Policy 3100, Student Rights, Responsibilities and Administrative Due Process. Procedure 3100.3 describes the Academic and Administrative Sanctions for Students who are found to be cheating. A copy of Procedure 3100.3 can be obtained in the Office of the Vice President of Student Services.

Course Repetition Policy

No course in which a "C" or better grade has been earned may be repeated. Students who believe that they have a compelling reason for an exception to policy may file a petition with the Vice President, Student Services. Petitions are available in the Evaluations Office.

Effective Fall 2006, students will be allowed a maximum of four enrollments in any course, including "W" and substandard grades. For more information, consult the Counseling Office on campus.

Additional repetitions of a course to accommodate a student's disability-related needs may be permitted. **For students with disabilities, course repetition is determined on an individual student basis. Contact a DSPS counselor or DSPS instructor for more information.**

Academic Renewal By Course Repetition

Each course in which an unsatisfactory grade ("D," "F," or "NC") has been earned **may be repeated one time only**. The course being repeated must be the same as the original course, not its equivalent. Only the newly-earned units and grades will be used in computing the grade point average.

Academic Renewal Without Course Repetition

A student with a record of substandard academic performance that is not reflective of present demonstrated ability, may petition to have the substandard grades disregarded in computation of his/her grade point average.

The following conditions apply:

- 1) To be eligible a student must:
 - a. be enrolled in an accredited college/university and working toward a degree or certificate of achievement.
 - b. have transcripts from all institutions attended officially on file.
 - c. successfully complete, in an accredited college or university, 12 units with a grade point average of at least 2.0 subsequent to the work to be disregarded. All courses taken during the semester/session in which the student reaches or exceeds the 12 unit minimum will be used in computing the 2.0 grade point average.

- d. have one year elapsed since the semester/session to be disregarded was completed.
- 2) Students with degrees or certificates: Semester/session(s) including courses that were used to fulfill requirements of a degree or certificate are not eligible for academic renewal.
 - 3) A maximum of 24 units or two semesters or summer sessions, may be disregarded, whichever is greater. For purposes of academic renewal for summer session work, a summer session will be defined as all courses which commence after the termination of the Spring semester and end prior to the commencement of the Fall semester. Intersession work will be included in Spring semesters. Short-term or carry-over classes will be considered to be part of the semester or session in which credit is awarded or a grade is posted to the student's permanent record.
 - 4) For any semester/session in which course work is to be disregarded, all courses in that semester/session will be disregarded including satisfactory grades.
 - 5) No courses taken during the disregarded semesters or session(s), even if satisfactory, may be applied toward degree or certificate requirements.
 - 6) Work taken at another institution may be forgiven in our computations for purposes of graduation from one of the District colleges under the regulations stated above.
 - 7) Similar actions by other accredited institutions will be honored under the District policy. Similar actions by another institution will also be counted as part of the maximum of 24 units or two semesters/sessions maximum to be disregarded.
 - 8) The permanent academic record will be annotated in such a manner that the record of all work remains legible, ensuring a true and complete academic record.
 - 9) Recalculation of the grade point average may be used toward qualification for graduation with honors.
 - 10) Academic standing for the semester/session(s) will not be adjusted.
 - 11) Once the petition is approved the action is not reversible.

NOTE: Transcripts from all institutions attended must be officially on file.

Transcripts of Record

A student may obtain an official transcript of record by filing a request in person at the Admissions Office at the college or by mail at the Office of the Registrar, San Diego Community College District, Administrative Office, 3375 Camino del Rio South, San Diego, CA, 92108.

Effective November 2006, the Transcript Office has moved to a temporary location at 3390 Armstrong Street, Building Z205, San Diego, CA 92111.

Payment of fees must be made prior to processing a request for transcripts. The following policy has been adopted by the San Diego Community College District Board of Trustees regarding the issuance of transcripts of record:

- 1) The first two transcripts in your lifetime will be issued without charge.
- 2) There will be a charge of \$5.00 for each additional transcript
- 3) All transcript requests are processed within 10 working days except "RUSH" orders.
- 4) A \$5.00 special handling fee will be charged for all "RUSH" order transcript requests. The special handling fee will be charged per request.

All official copies of the student's permanent record are in the Office of the Registrar. The Office of the Registrar will certify only to the accuracy of the records prepared by and issued directly from that office to another institution.

Transcripts of Prior Academic Credit

Students with credit from other colleges and universities must file official transcripts at the time of application for admission.

- Official transcripts are those sent directly from one institution to another.
- Transcripts will only be accepted for one year after issuance.
- Transcripts brought in by students may be accepted for unofficial purposes such as prerequisite clearance.
- Transcripts are required even if prior credits do not appear relevant or if units were taken years ago.
- Students receiving financial aid or veterans benefits must have transcripts on file within one semester.

- Certain programs require transcripts before admission to the program.
- Official transcripts from other institutions become the property of the college and will not be duplicated or returned.
- Official transcripts should be sent to the following address:

San Diego Community College District
3375 Camino del Rio South, Rm. 100
San Diego, CA 92108-3883

Please note: Foreign transcripts are not evaluated by the college. This service is available through outside companies for a fee. Contact the college Evaluations Office for additional information.

Transferability of Credits

Credits from other regionally accredited institutions may be accepted for transfer credit after evaluation by District and college evaluators. San Diego City College **will not** accept the transfer credits from another institution if the evaluation by the District and college evaluators determines that the credits received from another accredited institution do not meet the equivalent standards for a similar course taken at San Diego City College.

Academic Credit for Nontraditional Education

Academic credit may also be available to currently enrolled SDCCD students for skills or knowledge not obtained by formal scholastic experience or for prior course work with content determined equivalent to district courses.

Credit is available through the following:

- **College-Level Examination Program (CLEP).**
- **Defense Activity for Non-Traditional Education Support (DANTES).**

- **Advanced Placement Examinations (AP).**
- **International Baccalaureate (IB).**

A maximum of 30 cumulative units may be granted for acceptable scores on any combination of Advanced Placement (AP), College Level Examination Program (CLEP), Defense Activity for Non-Traditional Education Support (DANTES), or International Baccalaureate (IB) examinations. All official transcripts must be on file, and copies of test scores must be submitted to the college Evaluations Office to receive credit.

To obtain credit, the student must be currently enrolled and working toward an associate degree or certificate of achievement. Credit granted cannot be used to meet the district in-residence requirements nor will such credit be included in the student's current study load.

Limitations on credit by standardized examination:

- Tests cannot be used to meet the American Institutions nor laboratory requirements. The English composition requirement can be met by the AP and IB exams.
- Credit will not be granted for equivalent courses completed.
- **Grades are not assigned, nor is the credit used** in calculating grade point average.
- Departmental approval is required to satisfy requirements in the student's major.
- Credit granted by SDCCD does not necessarily transfer to other institutions. Transferability of credit is determined by the receiving college or university.

The tables below indicate the score necessary, the credit allowed, and the area(s) satisfied for each of the examinations accepted for credit.

College Level Examination Program (CLEP)

CLEP Examination	Required Score	Number of Credits Granted	Credit Granted for District	Credit Granted for CSU
Accounting, Principles of	50	4	Elective Credit	
Algebra	50	5	Math Comp and Area A2	
Algebra – Trigonometry	50	3	Math Comp and Area A2	Area B4

American Government	50	3	Area D	
American Literature	50	6	Area C	
Analyzing and Interpreting Literature	50	6	Area C	
Biology	50	3	Area B	
Business Law, Introductory	50	3	Elective Credit	
Calculus with Elementary Functions	50	5	Math Comp and Area A2	Area B4
Chemistry	50	3	Area B	Area B1
College Mathematics	50	3	Math Comp and Area A2	Area B4
Composition, Freshman	50	3	Elective Credit	
Educational Psychology, Introduction to	50	3	Area D	
English Composition (with or without Essay)	50	3	Elective Credit	
English Literature	50	6	Area C	
French – Level I	50	5	Area C	
French – Level II	52	10	Area C	
German – Level I	50	5	Area C	Area C2
German – Level II	63	10	Area C	
History of the U.S.: 1865 to the Present	50	3	Area D	
History of the U.S.: Early Colonizations to 1877	50	3	Area D	
Human Growth and Development	50	3	Area D	
Humanities	50	3	Area C	
Information Systems and Computer Applications	50	3	Area A2	
Macroeconomics, Principles of	50	3	Area D	
Management, Principles of	50	3	Elective Credit	
Marketing, Principles of	50	3	Elective Credit	
Microeconomics, Principles of	50	3	Area D	
Natural Science	50	3	Area B	
Psychology, Introductory	50	3	Area D	
Social Sciences and History	50	3	Area D	
Sociology, Introductory	50	3	Area D	
Spanish – Level I	50	5	Area C	
Spanish – Level II	54	10	Area C	
Trigonometry	50	3	Math Comp and Area A2	
Western Civilization I: Ancient Near East to 1648	50	3	Area C or D	
Western Civilization II: 1648 to the Present	50	3	Area C or D	

To request an official CLEP transcript, write to:

Educational Testing Service, P. O. Box 6604, Princeton, NJ 08541

Effective July 1, 2001. See Evaluator for CLEP Tests taken prior to July 1, 2001.

CLEP Tests can **NOT** be used to clear IGETC certification nor some degree requirements. See a counselor.

Dantes tests can not be used to clear IGETC requirements nor some degree requirements. See a counselor.

DANTES Subject Standardized Test (DANTES/DSST)

DANTES Examination	Required Score	Number of Credits Granted	Credit Granted for District	Credit Granted for CSU
Fundamental College Algebra	50	3	A2 & Math Competency	No Credit
Principles of Statistics	50	3	A2 & Math Competency	No Credit
Art of the Western World	50	3	Area C	No Credit
Contemporary Western Europe: 1946-1990	50	3	Area C	No Credit
An Introduction to the Modern Middle East	50	3	Area D	No Credit
Human / Cultural Geography	50	3	Elective	No Credit
A History of the Vietnam War	50	3	Elective	No Credit
Foundations of Education	50	3	Elective	No Credit
Lifespan Developmental Psychology	50	3	Elective	No Credit
General Anthropology	50	3	Elective	No Credit
Introduction To Law Enforcement	50	3	Area D	No Credit
Criminal Justice	50	3	Elective	No Credit
Fundamentals of Counseling	50	3	Elective	No Credit
Principles of Financial Accounting	50	3	Elective	No Credit
Human Resource Management	50	3	Elective	No Credit
Organizational Behavior	50	3	Elective	No Credit
Principles of Supervision	50	3	Elective	No Credit
Introduction to Computing	50	3	Elective	No Credit
Introduction to Business	50	3	Area D	No Credit
Personal Financial	50	3	Elective	No Credit
Business Mathematics	50	3	A2 & Math Competency	No Credit
Astronomy	50	3	Area B	No Credit
Here's to Your Health	50	3	Health Education	No Credit
Environment and Humanity: the Race to Save the Planet	50	3	Elective	No Credit
Principles of Physical Science I	50	3	Area B	No Credit
Physical Geography	50	3	Area B	No Credit
Technical Writing	50	3	Elective	No Credit
Ethics in America	50	3	Elective	No Credit
Introduction to World Religions	50	3	Area C	No Credit
Principles of Public Speaking	50	3	Area A2	No Credit

Advanced Placement Test

Advanced Placement Examination	Required Score	SDCCD Course Equivalents Applicable District GE	CSUGE Certification	IGETC Certification
Art History	3, 4, or 5	Art 110 or 111 & Area C (6 units)	Art 110 or 111 (3 units)	Art 110 or 111 (3 units)
Art Studio - Drawing	3, 4, or 5	Art 150A, 155A (6 units)	No Credit	No Credit
Art Studio - General	3, 4, or 5	Art 150A, 155A (6 units)	No Credit	No Credit
Biology	3, 4, or 5	Area B (3 units)	Area B2 (3 units)	Area 5-Biol. Sci. (3 units, No Lab)
Chemistry	3	Chemistry 200 & Area B (6 units)	Area B1 & B3 (6 units)	Area 5-Phys. Sci. (3 units, No Lab)
	4 or 5	Chemistry 200 & 201 (6 units)	Area B1 & B3 (6 units)	Area 5-Phys. Sci. (3 units, No Lab)
Classics - Latin Literature	3, 4, or 5	Area C (6 units)	Area C2 (3 units)	No Credit
Classics - Vergil	3, 4, or 5	Area C (6 units)	Area C2 (3 units)	No Credit
Computer Science - A	3, 4 or 5	Area A2 & Math Competency (3 units)	No Credit	No Credit
Computer Science - AB	3, 4 or 5	Area A2 & Math Competency (6 units)	No Credit	No Credit
Economics - Macro	3, 4, or 5	Economics 120 (3 units)	Economics 120 (3 units)	Economics 120 (3 units)
Economics - Micro	3, 4, or 5	Economics 121 (3 units)	Economics 121 (3 units)	Economics 121 (3 units)
English Composition Literature	3, 4, or 5	English 101 & Area C (6 units)	English 101 & Area C (6 units)	Area 1A or Area 3 - Hum. (3 units)
English Language Composition	3, 4, or 5	English 101 (3 units)	English 101 (3 units)	English 101 (3 units)
Environmental Science	4 or 5	Biology 120 & Area B	No Credit	Area 5- Biol. Sci.
French Language	3, 4 or 5	Area C (6 units)	Area C2 (6 units)	Clear Foreign Language Requirement
French Literature	3, 4, or 5	Area C (6 units)	Area C2 (6 units)	No Credit
German Language	3, 4, or 5	Area C (6 units)	Area C2 (6 units)	Clear Foreign Language Requirement
Government - Comparative	3, 4, or 5	Political Science 103 (3 units)	Political Science 103 (3 units)	Political Science 103 (3 units)
Government - U.S.	3, 4, or 5	Political Science 101 (3 units)	Political Science 101 (3 units)	Political Science 101 (3 units)
History - European	3, 4, or 5	Area C (6 units)	Area C2 or Area D6 (3 units)	Area 3 - Hum. (3 units)
History - U.S.	3, 4, or 5	History 109 and Elective (6 units)	History 109 (3 units)	History 109 (3 units)
Human Geography	3, 4 or 5	Geography 102 & Area D	No Credit	Area 4- Geography
Math - AB	3, 4, or 5	Area A2 & Math Competency (5 units)	Area B4 (3 units)	Area 2 (5 units)
Math - BC	3, 4, or 5	Area A2 & Math Competency (5 units)	Area B4 (3 units)	Area 2 (5 units)
Music Theory	3, 4, or 5	Elective (3 units)	Area C1 (3 units)	No Credit
Physics B	3, 4, or 5	Area B & Elective (6 units)	Area B1 & B3 (6 units)	Area 5- Phys. Sci. (3 units, No Lab)
Physics C - Mechanics	3, 4, or 5	Area B (3 units)	Area B1 & B3 (3 units)	Area 5- Phys. Sci. (3 units, No Lab)
Physics C - Electricity and Magnetism	3, 4, or 5	Area B (3 units)	Area B1 & B3 (3 units)	Area 5- Phys. Sci. (3 units, No Lab)
Psychology	3, 4, or 5	Psychology 101 (3 units)	Psychology 101 (3 units)	Psychology 101 (3 units)
Spanish Language	3, 4 or 5	Area C (6 units)	Area C2 (6 units)	Clear Foreign Language Requirement
Spanish Literature	3, 4, or 5	Area C (6 units)	Area C2 (6 units)	No Credit
Statistics	3, 4, or 5	Math 119 (3 units)	Math 119 (3 units)	Math 119 (3 units)
World History	3, 4, or 5	History 101 (3 units)	History 101 (3 units)	History 101 (3 units)

To request an official **AP transcript**, write to:
 The Chauncey Group International, Attn: DSST
 Program, P. O. Box 6604, Princeton, NJ 08541-6604

To request an official **DANTES transcript**, write to:
 The Chauncey Group, Attn: DSST Program, P.O. Box
 6604, Princeton, NJ 08541-6604

International Baccalaureate (IB) Credit			
EXAMINATION	SCORE Higher level exam	UNITS	SDCCD EQUIVALENT*
Art	4-7	6	Elective Credit
Biology	4-7	4	Area B
English A1	4-7	6	Area A1 and English competency 3 units and Area C - 3 units
Economics	4-7	6	Economics 120 & 121
French	4-7	5	Area C
Geography	4-7	6	Area D
History of the Americas	4-7	6	Area D
Mathematics	6-7	6	Area A2 & Competency
Psychology	5-7	3	Area D
Spanish A2 or Spanish B	4-7	6	Area C - 3 units and elective
Theater Art	4-7	6	Elective Credit

To request an International Baccalaureate transcript, write to: International Baccalaureate N.A., 475 Riverside Drive, 16th Floor, New York, NY 10115.

*Credit may not be earned at SDCCD for courses which duplicate credit already allowed through other means such as AP or credit-by-exam.

*IB tests can **not** be used to clear IGETC certification, nor some degree requirements. See a counselor.

*IB tests may be requested from your high school.

Credit by Examination designed and approved by individual disciplines

The term "examination" means any written, oral or performance standards determined by the individual departments. Forms are available in the Evaluations Office.

Credit for non-college credit vocational courses

Students who complete non-college credit

articulated courses (SDUSD/SDCCD) that are equivalent in subject matter, content, educational objectives, length of course, and performance standards and pass a college faculty approved examination for the course offered by the college may have these courses converted to college credit. Additional information is available in the Evaluations Office.

Credit is also available for the following military experiences:

- A minimum of six months continuous active military service is required. At the time a student petitions for an associate degree evaluation, form DD-214 should be submitted. Four units of credit to fulfill the Health Education and Physical Education requirements will be granted.
- **Credit for Military School(s).** A student may receive additional unit credits for completed military schools if the student needs the units to complete the major or general education

requirements or the general elective credits needed to complete the 60 units to graduate.

- The college is guided by the associate degree/baccalaureate credit recommendations of schools contained in "A Guide to the Evaluation of Educational Experiences in the Armed Services," published by the American Council on Education. More specific information may be obtained in the Evaluations Office.
- **Service Members Opportunity College and SOCNAV/SOCMAR.** The San Diego Community Colleges have been designated as members of the Service Members Opportunity College (SOC). As members, these colleges provide educational assistance to active duty service members and agree to accept unit credit for military service schools as recommended by the American Council on Education. In addition, these institutions recognize other non-traditional sources for credit such as DANTES and CLEP examinations. The San Diego Community Colleges are also committed to military personnel who may choose to participate in the SOCNAV/SOCMAR (Service Members Opportunity College/Navy/Marine Corp.) Program Network. SOCNAV/SOCMAR was established to better serve highly mobile service members and their families. The San Diego Community Colleges are members of the Interdisciplinary Studies and Criminal Justice SOCNAV/SOCMAR Networks. For more information on these programs, contact the Military Education counselors at the following locations:

ASW	(619) 230-2331
Naval Station 32nd St.	(619) 233-5617
MCAS	(858) 536-7805
Marine Corps Recruit Depot	(619) 295-9974
Sub Base	(619) 553-7195
- **U.S. Air Force and U.S. Army ROTC Programs.** Under the provisions of a special agreement with the United States Army, the United States Air Force, San Diego State University (SDSU), and this institution, students may participate in the Army or Air Force Reserve Officers Training Program (ROTC). San Diego Community College District students may enroll and attend ROTC classes at SDSU by contacting the Air Force ROTC at the Aerospace Studies Department (594-5545) or the Army ROTC at the Military Science Department (594-4943). The credits earned in these classes may be transferred as electives to meet the degree requirements of City College.

Note: Although University of California, San Diego (UCSD) does not have an ROTC program, students may, however, with the permission of their college, enroll in ROTC courses at another institution in conjunction with completing their degree programs at UCSD.

Responsibility for Meeting Requirements

Each student must assume responsibility for compliance with the regulations of the college set forth in this catalog, for satisfying prerequisites for any course, and for selecting courses which will facilitate attainment of educational objectives.

The college does not assume responsibility for misinterpretation of policies and procedures as presented in this catalog. Counselors and advisors are available to assist in planning students' programs. Any questions or doubts concerning this catalog material should be referred to the Office of the Vice President, Student Services.

Petition for Exceptions

Petitions for exceptions to graduation requirements, substitutions, or waiver of requirements are filed with the Evaluations Office. All petitions are acted upon by the appropriate college committees/offices.

Statement of Open Courses

It is the policy of the San Diego Community College District that, unless specifically exempted by statute, every course, section, or class offered by the District and reported for state aid shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets course prerequisites.

Academic Accommodation

The District is committed to the fundamental principles of nondiscrimination and accommodation in academic programs and to all provisions of Sections 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. District Policy 3105 and Procedure 3105.1 provide for academic accommodations and adjustments for students with disabilities.

Students with verified disabilities who may require academic adjustments or auxiliary aids are strongly recommended to contact the Disability Support Programs and Services (DSPS) Department, Room A-115, and complete orientation procedures well before classes begin. Students are encouraged to identify themselves to the appropriate instructors to discuss the

details and time lines necessary to provide appropriate accommodations. Students enrolled in Online courses are encouraged to contact the college DSPS to request academic accommodation. Questions regarding academic accommodations may be directed to the college 504 Officer.

Responsibility for Maintaining Accurate Registration

It is the student's obligation to add, drop, or withdraw from classes before the deadlines stated in the schedule of classes schedule. This applies even if the student has never attended class. Any student who anticipates difficulty in paying fees should check with the Financial Aid Office about eligibility and sources of assistance. Registration will be canceled for nonpayment of fees.

Debt Owed to the College

California Education Code Section 72237 and Title 5 Section 54640 state that grades, transcripts, diplomas, and registration privileges, or any combination thereof, shall be withheld from any student or former student who has been provided with written notice that he or she has failed to pay a proper financial obligation. Any item(s) withheld shall be released when the student satisfactorily meets the financial obligation. A service fee may be charged for all delinquent loans; any service fee would be determined by the total cost required to collect the delinquent loans.

Audit Policy

Auditing courses is not permitted under any circumstances. Students must be officially enrolled in all classes which they attend.

Student Right to Know

The Higher Education Act mandates that institutions of higher education disclose the completion of graduation rates of full-time degree-, certificate-, or transfer-seeking freshman students. The completion and transfer-out rates for full-time students seeking an Associate Degree, Certificate of Achievement, or transfer are:

	<u>Completion Rates</u>	<u>Transfer-Out Rates</u>
City	23.2%	35.2%
Mesa	30.8%	31.9%
Miramar	31.3%	27.6%

Nondiscrimination Policy

The San Diego Community College District has a policy which prohibits discrimination in accordance with state and federal laws. Students wishing to file complaints

based upon discrimination should contact the campus Equal Employment Opportunity (EEO) Officer, Mary Coleman, in room C-224 or phone 388-3940. Appeals may be made to the District EEO Compliance Manager at the District Administrative Office, 3375 Camino del Rio South, San Diego, CA 92108.

Students with disabilities who want to file a grievance under Section 504 of the 1973 Federal Rehabilitation Act should contact Disability Support Programs and Services in room A-115 or call 388-3513. Students who want to file a grievance under the Americans with Disabilities Act (ADA) should contact the campus Equal Employment Opportunity (EEO) Officer Mary Coleman, in room C-224 or phone 388-3940.

Free Speech

Free speech areas have been designated on the college campuses to maximize the opportunity for free discussion and expression, while minimizing the potential for disruption of classroom and college activities.

Information concerning free speech areas is available in the office of the Vice President of Student Services, or the Dean of Student Affairs office on campus.

Gender Equity

The Gender Equity Coordinator facilitates the development or updating of the campus Gender Equity Plan in cooperation with committees that are responsible for equity concerns. The Gender Equity Coordinator can be reached at (619) 388-3940 at San Diego City College, Building E, President's Office.

Title IX. Prohibiting Sex Discrimination in Education

San Diego City College is committed to support all regulations under Title IX. "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

For further directions or inquiries, please contact the Title IX Coordinator, Mary Coleman (619) 388-3940.

Policy Prohibiting Sexual Harassment

It is the policy of the San Diego Community College District to provide an educational environment that is free of sexual advances, requests for sexual favors, and other verbal or physical conduct or communications that constitute sexual harassment as defined and

prohibited by federal and state statutes. Anyone with questions about this policy or anyone who wishes to file a complaint should contact the Dean of Student Affairs, the College Affirmative Action Officer, or the District Affirmative Action Officer. The Vice President, Student Services is also available to provide assistance in matters of alleged sexual harassment. Procedures for filing a formal complaint of sexual harassment are described in District Procedure 4105.2. Copies of this procedure may be obtained from the Office of the Vice President, Student Services.

Drug and Alcohol Use

The San Diego Community College District is committed to providing a drug free environment. Any type of drug use, including alcohol, is dangerous and potentially life threatening. Drugs and alcohol adversely affect the body, mind and behavior. The effects vary from person to person and from usage to usage. Even low doses of drugs and alcohol can impair judgment and coordination. If you use drugs or alcohol, you risk overdose, accidents, dependence, ill health, as well as legal, financial and personal problems. The federal laws against drugs are divided into two categories: possession and distribution. The penalties are severe depending upon the type of drug, quantity of the drug, and any prior offenses. Possession will earn up to one year in prison and a \$5,000 fine. Distribution will earn up to life in prison and an \$8 million fine. State laws vary and may be more severe. District Policy 3100-Code of Conduct-states that use, possession, or distribution of narcotics or other controlled substances is prohibited while on the college premises or at college sponsored events. A student may be suspended or expelled for violation of this policy. A complete list of legal sanctions is available in the Vice President, Student Services Office. The colleges provide information on drug and alcohol treatment and prevention through seminars, courses, and the Student Health Services. Contact Student Health Services or the Vice President, Student Services Office for additional information.

Smoking Regulation

This procedure is applicable to all District facilities. It implements the Board policy of consonance with the City of San Diego's ordinance regulating smoking in public facilities.

The success of this program is dependent upon the voluntary cooperation of the smoking and nonsmoking public. The District recognized the fact that individual health can be impaired both by the direct and by the secondary effects of smoking. The District, therefore, discourages the practices of smoking, but provides for

opportunities for those who smoke as long as there is no impact upon the rights and health of non-smokers.

It is not the intent that the program be a prohibition of smoking, rather it is intended to recognize the individual right of the smoking/nonsmoking public.

All campuses of the San Diego Community College District operate in compliance with Government Code 7597. As required by this law, City College, Mesa College, Miramar College, and the Centers for Education and Technology will not permit smoking within 20 feet of main entrances to buildings, exits, or any operable windows. In addition, smoking is prohibited inside all public buildings. The colleges and centers will enforce the new ordinance at all times. Additional information is available in the College Police office on each campus.

- The posting of no smoking signs without the corresponding designation of smoking permitted areas is not in consonance with the intent of the procedure.
- Smoking is not permitted in District facilities which are open to the public and used as: Classrooms, Meetings Rooms, Theatres, Restrooms, Libraries, Cafeterias, Bookstores, Service Lines, Elevators, Faculty Offices.
- Smoking is not permitted in vehicles used for transportation of students.
- Site presidents/provost/facility managers may designate facilities or areas in addition to those listed above as NO SMOKING facilities or areas.
- Each site determines areas for smoking and areas for nonsmoking in accordance with the SDCCD procedure and San Diego Municipal Code.
- Signs indicating SMOKING PERMITTED and NO SMOKING should be posted conspicuously in each area.
- Site presidents/provost/facility managers may designate areas within NO SMOKING areas where smoking is permitted, under the general guidance of San Diego Municipal Code.

For complete Smoking Policy, please reference SDCCD Procedure 0505.2.

Crime Awareness and Campus Security

The San Diego Community College District Annual Security Report, titled "Safe and Sound, A Guide to Safety and Security in the San Diego Community College District", includes statistics for the previous

three years concerning reported crimes that occurred on campus; in certain off-campus buildings or property owned or controlled by the San Diego Community College District; and on public property within, or immediately adjacent to and accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies on drug use, crime prevention, the reporting of crimes, sexual assault and other matters. You can obtain a copy of this report by contacting any campus admissions office, Vice President of Student Services office or college police business office. At anytime you may view a full copy by accessing the following website: <http://www.sdccd.edu/police/statistics.html>

Pursuant to State and Federal Law information concerning registered sex offenders enrolled or employed by the college may be obtained through the College Police Office.

Elder and Dependent Adult Abuse

An elder is defined as a resident of the State of California which is 65 years of age or older; or a dependent adult, defined as a resident of the State of California between the ages of 18 and 64 years, who has a physical or mental limitation that restrict his or her ability to carry out normal activities or to protect his/her rights.

Post-secondary educational institutions serving dependent adults are designated as mandated reporters with an individual, personal responsibility to comply with the reporting requirements.

Any mandated reporter, who, in his or her professional capacity, or within the scope of his or her employment, has observed or had knowledge of an incident that reasonably appears to be physical abuse, abandonment, isolation, financial abuse, or neglect, or is told by an elder or dependent adult that he or she has experienced behavior constituting physical abuse, abandonment, isolation, financial abuse, or neglect, or reasonably suspects abuse shall report the known or suspected instance of abuse immediately to Adult Protective Services at 1-800-510-2020.

Copyright Responsibility

Any duplication request of copyrighted materials for use in the college's instructional programs must be accompanied by written permission from the copyright owner. Any duplication of copyrighted materials by student, staff, or faculty is to be for the sole purpose of private scholarly study. Since the liability for infringement of statutory or common-law copyright occurs during misuse of duplicated materials, the

duplicated copies cannot be sold or distributed. A designated portion of the duplicated copy cannot be included in another's work without the written permission of the copyright owner. All copyright responsibility is assumed by the individual requesting the duplication. San Diego City College, its agents, representatives, and employees are held harmless against all claims, suits, damage costs, and expenses of charges of statutory or common-law infringement resulting from the college's efforts to provide services, materials, and equipment to the requestor.

Student Rights, Responsibilities and Privacy of Student Records

Student Rights and Responsibilities

District policy 3100 enumerates the rights and responsibilities of all San Diego Community College District students.

1.0 Student Rights

All students shall have the right to a campus learning environment free from interference or disruption. The District shall ensure to the best of their ability to afford students the rights contained herein.

- 1.1** Students shall have the right to impartial objective evaluation of their academic performance. Students shall receive in writing, at the beginning of each course, information outlining the method of evaluating student progress including the method by which the final grade is determined.
- 1.2** Students shall have the right to exercise free expression including, but not limited to, the use of bulletin boards, the distribution of printed materials or petitions, and wearing of buttons, badges, or other insignia, so long as the expression is not obscene, libelous or slanderous according to current legal standards, and so long as the expression does not incite students so as to create a clear and present danger of (a) the commission of unlawful acts on community college premises, (b)

the violation of lawful community college regulations, or (c) the substantial disruption of the orderly operation of the community college. The District reserves the right to regulate the time, place and manner of all student activities. (Education Code Section 76120).

- 1.3 Students shall have the right to be free from acts or threats of intimidation, harassment, or physical aggression.
- 1.4 Students shall have the right to be free from the imposition of disciplinary sanctions without proper regard for due process.
- 1.5 Students shall have the right to take reasoned exception to the data or views offered in any course of study without disrupting the instructional environment and to reserve judgment about matters of opinion. However, this does not preclude learning the content of any course for which they are enrolled.
- 1.6 Students shall have the right to participate in the formation of policy affecting them in accordance with established procedures for Shared Governance.
- 1.7 Students shall have the right to petition to organize interest groups and/or join student associations pursuant to Manual 3200.
- 1.8 Students shall have the right to invite guest speakers to make presentations on campus in accordance with campus guidelines and District policies and procedures.
- 1.9 Students shall have the right to develop student publications in accordance with standards established by current District policies and procedures.
- 1.10 Students with verified disabilities shall have the right to receive appropriate academic adjustments and auxiliary aids as specified in the Americans with Disabilities Act and Section 504 of the Federal Rehabilitation Act of 1973.

2.0 Student Responsibilities

Student behavior must remain in accordance with specific academic and behavior requirements as specified in District policy and which may be outlined by the course syllabus.

- 2.1 Students shall be responsible for defining and making progress toward their educational goal.
- 2.2 Students are responsible for reading and adhering to the policies and procedures as outlined in catalogs, schedules, course syllabi and other official printed materials.
- 2.3 Students with verified disabilities who believe they need academic adjustments or auxiliary aids are encouraged to identify themselves to their instructors to discuss the details and time lines necessary to provide appropriate accommodation. Students are responsible for providing written verification of their disability to the instructor upon request.
- 2.4 Students may elect to consult directly with a Disabled Student Programs and Services (DSPS) Counselor Specialist regarding any accommodation. These students will be required to meet time lines and procedural requirements established by the DSPS Office.

3.0 Code of Conduct

Students are subject to adhering to the policies and procedures of the San Diego Community College District, as well as all federal, state, and local laws. Students are subject to charges of misconduct concerning, but not limited to, the following acts when committed on District-owned or controlled property or at District-sponsored activities:

- 3.1 The taking of and passing off as ones own the work or ideas of another: plagiarism and academic cheating.
- 3.2 Falsification, alteration or misuse of campus/District documents, and records.
- 3.3 Act or threat of damage to or theft of property belonging to or located on District-controlled property or facilities.
- 3.4 The physical or verbal disruption of instructional or student services activities, administrative procedures, public service functions, authorized curricular or co-curricular activities or prevention of authorized guests from carrying out the purpose for which they are on campus.
- 3.5 The physical or verbal intimidation or harassment of such severity or pervasiveness as to have the purpose or

- effect of unreasonably interfering with a student's academic performance, or a District employee's work performance, or of creating an intimidating, hostile, or offensive educational or work environment.
- 3.6 Disorderly, lewd, indecent or obscene conduct or expression or habitual profanity or vulgarity; any expression which is obscene, libelous or slanderous according to current legal standards or which so incites students as to create a clear and present danger of the commission of unlawful acts, or the substantial disruption of the orderly operation of the community college. (Ed. Code 76120)
 - 3.7 Assault, or battery upon a student or district personnel on district premises or at any time or place while under the authority of District personnel.
 - 3.8 Participation in hazing (California Education Code Sections 32050 through 32052).
 - 3.9 Possession of weapons, explosives, unlicensed dangerous chemicals or objects which may be used as weapons or to threaten bodily harm, as specified in the California Penal Code or other applicable laws.
 - 3.10 Participating in activities which are in violation of federal, state, or local laws or ordinances while on district premises or at district-sponsored or supervised activities.
 - 3.11 Failure to comply with directions of staff members of the district who are acting within the scope of their employment. Continued and willful disobedience or open and persistent defiance of the authority of district personnel providing such conduct is related to district activities or college/center attendance.
 - 3.12 Smoking on District premises, or in vehicles provided by the district used for transporting students; except as permitted by applicable ordinances, laws, college guidelines and District procedure 0505.2.
 - 3.13 Use, possession, distribution, or sale of alcoholic beverages on campus except as permitted by law.
 - 3.14 Use, possession, distribution, manufacture or sale of narcotics or other hallucinogenic

drugs or substances or inhaling or breathing the fumes of, or ingesting, any poison classified as such by the California Business and Professions Code Section 4160, Schedule "D," except as provided by law, is prohibited when on district premises.

- 3.15 Violation of Policies & Procedures for Student Organizations as enumerated in Manual 3200.

Student Grievance Procedure

The purpose of this procedure is to provide a prompt and equitable means for resolving student grievance. The procedures enumerated in Student Grievance Procedures 3100.1 shall be available to any student who believes a district decision or action has adversely affected his/her rights as a student as specified in Student Rights and Responsibilities, Policy 3100, Section 1 through 10. Note that grades are not grievable under this policy. Refer to the Grade Challenge section, page 46, of this catalog.

Academic Freedom

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students, and the general well being of society. Free inquiry and free expression are indispensable to the attainment of these goals. Such freedom shall be recognized as a right of all students, faculty, staff, and administrators.

Volunteer/Visitor Conduct Expectations

In accordance with Procedure 3100.4, all visitors and volunteers are expected to adhere to the policies and procedures of the San Diego Community College District, as well as all federal, state and local laws. Visitors and volunteers will be subject to removal from classrooms, service areas, and activities of the campus for any of the following acts (but not limited to) while on campus. Any violation may be subject to permanent removal from campus. Violations of state, federal, or local laws or ordinances, while on district premises, will be addressed by college police in accordance with the California Penal Code.

- Act or threat of damage to or theft of property belonging to or located on District-controlled property or facilities.
- The physical or verbal intimidation or harassment of such severity or pervasiveness as to have the purpose or effect of unreasonably interfering with a student's academic performance, or a District employee's work performance, or of creating an intimidating, hostile, or offensive educational or work environment.
- Physical or verbal disruption that is incompatible with instructional or student services activities, administrative procedures, public service functions, authorized curricular or co-curricular activities or prevention of authorized guests from carrying out the purpose for which they are on campus when such a disruption occurs inside of any classroom or facility or in such proximity as to appear reasonably likely to interfere with activities inside of the classroom or facility, or the substantial and material disruption of any other regular campus activity which occurs in any other portion of District-controlled property.
- Disorderly, lewd, indecent or obscene conduct or expression or habitual profanity or vulgarity; any expression which is obscene, libelous or slanderous according to current legal standards or which so incites students as to create a clear and present danger of the commission of unlawful acts, or the substantial disruption of the orderly operation of the community college. (Ed. Code 76120)
- Assault, or battery upon a student or district personnel on district premises or at any time or place while under the authority of District personnel.
- Possession of weapons, explosives, unlicensed dangerous chemicals or objects which may be used as weapons or to threaten bodily harm, as specified in the California Penal Code or other applicable laws.
- Failure to comply with the reasonable directions of staff members of the district who are acting within the scope of their employment. Continued and willful disobedience or open and persistent defiance of the authority of district personnel, provided such authority is related to district activities or college/center attendance.

Review of Student Records

Pursuant to the "Family Rights and Privacy Act of 1974" (Public Law 93-380) and the California Education Code, a student may request to inspect all official school records, files, and related data that are classified as Student Records. The records will be available for review at a mutually convenient time during regular working hours. Contact the Vice President, Student Services. If information in the file is inaccurate, misleading, or inappropriate, a student may request removal of the information or include a statement disputing the material that is challenged.

The law provides that no individual, agency or organization shall have access to a student's records without the written consent of the student, with the exception of the following:

- 1) School officials within the district with "legitimate educational interest" such as the following:
 - a. Instructional staff, when such information will assist in determining or improving the academic competence of students under their jurisdiction.
 - b. Counseling staff, when such information will assist the student in achieving his/her personal, academic, or vocational goals.
 - c. Classified staff who are involved in the creation, analysis, distribution, correction, compilation, or processing of student records.
 - d. Management or supervisory staff, when such information is directly related to the successful completion of management or supervisory duties, as prescribed by the Board of Trustees.
 - e. The Board of Trustees, in appropriate disciplinary cases.
- 2) Specified federal and state educational officials such as officials in the State Chancellor's Office.
- 3) State and local officials to the extent that such information is required to be reported pursuant to state law adopted prior to November 19, 1974.
- 4) Schools or colleges of intended enrollment provided that the student has been notified and given the opportunity to challenge the content.
- 5) Organizations conducting studies for the district.

- 6) Persons in connection with an emergency.
- 7) Agencies in connection with financial aid.
- 8) Court officials pursuant to a court order or subpoena provided the college makes a reasonable effort to notify the student in advance of such compliance.

Student records will normally include documents filed for admission to the college, grade reports, permanent records of academic work completed, transcripts received from other schools and colleges attended, test scores, counseling information, correspondence, and petitions. These documents will normally include but not be limited to a student's name, address, telephone number, birth date, residence classification, sex, past and current enrollment, academic and attendance status, educational benefits, ethnic background, high school graduation, college major, and identification number.

Information which cannot be classified as a student record includes: (a) information provided by parents in connection with financial aid, (b) confidential letters of recommendation on file prior to January 1, 1975, (c) information maintained by a district official or employee which remains in his/her sole possession, (d) information about student maintained by a physician, psychiatrist, psychologist or other professional acting in his/her professional capacity for the college, (e) information about student maintained by the college law enforcement unit, (f) information about student maintained in the normal course of business pertaining to your employment, if the student is employed by the college.

The information listed below is considered "Directory Information" and may be released as specified unless the student notifies the official responsible for student records within two weeks after the beginning of the semester or session that such personally identifiable information is not to be released.

- 1) Information related to officially recognized activities and sports which appears in programs

and campus/district newspapers or is released to the news media.

- 2) Information pertaining to graduation which appears on commencement programs, and campus/district newspapers or is released to the news media.
- 3) Information pertaining to the receipt of awards which appears in campus/district newspapers or is released to the news media.

When releasing the above categories of information, the following items of information may be included: student's name, date and place of birth, address, telephone number, major field of study, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and most recent public or private school attended by the student. No other categories of information may be released nor may the information be released to other recipients without the written authorization of the student concerned.

The college will maintain a log which lists all persons, agencies, or organizations requesting or receiving information from a student's record at the college Admissions and Records Office. Such a log will also indicate why such information is requested.

Information about students may be requested by officials in charge of recruitment for the National Guard and each active reserve component of the armed forces. Such information shall be released subject to the following conditions:

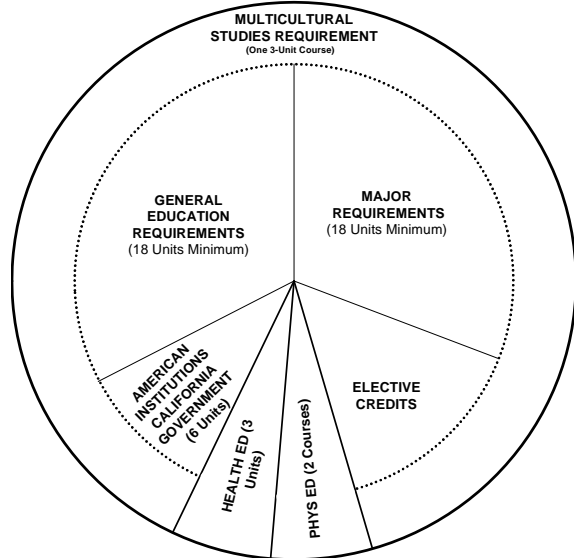
- **The requesting agency shall reimburse the District for the cost of developing and furnishing the information.**
- **The agreement shall acknowledge the confidentiality of the information and prohibit its release to a third party.**
- **After public notice, the student named has informed the district in writing that the information may be released.**

In the event you feel that City College has not complied with the provisions of the privacy act as specified herein or in the statutes, you may file a complaint with the United States Department of Education.

Academic Requirements



The Associate Degree



60 Units Required for the Associate Degree

On the recommendation of the faculty, the college awards the Associate in Arts degree, the Associate in Science degree, or the Certificate of Achievement to students who complete the requirements specified.

Associate Degree Requirements

The Associate in Science degree is awarded in engineering, physical and biological sciences, and occupational curricula. The Associate in Arts degree is awarded in the social sciences, humanities, the arts, and similar disciplines.

An associate degree is awarded by the San Diego Community College District colleges in recognition of completion of a minimum of 60 units which include completion of:

- **Major Requirements**
- **District Requirements**
- **General Education Requirements**

Students should plan programs with long range goals in mind. Students who plan to transfer to a four-year

institution should review the Transfer Requirements section of this catalog.

A minimum of 12 semester units must be completed in residence as an officially enrolled student in the San Diego Community College District.

Grade Point Average (GPA) and Minimum Grade Requirements

Students must obtain a grade point average of at least 2.0 (a "C" average) in all courses completed upon which the degree is based.

Students enrolled in occupational and health occupation programs must earn a grade of "C" or better in courses required for the major.

Recency of Coursework Limitation: Academic departments may require that courses for the major be completed within five years prior to the granting of the Associate Degree, Certificate of Achievement, or Certificate of Completion. Students with questions about the applicability of previous coursework are advised to consult the Evaluations Office as early as possible.

Major Requirements

Eighteen semester units or more are required for a major. A minimum of six semester units of the required courses for the major must be completed at City, Mesa or Miramar College. Refer to the Degree Curricula and Certificate Programs section of this catalog for specific requirements for each major. Only one course in a student's major discipline may be used to meet the San Diego Community College District general education requirements.

District Requirements

() Colleges in parenthesis indicate where the course is approved for District Requirements.
 C - City College
 M - Mesa College
 MMR - Miramar College

^ Courses with carets fulfill District multicultural studies graduation requirement.

The following information is based on 2007-2008 course offerings and is subject to change. Please contact the Counseling Department for updates.

1) Competence in Reading and Written Expression

Complete one course with a grade of "C" or better from General Education Requirements Area A.1 Language and Rationality, English Composition.

Note: The course selected to meet this requirement may also be used to meet the general education requirement for English Composition.

2) Competence in Mathematics

Competence is demonstrated by:

- a. Placement in MATH 096 or higher on the SDCCD mathematics assessment test

OR

- b. Completing one of the following courses with a grade of "C" or better:

BIOL 200	Biological Statistics (C,M)
BUSE 101	Business Mathematics (C,M,MMR)
MATH 91	Algebra for Math Placement (C)
MATH 95	Elementary Algebra and Geometry (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)

OR

- c. Completing, with a grade of "C" or better, any other Mathematics course for which one of the above listed courses is a prerequisite

Note: The course selected to meet these requirements may also be used to meet the general education requirement for Communications and Analytical Thinking.



3) American Institutions/California Government

Students must complete **TWO** (2) courses (six units) in American Institutions/California Government; one course selected from **Part A** and one course from **Part B**:

Part A		Part B	
^ BLAS 140A	History of the U.S., Black Perspective (C, M, MMR)	^ BLAS 140B	History of the U.S., Black Perspective (C, M, MMR)
^ CHIC 141A	U.S. History from a Chicano Perspective (C,M)	^ CHIC 141B	U.S. History from a Chicano Perspective (C, M)
HIST 109	History of the United States I (C, M, MMR)	HIST 110	History of the United States II (C, M, MMR)
^ HIST 115A	History of the Americas I (C, M)	^ HIST 115B	History of the Americas II (C, M)
HIST 141	Women in United States History I (C, M,MMR)	^ HIST 123	U.S. History from the Asian Pacific American Perspective (C, M)
^ HIST 150	Native Americans in U.S. History (M,MMR)	HIST 142	Women in United States History II (C, M,MMR)
		^ HIST 151	Native Americans in U.S. History (M, MMR)
		POLI 102	The American Political System (C, M, MMR)

Students who have completed the American Institutions requirement except for the California government portion must complete one of the following three-unit courses:

^ BLAS 140B	History of U.S., Black Perspective (C, M, MMR)
^CHIC 141B	U.S. History from a Chicano Perspective (C, M)
HIST 110	History of the United States II (C, M, MMR)
^HIST 115B	History of the Americas II (C, M)
^HIST 123	U.S. History from the Asian Pacific American Perspective (C, M)
HIST 142	Women in United States History II (C, M, MMR)
^HIST 151	Native Americans in U.S. History (M, MMR)
HIST 175	California History (M)
POLI 102	The American Political System (C, M, MMR)

NOTE: If a six-unit sequence or combination is selected to fulfill the American Institutions requirement, only three (3) units may be used for general education credit.

4) Health Education

This requirement is met by completing Health Education 101: Health and Lifestyle, three units.

Note: *This requirement is waived for students who earn degrees in Nursing Education. U.S. Veterans and active duty U.S. military personnel may be granted two units of college credit to fulfill the Health Education Requirement if service has been continuous for at least six months. Copies of form DD-214 or DD-295 or SMART or AART Transcript covering all periods of military service must be on file in the Records Office.*

5) Physical Education

Students must complete two activity courses in Physical Education or Dance. Physical Education courses numbered below 240 are acceptable, except for Physical Education 150. Dance courses are also acceptable, except for DANC 111, 127, 181, 183 and 253. Students with physical conditions which prevent participation in regular physical education activity classes must file a physician's statement with the Health Services Office, Room A-116. Adapted Physical Education classes are available. A Physician's medical release form is required.

Note: *U.S. Veterans and active duty U.S. military personnel may be granted two units of college credit to fulfill the Physical Education requirement if service has been continuous for at least six months. Copies of form DD-214 or DD-295 or SMART or AART Transcript covering all periods of military service must be on file in the Records Office.*

6) Multicultural Studies

Students may satisfy the District multicultural studies graduation requirement by satisfactorily completing a course related to the culture of one or more of the ethnic groups which are represented in American society. The course shall include a focus on the role of men and women in the origin, development, and current status of these cultures.

Note: *Each student seeking the Associate Degree must complete a three-unit multicultural studies course selected from the general education courses marked with a ^ indicating that it meets the Multicultural Requirement. The three units may be applied to the 18 units required in general education.*

This requirement is met by completing one of the following courses (these courses are also on the District General Education list).

- ^ ADJU 106 Diversity and Community Relations (MMR)
- ^ AMSL 104 Introduction to Deaf Culture (M)
- ^ ANTH 103 Introduction to Cultural Anthropology (C,M,MMR)
- ^ ANTH 200 Introduction to North American Indians (M)
- ^ ANTH 210 Introduction to California Indians (C,M)
- ^ ARTF 113 African, Oceanic, and Native American Art (M,MMR)
- ^ ARTF 115 African Art (C,M)
- ^ ARTF 120 Native American Indian Art (M)
- ^ BLAS 104 Black Psychology (C,M)
- ^ BLAS 110 Afro-American Art (C,M)
- ^ BLAS 115 Sociology from a Black Perspective (C)
- ^ BLAS 116 Contemporary Social Problems from a Black Perspective (C,M)
- ^ BLAS 120 Black Music (C,M)
- ^ BLAS 125 Dynamics of the Black Community (M)
- ^ BLAS 130 The Black Family (C,M)
- ^ BLAS 135 Introduction to Black Politics (C)
- ^ BLAS 140A History of the U.S., Black Perspectives (C,M,MMR)
- ^ BLAS 140B History of the U.S., Black Perspectives (C,M,MMR)
- ^ BLAS 145A Introduction to African History (C,M)
- ^ BLAS 145B Introduction to African History (C)
- ^ BLAS 150 Black Women in Literature and the Media (C,M)
- ^ BLAS 155 Afro-American Literature (C,M)
- ^ CHIC 110A Introduction to Chicano Studies (C,M)
- ^ CHIC 110B Introduction to Chicano Studies (C,M)
- ^ CHIC 135 Chicano Literature (C,M)
- ^ CHIC 141A United States History from a Chicano Perspective (C,M)
- ^ CHIC 141B United States History from a Chicano Perspective (C,M)
- ^ CHIC 190 Chicano Images in Film (C,M)
- ^ CHIC 210 Chicano Culture (C,M)
- ^ CHIL 141 The Child, Family and Community (C,M,MMR)
- ^ ENGL 202 Introduction to Linguistics (C,M)
- ^ ENGL 230 Asian American Literature (M,MMR)
- ^ FILI 100 Filipino American Experience (M,MMR)
- ^ GEOG 102 Cultural Geography (C,M,MMR)
- ^ HIST 115A History of the Americas I (C,M)
- ^ HIST 115B History of the Americas II (C,M)
- ^ HIST 120 Introduction to Asian Civilizations (C,M,MMR)

- ^ HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- ^ HIST 123 U. S. History from the Asian Pacific American Perspective (C,M)
- ^ HIST 130 The Middle East Today (M)
- ^ HIST 150 Native Americans in United States History (M,MMR)
- ^ HIST 151 Native Americans in United States History (M,MMR)
- ^ HIST 168 The United States in Vietnam (M)
- ^ MUSI 109 World Music (C,M,MMR)
- ^ PHIL 125 Philosophy of Women (C,M)
- ^ POLI 103 Comparative Politics (C,M,MMR)
- ^ POLI 140 Contemporary International Politics (C,M,MMR)
- ^ SOCO 101 Principles of Sociology (C,M,MMR)
- ^ SOCO 110 Contemporary Social Problems (C,M,MMR)
- ^ SOCO 125 Sociology of the Family (C,M)
- ^ SOCO 223 Globalization and Social Change (C,MMR)
- ^ SPEE 180 Intercultural Communication (C,M,MMR)

General Education Outcomes Defined

General Education courses should contribute to the broad education of career technical and transfer students in the areas of critical thinking, writing, and oral communication skills, understanding of and the ability to use quantitative analysis, and awareness of the arts and humanities; and of the physical, social and behavioral sciences as they affect one's interaction with the diverse local and global communities. General Education Requirements Title 5: Section 55806

- a. **Natural Sciences.** Courses in the natural sciences are those that examine the physical universe, its life forms, and its natural phenomena. To satisfy the General Education Requirement in natural sciences, a course shall be designed to help the student develop an appreciation and understanding of the scientific method, and encourage an understanding of the relationships between science and other human activities. This category would include introductory or integrative courses in astronomy, biology, chemistry, general physical science, geology, meteorology, oceanography, physical geography, physical anthropology, physics and other scientific disciplines.
- b. **Social and Behavioral Sciences.** Courses in the social and behavioral sciences are those

which focus on people as members of society. To satisfy the general education requirement in social and behavioral sciences, a course shall be designed to develop an awareness of the method of inquiry used by the social and behavioral sciences. It shall be designed to stimulate critical thinking about the ways people act and have acted in response to their societies and should promote appreciation of how societies and social subgroups operate. This category would include introductory or integrative survey courses in cultural anthropology, cultural geography, economics, history, political science, psychology, sociology and related disciplines.

- c. **Humanities.** Courses in the humanities are those which study the cultural activities and artistic expressions of human beings. To satisfy the general education requirement in the humanities, a course shall be designed to help the student develop an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves, help the student develop aesthetic understanding and an ability to make value judgments. Such courses could include introductory or integrative courses in the arts, foreign languages, literature, philosophy, and religion.
- d. **Language and Rationality.** Courses in language and rationality are those which develop for the student the principles and applications of language toward logical thought, clear and precise expression and critical evaluation of communication in whatever symbol system the student uses.
 - 1) English Composition. Courses fulfilling the written composition requirement shall be designed to include both expository and argumentative writing.
 - 2) Communication and Analytical Thinking. Courses fulfilling the communication and analytical thinking requirement include oral communication, mathematics, logic, statistics, computer languages and programming, and related disciplines.

Ethnic Studies will be offered in at least one of the required areas.

General Education Requirements

() Colleges in parenthesis indicate where the course is approved for General Education Requirements.

C - City College

M - Mesa College

MMR - Miramar College

^ Courses with carets fulfill District multicultural studies graduation requirement.

* Courses with asterisks may satisfy more than one area and/or general education requirement but may not be counted more than once for this purpose.

Only one course in a student's major discipline may be used to meet the San Diego Community College District General Education Requirements

The following information is based on 2007-2008 course offerings and is subject to change. Please contact the Counseling Department for updates.

The State of California requires the completion of a minimum of 18 units of general education. One course must be selected from each of the following areas: English Composition; Communication/Analytical Thinking; the Sciences (Life or Physical, not both); Humanities; Social Sciences; and a sixth course chosen from any area.

A. Language and Rationality:

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

1. English Composition

BUSE 119	Business Communications (C,M,MMR)
ENGL 101	Reading and Composition (C,M,MMR)
ENGL 105	Composition and Literature (C,M,MMR)
ENGL 205	Critical Thinking and Intermediate Composition (C,M,MMR)
TEHW 101	Introduction to Technical Writing (C)

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

2. Communication and Analytical Thinking

BIOL 200	Biological Statistics (C,M)
BLAS 106	Black Oral Expression and Interpretation (M)
BUSE 101	Business Mathematics (C,M,MMR)
CISC 150	Introduction to Computer and Information Sciences (C,M)
CISC 181	Principles of Information Systems (C,M,MMR)
GISG 104	Geographic Information Science and Spatial Reasoning (C,M)
MATH 91	Algebra for Math Placement (C)
MATH 95	Elementary Algebra and Geometry (C,M,MMR)
MATH 96	Intermediate Algebra and Geometry (C,M,MMR)
MATH 104	Trigonometry (C,M,MMR)
MATH 107	Introduction to Scientific Programming (C,M)
MATH 107L	Introduction to Scientific Programming Lab (C,M)
MATH 116	College and Matrix Algebra (C,M,MMR)
MATH 118	A Survey of Modern Mathematics (C,M,MMR)
MATH 119	Elementary Statistics (C,M,MMR)
MATH 121	Basic Techniques of Applied Calculus I (C,M,MMR)
MATH 122	Basic Techniques of Calculus II (C,M,MMR)
MATH 141	Precalculus (C,M,MMR)
MATH 150	Calculus with Analytic Geometry I (C,M,MMR)
MATH 151	Calculus with Analytic Geometry II (C,M,MMR)
MATH 181	Mecomtronics College Algebra and Trigonometry I (C)
MATH 182	Mecomtronics College Algebra and Trigonometry II (C)
MATH 183	Mecomtronics Calculus I (C)
MATH 184	Mecomtronics Calculus II (C)
MATH 210A	Concepts of Elementary School Mathematics I (C,M,MMR)
MATH 210B	Concepts of Elementary School Mathematics II (C,M,MMR)
MATH 237	Machine and Assembly Language (C,M)
MATH 245	Discrete Mathematics (C,M,MMR)
MATH 252	Calculus with Analytic Geometry III (C,M,MMR)

MATH 254	Introduction to Linear Algebra (C,M,MMR)	BIOL 210B	Introduction to the Biological Sciences II-Lecture/Laboratory (C,M,MMR)
MATH 255	Differential Equations (C,M,MMR)	BIOL 215	Introduction to Zoology (C,M,MMR)
PHIL 100	Logic and Critical Thinking (C,M,MMR)	BIOL 230	Human Anatomy (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)	BIOL 235	Human Physiology (C,M,MMR)
* PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)	BIOL 250	Introduction to Botany (M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)	BIOL 255	California Plants (M)
SPEE 99	Voice and Diction for Non-Native Speakers of English (C,M,MMR)	BIOL 285	Tropical Biology Field Experience (MMR)
SPEE 101	Voice and Articulation (C,M,MMR)	MEDA 105	Fundamentals Human Anatomy and Physiology (M)
SPEE 103	Oral Communication (C,M,MMR)	NUTR 150	Nutrition (M,MMR)
SPEE 135	Interpersonal Communication (C,M,MMR)	PSYC 260	Introduction to Physiological Psychology (C,M,MMR)
SPEE 160	Argumentation (C,M,MMR)		
SPEE 170	Small Group Communication (C,M)		
^ SPEE 180	Intercultural Communication (C,M,MMR)		

B. Natural Sciences

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

1. Life Sciences

ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
BIOL 100	Natural History - Environmental Biology-Lecture/Laboratory (M,MMR)
BIOL 101	Issues in Environmental Biology-Lecture/Laboratory (C)
BIOL 105	Principles of Biology (MMR)
BIOL 106	Principles of Biology-Laboratory (MMR)
BIOL 107	General Biology-Lecture/Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 115	Marine Biology-Lecture/Laboratory (C,M,MMR)
BIOL 120	The Environment of Man (M)
BIOL 130	Human Heredity (C,M,MMR)
BIOL 131	Introduction to Biotechnology (MMR)
BIOL 160	Elements of Human Anatomy & Physiology-Lecture/Laboratory (M,MMR)
BIOL 180	Plants and People (C,M,MMR)
BIOL 205	General Microbiology (C,M,MMR)
BIOL 210A	Introduction to the Biological Sciences I-Lecture/Laboratory (C,M,MMR)

2. Physical Sciences

ASTR 101	Descriptive Astronomy (C,M,MMR)
ASTR 109	Practice in Observing-Laboratory (C,M)
ASTR 111	Astronomy Laboratory (M,MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)
CHEM 100L	Fundamentals of Chemistry-Laboratory (C,M,MMR)
CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
CHEM 130L	Introduction to Organic & Biological Chemistry-Laboratory (C,M,MMR)
CHEM 152	Introduction to General Chemistry (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)
CHEM 200	General Chemistry I-Lecture (C,M,MMR)
CHEM 200L	General Chemistry I-Laboratory (C,M,MMR)
CHEM 201	General Chemistry II-Lecture (C,M,MMR)
CHEM 201L	General Chemistry II-Laboratory (C,M,MMR)
CHEM 231	Organic Chemistry I-Lecture (C,M,MMR)
CHEM 231L	Organic Chemistry I-Laboratory (C,M,MMR)
CHEM 233	Organic Chemistry II-Lecture (C,M,MMR)
CHEM 233L	Organic Chemistry II-Laboratory (C,M,MMR)
CHEM 251	Analytical Chemistry (C,M,MMR)
ENGN 110	Science for Technical Applications (C)
GEOG 101	Physical Geography (C,M,MMR)
GEOG 101L	Physical Geography-Laboratory (C,M,MMR)
GEOL 100	General Geology (C,M,MMR)
GEOL 101	General Geology-Laboratory (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)

MCTR 120A	Basic Physics for Technical Applications I (C)	^	BLAS 155	Afro-American Literature (C,M)	
MCTR 120B	Basic Physics for Technical Applications II (C)	^	CHIC 130	Mexican Literature in Translation (C)	
MCTR 120C	Basic Physics for Technical Applications III (C)		CHIC 135	Chicano Literature (C,M)	
PHYN 100	Survey of Physical Science-Lecture (C,M,MMR)		CHIC 138	Literature of La Raza in Latin America in Translation (C,M)	
PHYN 101	Survey of Physical Science-Laboratory (C,M,MMR)		^	CHIC 190	Chicano Images in Film (C,M)
PHYN 120	Physical Oceanography (M,MMR)		CHIC 203	Introductory Spanish for Spanish Speakers (C)	
PHYS 100	Introductory Physics Lecture/Laboratory (C,M)		CHIC 204	Intermediate Spanish for Spanish Speakers (C)	
PHYS 121A	General Physics Lab (C)		^	CHIC 210	Chicano Culture (C,M)
PHYS 121B	General Physics Lab (C)		CHIC 230	Chicano Art (M)	
PHYS 125	General Physics (C,M,MMR)		CHIN 101	First Course in Mandarin Chinese (M)	
PHYS 126	General Physics II (C,M,MMR)		CHIN 102	Second Course in Mandarin Chinese (M)	
PHYS 180A	General Physics I (C)		CHIN 201	Third Course in Mandarin Chinese (M)	
PHYS 180B	General Physics II (C)		DANC 181	Introduction to Dance (C,M)	
PHYS 195	Mechanics (C,M,MMR)		DFLM 101	Introduction to Film (MMR)	
PHYS 196	Electricity and Magnetism (C,M,MMR)		DFLM 102	The American Cinema (MMR)	
PHYS 197	Waves, Optics and Modern Physics (C,M,MMR)		DRAM 105	Introduction to Dramatic Arts (C,M)	
			DRAM 107	Study of Filmed Plays (C)	
			DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)	
			DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)	
			DRAM 150	Cinema as Art and Communication I (M)	
			DRAM 151	Cinema as Art and Communication II (M)	
			ENGL 207	The Art of the Sentence (M)	
			ENGL 208	Introduction to Literature (C,M,MMR)	
			ENGL 209	Literary Approaches to Film (C,M,MMR)	
			ENGL 210	American Literature I (C,M,MMR)	
			ENGL 211	American Literature II (C,M,MMR)	
			ENGL 215	English Literature I: 800-1799 (C,M,MMR)	
			ENGL 216	English Literature II: 1800-Present (C,M,MMR)	
			ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)	
			ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)	
			^	ENGL 230	Asian American Literature (M,MMR)
			ENGL 237	Women in Literature (C,MMR)	
			ENGL 238	Evaluating Children's Literature (C,M)	
			ENGL 240	Shakespeare (C,M)	
			FREN 101	First Course in French (C,M)	
			FREN 102	Second Course in French (C,M)	
			FREN 201	Third Course in French (C,M)	
			FREN 202	Fourth Course in French (C,M)	
			GERM 101	First Course in German (C,M)	
			GERM 102	Second Course in German (C,M)	
			GERM 201	Third Course in German (C,M)	
			HIST 100	World History I (C,M,MMR)	
			HIST 101	World History II (C,M,MMR)	

C. Humanities

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

AMSL 115	American Sign Language Level I (C,M)	
AMSL 116	American Sign Language Level II (C,M)	
AMSL 215	American Sign Language Level III (C,M)	
AMSL 216	American Sign Language Level IV (C,M)	
ARAB 101	First Course in Arabic (C,MMR)	
ARAB 102	Second Course in Arabic (C,MMR)	
ARTF 100	Art Orientation (C,M,MMR)	
ARTF 107	Contemporary Art (M,MMR)	
ARTF 109	Nineteenth and Twentieth Century Art (C,M,MMR)	
ARTF 110	Art History: Prehistoric to Gothic (C,M,MMR)	
ARTF 111	Art History: Renaissance to Modern (C,M,MMR)	
^	ARTF 113	African, Oceanic, and Native American Art (M,MMR)
^	ARTF 115	African Art (C,M)
^	ARTF 120	Native American Indian Art (M)
^	ARTF 125	History of Art: Far Eastern Art (MMR)
^	BLAS 110	Afro-American Art (C,M)
^	BLAS 111	African Art History (M)
^	BLAS 120	Black Music (C,M)
^	BLAS 150	Black Women in Literature and the Media (C,M)

- * HIST 105 Introduction to Western Civilization I (C,M,MMR)
- * HIST 106 Introduction to Western Civilization II (C,M,MMR)
- ^ HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- ^ HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- ^^ HIST 123 U. S. History from the Asian Pacific American Perspective (C,M)
- HIST 125 History of England and the Commonwealth I (M)
- HIST 126 History of England and the Commonwealth II (M)
- * HIST 131 Latin America Before Independence (M)
- * HIST 132 Latin America Since Independence (M)
- HUMA 101 Introduction to the Humanities I (C,M,MMR)
- HUMA 102 Introduction to the Humanities II (C,M,MMR)
- HUMA 103 Introduction to the New Testament(C,M)
- HUMA 104 Introduction to the Old Testament (M)
- HUMA 106 World Religions (C,M)
- HUMA 201 Mythology (C,M,MMR)
- HUMA 202 Mythology: Hero's Journey (C,M)
- ITAL 101 First Course in Italian (C,M)
- ITAL 102 Second Course in Italian (C,M)
- ITAL 201 Third Course in Italian (C,M)
- JAPN 101 First Course in Japanese (M)
- JAPN 102 Second Course in Japanese (M)
- JAPN 201 Third Course in Japanese (M)
- JAPN 202 Fourth Course in Japanese (M)
- LATI 101 First Course in Latin (M)
- LATI 102 Second Course in Latin (M)
- LATI 201 Third Course in Latin (M)
- MULT 116 Flash Game Development (M)
- MUSI 100 Introduction to Music (C,M,MMR)
- MUSI 101 Music History I: Middle Ages to Mid 18th Century (M)
- MUSI 102 Music History II: Mid 18th to Early 20th Century (M)
- MUSI 105 Music of Our Time (M)
- ^ MUSI 109 World Music (C,M,MMR)
- MUSI 111 Jazz-History and Development (C,M,MMR)
- MUSI 125 Music, the Arts and Humanity (M)
- PHIL 102A Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
- PHIL 102B Introduction to Philosophy: Values (C,M,MMR)
- PHIL 103 Historical Introduction to Philosophy (M)
- PHIL 104A History of Western Philosophy (C,M)
- PHIL 104B History of Western Philosophy (C,M)
- PHIL 105 Contemporary Philosophy (M)
- PHIL 106 Asian Philosophy (C,M)
- PHIL 107 Reflections on Human Nature (C,M,MMR)
- * PHIL 108 Perspectives on Human Nature and Society (C,M)
- PHIL 110 Philosophy of Religion (M)
- PHIL 111 Philosophy in Literature (C,M)
- PHIL 112 Philosophy of Science (M)
- ^* PHIL 125 Philosophy of Women (C,M)
- PHIL 130 Philosophy of Art and Music (M)
- * PHIL 205 Critical Thinking and Writing in Philosophy (C,M,MMR)
- PHOT 150 History of Photography (C)
- PSYC 207 Psychology of Religion (M)
- RTVC 160 Introduction to Cinema (C)
- RUSS 101 First Course in Russian (C,M)
- RUSS 102 Second Course in Russian (M)
- RUSS 201 Third Course in Russian (M)
- SPAN 100 First/Second Course in Spanish-Accelerated (M)
- SPAN 101 First Course in Spanish (C,M,MMR)
- SPAN 102 Second Course in Spanish (C,M,MMR)
- SPAN 201 Third Course in Spanish (C,M,MMR)
- SPAN 202 Fourth Course in Spanish (C,M,MMR)
- SPAN 215 Spanish for Spanish Speakers I (C,M,MMR)
- SPAN 216 Spanish for Spanish Speakers II (C,M,MMR)
- TAGA 101 First Course in Tagalog (M,MMR)
- TAGA 102 Second Course in Tagalog (M,MMR)
- TAGA 201 Third Course in Tagalog (M,MMR)
- VIET 101 First Course in Vietnamese (M)
- VIET 102 Second Course in Vietnamese (M)
- VIET 201 Third Course in Vietnamese (M)

D. Social and Behavioral Sciences

A minimum of three semester units, or four quarter units, must be completed. Choose one course from the following:

- ADJU 101 Introduction to Administration of Justice (C,MMR)
- ^ ADJU 106 Diversity and Community Relations (MMR)
- ^ AMSL 104 Introduction to Deaf Culture (M)
- ^ ANTH 103 Introduction to Cultural Anthropology (C,M,MMR)
- ANTH 107 Introduction to Archaeology (C,M,MMR)
- ^ ANTH 200 Introduction to North American Indians (M)

^ ANTH 210	Introduction to California Indians (C,M)	^* HIST 123	U. S. History from the Asian Pacific American Perspective (C,M)
ANTH 215	Cultures of Latin America (C,M)	^ HIST 130	The Middle East Today (M)
BLAS 100	Introduction to Black Studies (C,M)	* HIST 131	Latin America Before Independence (M)
^ BLAS 104	Black Psychology (C,M)	* HIST 132	Latin America Since Independence (M)
^ BLAS 115	Sociology from a Black Perspective (C)	HIST 141	Women in United States History I (C,M,MMR)
^ BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)	HIST 142	Women in United States History II (C,M,MMR)
^ BLAS 125	Dynamics of the Black Community (M)	^ HIST 150	Native Americans in United States History (M,MMR)
^ BLAS 130	The Black Family (C,M)	^ HIST 151	Native Americans in United States History (M,MMR)
^ BLAS 135	Introduction to Black Politics (C)	HIST 154	Ancient Egypt (M)
^ BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)	^ HIST 168	The United States in Vietnam (M)
^ BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)	HIST 171	Twentieth Century America on Film (M)
^ BLAS 145A	Introduction to African History (C,M)	HIST 175	California History (M)
^ BLAS 145B	Introduction to African History (C)	JOUR 202	Introduction to Mass Communication (M,MMR)
BUSE 100	Introduction to Business (C,M,MMR)	* PHIL 108	Perspectives on Human Nature and Society (C,M)
BUSE 140	Business Law and the Legal Environment (C,M,MMR)	PHIL 109	Issues in Social Philosophy (M)
^ CHIC 110A	Introduction to Chicano Studies (C,M)	^* PHIL 125	Philosophy of Women (C,M)
^ CHIC 110B	Introduction to Chicano Studies (C,M)	PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
^ CHIC 141A	United States History from a Chicano Perspective (C,M)	POLI 101	Introduction to Political Science (C,M,MMR)
^ CHIC 141B	United States History from a Chicano Perspective (C,M)	POLI 102	The American Political System (C,M,MMR)
CHIC 150	History of Mexico (C,M)	^ POLI 103	Comparative Politics (C,M,MMR)
CHIC 170	La Chicana (C,M)	^ POLI 140	Contemporary International Politics (C,M,MMR)
CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)	PSYC 101	General Psychology (C,M,MMR)
CHIL 101	Human Growth and Development (C,M,MMR)	PSYC 111	Psychological /Social Aspects of Aging, Death and Dying (M)
CHIL 103	Lifespan Growth and Development (MMR)	PSYC 121	Introduction to Child Psychology (M,MMR)
^ CHIL 141	The Child, Family and Community (C,M,MMR)	PSYC 123	Adolescent Psychology (M,MMR)
ECON 120	Principles of Economics I (C,M,MMR)	PSYC 133	Psychology of Women (M,MMR)
ECON 121	Principles of Economics II (C,M,MMR)	PSYC 135	Marriage and Family Relations (C,M,MMR)
^ ENGL 202	Introduction to Linguistics (C,M)	PSYC 137	Human Sexual Behavior (C,M,MMR)
^ FILI 100	Filipino American Experience (M,MMR)	PSYC 155	Introduction to Personality (C,M,MMR)
^ GEOG 102	Cultural Geography (C,M,MMR)	PSYC 166	Introduction to Social Psychology (C,M,MMR)
GEOG 104	World Regional Geography (C,M,MMR)	PSYC 211	Learning (C,M,MMR)
GEOG 154	Introduction to Urban Geography (M)	PSYC 230	Psychology of Lifespan Development (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PSYC 245	Abnormal Psychology (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	RTVC 200	Introduction to Mass Communications (C)
HIST 109	History of the United States I (C,M,MMR)	^ SOCO 101	Principles of Sociology (C,M,MMR)
HIST 110	History of the United States II (C,M,MMR)		
^ HIST 115A	History of the Americas I (C,M)		
^ HIST 115B	History of the Americas II (C,M)		

- ^ SOCO 110 Contemporary Social Problems (C,M,MMR)
- ^ SOCO 125 Sociology of the Family (C,M)
- SOCO 201 Advanced Principles of Sociology (C,M,MMR)
- ^ SOCO 223 Globalization and Social Change (C,MMR)

Certificate of Achievement

Programs in which a Certificate of Achievement may be awarded are described in the Degree Curricula and Certificate Programs section of this catalog. Certificate programs are designed for students with specific personal or occupational goals. To qualify for the Certificate of Achievement, students must satisfy the following requirements:

- 1) meet all standards for admission to the desired certificate program;
- 2) earn a grade of "C" or higher in each course;
- 3) A minimum of six semester units of the required courses for the major must be completed at City, Mesa or Miramar College.

Certificate of Completion

Programs in which a Certificate of Completion may be awarded are described in the Degree Curricula and Certificate Programs section of this catalog. A Certificate of Completion recognizes the attainment of knowledge and/or skill through the successful completion of two or more courses as specified by a department. Certificates of Completion are designed to prepare students for employment, job enhancement and/or job advancement. To qualify for the Certificate of Completion, students must satisfy the following requirements:

- 1) Achieve a grade of "C" or better in each of the required courses.
- 2) Complete all required course work in the San Diego Community College District.
- 3) Course substitutions or course equivalencies from other colleges may not be used to satisfy Certificate of Completion requirements.

For additional information, contact the campus Evaluations Office or subject-area department.

Graduation

Petition for Graduation

Graduation is not automatic upon completion of requirements. A student who expects to receive the Associate Degree or the Certificate of Achievement must file a Petition for Graduation in the Evaluations Office. See class schedule for important deadline dates for filing a Petition for Graduation.

Official college transcripts from all colleges attended must be on file before submitting the petition for Associate Degree or Certificate of Achievement.

A petition for an associate degree evaluation should be submitted one year before the student plans to graduate.

An evaluation is a summary of college work completed and of requirements to be completed for the associate degree or the certificate of achievement. Only evaluations completed by one of the College Evaluators are official.

Students who have petitioned for graduation should notify the evaluator immediately of any name or address change.

Students who are working toward a certificate of achievement should file the Petition for Graduation prior to the beginning of the semester in which they plan to complete the requirements of their certificate program.

Catalog Rights

Students who maintain continuous enrollment may choose to graduate under the (City College, Mesa College, and Miramar College) catalog in effect at the time they began their studies in a California Community College, California State University, or University of California campus, or under the catalog in effect at the time of graduation.

Certification of a student's completion of CSU general education requirements or the Intersegmental General Education Transfer Curriculum (IGETC) is not a graduation requirement. Therefore, students do not have catalog rights to a certification pattern used by a certifying institution or a CSU or UC campus. For more information on catalog rights at transfer institutions consult a counselor or visit the Transfer/Career center.

Continuous Enrollment

Continuous enrollment is defined as attendance in one semester or two quarters (excluding summer) within a calendar year in either the CSU, UC, or California Community College System.

Awarding of Degrees or Certificates

The graduation ceremony is held once a year at the end of the spring semester. Students who complete requirements for the Associate Degree or the Certificate of Achievement in the fall or spring semesters and petition by March will be granted the degree in Spring.

Students who complete the requirements during the summer session or petition after the March deadline will be granted the degree in August. Summer candidates for graduation may participate in the graduation ceremony in Spring if the Petition for Graduation is filed by the March deadline.

Diplomas

Diplomas are issued only after completion of all graduation requirements have been verified. For information on obtaining your diploma or certificate of achievement, please contact the Evaluations Office on campus.

Graduation with Distinction

Graduation with honors distinction will be based upon all coursework that is applicable to the associate degree or certificate of achievement.

Graduation with Honors is granted to students who achieve an overall 3.5 GPA, High Honors is granted to students who achieve an overall 3.75 GPA, and Highest Honors is granted to students who achieve an overall 4.0 GPA.

Students will be notified that this distinction is pending at the time of the graduation ceremony, when the GPA will be calculated based upon degree or certificate applicable coursework completed through

the fall semester of the year of the ceremony. The final distinction will be determined upon completion of all coursework completed through the spring semester for spring graduates or the summer term for summer graduates.

Additional College Degree

A student having received an associate or baccalaureate degree may qualify for an additional Associate in Arts or Associate in Science degree in a new major or concentration.

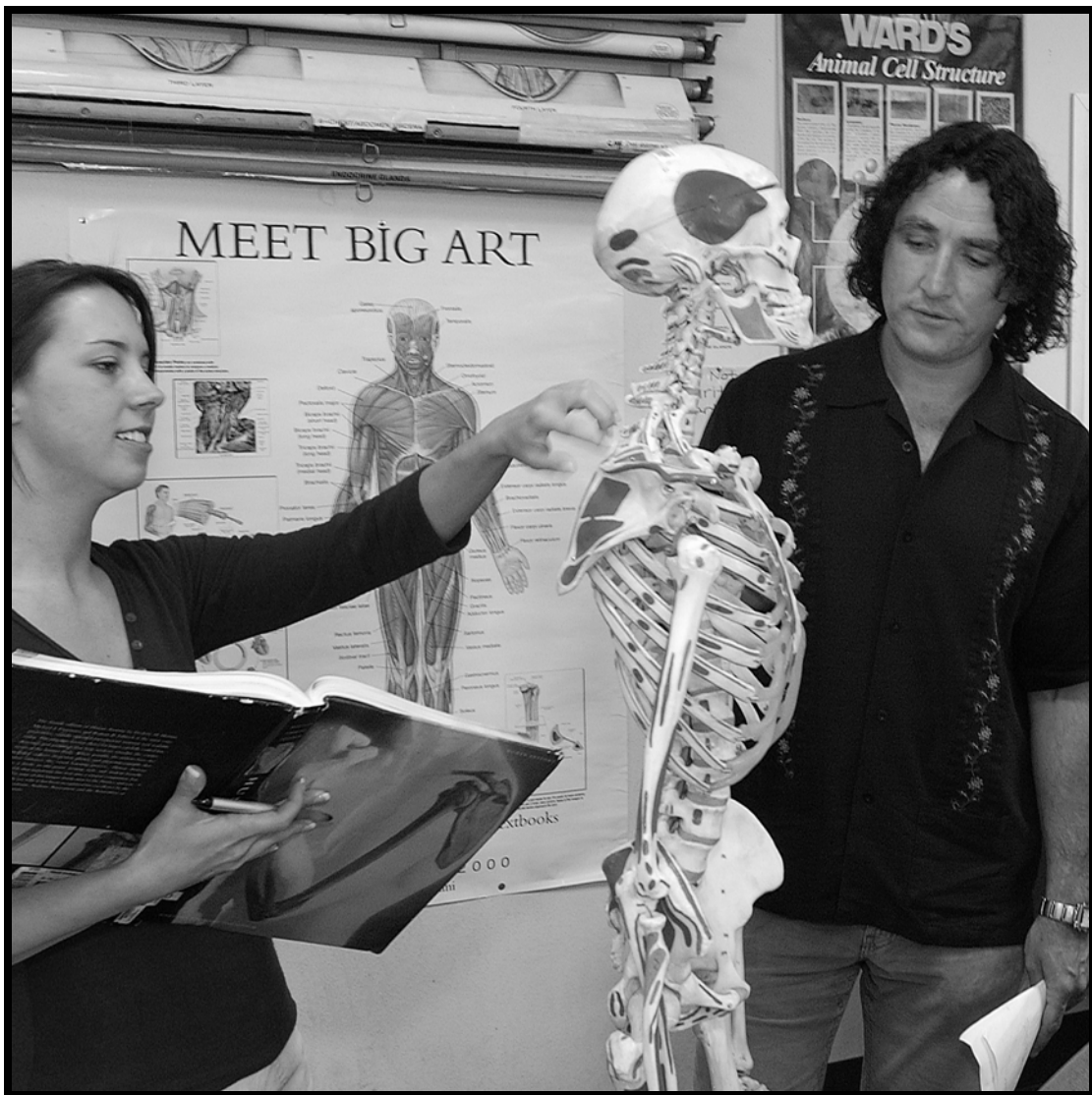
An additional degree:

- 1) Permits upgrading or preparation for upgrading current employment.
- 2) Prepares for employment in an area different from that provided by previous training.
- 3) Provides general knowledge leading to fulfillment of personal goals.

The following requirements are applicable:

- 1) The degree to be earned must represent a change in major or concentration from the degree or degrees previously earned.
- 2) A student must earn a minimum of 18 required semester units in the new major or concentration beyond the minimum 60 units required for the Associate Degree, bringing the total units required for the second degree to a minimum of 78 units, a minimum of 96 units for the third degree, and so on. Twelve (12) semester units of the new major or concentration must be completed in residence.
- 3) A student must fulfill current catalog associate degree requirements.
- 4) In order to receive an additional college degree, the student must file a Petition for Graduation in the Evaluations Office. The college evaluator will review all previous college work to determine the student's eligibility for a second degree.

Transfer Guide



Transfer Programs

Many of the courses completed at San Diego City College, San Diego Mesa College, and San Diego Miramar College may be applied for transfer credit to four-year colleges and universities. Students have the opportunity to complete their first two years of a four-year degree at this level. The Transfer Center serves as a resource center for students interested in transfer and provides the following: university catalogs, student computer work stations, university brochures and handouts, assistance with transfer information such as articulation agreements for lower division general education, major preparation, transferable electives, workshops on transferring to colleges and universities, access to university advisors, guaranteed university admission programs, and assistance completing college applications.

Students are advised to plan transfer programs as early as possible and enroll in transferable courses in both general education and in courses that prepare for the specific university major. Questions related to transfer programs should be discussed with counselors or the Transfer Center staff. Students interested in transfer should meet a counselor in the Counseling Department, room A110 to develop a Transfer Educational Plan which will identify the courses needed to transfer. The Transfer/Career Center is located Room A-111. For information, call (619) 388-3722.

Transfer Services

The Transfer/Career Center is dedicated to helping City College students successfully transfer to a four-year institution. Transferring can be a confusing process at times. The Transfer Center is here to provide information and resources to assist students in making the transition a smooth and easy one and help with each step along the way.

The Transfer/Career Center offers:

- Academic Counseling and Assistance
- Transfer Workshops
- Transfer Fairs
- Meetings with college representatives
- A library of catalogs & publications
- Information on transfer guarantees
- Computer software for college research

- Guidance in researching and selecting a transfer institution and major

For additional information regarding specific services, contact the San Diego City College Transfer/Career Center in Room A-111 at (619) 388-3722 or the Counseling Department in Room A-110 at (619) 388-3540, or visit www.sdccity.edu/transfer

What is Transfer?

Transfer is the process of continuing your education at a four-year college or university, usually after completing your first two years at a community college. If planned correctly, the courses that you pass at community college will count towards requirements for your Bachelor degree just as if they had been taken at the four-year institution. City College students transfer to a wide variety of universities within California and throughout the world. There are four basic areas that students will focus on prior to transfer:

- General Education
- Preparation for Major
- Minimum Required Transferable Units (usually 60 semester units for public universities)
- Minimum Required GPA (usually 2.0 or higher) Specific requirements vary depending on the college/university and major

Why Should You Transfer?

The purpose of transferring is to earn a Bachelor degree from a university. Students choose to earn a Bachelor degree for many different reasons, including:

- Academic interest
- Personal growth and development
- Preparation for a specific career
- Preparation for a higher-level degree (Master or Doctorate degree)
- Increase future earnings potential

Your Educational Options

Associate Degree

Awarded after completing 60 semester units of study, including major, district, and general education

requirements. City College offers a flexible Associate Degree in Transfer Studies designed to meet the specific requirements of your transfer major and university (see below), as well as Associate Degrees in career and technical fields.

Transfer Coursework

Courses designed to meet lower-division (freshman and sophomore) requirements of a four-year university. Includes transfer general education and preparation-for-major courses. Transfer coursework is the first step to completing the Bachelor's and higher degrees.

Earning an Associate Degree may or may not be the most effective path to fulfilling transfer requirements. See a counselor for details.

Associate in Arts Degree: Transfer Studies

Students wishing to earn an Associate Degree who also plan to transfer to a four-year college or university should complete the following:

- 1) Units Transfer Studies General Education Pattern: (CSU GE, IGETC, TAG, Other)
- 2) Preparation for the Major
- 3) Math and English Competency (met in transfer General Education)
- 4) Electives

Total Units Required = 60

The AA in Transfer Studies is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. Courses used to satisfy requirements for the AA in Transfer Studies must be planned with the help of a City College counselor.

Types of Degrees and Certificates

Vocational Certificate

Awarded after completing specific courses related to a particular occupational skill-the number of required units varies. Awarded by community colleges and some private educational organizations. Usually intended to assist in obtaining or upgrading employment in a particular career field.

Associate Degree

Awarded after completing 60 semester units of study, including major, district, and general education requirements. The degree awarded by community colleges and other "two year" schools. Can be in arts

(A.A.) or sciences (A.S.). Most universities do not require that you earn an Associate Degree prior to transfer.

Bachelor's Degree

Awarded after completing at least 120 semester units of study, including major, general education, graduation requirement, and elective courses. The basic degree awarded by "four-year" colleges and universities. Transferable units earned in community college count toward a Bachelor Degree. Usually earned in arts (B.A.) or sciences (B.S.).

Professional Credential

Some occupations require a special credential or license in order to work in that field-examples include teachers and nurses. Some credentials and licenses require completion of the Bachelor degree while others do not.

Master's Degree

Awarded after completing 30 to 60 semester units of study in a particular field beyond what is required for a Bachelor degree. Examples include Master of Science (M.S.), Master of Arts (M.A.), and Master of Business Administration (M.B.A.). Almost all universities require the completion of a Bachelor Degree before beginning work on a Master Degree.

Doctorate Degree

Awarded after completing several years of advanced study, research, and practice in a particular field, usually beyond what is required for the Master Degree.

Examples include Doctor of Medicine (M.D.), Doctor of Philosophy (Ph.D.), Doctor of Dental Surgery (D.D.S.), and Doctor of Education (Ed.D.). Almost all universities require the completion of at least a Bachelor Degree before beginning work on a Doctorate Degree.

STEP 1: Reviewing Your Options

Choosing Your Major

A major is a field of study that you emphasize in your college education. It is what you "specialize" in with your degree. It's important to remember that your major is what you will study at the university you transfer to. At City College, you can prepare to transfer into virtually any major at any university-there are literally thousands to choose from. To narrow down the options, students often begin to select their major by one of the following techniques:

- a. If you have an idea of the career field you want to enter, you can find majors that are related to, or prepare for, that career field.

Majors and career fields are not always "perfectly matched". However, knowing your intended career field can help narrow your options. You can visit the Counseling Office or Transfer/Career Center for assistance in researching career fields.

- b. If you know what university you want to attend, you can select from the list of majors at that university. Lists of majors at California public universities are available at www.assist.org (click on "Explore Majors").
- c. If you think you might be interested in a particular major but are not sure, try taking a general education class in the major and see how you like it. Students often select their major based simply on the courses that are the most interesting to them.
- d. For descriptions of the 75 most popular majors, visit www.petersons.com/majordecision/.

Choosing Your Transfer University

Each university may have different transfer requirements, so choosing a transfer university (or a first, second, and third choice) is important to ensure you complete the right courses. Universities in the United States are organized into different systems and categories.

University of California (UC)

Combines undergraduate education (leading to a Bachelor degree) with emphasis on graduate program (Master and Doctor degrees) and research. Relatively inexpensive for California residents. UC San Diego (UCSD) is one of the 10 universities in the University of California system local to San Diego.

California State University (CSU)

Emphasizes undergraduate education (leading to a Bachelor degree) but also offers Master degrees. Professors spend more time in the classroom and less time on research than those in the University of California system. Emphasizes preparation for specific careers. Relatively inexpensive for California residents. San Diego State University (SDSU) and CSU San Marcos are two local universities in the 23-campus California State University system.

Private Colleges and Universities

Colleges and universities that are not funded by public taxes, sometimes also called "independent." Each

university is unique, with its own programs, majors, and degrees. Some offer academic programs grounded in a specific religion or philosophy. Others offer programs in only one discipline, such as the arts or technical degrees. Others specialize in providing continuing education to working adults. Many are smaller and more focused in academic emphasis than public universities.

Historically Black Colleges and Universities (HBCUs)

Usually have a majority African-American student body, although students of all races attend them. May be private or out-of-state public schools. Most are located in the southern United States.

Hispanic Serving Institutions

The Hispanic Association of Colleges and Universities (HACU) is a national educational association that represents colleges and universities committed to Hispanic higher education success in the United States (including Puerto Rico), Latin America, and Spain. HACU has 193 member Hispanic-Serving Institutions (HSIs) located in 11 U.S. states and Puerto Rico. To be considered a Hispanic-Serving Institution, the Hispanic enrollment at a college or university must be at least 25 percent of the total student enrollment. California is home to 54 Hispanic Serving Institutions.

Tribal Colleges and Universities

There are 35 federally recognized Tribal Colleges and Universities in the United States. Located mainly in the Midwest and Southwest, Tribal Colleges and Universities service approximately 30,000 full- and part-time students. They offer two-year associate degrees in over 200 disciplines with some providing a bachelor's and master's degree. They also offer 200 vocational certificate programs.

Out-of-State Colleges and Universities

Colleges and universities that are not in California may be public or private. Usually are more expensive for out-of-state residents than those who live and pay taxes in the state.

STEP 2: Developing an Education Plan

What is an Education Plan?

An education plan is a pattern of courses you take at community college that prepares you to transfer to a university in a specific major. It usually includes:

- **Preparation for Major**, courses you take to prepare to enter your major at your transfer university.

More information on Preparation for Major courses is available from the following resources:

- The Counseling Center
 - The City Transfer Center, Room A-111
 - www.sdcity.edu/transfer
 - www.assist.org
- **General Education**, courses from a variety of disciplines that help you develop a well-rounded education. Most transfer students pursue one of four different options to complete General Education:
 - 1) The Intersegmental General Education Transfer Curriculum (IGETC). IGETC is accepted by all CSU campuses and most UC campuses and majors. It is a good choice if you plan to transfer to the UC system or are not yet sure where you intend to transfer. The IGETC pattern is described in more detail **starting on page 99**.
 - 2) The CSU General Education - Breadth Pattern (CSU GE). The CSU GE pattern is accepted by all CSU campuses. It is a good choice if you plan to transfer to one of the 23 CSU campuses, but it is not accepted by the UC. The CSU GE pattern is described in more detail **starting on page 86**.
 - 3) University of California, San Diego Transfer Admission Guarantee General Education Pattern (UCSD TAG GE). The UCSD TAG GE pattern should only be followed by students who have signed, or intend to sign, a UCSD Transfer Admission Guarantee (TAG) contract. The UCSD TAG program guarantees admission to UCSD upon completion of specific unit, GPA, and coursework requirements. You must sign a UCSD TAG contract with a counselor one to two years prior to transfer, to enroll in this program. The UCSD TAG GE pattern is described in more detail **starting on page 95**.
 - 4) Other Transfer General Education Patterns. Some students are best served by following a general education pattern other than the three described above. These typically include students who intend to enter a high unit major such as an engineering or science discipline, plan to transfer to a private/independent or out-of-state university, or who wish to complete the general education requirements of one specific university campus.
 - Electives, which are additional courses taken to meet the number of units required to transfer or earn a degree. More information on electives is **available on page 82**.

Your Bachelor Degree

Most students complete about half of their Bachelor degree coursework at community college and about half at their university. In order to graduate from a university with a Bachelor degree, you must complete all the course, GPA, and unit requirements for that university. These requirements are spelled out in the university's catalog.

- **Courses:** Course requirements for a Bachelor degree usually include General Education, major and prefor-major courses, and university graduation requirements. These vary from university to university.
- **GPA:** Most universities require at least a 2.0 GPA to graduate, but some majors and/or universities have higher GPA requirements.

Preparation for Major Courses

In order to be admitted to a major at a four-year institution, you must first complete a core of specific courses commonly called major preparation. Completion of these courses does not necessarily guarantee admission to the major or the university, but it does greatly improve your opportunities. In fact, most highly selective colleges and universities consider completion of major preparation courses to be more important in the screening and selection process than completion of general education courses.

Each combination of transfer university and major has a unique set of major preparation courses that are often very different from each other, even within the same major. For example, the courses you would take to prepare for the Psychology major at San Diego State University are significantly different than the courses you would take to prepare for the Psychology major at UC San Diego. In addition, major preparation courses often change from year to year as universities update their programs to keep current with the latest information and practices in the field.

In order to help students best prepare for transfer, City College has established "articulation agreements" with many four-year public and private institutions.

These agreements specify the courses that can be completed at City to fulfill major preparation and other requirements at the university. Because City College students can transfer to virtually any major at any university, there are literally thousands of articulation agreements to choose from. Fortunately, these agreements are available in an easily-searchable format from several different locations:

- A **City College counselor** can help you locate any published articulation agreement and develop a transfer education plan
- The **Transfer/Career Center** in room A-111 can help you locate any published articulation agreement and answer questions about the transfer process
- For links to all City College articulation agreements including UC, CSU, and private/independent and out-of-state universities, visit: www.sdccity.edu/transfer/
- For links to articulation agreements with California public universities (UC and CSU systems), visit www.assist.org

Although each combination of transfer university and major has a different set of major preparation courses, many majors have a "core" set of courses that are commonly required at most universities. If you have not yet decided on your transfer university but want to begin work on your major preparation courses, in order to accurately determine the most appropriate major preparation courses, you should select your preferred transfer university and major as soon as possible and then create a transfer education plan. For one-on-one assistance see a counselor in room A-110 or stop by the Transfer/Career Center in Room A-111.

If you have already selected a preferred transfer university, find the appropriate major preparation courses for your specific university and major by using one or more of the following resources:

- A City College counselor
- The City Transfer Center, Room A-111
- www.sdccity.edu/transfer/
- www.assist.org

Elective courses

Most students transfer as "upper division" students (college juniors) after completing at least 60 transferable units. "Electives" are the classes you take in addition to GE and prep-for-major courses to complete your required number of units. Electives can be any course you choose, but should be transferable to the college you want to attend (the course description in the Miramar College Catalog will tell you if the course is

transferable). You may want to take elective courses that:

- Interest you
- Fulfill elective requirements for your major at your transfer college
- Prepare you for an alternative major at your transfer college (particularly if your primary major is "impacted" (full))
- Fulfill requirements for a minor (a secondary area of academic emphasis)

A City College counselor can help you select appropriate elective courses if you need them (many students have enough units to transfer without taking any electives!)

Transfer Checklist

- When you begin classes at a California Community College, discuss your transfer plans with a community college counselor or Transfer Center director. Inquire about general education requirements and the lower division courses required for your major.
- Review your California Community College catalog for information on which courses are transferable.
- Obtain one or more campus catalogs to become familiar with admission, general education, and major requirements.
- If you will need financial assistance, talk to a financial aid advisor at the California Community College you are attending; obtain a copy of the FAFSA form, and note application deadlines.
- Contact a campus Disabled Student Services program to inquire about available services.
- Visit one or more campuses. Call the Admissions Office at your target campus if you would like a campus tour.
- Contact the Transfer/Career Center in A-111 to see about 4-year representative visits or visit the website at www.sdmesa.edu
- Complete and file an application for admission with the CSU campus during the initial filing period (visit <http://www.csumentor.edu>, see the CSU admission booklet, or contact a CSU admission office).

- Send the application fee with the application for admission.
- Have transcripts from all colleges attended (and high school transcript, if necessary) sent to the campus you have selected.
- After you have applied for admission to a campus, request that the community college Evaluations Office certify (if applicable) your transcript the courses you have completed to satisfy general education.

Student Responsibility to Meeting Transfer Requirements

Students are advised to obtain a copy of the catalog for their chosen transfer college. Counselors will assist students with the transfer process including appropriate course selection and information regarding the admissions process and requirements, however, it is up to each student - working with a counselor - to decide upon an educational goal, to take responsibility to devise a long range educational plan to achieve the goal, to read the transfer college catalog and to choose the appropriate San Diego City College, Mesa College or Miramar College courses to satisfy the transfer requirements for that college or university.

Course Numbering System

The course numbering system has meaning with regard to level and transfer. See the description below:

- **1-49** Basic Skills or college preparatory courses. Credit does not apply toward an associate degree or transfer to a four-year college or university.
- **50-99** Course credit applies toward the associate degree but does not transfer to a four-year college or university.
- **100-299** Course credit applies toward the associate degree and credit is intended for transfer to a four-year college or university. (Some courses may be identified as associate degree.) Final decision in regard to transferability rests with the receiving institution.
- **300-399** Apprenticeship and in-service courses. See Catalog course description to determine credit for Associate Degree or Transfer.

Apprenticeship 345, 349, 349-D, DSPS 065, Field Experience/Internship 275, Independent Study 290, Individualized Instruction 296, Special Topics 23, 63, 265, Tutoring 044, and Work Experience courses 270, 272, 274, have Districtwide designated numbers.

Identification of UC and CSU Transfer Courses in this catalog.

Courses designated "UC Transfer Course List" in the course description section, transfer as baccalaureate credit to the University of California. Some courses satisfy specific transfer requirements designated in the major fields of study, some courses satisfy general education requirements, and other courses transfer only as elective credit.

The designation "transfer to CSU and/or private colleges and universities" indicates courses that have been determined by San Diego City, Mesa and Miramar Colleges to be baccalaureate appropriate and acceptable for transfer to the California State University as at least elective credit.

California Articulation Number (CAN) System

The California Articulation Number (CAN) identifies some of the transferable, lower division, introductory, preparatory courses and sequences commonly taught within each academic discipline on college campuses. The system assures students that CAN courses and sequences on one participating campus will be similar in content to the comparable CAN course and sequence on another participating campus. For example, CAN ECON 4 on one campus can be identified for use "in lieu of" CAN ECON 4 on another participating campus. Each college, however, maintains its own course numbering system and its own requirements.

California Articulation Numbers are listed after each course description in this catalog. Lists of courses and sequences from campuses participating in the CAN system are available in the Counseling Department. See a counselor for assistance. These courses are by no means the only transferable courses offered; other courses that transfer are listed in campus articulation agreements and elsewhere in this catalog.

Articulation Agreements

Articulation is the planned process linking two educational institutions to help students make a smooth transition from the community college to the university. San Diego City, Mesa and Miramar Colleges have established articulation agreements with a variety of institutions of higher education. Courses approved for credit at other universities are listed in these articulation agreements. Department course-to-course, general education and major preparation agreements are available through counselors, the Transfer/Career Center, and through the ASSIST Web site www.assist.org.

The following is a sample representing fields of study which San Diego City College has articulated with various four year colleges and universities:

Accounting
 Aeronautics/Aviation
 Anthropology
 Arabic
 Art - Fine Art
 Art - Graphic Design
 Astronomy
 Athletic Training
 Behavioral Sciences
 Biochemistry
 Biological Sciences
 Black Studies
 Business Administration
 Chemical Engineering
 Chemistry
 Chicano Studies
 Child Development
 Civil Engineering
 Communication Studies
 Computer Information Sciences
 Dance
 Drama
 Economics
 Education
 Electrical Engineering and Computer Science
 Electricity
 Electronics
 Engineering
 English
 Ethnic Studies
 French
 Geography
 Geology
 German
 History
 Humanities
 Human Services
 Industrial Technology
 International Studies/Business
 Italian
 Journalism
 Kinesiology
 Labor Studies
 Legal Studies
 Liberal Studies
 Linguistics
 Manufacturing Engineering Technology
 Mathematics
 Mecomtronics

Microbiology
 Music
 Nursing
 Pharmacology
 Philosophy
 Physical Education
 Physical Science
 Physical Therapy
 Physics
 Political Science
 Psychology
 Public Relations
 Radio and Television
 Shipbuilding
 Social Work
 Sociology
 Spanish
 Speech Communication
 Speech Pathology
 Teaching
 Women's Studies
 Zoology

Students planning to transfer from San Diego City College to a UC or CSU can find articulation information on www.assist.org, www.sdcity.edu/transfer/articulation or at the Counseling or Transfer/Career Centers. ASSIST is a database that contains information on lower division major requirements and general education requirements and their equivalent at the community college.

San Diego City College also has articulation agreements with private and out-of-state institutions. These agreements can contain General Education requirements, lower division major requirements or both. For further information, please visit our web site at www.sdcity.edu/transfer or the Counseling or Transfer/Career Centers. San Diego City College has articulation with the following institutions of higher education:

University of California

UC Berkeley
 UC Davis
 UC Irvine
 UC Los Angeles
 UC Merced
 UC Riverside
 UC San Francisco - Pharmacy
 UC Santa Barbara
 UC Santa Cruz
 UC San Diego

California State University

California Polytechnic State University, San Luis Obispo
 California State Polytechnic University, Pomona
 CSU Bakersfield
 CSU Channel Islands
 CSU Chico
 CSU Dominguez Hills
 CSU East Bay
 CSU Fresno
 CSU Fullerton
 CSU Long Beach
 CSU Los Angeles
 CSU Monterey Bay
 CSU Northridge
 CSU Sacramento
 CSU San Bernardino
 CSU San Marcos
 CSU Stanislaus
 Humboldt State University
 San Diego State University
 San Francisco State University
 San Jose State University
 Sonoma State University

Independent - Out of State

Boston University
 Capella University
 Drexel University College of Engineering
 Embry Riddle Aeronautical University
 Howard University
 Northcentral University
 Palmer College of Chiropractic

Independent - California

Academy of Art University San Francisco
 Alliant International University
 Art Center College of Design
 Azusa Pacific University
 Biola University
 California Lutheran University
 California College of the Arts
 Christian Heritage University
 Chapman University
 Cleveland Chiropractic
 College of Notre Dame
 Concordia University
 Design Institute of San Diego
 DeVry Institute of Technology
 Golden Gate University
 Los Angeles Chiropractic
 Loma Linda University - Allied Health, Dentistry
 Marymount College
 National University

NewSchool of Architecture and Design
 Pacific Oaks
 Pepperdine University
 Point Loma Nazarene University - Nursing
 Springfield College
 University of the Pacific
 University of Phoenix
 University of San Diego
 University of San Francisco
 University of Southern California
 Webster University
 Woodbury University

Requirements for Transfer Studies Degree and Lower Division General Education for University Transfer

Students preparing to transfer to a university may complete one of four lower division general education patterns:

- Intersegmental General Education Transfer Curriculum (IGETC)
- Certification of General Education Breadth Requirements (CSU-GE) for any California State University
- Transfer Admission Guarantee to the University of California at San Diego ONLY (UCSD-TAG)
- Other Institutions Transfer Pattern

Completion of the CSU-GE or IGETC requirements assures that transfer institutions, with some exceptions, will accept that pattern of general education in lieu of their lower division general education requirements. Students gaining certification from San Diego City, Mesa, or Miramar College will generally need no further lower division general education upon transfer. TAG students may be held to additional lower division general education coursework requirements depending upon which of the five colleges they select at UCSD. Students will not be required to complete additional graduation requirements. See 366 for requirements.

Transfer to California State University (CSU)

California State University Campuses

California Maritime Academy
 California Polytechnic State University, San Luis Obispo
 California State Polytechnic University, Pomona
 California State University, Bakersfield
 California State University, Channel Islands
 California State University, Chico
 California State University, Dominguez Hills

California State University, East Bay
 California State University, Fresno
 California State University, Fullerton
 California State University, Long Beach
 California State University, Los Angeles
 California State University, Monterey Bay
 California State University, Northridge
 California State University, Sacramento
 California State University, San Bernardino
 California State University, San Marcos
 California State University, Stanislaus
 Humboldt State University
 San Diego State University
 San Francisco State University
 San Jose State University
 Sonoma State University

California State University General Education Breadth (CSU GE)

The California State University General Education-Breadth (CSU GE) pattern is one option that allows California community college transfer students to fulfill the lower-division general education requirements of any California State University (CSU) campus. The curriculum consists of a 39-unit pattern with five areas of concentration.

For assistance in determining the most appropriate general education program, consult a counselor.

Certification of CSU GE Requirements

Official notification from a California community college that a transfer student has completed courses fulfilling lower-division general education requirements occurs through a process of "certification". Certification is a legal agreement between the CSU and California Community Colleges.

It is the policy of the San Diego Community College District to provide certification of general education breadth requirements when such service is requested by the student. Certification of general education courses is generally requested when the CSU GE pattern has been completed.

Additional CSU GE Information and Restrictions

- Completion of the CSU GE pattern is not an admission requirement nor does completion guarantee admission to any CSU campus or program.
- Certification is based on approved courses listed in the CSU GE pattern that are completed in the San

Diego Community College District or from other regionally accredited institutions.

- Courses completed at a foreign college or university cannot be used to satisfy requirements for certification.
- Catalog rights do not apply to the CSU GE pattern.
- Prior to certification, students must complete a minimum of 3 units of general education within the CSU GE pattern or 12 units in residence at the San Diego Community College District.
- Official transcripts from all colleges and universities attended must be on file before submitting an application for certification. The application is available in the Evaluations Office and/or Counseling Office.
- The CSU GE pattern is accepted by some California private and independent colleges and universities in satisfying lower division general education requirements.

For additional information, consult a counselor

The CSU GE Pattern

The following information is based on the 2007-2008 agreement and is distributed as follows:

Colleges in parenthesis indicate where the course is approved for CSU GE requirements.

C - City College

M - Mesa College

MMR - Miramar College

*Courses with asterisks are listed in more than one area but shall not be certified in more than one area.

Please note: Courses required in Oral Communication (Area A1), Written Communication (Area A2), Critical Thinking (Area A3), and Mathematics and Quantitative Reasoning (Area B4) must be completed with grades of "C" or better for admission to most CSU campuses. *For additional information, consult a counselor.*

Area A. Communication in the English Language and Critical Thinking:

No fewer than nine semester units (12-15 quarter units) including one course in A1, one course in A2, and one course in A3.

A1: Oral Communication

BLAS 106	Black Oral Expression and Interpretation (M)
SPEE 103	Oral Communication (C,M,MMR)
SPEE 135	Interpersonal Communication (C,M,MMR)
SPEE 170	Small Group Communication (C,M)

A2: Written Communication

ENGL 101	Reading and Composition (C,M,MMR)
ENGL 105	Composition and Literature (C,M,MMR)

A3: Critical Thinking

ENGL 205	Critical Thinking and Intermediate Composition (C,M,MMR)
PHIL 100	Logic and Critical Thinking (C,M,MMR)
* PHIL 103	Historical Introduction to Philosophy (M)
PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
SPEE 160	Argumentation (C,M,MMR)

Area B. Physical Universe and its Life Forms; Mathematics/Quantitative Reasoning:

No fewer than nine semester units (12-15 quarter units) Including:

- One course in B1 (underlined courses include a lab component)
- One course in B2 (underlined courses include a lab component)
- One of the courses selected to fulfill the requirement for B1 or B2 must include a laboratory component or a separate course must be taken from B3. If a separate laboratory course is taken from B3, it must match one of the two lecture courses taken from B1 or B2.
- One course in B4

B1: Physical Science

ASTR 101	Descriptive Astronomy (C,M,MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)
CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
CHEM 152	Introduction to General Chemistry (C,M,MMR)
CHEM 200	General Chemistry I-Lecture (C,M,MMR)
CHEM 201	General Chemistry II-Lecture (C,M,MMR)
CHEM 231	Organic Chemistry I-Lecture (C,M,MMR)
CHEM 233	Organic Chemistry II-Lecture (C,M,MMR)
<u>CHEM 251</u>	Analytical Chemistry (C,M,MMR)
* ENGN 110	Science for Technical Applications (C)
GEOG 101	Physical Geography (C,M,MMR)
GEOL 100	General Geology (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)
<u>MCTR 120A</u>	Basic Physics for Technical Applications I (C)
<u>MCTR 120B</u>	Basic Physics for Technical Applications II (C)
<u>MCTR 120C</u>	Basic Physics for Technical Applications III (C)
PHYN 100	Survey of Physical Science (C,M,MMR)
PHYN 120	Physical Oceanography (M,MMR)
<u>PHYS 100</u>	Introductory Physics (C,M)
<u>PHYS 125</u>	General Physics (C,M,MMR)
<u>PHYS 126</u>	General Physics II (C,M,MMR)
PHYS 180A	General Physics I (C)
PHYS 180B	General Physics II (C)
<u>PHYS 195</u>	Mechanics (C,M,MMR)
<u>PHYS 196</u>	Electricity and Magnetism (C,M,MMR)
<u>PHYS 197</u>	Waves, Light and Modern Physics (C,M,MMR)

B2: Life Science

ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
<u>BIOL 100</u>	Natural History-Environmental Biology (M,MMR)
<u>BIOL 101</u>	Issues in Environmental Biology (C)
BIOL 105	Principles of Biology (MMR)
<u>BIOL 107</u>	General Biology-Lecture and Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
<u>BIOL 115</u>	Marine Biology (C,M,MMR)
BIOL 130	Human Heredity (C,M,MMR)
<u>BIOL 131</u>	Introduction to Biotechnology (MMR)
<u>BIOL 160</u>	Elements of Human Anatomy & Physiology (M,MMR)

BIOL 180	Plants and People (C,M)
<u>BIOL 205</u>	General Microbiology (C,M,MMR)
<u>BIOL 210A</u>	Introduction to the Biological Sciences I (C,M,MMR)
<u>BIOL 210B</u>	Introduction to the Biological Sciences II (C,M,MMR)
<u>BIOL 215</u>	Introduction to Zoology (C,M,MMR)
<u>BIOL 230</u>	Human Anatomy (C,M,MMR)
<u>BIOL 235</u>	Human Physiology (C,M,MMR)
<u>BIOL 250</u>	Introduction to Botany (M,MMR)
* BIOL 255	California Plants (M)
PSYC 260	Introduction to Physiological Psychology (C,M,MMR)

B3: Laboratory Activity

ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
ASTR 109	Practice in Observing (C,M)
ASTR 111	Astronomy Laboratory (M,MMR)
BIOL 106	Principles of Biology-Laboratory (MMR)
* BIOL 255	California Plants (M)
CHEM 100L	Fundamentals of Chemistry Laboratory (C,M,MMR)
CHEM 130L	Introduction to Organic & Biological Chemistry Laboratory (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)
CHEM 200L	General Chemistry I-Laboratory (C,M,MMR)
CHEM 201L	General Chemistry II-Laboratory (C,M,MMR)
CHEM 231L	Organic Chemistry I-Laboratory (C,M,MMR)
CHEM 233L	Organic Chemistry II-Laboratory (C,M,MMR)
* ENGN 110	Science for Technical Applications (C)
GEOG 101L	Physical Geography Laboratory (C,M,MMR)
GEOL 101	General Geology Laboratory (C,M,MMR)
PHYN 101	Survey of Physical Science Laboratory (C,M,MMR)
PHYS 121A	General Physics Lab (C)
PHYS 121B	General Physics Lab (C)

B4: Mathematics/Quantitative Reasoning

BIOL 200	Biological Statistics (C,M)
MATH 104	Trigonometry (C,M,MMR)
MATH 107	Introduction to Scientific Programming (C,M)
MATH 107L	Introduction to Scientific Programming Laboratory (C,M)

MATH 116	College and Matrix Algebra (C,M,MMR)
MATH 118	A Survey of Modern Mathematics (C,M,MMR)
MATH 119	Elementary Statistics (C,M,MMR)
MATH 121	Basic Techniques of Applied Calculus I (C,M,MMR)
MATH 122	Basic Techniques of Calculus II (C,M,MMR)
MATH 141	Precalculus (C,M,MMR)
MATH 150	Calculus with Analytic Geometry I (C,M,MMR)
MATH 151	Calculus with Analytic Geometry II (C,M,MMR)
MATH 181	Mecomtronics College Algebra and Trigonometry I (C)
MATH 182	Mecomtronics College Algebra and Trigonometry II (C)
MATH 183	Mecomtronics Calculus I (C)
MATH 184	Mecomtronics Calculus II (C)
MATH 210A	Concepts of Elementary School Mathematics I (C,M,MMR)
MATH 210B	Concepts of Elementary School Mathematics II (C,M,MMR)
MATH 245	Discrete Mathematics (C,M,MMR)
MATH 252	Calculus with Analytic Geometry III (C,M,MMR)
MATH 254	Introduction to Linear Algebra (C,M,MMR)
MATH 255	Differential Equations (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)

Area C. Arts, Literature, Philosophy and Foreign Language:

Nine semester units (12-15 quarter units) with at least one course each in Arts and Humanities.

C1: Arts (Art, Dance, Music, Theatre)

ARTF 100	Art Orientation (C,M,MMR)
ARTF 107	Contemporary Art (M,MMR)
ARTF 109	Nineteenth and Twentieth Century Art (C,M,MMR)
ARTF 110	Art History: Prehistoric to Gothic (C,M,MMR)
ARTF 111	Art History: Renaissance to Modern (C,M,MMR)
ARTF 113	African, Oceanic, and Native American Art (M,MMR)
ARTF 115	African Art (C,M)
ARTF 120	Native American Indian Art (M)

ARTF 125	History of Art: Far Eastern Art (MMR)	CHIC 210	Chicano Culture (C,M)
BLAS 110	Afro-American Art (C,M)	CHIN 101	First Course in Mandarin Chinese (M)
BLAS 111	African Art History (M)	CHIN 102	Second Course in Mandarin Chinese (M)
BLAS 120	Black Music (C,M)	CHIN 201	Third Course in Mandarin Chinese (M)
CHIC 230	Chicano Art (M)	ENGL 208	Introduction to Literature (C,M,MMR)
DANC 181	Introduction to Dance (C,M)	ENGL 209	Literary Approaches to Film (C,M,MMR)
DFLM 101	Introduction to Film (MMR)	ENGL 210	American Literature I (C,M,MMR)
DFLM 102	The American Cinema (MMR)	ENGL 211	American Literature II (C,M,MMR)
DRAM 105	Introduction to Dramatic Arts (C,M)	ENGL 215	English Literature I: 800-1799 (C,M,MMR)
DRAM 107	Study of Filmed Plays (C)	ENGL 216	English Literature II: 1800-Present (C,M,MMR)
DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)	ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)
DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)	ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)
DRAM 150	Cinema as Art and Communication I (M)	ENGL 230	Asian American Literature (M,MMR)
DRAM 151	Cinema as Art and Communication II (M)	ENGL 237	Women in Literature (C,MMR)
MUSI 100	Introduction to Music (C,M,MMR)	ENGL 238	Evaluating Children's Literature (C,M)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)	ENGL 240	Shakespeare (C,M)
MUSI 102	Music History II: Mid 18th to Early 20th Century (M)	FREN 101	First Course in French (C,M)
MUSI 105	Music of Our Time (M)	FREN 102	Second Course in French (C,M)
MUSI 109	World Music (C,M,MMR)	FREN 201	Third Course in French (C,M)
MUSI 111	Jazz-History and Development (C,M,MMR)	FREN 202	Fourth Course in French (C,M)
MUSI 125	Music, the Arts and Humanity (M)	GERM 101	First Course in German (C,M)
PHOT 150	History of Photography (C)	GERM 102	Second Course in German (C,M)
RTVC 160	Introduction to Cinema (C)	GERM 201	Third Course in German (C,M)
		* HIST 100	World History I (C,M,MMR)
		* HIST 101	World History II (C,M,MMR)
		* HIST 105	Introduction to Western Civilization I (C,M,MMR)
		* HIST 106	Introduction to Western Civilization II (C,M,MMR)
		* HIST 120	Introduction to Asian Civilizations (C,M,MMR)
		* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
		* HIST 125	History of England and the Commonwealth I (M)
		* HIST 126	History of England and the Commonwealth II (M)
		* HIST 131	Latin America Before Independence (M)
		* HIST 132	Latin America Since Independence (M)
		* HIST 154	Ancient Egypt (M)
		HUMA 101	Introduction to the Humanities I (C,M,MMR)
		HUMA 102	Introduction to the Humanities II (C,M,MMR)
		HUMA 103	Introduction the the New Testament (M)
		HUMA 104	Introduction to the Old Testament (M)
		HUMA 106	World Religions (C,M)
		HUMA 201	Mythology (C,M,MMR)

C2: Humanities (Literature, Philosophy, Foreign Languages)

* AMSL 104	Introduction to Deaf Culture (M)
AMSL 115	American Sign Language Level I (C,M)
AMSL 116	American Sign Language Level II (C,M)
AMSL 215	American Sign Language Level III (C,M)
AMSL 216	American Sign Language Level IV (C,M)
ARAB 101	First Course in Arabic (C,MMR)
ARAB 102	Second Course in Arabic (C)
BLAS 150	Black Women in Literature and the Media (C,M)
BLAS 155	Afro-American Literature (C,M)
CHIC 130	Mexican Literature in Translation (C)
CHIC 135	Chicano Literature (C,M)
CHIC 138	Literature of La Raza in Latin America in Translation (C,M)
CHIC 190	Chicano Images in Film (C,M)
CHIC 203	Introductory Spanish for Spanish Speakers (C)
CHIC 204	Intermediate Spanish for Spanish Speakers (C)

HUMA 202	Mythology: Hero's Journey (C,M)
ITAL 101	First Course in Italian (C,M)
ITAL 102	Second Course in Italian (C,M)
ITAL 201	Third Course in Italian (C,M)
JAPN 101	First Course in Japanese (M)
JAPN 102	Second Course in Japanese (M)
JAPN 201	Third Course in Japanese (M)
JAPN 202	Fourth Course in Japanese (M)
LATI 101	First Course in Latin (M)
LATI 102	Second Course in Latin (M)
LATI 201	Third Course in Latin (M)
PHIL 102A	Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
* PHIL 103	Historical Introduction to Philosophy (M)
PHIL 104A	History of Western Philosophy (C,M)
PHIL 104B	History of Western Philosophy (C,M)
PHIL 105	Contemporary Philosophy (M)
PHIL 106	Asian Philosophy (C,M)
PHIL 107	Reflections on Human Nature (C,M,MMR)
PHIL 108	Perspectives on Human Nature and Society (C,M)
PHIL 110	Philosophy of Religion (M)
PHIL 111	Philosophy in Literature (C,M)
PHIL 112	Philosophy of Science (M)
PHIL 125	Philosophy of Women (C,M)
* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
PHIL 130	Philosophy of Art and Music (M)
PSYC 207	Psychology of Religion (M)
RUSS 101	First Course in Russian (C,M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
SPAN 100	First/Second Course in Spanish-Accelerated (M)
SPAN 101	First Course in Spanish (C,M,MMR)
SPAN 102	Second Course in Spanish (C,M,MMR)
SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 202	Fourth Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
TAGA 101	First Course in Tagalog (M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 101	First Course in Vietnamese (M)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

AREA D. Social, Political, and Economic Institutions and Behavior; Historical Background:

Nine semester units (12-15 quarter units) required with courses in at least two disciplines.

D0: Sociology and Criminology

* BLAS 115	Sociology from a Black Perspective (C)
* BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)
* BLAS 125	Dynamics of the Black Community (M)
* BLAS 130	The Black Family (C,M)
SOCO 101	Principles of Sociology (C,M,MMR)
SOCO 110	Contemporary Social Problems (C,M,MMR)
SOCO 125	Sociology of the Family (C,M)
SOCO 201	Advanced Principles of Sociology (C,M,MMR)
* SOCO 223	Globalization and Social Change (MMR)

D1: Anthropology and Archaeology

ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
* ANTH 200	Introduction to North American Indians (M)
* ANTH 210	Introduction to California Indians (C,M)
* ANTH 215	Cultures of Latin America (C,M)

D2: Economics

ECON 120	Principles of Economics I (C,M,MMR)
ECON 121	Principles of Economics II (C,M,MMR)

D3: Ethnic Studies

* AMSL 104	Introduction to Deaf Culture (M)
* ANTH 200	Introduction to North American Indians (M)
* ANTH 210	Introduction to California Indians (C,M)
* ANTH 215	Cultures of Latin America (C,M)
BLAS 100	Introduction to Black Studies (C,M)
* BLAS 104	Black Psychology (C,M)
* BLAS 115	Sociology from a Black Perspective (C)

- * BLAS 116 Contemporary Social Problems from a Black Perspective (C,M)
- * BLAS 125 Dynamics of the Black Community (M)
- * BLAS 130 The Black Family (C,M)
- * BLAS 135 Introduction to Black Politics (C)
- * BLAS 140A History of the U.S., Black Perspectives (C,M,MMR)
- * BLAS 140B History of the U.S., Black Perspectives (C,M,MMR)
- CHIC 110A Introduction to Chicano Studies (C,M)
- CHIC 110B Introduction to Chicano Studies (C,M)
- * CHIC 141A United States History from a Chicano Perspective (C,M)
- * CHIC 141B United States History from a Chicano Perspective (C,M)
- * CHIC 170 La Chicana (C,M)
- CHIC 201 Pre-Columbian Cultures of MesoAmerica (C,M)
- FILI 100 Filipino American Experience (M,MMR)
- * HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)
- * HIST 150 Native Americans in United States History (M,MMR)
- * HIST 151 Native Americans in United States History (M,MMR)
- * CHIC 141A United States History from a Chicano Perspective (C,M)
- * CHIC 141B United States History from a Chicano Perspective (C,M)
- CHIC 150 History of Mexico (C,M)
- * HIST 100 World History I (C,M,MMR)
- * HIST 101 World History II (C,M,MMR)
- * HIST 105 Introduction to Western Civilization I (C,M,MMR)
- * HIST 106 Introduction to Western Civilization II (C,M,MMR)
- HIST 109 History of the United States I (C,M,MMR)
- HIST 110 History of the United States II (C,M,MMR)
- HIST 115A History of the Americas I (C,M)
- HIST 115B History of the Americas II (C,M)
- * HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- * HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- * HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)
- * HIST 125 History of England and the Commonwealth I (M)
- * HIST 126 History of England and the Commonwealth II (M)
- HIST 130 The Middle East Today (M)
- * HIST 131 Latin America Before Independence (M)
- * HIST 132 Latin America Since Independence (M)
- * HIST 141 Women in United States History I (C,M,MMR)
- * HIST 142 Women in United States History II (C,M,MMR)
- * HIST 150 Native Americans in United States History (M,MMR)
- * HIST 151 Native Americans in United States History (M,MMR)
- * HIST 154 Ancient Egypt (M)
- HIST 175 California History (M)

D4: Gender Studies

- * CHIC 170 La Chicana (C,M)
- * HIST 141 Women in United States History I (C,M,MMR)
- * HIST 142 Women in United States History II (C,M,MMR)
- * PHIL 126 Introduction to Philosophy of Contemporary Gender Issues (C,M)
- * PSYC 133 Psychology of Women (M,MMR)

D5: Geography

- GEOG 102 Cultural Geography (C,M,MMR)
- GEOG 104 World Regional Geography (C,M,MMR)
- GEOG 154 Introduction to Urban Geography (M)

D6: History

- * BLAS 140A History of the U.S., Black Perspectives (C,M,MMR)
- * BLAS 140B History of the U.S., Black Perspectives (C,M,MMR)
- BLAS 145A Introduction to African History (C,M)
- BLAS 145B Introduction to African History (C)

D7: Interdisciplinary Social or Behavioral Science

- * CHIL 101 Human Growth and Development (C,M,MMR)
- * CHIL 103 Lifespan Growth and Development (MMR)
- CHIL 141 The Child, Family and Community (C,M,MMR)
- ENGL 202 Introduction to Linguistics (C,M)

- JOUR 202 Introduction to Mass Communication (M,MMR)
 PHIL 109 Issues in Social Philosophy (M)
 * SOCO 223 Globalization and Social Change (MMR)

D8: Political Science, Government, and Legal Institutions

- * BLAS 135 Introduction to Black Politics (C)
 POLI 101 Introduction to Political Science (C,M,MMR)
 POLI 102 The American Political System (C,M,MMR)
 POLI 103 Comparative Politics (C,M,MMR)
 POLI 140 Contemporary International Politics (C,M,MMR)
 * SOCO 223 Globalization and Social Change (MMR)

D9: Psychology

- * BLAS 104 Black Psychology (C,M)
 PSYC 101 General Psychology (C,M,MMR)
 PSYC 121 Introduction to Child Psychology (M,MMR)
 PSYC 123 Adolescent Psychology (M,MMR)
 * PSYC 133 Psychology of Women (M,MMR)
 * PSYC 135 Marriage and Family Relations (C,M,MMR)
 * PSYC 137 Human Sexual Behavior (C,M,MMR)
 * PSYC 155 Introduction to Personality (C,M)
 PSYC 166 Introduction to Social Psychology (M,MMR)
 PSYC 211 Learning (C,M,MMR)
 * PSYC 230 Psychology of Lifespan Development (C,M,MMR)

Area E. Lifelong Understanding and Self-Development:

*Three semester units (4-5 quarter units).**

- BIOL 120 The Environment of Man (M)
 BIOL 135 Biology of Human Nutrition (MMR)
 * CHIL 101 Human Growth and Development (C,M,MMR)
 CHIL 103 Lifespan Growth and Development (MMR)
 HEAL 101 Health and Life Style (C,M,MMR)
 NUTR 150 Nutrition (M,MMR)
 PERG 140 Life Skills and Personal Adjustment (C,M,MMR)
 PHYE 103 Aerobic Dance (C,M,MMR)
 PHYE 123 Fitness Activities (C,M,MMR)
 PHYE 132 Individual Conditioning (C,M,MMR)
 PHYE 168 Yoga (C,M)
 PHYE 182 Adapted Weight Training (C,M)
 PSYC 111 Psychological/Social Aspects of Aging, Death and Dying (M)
 PSYC 112 Interpersonal Relations (M)
 PSYC 128 Biofeedback and Stress Management (M)
 * PSYC 135 Marriage and Family Relations (C,M,MMR)
 * PSYC 137 Human Sexual Behavior (C,M,MMR)
 * PSYC 155 Introduction to Personality (C,M)
 * PSYC 230 Psychology of Lifespan Development (C,M,MMR)
 SPEE 180 Intercultural Communication (C,M,MMR)

Additional Requirements for CSU Graduation

Note: Not required for Certification.

American Institutions/California Government

Although this requirement is not part of the General Education requirements for CSU, all students must complete course work in U.S. History, Constitution and Government. The courses may also be used to partially fulfill Area D of the CSU General Education Breadth Requirements.

Students must complete **TWO** (2) courses (six units) in American Institutions/California Government; one course selected from **Part A** and one course from **Part B**:

Part A		Part B	
BLAS 140A	History of the U.S., Black Perspective (C, M, MMR)	BLAS 140B	History of the U.S., Black Perspective (C, M, MMR)
CHIC 141A	U.S. History from a Chicano Perspective (C,M)	CHIC 141B	U.S. History from a Chicano Perspective (C, M)
HIST 109	History of the United States I (C, M, MMR)	HIST 110	History of the United States II (C, M, MMR)
HIST 115A	History of the Americas I (C, M)	HIST 115B	History of the Americas II (C, M)
HIST 141	Women in United States History I (C,M,MMR)	HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
HIST 150	Native Americans in U.S. History (M,MMR)	HIST 142	Women in United States History II (C,M,MMR)
		HIST 151	Native Americans in U.S. History (M, MMR)
		POLI 102	The American Political System (C, M, MMR)

Students who have completed the American Institutions requirement except for the California government portion must complete one of the following three-unit courses:

BLAS 140B	History of U.S., Black Perspectives (C, M, MMR)
CHIC 141B	United States History from a Chicano Perspective (C, M)
HIST 110	History of the United States II (C, M, MMR)
HIST 115B	History of the Americas II (C, M)
HIST 123	U.S. History from the Asian Pacific American Perspective (C, M)
HIST 142	Women in United States History II (C, M, MMR)
HIST 151	Native Americans in United States History (M, MMR)
HIST 175	California History (M)
POLI 102	The American Political System (C, M, MMR)

Upon completion of this pattern of general education requirements students must petition for CSU General Education Certification in the Evaluations Office.

Students who are eligible for CSU Certification may also qualify for an **Associate Degree in Liberal Arts** if they have completed the following San Diego Community College District requirements: American Institutions, a Multicultural Studies course, Health Education 101 and two Physical Education activity courses. Students who are pursuing an **Associate Degree in Transfer Studies** are not required to meet the additional San Diego Community College District graduation requirements.

Transfer to University of California

University of California Campuses

University of California, Berkeley

University of California, Davis

University of California, Irvine

University of California, Los Angeles

University of California, Merced

University of California, Riverside

University of California, San Diego

University of California, San Francisco

University of California, Santa Barbara

University of California, Santa Cruz

Students who plan to earn a university degree may find it advantageous to complete freshman and sophomore work at a California community college. A student may apply 70 transferable semester units (or 105 quarter units) from the community colleges toward a university degree.

The University of California includes nine campuses and a Health Sciences Center in San Francisco. Courses completed at a community college after the 70-unit maximum course units has been reached will count toward university requirements, but these course units will not count toward the total number of units required to earn a university degree.

The University of California minimum requirements

Transfer students will be eligible for admission if they meet the following requirements:

- 1) Complete 60 semester units or 90 quarter units of transferable units with a grade point average of at least 2.4 (no more than 14 semester or 21 quarter units may be taken as Pass/Not Pass; and
- 2) Complete the following course pattern, with a grade of "C" or better in each course:
 - two transferable college courses (3 semester or 4-5 quarter units) in English composition; and
 - one transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning; and
 - four transferable college courses (3 semester or 4-5 quarter units each) selected from at least two of the following subject areas: arts and humanities; social and behavioral sciences; and physical and biological sciences.

Students who complete the Intersegmental General Education Transfer Curriculum (IGETC) pattern prior to transferring to the University of California system will meet the transfer eligibility coursework requirement listed above. Students who did not qualify for admissions to a university when graduating from high school because subjects A-F were not satisfied, must complete the requirements listed above.

Note: Specific admission criteria vary among University of California campuses. The UC system limits credit for transfer of courses in fine arts, music, theater arts, computer science, engineering and independent study. Students are advised to plan transfer programs as early as possible and enroll in transferable courses in both general education and in courses that prepare for the specific university major. Questions related to transfer programs should be discussed with counselors or the Transfer Center staff.

UC Transfer and Physical Education Activity Courses

UC grants a maximum of four semester units of credit for appropriate Physical Education Activity courses. Courses that are subject to this limit are listed as such on the college's UC Transfer Course Agreement, available on web ASSIST at www.assist.org under the *UC Transferable Courses* link. Physical Education Theory courses or courses that do not fit either the Theory or Activity category are not included in the four semester credit limit.

UC Transfer and Variable Topics Courses

These courses are also called "Independent Studies", "Special Studies", "Special Topics", "Internships", "Field Work", etc. Credit for variable topics courses is given only after a review of the scope and content of the course by the enrolling UC campus. This usually occurs after transfer and may require recommendations from faculty. UC does not grant credit for variable topics courses in Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) or Library Departments because of credit restrictions in these areas.

University of California, San Diego Transfer Admission Guarantee (UCSD-TAG)

() Colleges in parenthesis indicate where the course is approved for UCSD-TAG Requirements.
 C - City College
 M - Mesa College
 MMR - Miramar College

The following information is based on 2006-2007 articulation agreements and/or course offerings. This information is subject to change. Please contact the Counseling Department or Transfer Center for updates.

The TAG program guarantees student admission to any one of the UCSD colleges (John Muir, Thurgood Marshall, Earl Warren, Revelle, Eleanor Roosevelt or Sixth College). In order to take advantage of TAG, students must attend a TAG workshop and plan their academic programs with a counselor at City, Mesa or Miramar College and comply with all TAG provisions.

TAG students must satisfy the following requirements:

- 1) Maintain a minimum cumulative GPA of 2.8 in all UC-transferable units and be in good academic standing.
- 2) Sign a TAG contract at a TAG participating college by the published deadlines, but not more than two years before the quarter of admission to UCSD.
- 3) Once the TAG contract is signed, complete remain-

ing core general education courses at a TAG participating college.

- 4) Establish California Community College (CCC) residency for admission to UCSD by:
 - a. Completing thirty (30) UC-transferable semester units at a California Community College, and
 - b. Attending the last regular term (Fall or Spring, not Summer) at a California Community College

NOTE: California residency status at the community college does NOT guarantee residency status for tuition purposes at UCSD)
- 5) Earn a minimum of sixty (60) UC-transferable semester units.
- 6) Pass (with a grade of "C" or better) all TAG core general education courses, including one year (two semesters) of a transferable sequence in (A) Writing, (B) Humanities, (C) Foreign Language, (D) Social Science, and (E) Calculus or Natural Science.
- 7) Pass (with a grade of "C" or better) one UC-transferable Math course that clears the Math requirement (see www.assist.org for courses denoted with UC-M).
- 8) Complete courses to prepare for the major as required (see www.assist.org)
- 9) Submit a UC Admission Application within the published deadlines of the filing period that corresponds to the quarter noted on the signed TAG contract, and comply with all UC requirements (see www.universityofcalifornia.edu for filing deadlines).

Area A - Writing

Complete one two-course sequence:

ENGL 101 (C,M,MMR) & ENGL 205 (C,M,MMR)
 ENGL 105 (C,M,MMR) & ENGL 205 (C,M,MMR)

Area B - Humanities

Complete one two-course sequence from one subject:

Art - Fine Art

ARTF 109 (C,M,MMR) & ARTF 111 (C,M,MMR)
 ARTF 110 (C,M,MMR) & ARTF 111 (C,M,MMR)
 ARTF 113 (M,MMR) & ARTF 115 (C,M)

Black Studies

BLAS 145A (C,M) & BLAS 145B (C)

Chicano Studies

CHIC 135 (C,M) & CHIC 138 (C,M)

Dramatic Arts

DRAM 136 (C) & DRAM 137(C)
DRAM 150 (M) & DRAM 151(M)

English

ENGL 210 (C,M,MMR) & ENGL 211(C,M,MMR)
ENGL 215 (C,M,MMR) & ENGL 216(C,M,MMR)
ENGL 220 (C,M,MMR) & ENGL 221 (C,M,MMR)

History

HIST 100 (C,M,MMR) & HIST 101 (C,M,MMR)
HIST 105 (C,M,MMR) & HIST 106 (C,M,MMR)
HIST 115A (C,M) & HIST 115B (C,M)
HIST 120 (C,M,MMR) & HIST 121 (C,M,MMR)
HIST 125 (M) & HIST 126 (M)

Humanities

HUMA 101 (C,M,MMR) & HUMA 102(C,M,MMR)

Music

MUSI 100 (C,M,MMR) & MUSI 105 (M)
MUSI 100 (C,M,MMR) & MUSI 109 (C,M,MMR)
MUSI 100 (C,M,MMR) & MUSI 111 (C,M,MMR)

Philosophy

PHIL 102A (C,M,MMR) & PHIL 102B (C,M,MMR)
PHIL 104A (C,M) & PHIL 104B (C,M)
PHIL 103 (M) & PHIL 106 (C,M)

Area C - Foreign Language

Complete two semesters of college level work in the same language:

AMSL 115, 116, 215, 216 (C,M)
ARAB 101, 102 (C)
CHIN 101, 102, 201 (M)
FREN 101, 102, 201, 202 (C,M)
GERM 101, 102, 201 (C,M)
ITAL 101, 102, 201 (C,M)
JAPA 101, 102, 201, 202 (M)
LATI 101, 102, 201 (M)
RUSS 101, 102, 201 (M)
SPAN 100 (M), 101, 102, 201, 202, 215, 216 (C,M,MMR)
TAGA 101, 102, 201 (M,MMR)
VIET 101, 102, 201 (M)

Area D - Social Science

Complete one two-course sequence from one subject
Anthropology:

ANTH 102 (C,M,MMR) & ANTH 103 (C,M,MMR)
ANTH 102 (C,M,MMR) & ANTH 107 (C,M,MMR)
ANTH 102 (C,M,MMR) & ANTH 200 (M)
ANTH 102 (C,M,MMR) & ANTH 210 (C,M)
ANTH 102 (C,M,MMR) & ANTH 215 (C,M)
ANTH 103 (C,M,MMR) & ANTH 107 (C,M,MMR)
ANTH 103 (C,M,MMR) & ANTH 200 (M)
ANTH 103 (C,M,MMR) & ANTH 210 (C,M)
ANTH 103 (C,M,MMR) & ANTH 215 (C,M)

Black Studies

BLAS 140A (C,M,MMR) & BLAS 140B (C,M,MMR)

Chicano Studies

CHIC 110A (C,M) & CHIC 110B (C,M)
CHIC 141A (C,M) & CHIC 141B (C,M)

Economics

ECON 120 (C,M,MMR) & ECON 121 (C,M,MMR)

History

HIST 109 (C,M,MMR) & HIST 110 (C,M,MMR)
HIST 109 (C,M,MMR) & HIST 123 (C,M)
HIST 141 (C,M,MMR) & HIST 142 (C,M,MMR)
HIST 150 (M,MMR) & HIST 151 (M,MMR)

Political Science

POLI 101 (C,M,MMR) & POLI 102 (C,M,MMR)
POLI 101 (C,M,MMR) & POLI 103 (C,M,MMR)
POLI 101 (C,M,MMR) & POLI 140 (C,M,MMR)
POLI 102 (C,M,MMR) & POLI 103 (C,M,MMR)
POLI 102 (C,M,MMR) & POLI 140 (C,M,MMR)
POLI 103 (C,M,MMR) & POLI 140 (C,M,MMR)

Psychology

PSYC 101 (C,M,MMR) & PSYC 121 (M,MMR)
PSYC 101 (C,M,MMR) & PSYC 123 (M,MMR)
PSYC 101 (C,M,MMR) & PSYC 137 (C,M,MMR)
PSYC 101 (C,M,MMR) & PSYC 155 (C,M)
PSYC 101 (C,M,MMR) & PSYC 211 (C,M,MMR)
PSYC 101 (C,M,MMR) & PSYC 230 (C,M,MMR)
PSYC 101 (C,M,MMR) & PSYC 245 (M,MMR)
PSYC 101 (C,M,MMR) & PSYC 260 (C,M,MMR)

Sociology

SOCO 101 (C,M,MMR) & SOCO 110 (C,M,MMR)
SOCO 101 (C,M,MMR) & SOCO 201 (C,M)
SOCO 110 (C,M,MMR) & SOCO 201 (C,M)

Area E - Calculus or Natural Science

Complete one two-course sequence from one subject:

Biology

BIOL 105/106 (MMR) & BIOL 205 (C,M,MMR)
 BIOL 105/106 (MMR) & BIOL 210B (C,M,MMR)
 BIOL 105/106 (MMR) & BIOL 215 (C,M,MMR)
 BIOL 105/106 (MMR) & BIOL 230 (C,M,MMR)
 BIOL 105/106 (MMR) & BIOL 235 (C,M,MMR)
 BIOL 105/106 (MMR) & BIOL 250 (M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 205 (C,M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 210B (C,M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 215 (C,M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 230 (C,M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 235 (C,M,MMR)
 BIOL 107 (C,M,MMR) & BIOL 250 (M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 205 (C,M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 210B (C,M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 215 (C,M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 230 (C,M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 235 (C,M,MMR)
 BIOL 210A (C,M,MMR) & BIOL 250 (M,MMR)

Chemistry

CHEM 200 (C,M,MMR) & CHEM 201 (C,M,MMR)
 CHEM 231 (C,M,MMR) & CHEM 233 (C,M,MMR)

Mathematics

MATH 121 (C,M,MMR) & MATH 122 (C,M,MMR)
 MATH 150 (C,M,MMR) & MATH 151 (C,M,MMR)
 MATH 151 (C,M,MMR) & MATH 252 (C,M,MMR)

Physics

PHYS 180A (C) & PHYS 180B (C)
 PHYS 125 (C,M,MMR) & PHYS 126 (C,M,MMR)
 PHYS 195 (C,M,MMR) & PHYS 196 (C,M,MMR)
 PHYS 195 (C,M,MMR) & PHYS 197 (C,M,MMR)

Math UC Transfer Requirement

One UC-transferable mathematics course is required for admission to any UC campus. UCSD TAG students are not required to complete a third math class if a math sequence is selected for UCSD TAG GE area E

BIOL 200 Biological Statistics (C,M)
 MATH 116 College and Matrix Algebra (C,M,MMR)
 MATH 119 Elementary Statistics (C,M,MMR)
 MATH 121 Basic Techniques of Applied Calculus I (C,M,MMR)
 MATH 122 Basic Techniques of Calculus II (C,M,MMR)

MATH 141 Precalculus (C,M,MMR)
 MATH 150 Calculus with Analytic Geometry I (C,M,MMR)
 MATH 151 Calculus with Analytic Geometry II (C,M,MMR)
 MATH 245 Discrete Mathematics (C,M,MMR)
 MATH 252 Calculus with Analytic Geometry III (C,M,MMR)
 MATH 254 Introduction to Linear Algebra (C,M,MMR)
 MATH 255 Differential Equations (C,M,MMR)
 PSYC 258 Behavioral Science Statistics (C,M,MMR)

Additional Information about UCSD TAG GE

Some UCSD colleges require additional lower division GE courses prior to graduation from UCSD. Some of these courses may be completed at community college, as listed below:

Muir College: After transfer to UCSD: No additional lower division college GE courses required. However, you must take either Muir College Writing 50 (lower division) or 125 (upper division). By graduation from UCSD, you must complete one three-unit (semester system) or one four-unit (quarter system) course that emphasizes U.S. Cultural Diversity. This course may be taken before or after transfer to UCSD.

Marshall College: After transfer to UCSD: You must also complete one course in Dimensions of Culture (DOC): either DOC 2 or DOC 3. In making your core selection E: If you select a year sequence in natural sciences (biology, chemistry, or physics), you must complete one additional course in calculus or statistics. If you select a year sequence in calculus, you must complete two additional semester courses in natural science, or three quarters at UCSD, one in each discipline. Additional courses: One course in ethnic studies or third world studies.

Warren College: After transfer to UCSD: No additional lower division GE courses required. Students will be required to complete two upper division non-contiguous courses, one of which must be selected from an approved list of courses with a significant writing component.

Revelle College: In making your core selection E: Select two courses in calculus. In addition, one biology and a total of three semesters of physics and chemistry (must include at least one course from each subject). Additional course: One course in music, art, or theatre to be taken at the community college or after transfer

to UCSD. Additional courses: Complete two semesters or three quarters in one discipline non-contiguous to your major. Additional course: Complete 3rd semester level of foreign language at community college. Or after transfer to UCSD: Pass the UCSD language exam (written and oral) in any foreign language, or complete fourth quarter language at UCSD.

Roosevelt College: In making your core selection B: Select two courses from art, drama/theatre, or music. If available you should take one course in a non-western emphasis. For core selection C: Additional course: Complete 3rd semester level of foreign language. Or after transfer to UCSD: Pass the UCSD language exam (written and oral) in any foreign language, or complete fourth quarter language at UCSD. In making your core selection E: Select two courses in natural science from biology, chemistry, or physics. In addition, you should take two semester courses, chosen from the following areas: math, computer programming, logic, and/or statistics (classes may be taken at community college or after transfer to UCSD). After transfer to UCSD: You must take three quarters of "Making of the Modern World."

Sixth College: After transfer to UCSD: No additional lower division GE courses required. However, you must complete the requirement to satisfy the upper division practicum and CAT 125, the two-unit practicum writing course.

California State University and University of California Guaranteed Admission Programs

In addition to the University of California, San Diego TAG program, students enrolled at one of the San Diego Community College Districts colleges (City, Mesa, Miramar), may be eligible for additional guaranteed admission programs.

California State University, Northridge Transfer Admission Guarantee Program (TAG) - Guarantees admission to CSU Northridge during transfer semester of your choice and provides CSU Northridge advising and other services.

San Diego State University Transfer Studies Degree Program (TSD)-Guarantees admission to SDSU and the major of your choice (not available for all majors). Also "locks in" the SDSU admission requirements in effect at the time the agreement is signed. Apply one to two years before transferring.

University of California, San Diego UniversityLink Program - Guarantees admission to

UCSD and provides counseling, workshops and other activities to help you succeed in the university. Open to students who are recent graduates of a San Diego County high school.

University of California, Davis Transfer Admission Agreement Program (TAA) - Guarantees admission to UC Davis and the major of your choice. Limited numbers available. Apply in August of the year before transfer. You must have completed 30 UC-transferable units and have a 2.8 GPA to apply.

University of California, Irvine Preliminary Admission in the Field Program (PAIF) - Guarantees admission to UC Irvine. Administered through UC Irvine.

University of California, Riverside Transfer Admission Program (TAG) - Guarantees admission to UC Riverside. Administered through UC Riverside Admissions Office.

University of California, Santa Barbara Transfer Admission Agreement Program (TAA) - Guarantees admission to UCSB. No agreement form is necessary - just meet the requirements and apply.

University of California, Santa Cruz Guaranteed Admission for Transfer Entry Program (GATE) - Guarantees admission to UC Santa Cruz. Apply in early Fall of year before transfer. You must have completed 30 UC-transferable units and have a 3.0 GPA to apply.

Note: Eligibility and coursework requirements differ for each of these programs. See a counselor or visit the Transfer/Career Center for more information

Students who qualify for the college Honors Program may also be eligible for additional transfer guarantee programs and benefits. Visit the Honors Program office for more information.

Transfer Guarantee Programs for High School Students

In addition, District colleges participate in transfer guarantee programs made available to eligible high school students who have not been admitted to the university program directly after high school graduation. These include:

- **San Diego State University Dual Admissions Program.**
- **University of California, San Diego Dual Admission Program**

Cross-Enrollment

Matriculated San Diego City, Mesa and Miramar College students who have completed at least one semester of coursework, are enrolled in six units and have a 2.0 or higher GPA may be eligible to enroll in one course per semester at a California State University or University of California campus for a substantially reduced fee. Cross-Enrollment may not be available during the summer term and additional restrictions and/or requirements may be applicable. For more information, visit the Counseling department or Transfer/Career Center, room A-111.

University of California and California State University

Intersegmental General Education Transfer Curriculum (IGETC)

The following information is based on 2007-2008 articulation agreements and/or course offerings and is subject to change. Please contact the Counseling Department for updates.

- () Colleges in parenthesis indicate where the course is approved for IGETC Requirements.
 C - City College
 M - Mesa College
 MMR - Miramar College
- * Courses with asterisks are listed in more than one area but shall not be certified in more than one area.
- + Courses with pluses indicate transfer credit may be limited by either UC or CSU, or both. Please consult a counselor for additional information.
- @Courses with at symbols indicate CSU-only requirements.

The Intersegmental General Education Transfer Curriculum (IGETC) is a general education pattern that will fulfill all lower-division general education requirements at all California State University (CSU) campuses and most University of California (UC) campuses/majors. It is also accepted by some private/independent or out of state universities. IGETC is usually recommended for students who intend to transfer to a UC campus, or who are not yet sure of their intended transfer university. Completion of the IGETC pattern is not an admission requirement for transfer to most UC or CSU campuses, nor is it the only way to fulfill the lower division GE requirements of a UC or CSU campus prior to transfer.

It is strongly recommended that students consult with a counselor to determine which general education pattern is most appropriate for their individual educational goals.

Rules for using the IGETC pattern:

- Each course must have been IGETC approved at the time it was taken. See www.assist.org for a list of certified courses and approval dates.
- Courses may be approved for more than one IGETC area. However, each course may be used to certify only one of the areas it is approved for.
- The entire IGETC pattern must be completed prior to transfer (although some exceptions are made for high-unit majors or other cases).
- Students must apply for IGETC certification at the last community college attended prior to transfer. Forms are available from the Counseling or Evaluations office. IGETC can not be certified after transfer.
- AP credit and coursework completed at accredited U.S. colleges and universities may be used to fulfill some IGETC requirements. All such credit must be evaluated through the Evaluations office. Foreign coursework is not acceptable.
- All courses must be passed with a "C" or higher. "C-" is not acceptable.
- Students transferring to UC need not complete the Oral Communication requirement (Area 1C).
- Students transferring to CSU need not complete the Languages Other than English requirement.
- Some UC campuses do not allow use of IGETC for students who were previously enrolled at a UC campus.

- Some community college courses have limitations on the amount of credit awarded by the receiving university. See a counselor, the course description in the college catalog, or www.assist.org for more information.

IGETC is not recommended for the following transfer destinations:

- UC San Diego Revelle and Eleanor Roosevelt Colleges
- UC Berkeley Colleges of Business, Chemistry, Environmental Design (Architecture), Engineering, Natural Resources, Optometry
- UC Davis College of Engineering
- UC Irvine Schools of Engineering, Biological Sciences, Physical Sciences
- UC Riverside Colleges of Engineering, Natural and Agricultural Sciences
- UC Santa Barbara Colleges of Engineering, Creative Studies
- UC Los Angeles Schools of Engineering and Applied Science, Nursing

Area 1 - English Communication

2-3 courses, 6-9 semester/8-12 quarter units

Group A: English Composition

1 course, 3 semester/4-5 quarter units

- ENGL 101 Reading and Composition (C,M,MMR)
OR
 ENGL 105 Composition and Literature (C,M,MMR)

Group B: Critical Thinking - English Composition

1 course, 3 semester/4-5 quarter units

Courses must have English Composition as a prerequisite.

- ENGL 205 Critical Thinking and Intermediate Composition (C,M,MMR)
 PHIL 205 Critical Thinking and Writing in Philosophy (C,M,MMR)

Group C: Oral Communication

1 course, 3 semester/4-5 quarter units

- @ SPEE 103 Oral Communication (C,M,MMR)
 @ SPEE 160 Argumentation (C,M,MMR)

Area 2 - Mathematical Concepts and Quantitative Reasoning

1 course, 3 semester/4-5 quarter units

Courses must have Intermediate Algebra as a prerequisite.

- + BIOL 200 Biological Statistics (C,M)
- + MATH 116 College and Matrix Algebra (C,M,MMR)
- + MATH 119 Elementary Statistics (C,M,MMR)
- + MATH 121 Basic Techniques of Applied Calculus I (C,M,MMR)
- + MATH 122 Basic Techniques of Calculus II (C,M,MMR)
- + MATH 141 Precalculus (C,M,MMR)
- + MATH 150 Calculus with Analytic Geometry I (C,M,MMR)
- + MATH 151 Calculus with Analytic Geometry II (C,M,MMR)
- MATH 245 Discrete Mathematics (C,M,MMR)
- MATH 252 Calculus with Analytic Geometry III (C,M,MMR)
- MATH 254 Introduction to Linear Algebra (C,M,MMR)
- MATH 255 Differential Equations (C,M,MMR)
- + PSYC 258 Behavioral Science Statistics (C,M,MMR)

Area 3 - Arts and Humanities

3 courses, 9 semester/12-15 quarter units

At least one course from the Arts and one from the Humanities.

3A: Arts Courses:

- ARTF 100 Art Orientation (C,M,MMR)
- ARTF 107 Contemporary Art (M,MMR)
- ARTF 109 Nineteenth and Twentieth Century Art (C,M,MMR)
- ARTF 110 Art History: Prehistoric to Gothic (C,M,MMR)
- ARTF 111 Art History: Renaissance to Modern (C,M,MMR)
- + ARTF 113 African, Oceanic, and Native American Art (M,MMR)
- + ARTF 115 African Art (C,M)
- + ARTF 120 Native American Indian Art (M)
- ARTF 125 History of Art: Far Eastern Art (MMR)
- BLAS 110 Afro-American Art (C,M)
- + BLAS 111 African Art History (M)
- BLAS 120 Black Music (C,M)
- CHIC 230 Chicano Art (M)
- DFLM 101 Introduction to Film (MMR)

DFLM 102	The American Cinema (MMR)
DRAM 105	Introduction to Dramatic Arts (C,M)
DRAM 107	Study of Filmed Plays (C)
DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)
DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)
DRAM 150	Cinema as Art & Communication I (M)
DRAM 151	Cinema as Art & Communication II (M)
MUSI 100	Introduction to Music (C,M,MMR)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
MUSI 102	Music History II: Mid 18th - Early 20th Century (M)
MUSI 105	Music of Our Time (M)
MUSI 109	World Music (C,M,MMR)
MUSI 111	Jazz - History & Development (C,M,MMR)
MUSI 125	Music, The Arts, and Humanity (M)
PHOT 150	History of Photography (C)

3B: Humanities Courses:

* AMSL 104	Introduction to Deaf Culture (M)	ENGL 237	Women in Literature (C,MMR)
AMSL 116	American Sign Language Level II (C,M)	ENGL 240	Shakespeare (C,M)
AMSL 215	American Sign Language Level III(C,M)	FREN 102	Second Course in French (C,M)
AMSL 216	American Sign Language Level IV (C,M)	FREN 201	Third Course in French (C,M)
* BLAS 145A	Introduction to African History (C,M)	FREN 202	Fourth Course in French (C,M)
* BLAS 145B	Introduction to African History (C)	GERM 102	Second Course in German (C,M)
BLAS 150	Black Women in Literature & the Media (C,M)	GERM 201	Third Course in German (C,M)
BLAS 155	Afro-American Literature (C,M)	* HIST 100	World History I (C,M,MMR)
CHIC 130	Mexican Literature in Translation (C)	* HIST 101	World History II (C,M,MMR)
CHIC 135	Chicano Literature (C,M)	* HIST 105	Introduction to Western Civilization I (C,M,MMR)
CHIC 138	Literature of La Raza in Latin America in Translation (C,M)	* HIST 106	Introduction to Western Civilization II (C,M,MMR)
CHIC 190	Chicano Images in Film (C,M)	* HIST 120	Introduction to Asian Civilizations (C,M,MMR)
* CHIC 210	Chicano Culture (C,M)	* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
CHIN 102	Second Course in Mandarin Chinese (M)	HIST 125	History of England & the Commonwealth I (M)
CHIN 201	Third Course Mandarin Chinese (M)	* HIST 131	Latin America Before Independence (M)
ENGL 208	Introduction to Literature (C,M,MMR)	* HIST 132	Latin America Since Independence(M)
ENGL 209	Literary Approaches to Film (C,M,MMR)	HUMA 101	Introduction to the Humanities I (C,M,MMR)
ENGL 210	American Literature I (C,M,MMR)	HUMA 102	Introduction to the Humanities II (C,M,MMR)
ENGL 211	American Literature II (C,M,MMR)	HUMA 103	Introduction to the New Testament (M)
ENGL 215	English Literature I: 800-1799 (C,M,MMR)	HUMA 104	Introduction to the Old Testament (M)
ENGL 216	English Literature II: 1800-Present (C,M,MMR)	HUMA 106	World Religions (C,M)
ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)	HUMA 201	Mythology (C,M,MMR)
ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)	ITAL 201	Third Course in Italian (C,M)
ENGL 230	Asian American Literature (M,MMR)	JAPN 102	Second Course in Japanese (M)
		JAPN 201	Third Course in Japanese (M)
		JAPN 202	Fourth Course in Japanese (M)
		LATI 102	Second Course in Latin (M)
		LATI 201	Third Course in Latin (M)
		PHIL 102A	Introduction to Philosophy: Reality & Knowledge (C,M,MMR)
		PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
		PHIL 103	Historical Introduction to Philosophy (M)
		PHIL 104A	History of Western Philosophy (C,M)
		PHIL 104B	History of Western Philosophy (C,M)
		PHIL 106	Asian Philosophy (C,M)
		PHIL 107	Reflections on Human Nature (C,M,MMR)
		PHIL 108	Perspectives on Human Nature & Society (C,M)
		PHIL 110	Philosophy of Religion (M)
		PHIL 111	Philosophy in Literature (C,M)
		PHIL 112	Philosophy of Science (M)
		PHIL 125	Philosophy of Women (C,M)

PHIL 130	Philosophy of Art and Music (M)
PSYC 207	Psychology of Religion (M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
+ SPAN 102	Second Course in Spanish (C,M,MMR)
+ SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

Area 4 - Social and Behavioral Sciences

3 courses, 9 semester/12-15 quarter units

Courses from at least two disciplines or an interdisciplinary sequence.

4A: Anthropology and Archaeology Courses:

ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
ANTH 200	Introduction to North American Indians (M)
ANTH 210	Introduction to California Indians (C,M)
ANTH 215	Cultures of Latin America (C,M)

4B: Economics Courses:

ECON 120	Principles of Economics I (C,M,MMR)
ECON 121	Principles of Economics II (C,M,MMR)

4C: Ethnic Studies Courses:

* AMSL 104	Introduction to Deaf Culture (M)
BLAS 100	Introduction to Black Studies (C,M)
+ BLAS 104	Black Psychology (C,M)
+ BLAS 115	Sociology from a Black Perspective (C)
BLAS 116	Contemporary Social Problems From a Black Perspective (C,M)
BLAS 130	The Black Family (C,M)
BLAS 135	Introduction to Black Politics (C)
+ BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)

+ BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
* BLAS 145A	Introduction to African History (C,M)
* BLAS 145B	Introduction to African History (C)
CHIC 110A	Introduction to Chicano Studies (C,M)
CHIC 110B	Introduction to Chicano Studies (C,M)
*+ CHIC 141A	United States History From a Chicano Perspective (C,M)
+ CHIC 141B	United States History From a Chicano Perspective (C,M)
CHIC 150	History of Mexico (C,M)
CHIC 170	La Chicana (M)
CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)
* CHIC 210	Chicano Culture (C,M)
FILI 100	Filipino American Experience (M,MMR)
*+ HIST 150	Native Americans in United States History (M,MMR)
*+ HIST 151	Native Americans in United States History (M,MMR)

4D: Gender Studies:

*+ HIST 141	Women in United States History I (C,M,MMR)
*+ HIST 142	Women in United States History II (C,M,MMR)
* PSYC 133	Psychology of Women (M,MMR)

4E: Geography Courses:

GEOG 102	Cultural Geography (C,M,MMR)
GEOG 104	World Regional Geography (C,M,MMR)
GEOG 154	Introduction to Urban Geography (M)

4F: History Courses:

*+ CHIC 141A	United States History from a Chicano Perspective (C,M)
* HIST 100	World History I (C,M,MMR)
* HIST 101	World History II (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)
+ HIST 109	History of the United States I (C,M,MMR)
+ HIST 110	History of the United States II (C,M,MMR)
HIST 115A	History of the Americas I (C,M)
HIST 115B	History of the Americas II (C,M)

- * HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- * HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- HIST 123 U.S. History from the Asian Pacific American Perspective (C, M)
- HIST 130 The Middle East Today (M)
- * HIST 131 Latin America Before Independence (M)
- * HIST 132 Latin America Since Independence (M)
- *+ HIST 141 Women in United States History I (C, M,MMR)
- *+ HIST 142 Women in United States History II (C, M,MMR)
- *+ HIST 150 Native Americans in United States History (M,MMR)
- *+ HIST 151 Native Americans in United States History (M,MMR)
- HIST 154 Ancient Egypt (M)
- HIST 175 California History (M)

4G: Interdisciplinary, Social & Behavioral Sciences:

- + CHIL 101 Human Growth and Development (C,M,MMR)
- + CHIL 103 Lifespan Growth and Development (MMR)
- ENGL 202 Introduction to Linguistics (C,M)
- JOUR 202 Introduction to Mass Communication (M,MMR)
- * SOCO 223 Globalization and Social Change (MMR)

4H: Political Science, Government & Legal Institutions Courses:

- POLI 101 Introduction to Political Science (C,M,MMR)
- POLI 102 The American Political System (C,M,MMR)
- POLI 103 Comparative Politics (C,M,MMR)
- POLI 140 Contemporary International Politics (C,M,MMR)
- * SOCO 223 Globalization and Social Change (MMR)

4I: Psychology Courses:

- + PSYC 101 General Psychology (C,M,MMR)
- + PSYC 121 Introduction to Child Psychology (M,MMR)
- + PSYC 123 Adolescent Psychology (M,MMR)
- * PSYC 133 Psychology of Women (M,MMR)

- PSYC 135 Marriage and Family Relations (C,M,MMR)
- + PSYC 137 Human Sexual Behavior (C,M,MMR)
- PSYC 155 Introduction to Personality (C,M)
- PSYC 166 Introduction to Social Psychology (M,MMR)
- PSYC 211 Learning (C,M,MMR)
- PSYC 230 Psychology of Lifespan Development (C,M,MMR)
- PSYC 245 Abnormal Psychology (M,MMR)

4J: Sociology & Criminology Courses:

- PHIL 109 Issues in Social Philosophy (M)
- + SOCO 101 Principles of Sociology (C,M,MMR)
- SOCO 110 Contemporary Social Problems (C,M,MMR)
- SOCO 201 Advanced Principles of Sociology (C, M,MMR)
- * SOCO 223 Globalization and Social Change (MMR)

Area 5 - Physical and Biological Sciences

At least 2 courses required, 7-9 semester/9-12 quarter units. One Physical Science course and one Biological Science course; at least one must include a laboratory.

5A: Physical Science Courses:

- ASTR 101 Descriptive Astronomy (C,M,MMR)
- + ASTR 109 Practice in Observing Lab (C,M)
- + ASTR 111 Astronomy Lab (M,MMR)
- + CHEM 100 Fundamentals of Chemistry (C,M,MMR)
- + CHEM 100L Fundamentals of Chemistry Lab (C,M,MMR)
- + CHEM 130 Introduction to Organic & Biological Chemistry (C,M,MMR)
- + CHEM 130L Introduction to Organic & Biological Chemistry Lab (C,M,MMR)
- + CHEM 152 Introduction to General Chemistry (C,M,MMR)
- + CHEM 152L Introduction to General Chemistry Lab (C,M,MMR)
- CHEM 200 General Chemistry I - Lecture (C,M,MMR)
- CHEM 200L General Chemistry I - Lab (C,M,MMR)
- CHEM 201 General Chemistry II - Lecture (C,M,MMR)
- CHEM 201L General Chemistry II - Lab (C,M,MMR)
- + CHEM 231 Organic Chemistry I - Lecture (C,M,MMR)

- + CHEM 231L Organic Chemistry I - Lab (C,M,MMR)
- CHEM 233 Organic Chemistry II - Lecture (C,M,MMR)
- CHEM 233L Organic Chemistry II - Lab (C,M,MMR)
- CHEM 251 Analytical Chemistry - (C,M,MMR)
- + ENGN 110 Science for Technical Applications (C)
- GEOG 101 Physical Geography (C,M,MMR)
- GEOG 101L Physical Geography Lab (C,M,MMR)
- GEOL 100 General Geology (C,M,MMR)
- GEOL 101 General Geology Lab (C,M,MMR)
- GEOL 104 Earth Science (C,M,MMR)
- + PHYN 100 Survey of Physical Science (C,M,MMR)
- + PHYN 101 Survey of Physical Science Lab (C,M,MMR)
- PHYN 120 Physical Oceanography (M, MMR)
- + PHYS 100 Introductory Physics w/Lab (C, M)
- + PHYS 121A General Physics Lab (C)
- + PHYS 121B General Physics Lab (C)
- + PHYS 125 General Physics (C,M,MMR)
- + PHYS 126 General Physics II (C,M,MMR)
- + PHYS 180A General Physics I (C)
- + PHYS 180B General Physics II (C)
- + PHYS 195 Mechanics (C,M,MMR)
- + PHYS 196 Electricity and Magnetism (C,M,MMR)
- + PHYS 197 Waves, Optics and Modern Physics (C,M,MMR)

5B: Biological Science Courses:

- ANTH 102 Introduction to Physical Anthropology (C,M,MMR)
- ANTH 104 Laboratory in Physical Anthropology (C,M,MMR)
- + BIOL 100 Natural History Environmental Biology w/Lab (M,MMR)
- BIOL 101 Issues In Environmental Biology (C)
- + BIOL 105 Principles of Biology (MMR)
- + BIOL 106 Principles of Biology-Laboratory (MMR)
- + BIOL 107 General Biology - Lecture and Lab (C,M,MMR)
- BIOL 110 Introduction to Oceanography (C,M)
- BIOL 115 Marine Biology Lecture/Laboratory (C,M,MMR)
- + BIOL 120 The Environment of Man (M)
- BIOL 130 Human Heredity (C,M,MMR)
- BIOL 131 Introduction to Biotechnology (MMR)
- + BIOL 180 Plants and People (C,M)
- BIOL 205 General Microbiology (C,M,MMR)
- BIOL 210A Introduction to the Biological Sciences I (C,M,MMR)
- BIOL 210B Introduction to the Biological Sciences II (C,M,MMR)

- + BIOL 215 Introduction to Zoology w/Lab (C,M,MMR)
- BIOL 230 Human Anatomy w/Lab (C,M,MMR)
- BIOL 235 Human Physiology w/Lab (C,M,MMR)
- + BIOL 250 Introduction to Botany w/Lab (M,MMR)
- PSYC 260 Introduction to Physiological Psychology (C,M,MMR)

Languages Other Than English

UC Requirement Only. In order to complete IGETC for the University of California system, students are required to demonstrate competence/proficiency in a language other than English equal to two years of high school study. **Competence may be demonstrated through the following mechanisms:**

1. Completion of two years of the same foreign language of high school level work with grades of "C" or better;
2. Completion of a course or courses at a college or university, with a grade of "C" or better in each course. Usually, one semester of college work in a language other than English is equivalent to two years of high school work;

Any one of the following course or courses completed with a grade of "C" or better, will fulfill the requirement:

- AMSL 115 American Sign Language Level I (C,M)
- AMSL 116 American Sign Language Level II (C,M)
- AMSL 215 American Sign Language Level III (C,M)
- AMSL 216 American Sign Language Level IV (C,M)
- ARAB 101 First Course in Arabic (C,MMR)
- ARAB 102 Second Course in Arabic (C)
- CHIN 101 First Course in Mandarin Chinese (M)
- CHIN 102 Second Course in Mandarin Chinese (M)
- CHIN 201 Third Course in Mandarin Chinese (M)
- FREN 101 First Course in French (C,M)
- FREN 102 Second Course in French (C,M)
- FREN 201 Third Course in French (C,M)
- FREN 202 Fourth Course in French (C,M)
- GERM 101 First Course in German (C,M)
- GERM 102 Second Course in German (C,M)
- GERM 201 Third Course in German (C,M)
- ITAL 101 First Course in Italian (C,M)
- ITAL 102 Second Course in Italian (C,M)
- ITAL 201 Third Course in Italian (C,M)
- JAPN 101 First Course in Japanese (M)
- JAPN 102 Second Course in Japanese (M)
- JAPN 201 Third Course in Japanese (M)
- JAPN 202 Fourth Course in Japanese (M)
- LATI 101 First Course in Latin (M)

- LATI 102 Second Course in Latin (M)
 LATI 201 Third Course in Latin (M)
 RUSS 101 First Course in Russian (C,M)
 RUSS 102 Second Course in Russian (M)
 RUSS 201 Third Course in Russian (M)
 SPAN 100 First/Second Course in Spanish-Accelerated (M)
 + SPAN 101 First Course in Spanish (C,M,MMR)
 + SPAN 102 Second Course in Spanish (C,M,MMR)
 + SPAN 201 Third Course in Spanish (C,M,MMR)
 + SPAN 202 Fourth Course in Spanish (C,M,MMR)
 SPAN 215 Spanish for Spanish Speakers I (C,M,MMR)
 SPAN 216 Spanish for Spanish Speakers II (C,M,MMR)
 TAGA 101 First Course in Tagalog (M,MMR)
 TAGA 102 Second Course in Tagalog (M,MMR)
 TAGA 201 Third Course in Tagalog (M,MMR)
 VIET 101 First Course in Vietnamese (M)
 VIET 102 Second Course in Vietnamese (M)
 VIET 201 Third Course in Vietnamese (M)

3. Completion, with grades "C" or better, of two years formal schooling at the sixth grade level or higher at an institution where the language of instruction is not English. Documentation must be presented to substantiate that required coursework was completed;

4. 500 or higher in the College Board Achievement tests in languages other than English;
 5. 3 or higher in the College Board Advanced Placement Examinations in languages other than English;
 6. 5 or higher in the International Baccalaureate Higher Level Examinations in languages other than English;
 7. Completion of an achievement test administered by a community college - the San Diego Community College District does not administer this test - university or other college in a language other than English. The test will have to assess the student proficiency at the level equivalent to 2 years of high school language.

Completion of courses above proficiency level, with grades of C or better, may also be used to meet the requirement. Special Topics and Civilization courses DO NOT meet this requirement. See a counselor.

Students who are eligible for IGETC Certification may also be awarded an **Associate Degree in Liberal Arts** if they have completed the San Diego Community College District requirements of American Institutions, Multicultural Studies, two Physical Education activity courses and Health Education 101.

For transfer to other institutions of higher education contact the Counseling Department for information.

Recognition of High School Courses for College Credit

Students who successfully complete the articulated course/program and demonstrate acquisition of the knowledge, skills, and abilities via a college-approved examination, administered at the end of the course/program may earn college credit equivalent to the course(s) identified in the Articulation Table below.

In order to receive the credit for an articulated college course(s)/program, the student must earn a grade of "B" or better, complete the SDCCD online college application and the Tech Prep Articulation Certification request. The high school instructor must verify successful completion and submit each request to the Tech Prep office. Approved requests are processed annually each July. Seniors earning college credit may request a copy of their SDCCD transcript after July 31st. If you have any questions, please contact the Associate Dean of Tech Prep at (619) 388-6572.

TECH PREP COURSES

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	CITY COURSE(S)	UNITS
Academy of Finance (3 years)	San Diego Educational Complex	ACCT 102 ACCT 150 BUSE 90A BUSE 90B BUSE 90C BUSE 90D BUSE 92 BUSE 113 CBTE 180 CONF 110 ECON 120	up to 26.5
Accounting 1-2 (1 year)	San Diego Educational Complex, Serra, Point Loma, Crawford Educational Complex and Kearny Educational Complex	ACCT 102	3
Accounting 3-4 (1 year)	San Diego Educational Complex and Serra	ACCT 150	3
ROP Business Environments	Crawford Educational Complex, Kearny Educational Complex, San Diego Educational Complex, Gompers Secondary, Hoover and Met Program at Mesa College	BUSE 90A BUSE 90B BUSE 90C BUSE 90D	up to 5.5
Sales & Merchandising	University City	BUSE 90A BUSE 90B BUSE 90C BUSE 90D	up to 5.5

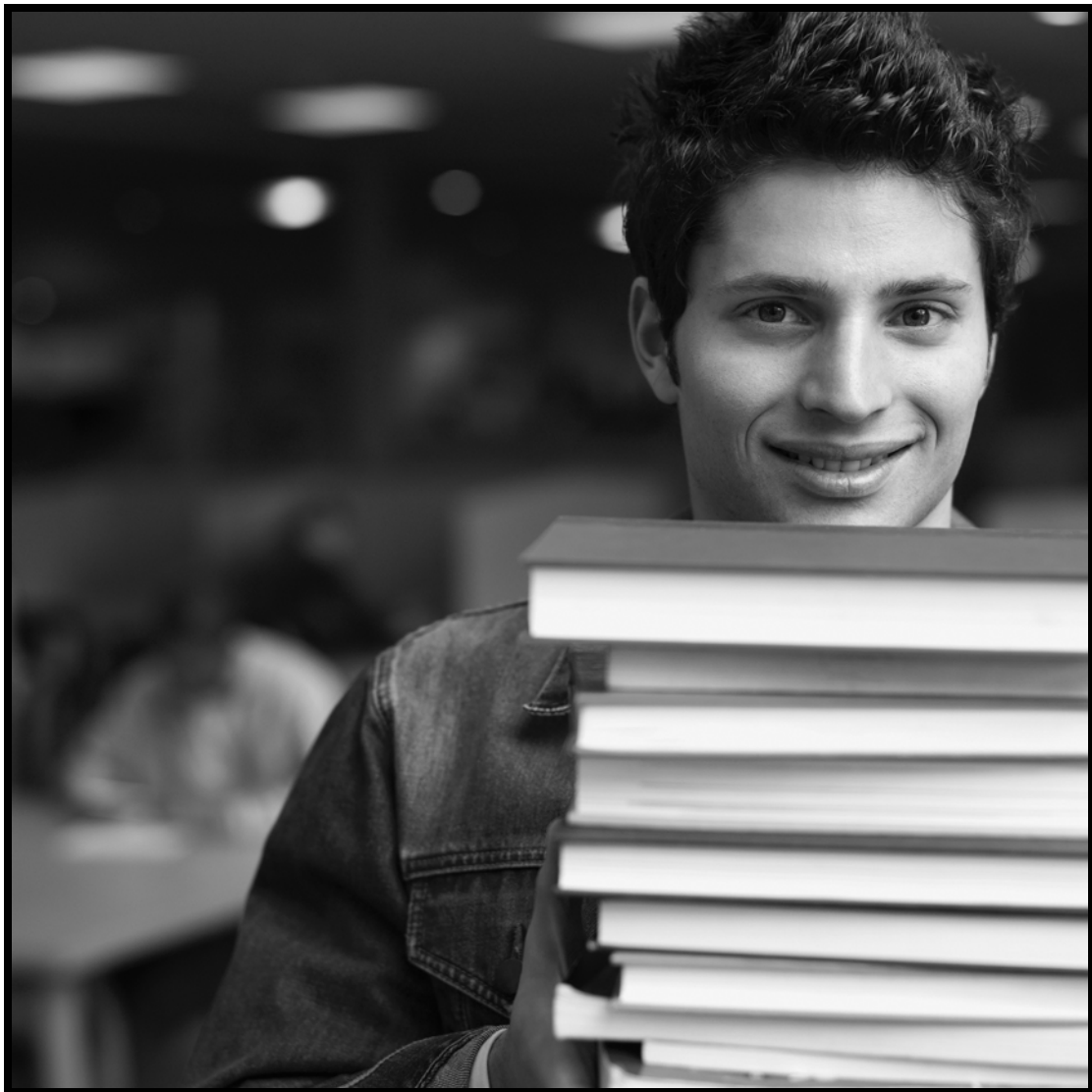
TECH PREP COURSES

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	CITY COURSE(S)	UNITS
ROP Business & Computer Applications (2 years)	Clairemont, Gompers Secondary, Hoover, Kearny Educational Complex, Madison, Mira Mesa, Morse, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Serra, Twain and University City	CBTE 101 CBTE 120 CBTE 122 CBTE 140 CBTE 151 CBTE 210 CISC 128	up to 13
Computer Applications or Computer Applications in Business (1 year)	Crawford Educational Complex, Clairemont, Hoover, Kearny Educational Complex, La Jolla, Mira Mesa, Mission Bay, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Twain, Serra and University City	CBTE 101 CBTE 120	up to 3
ROP Computerized Graphic Design (1 Year)	Crawford Educational Complex, Hoover, Morse, Patrick Henry Kearny Educational Complex, Point Loma, Scripps Ranch, Serra and Twain	CBTE 162 CBTE 170 CISC 114	up to 6
ROP Developmental Psychology of Children 1-4	Clairemont, Garfield, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Twain and University City	CHIL 160 CHIL 161 CHIL 270	up to 6
Teaching Academy (2 years)	Mira Mesa	EDUC 200	2
ROP Law Office Procedures	San Diego Educational Complex	CBTE 221	3
Teaching Academy (2 years)	Patrick Henry	EDUC 200 CHIL 270 SPAN 085	up to 9
ROP Introduction to Teaching and Learning (1 year)	Clairemont, Garfield, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch and University City	CHIL 270	up to 4
ROP Machine Tool Technology Program (2 years)	Kearny Educational Complex, Monte Vista and Santana	MACT 140	4
ROP Technology Support Services 1-2 (1 years)	Hoover, Patrick Henry, San Diego Educational Complex, Serra and Scripps Ranch	INWT 100	4
ROP Photographic Imaging	SCPA	PHOT 143	3
Web Programming/School Website Design (1 year)	Mission Bay and La Jolla	CBTE 162	2

TECH PREP COURSES

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	CITY COURSE(S)	UNITS
ROP Organizational Leadership	San Diego Educational Complex	BUSE 90A BUSE 90B BUSE 90C BUSE 90D	up to 5.5

Programs of Instruction



General Course Information

Not all courses listed will be offered each semester, and San Diego City College reserves the right to cancel any course if enrollment in such course is below a minimum number as set by the San Diego Community College District Board of Trustees. The hours indicated at the beginning of each course description, except where otherwise specified, denote the total number of clock hours the class meets each week.

Students enrolled in occupational and health occupation programs must earn a grade of "C" or better in courses required for the major.

Only one course in a student's major discipline may be used to meet the San Diego Community College district general education requirement.

Course Numbering System

The course numbering system has meaning with regard to level and transfer. See the description below:

- **1-49** Basic Skills or college preparatory courses. Credit does not apply toward an associate degree or transfer to a four-year college or university.
- **50-99** Course credit applies toward the associate degree but does not transfer to a four-year college or university.
- **100-299** Course credit applies toward the associate degree and credit is intended for transfer to a four-year college or university. (Some courses may be identified as associate degree.) Final decision in regard to transferability rests with the receiving institution.
- **300-399** Apprenticeship and in-service courses. See Catalog course description to determine credit for Associate Degree or Transfer.

Apprenticeship 345, 349, 349-D, DSPS 065, Field Experience/Internship 275, Independent Study 290, Individualized Instruction 296, Special Topics 23, 63, 265, Tutoring 044, and Work Experience courses 270, 272, 274, have Districtwide designated numbers.

Prerequisites, Corequisites, Limitations on Enrollment, Advisories

All prerequisites, corequisites, and limitations on enrollment stated in the course descriptions listed in this catalog will be strictly enforced by ClassTalk and Reg-e at the time of registration. Students who do not meet the prerequisite, corequisite, or other limitation according to the college's records, will not be permitted to register for the course. Students are strongly advised to have all transcripts of prior college work and other documentation on file well in advance of registration.

This will minimize registration delays. For more information see page 21.

Students should plan their schedule early and see a counselor for assistance.

Challenge Procedures

Students may challenge a prerequisite, corequisite or limitation on enrollment. Contact the Counseling Office to obtain a Petition to Challenge and a copy of Procedures 5500.2. The completed petition must be filed no later than ten working days prior to the published add deadline for the course being challenged.

Generic Course Information

Any discipline or department may offer the courses listed below which do not appear individually in the catalog. If applicable to a particular subject area, it will be listed under the appropriate departmental heading (subject indicator) in the college class schedule. For further information, please check with the instructor or department chair.

Supervised Tutoring (044)

Supervised tutoring courses are available in each discipline. To enroll in a supervised tutoring course, a student must be enrolled in a college or basic skills course in the respective discipline. The courses are designed to prepare the student to succeed in the corequisite or subsequent courses. Supervised tutoring may be taken four times, each time with a different corequisite. Credit does not apply to the associate degree.

Special Topics Courses (265)

Special topics courses that examine current problems or issues of interest may be offered in some disciplines. See the class schedule for specific titles and course details.

Work Experience (270)

Program of on-the-job learning experiences for students employed in a job related to the major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. To receive credit, a student must complete a minimum of seven units during the semester, including work experience. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning

Students gain hands-on experience in project planning, development, implementation and evaluation. Students meet weekly to receive support training and development opportunities regarding best practices in

Service Learning. The service-learning options are as follows:

Service Learning - High School Projects (277A)

Students in this course develop and implement service-learning projects to help high school students under the supervision of college faculty and in cooperation with high school teachers, counselors and resource teachers. Projects may include collaboration with high school classes, educational projects for high school students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277A discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Elementary and High School Projects (277B)

Students in this course develop and implement service learning projects to help elementary and junior high school students under the supervision of college faculty and in cooperation with elementary and junior high school teachers, counselors and resource teachers. Projects may include collaboration with elementary and junior high school classes, educational projects for elementary and junior high school students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277B discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning - Community (277C)

Students in this course develop and implement service-learning projects to help the college's community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies. Projects may include collaboration with off-campus community organizations and educational service oriented projects for the college's community. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277C discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Service Learning - On Campus (277D)

Students in this course develop and implement service-learning projects to help the college's students under the supervision of college faculty and in cooperation with college counselors and staff. Projects may include collaboration with college classes, educational projects for college students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277D discipline courses may not exceed three units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Independent Study (290)

This course is for students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course in the discipline. In this course students will have a written contract with their instructor for activities such as: preparing problem analysis, engaging in primary research, preparing reports, and meeting with the instructor at specific intervals. This course may be taken four times with different content, for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Individualized Instruction (296)

This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of the instructor of the designated course. Learning activities may employ a variety of self-paced multimedia learning systems, language labs, print and electronic resources, laboratory, or field research arrangements, to assist student in reaching specific learning objectives. This open entry/open exit course is offered concurrently with designated courses. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Explanation of Terms

Courses in the San Diego Community College District that are associate degree applicable and/or transfer to public four-year universities in California are identified at the end of each course description with the following statements:

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: The course will apply toward the units required for

the associate degree at San Diego Community College District colleges. The course is also likely to apply toward the total number of lower division units required for the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor: The course will apply toward the units required for the associate degree at San Diego Community College District colleges. There may be limitations on the number of units that are applied from this course toward the total number of lower division units required for the baccalaureate degree at the University of California. Students should see a counselor concerning these limitations. The course is also likely to apply toward the total number of lower division units required for the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

The University of California limits the maximum amount of lower division credit that can be applied toward the baccalaureate degree in a variety of disciplines, including Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) and Library Science.

Associate Degree Credit & transfer to CSU and/or private colleges and universities: The course will apply toward units required for the associate degree at San Diego Community College District colleges. The course is also likely to apply toward the total number of lower division units required for the baccalaureate degree at private, independent, and/or out-of-state colleges and universities; however, the final evaluation of course credit will be determined by the individual private, independent, or out-of-state institution.

CAN: The notation CAN stands for California Articulation Number. The course is likely to be accepted at other participating campuses (See page 83).

Information concerning transferability to CSU or UC systems is based on information available at the time the catalog is printed. For the latest information, see a counselor. Other symbols include:

Field Trip: (FT) All courses identified at the end of the course description with the symbol (FT) may have field trips required. Detailed information concerning costs incurred will be provided by the instructor.

Physical Education Classes/ Intercollegiate Sports-disclaimer

Participation in all sports and physical education activities involves certain inherent risks. Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system; and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports. Students are strongly advised to consult a physician prior to participating in any physical education activity.

UC Transfer and Physical Education Courses

The University of California divides physical education courses into three categories: 1) Activity; 2) Theory, and 3) Academic/Scholarly. Credit for Activity courses is limited to four (4) units. Credit for Theory courses is limited to eight (8) units. No credit limitation is established for Academic/Scholarly courses. All UC-transferable physical education courses and their associated unit limitations are listed on Web ASSIST at www.assist.org.

UC Transfer and Variable Topics Courses

These courses are also called "Independent Studies", "Special Studies", "Special Topics", "Field Work", etc. Credit for variable topics courses is given only after a review of the scope and content of the course by the enrolling UC campus. This usually occurs after transfer and may require recommendations from faculty. Information about internships may also be presented for review, but credit for internships rarely transfers to UC. UC does not grant credit for variable topics courses in Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) or Library Departments because of credit restrictions in these areas.

Accounting

See "Business Studies" on page 142.

Air Conditioning, Refrigeration, and Environmental Control Technology

See "Engineering Technology" on page 237.

Alcohol and Other Drug Studies

See "Alcohol and Other Drug Studies" on page 114.

American Sign Language

See "Languages" on page 294.

Anthropology

See "Behavioral Sciences" on page 114.

Arabic

See "Languages" on page 294.

Art-Fine Arts and Art-Graphic Arts

See "Visual and Performing Arts" on page 369

Astronomy

See "Physical and Earth Sciences" on page 336

Administration of Justice

There is currently no program in Administration of Justice. The following courses are offered and may be used as associate degree electives.

Courses

Administration of Justice (ADJU)

101 Introduction to Administration of Justice

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces students to the philosophy and history of administration of justice. It provides an overview of crime, police problems, and the organization and jurisdiction of law enforcement agencies. Students survey professional career opportunities and qualifications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Criminal Law I

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces students to the scope and source of criminal law and classification of crimes. It covers types of intent, capacity to commit crimes, legal defenses, parties to crime, laws of arrest, offenses against the public peace, types of assault, and constitutional background. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Allied Health

There is currently no program in Allied Health. The following courses are offered.

Courses

Allied Health (ALLH)

49 Introduction to Health Careers

1.5 hours lecture, 1.5 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56 and Mathematics 91, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M40.

This introductory course is designed for students interested in entering the human or veterinary health care industry. This course explores the history and key aspects of the practice of health care in the United States. The content provides ways to identify general aptitudes and skills required in health careers and provide students with an opportunity to match individual aptitudes, interests and abilities to specific health careers. (FT) Not Applicable to Associate Degree and not a basic skills course.

Behavioral Sciences

Alcohol and Other Drugs Studies, Anthropology, Community Health Work, Psychology, Human Services, Sociology, Social Work, Youth Development Work

Units

Certificate of Completion:

Archaeology	16
Community Health Work	16
Health and Human Services	10
Youth Development Work	16

Certificate Of Achievement:

Alcohol and Other Drug Studies	33.5
Health and Human Services	31-33

Associate in Arts Degree:

Anthropology	18*
Health and Human Services	31-33*
Psychology	18*
Sociology	18*

Associate in Science Degree:

Alcohol and Other Drug Studies	33.5*
Social Work	25*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Behavioral Sciences: Alcohol and Other Drug Studies

Description

This program prepares students for certification as Alcohol and/or Drug Abuse Counselors. The Certificate of Achievement is designed to prepare students for entry level alcohol and drug counselor employment. The associate degree provides academic preparation for baccalaureate study in psychology, social work and related disciplines.

Program Emphasis

This program is both vocational and academic. It trains students in the core functions of an alcohol and drug

counselor while providing a theoretical foundation in the behavioral sciences and human service professions.

Faculty	Office	Telephone
James Evans	A-1R	(619) 388-3257
Marie St. George	A-1U	(619) 388-3371
William Weiner	A-1U	(619) 388-3654
Veronica Ortega Welch	A-1T	(619) 388-3238

Career Options

Upon completion of the certificate of achievement or associate degree, students may be eligible for entry level employment as alcohol and/or drug counselors. However, most students find that further credentialing is required. The California Association of Alcohol and Drug Abuse Counselors (CAADAC) offers the Certified Alcohol Counselor (CAC), the Certified Drug Counselor (CDC) and the Certified Alcohol and Drug Counselor (CADC) Credentials. The Alcohol and Other Drug Studies program satisfies academic requirements for all seven California Alcohol and Drug Counseling credentialing agencies. This includes opportunities for continuing education and/or credentialing in nursing, drunk driver education programs, American Indian Certification and others.

Academic Programs

The Certificate of Achievement in Behavioral Sciences, Alcohol and Other Drug Studies program requires completion of the courses listed below.

Certificate of Achievement: Behavioral Sciences

Alcohol and Other Drug Studies

Courses Required for the Major:	Units
AODS 150, Introduction to Chemical Dependency	3
AODS 152, Physiology & Pharmacology of Psychoactive Drugs	3
AODS 154, Prevention, Intervention, Legal & Ethical Issues of Psychoactive Drug Use.....	3
AODS 156, Chemical Dependency Case Management ..	3
AODS 158, Chemical Dependency Family Counseling Techniques	3
AODS 160, Group Dynamics in Chemical Dependency Counseling.....	3
AODS 162, Chemical Dependency Internship Seminar.....	3
AODS 163*, Chemical Dependency Internship	3.5
PSYC 101, General Psychology	3
PSYC 161, Introduction to Counseling.....	3
SOCO 101, Principles of Sociology.....	3
Total Units =	33.5

*Alcohol and Other Drug Studies 270 must be substituted for 163 if a student has a paid internship.

Associate in Science: Behavioral Sciences

Alcohol and Other Drug Studies

The associate degree with an emphasis in Alcohol and Other Drug Studies requires completion of the Certificate of Achievement, Alcohol and Other Drug Studies. Recommended elective: Alcohol and Other Drug Studies 270. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of Alcohol and Other Drug Studies

include: Human Development, Psychology, Human Services.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Alcohol and Other Drug Studies (AODS)

150 Introduction to Chemical Dependency 3 hours lecture, 3 units Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 150 or Psychology 265: Introduction to Chemical Dependency.

This course is a study of the basic concepts of chemical dependency. Emphasis is placed on understanding chemical dependency from an interdisciplinary level and on examining the socio-cultural patterns of dependency. Individual student's potential as a chemical dependency counselor will also be addressed. Students beginning the certificate program should start with this course. This course is also appropriate for any student wishing to learn more about alcohol and other drug use, abuse and dependency. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Physiology and Pharmacology of Psychoactive Drugs

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Science 152 or Psychology 265: Physiology and Pharmacology of Psychoactive Drugs.

This course is a study of the neurochemical, physical and mental effects of commonly used addictive psychoactive substances on the human biological system. Emphasis is placed on the basic pharmacology of psychoactive drugs, the medical consequences of abuse and addiction, and therapeutic approaches for managing chemical dependency. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

154 Prevention, Intervention, Legal & Ethical Issues of Psychoactive Drug Use

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Psychology 101 or Sociology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 154 or Psychology 265: Prevention, Intervention, Legal and Ethical Issues of Psychoactive Drug Use.

This course is a study of ethical and legal components of the chemical dependency field. Emphasis is placed on professional responsibility and patients' rights as they relate to various models of primary prevention and intervention. Topics also include community needs and

resources and the influence of the media on prevention and intervention. This course is primarily intended for students pursuing the Alcohol and Other Drug Studies certificate. It is a required course for that program but this course is also intended for persons interested in how to keep individuals from developing alcohol and other drug problems and for persons wanting to learn how to help someone with an alcohol or drug problem when that person with the problem doesn't want help. This course is also intended for students wanting to learn the ethical and legal responsibilities of a helping professional. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

156 Chemical Dependency Case Management

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152, and 154 and Psychology 161 and Sociology 101, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit in Behavioral Sciences 156 or Psychology 265: Chemical Dependency Case Management.

This course is a study of the theory and practical application of the twelve core functions of chemical dependency counseling as they apply to case management. Emphasis is placed on preparing students to work effectively in the field of chemical dependency. This course should only be taken by students who have completed Alcohol and Other Drug Studies 150 and 154. Extensive knowledge of the DSM IV diagnostic criteria for Substance-Related Disorders and the Federal Confidentiality Regulations for Alcohol/Drug Records is required to achieve in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158 Chemical Dependency Family Counseling Techniques

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152 and 154, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 158 or Psychology 265: Chemical Dependency Family Counseling Techniques

This course is a study of the theory and techniques involved in treating the family as well as the chemically dependent person as the client. Emphasis is placed on diagnosing family codependency, treatment strategies, prevention and intervention with an interdisciplinary perspective. This course is open to students who have

completed Alcohol and Other Drug Studies 150, 152 and 154 and should be taken after a student's first semester in the Alcohol and Other Drug Studies program. It is a required advanced course for the Certificate in Alcohol and Other Drug Studies. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Group Dynamics in Chemical Dependency Counseling

**3 hours lecture, 3 units
Grade Only**

Advisory: Alcohol and Other Drug Studies 150, 152, and 154, and Psychology 161 and Sociology 101, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 160.

This course is a study of the theory and application of group counseling approaches, methods and techniques with an emphasis on chemical dependency problems. Course content includes the dynamics of small group interaction and allows students to develop effective communication, interpersonal and leadership skills from an interdisciplinary perspective. This course is designed for students majoring in Behavioral Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Chemical Dependency Internship Seminar

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Alcohol and Other Drug Studies 156 with a grade of "C" or better, or equivalent.

Corequisite: Alcohol and Other Drug Studies 163 or 270.

Advisory: Alcohol and Other Drug Studies 158 and 160 each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Science 162.

This course is a study of the nature of chemical dependency treatment with an emphasis on developing the skills and abilities of the student-as-intern. Emphasis is placed on supporting students enrolled in the Chemical Dependency Internship. Throughout this course, students engage in critical analysis of their strengths and weaknesses as interns and as potential professionals in the field. This is a restricted class. This course is open to students only in their final semester within the Alcohol and Other Drug Studies Certificate Program. Students taking this class must be doing an internship (Alcohol and Other Drug Studies 163 or 270)

in the same semester. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

163 Chemical Dependency Internship

**Hours by Arrangement, 3.5 units
Grade Only**

Corequisite: Alcohol and Other Drug Studies 162.

Advisory: Alcohol and Other Drug Studies 156, 158, and 160, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Behavioral Sciences 163.

This course provides students with a hands-on learning experience via a directed field study resulting from the cooperative effort of a provider agency, the instructor and the student. Emphasis is placed on enabling the student intern to learn and experience the work of a chemical dependency professional while receiving college credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience in Chemical Dependency

**Hours by Arrangement, 1-4 units
Grade Only**

Corequisite: Alcohol and Other Drug Studies 162.

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. To receive credit a student must complete a minimum of seven units during the semester, including work experience. This course provides students with a hands-on learning experience via the cooperative effort of the employer, the instructor and the student. Emphasis is placed on enabling the student who is employed or volunteering in chemical dependency work to receive college credit for achieving new, meaningful and measurable learning objectives related to as many interdisciplinary aspects of chemical dependency as possible. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Behavioral Sciences: Anthropology

Description

Anthropology is a scientific discipline that studies humans and human behavior. The subject is divided into five broad fields: physical and cultural anthropology, linguistics and archaeology, and applied anthropology. Physical anthropology is concerned with hominid evolution and the biological features of human populations. Cultural anthropology deals with cross-cultural studies of learned behavior, such as language, kinship, religion, economics, technology, values and personality. Linguistics is the study of the origin and evolution of languages and how they reflect the behavioral patterns of people. Archaeology is involved in the recovery of material remains of past peoples with the objective of reconstructing the past. Applied Anthropology applies what we have learned from the other four fields to promote change. As both a biological and social science, anthropology seeks to understand and describe humankind.

Program Emphasis

The anthropology program has been developed to provide the student with a broad perspective of human biological and cultural origins and change which prepares the student for transfer to a four-year institution. It also offers a limited course curriculum in archaeology. A certificate of completion is available for the student who has an interest in the recovery, identification, and analysis of prehistoric and early historic artifacts related to archaeological research projects.

Faculty	Office	Telephone
Stephen J. Bouscaren	A1-S	(619) 388-3260

Career Options

Most careers related to anthropology require education beyond the associate degree, however, an understanding of broad anthropological and archaeological concepts provides some preparation for work in museums and local excavations. A partial list of possible career options follows: archaeologist, cultural anthropologist, ethnic relations specialist, ethnologist, exhibit designer, expedition guide, film ethnographer, health researcher, linguist, medical anthropologist, museum curator, physical anthropologist, primatologist, paleoanthropologist, population analyst, public health analyst, social gerontologist, transcultural nurse specialist, travel consultant, urban planner, international business consultant, international law development specialist,

environmentalist, conflict resolution, and peace studies.

Certificate of Completion: Archaeology*

Courses:	Units
ANTH 103, Introduction to Cultural Anthropology	3
ANTH 107, Introduction to Archaeology	3
ANTH 210, Introduction to California Indians	3
ANTH 115, Introduction to Archaeological Field Work	4
ANTH 120, Archaeological Artifact Analysis	3
Total Units = 16	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Associate in Arts Degree: Behavioral Sciences Anthropology

The associate degree in anthropology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Courses Required for the Major:	Units
ANTH 102, Introduction to Physical Anthropology....	3
ANTH 103, Introduction to Cultural Anthropology	3
ANTH 107, Introduction to Archaeology	3
*PSYC 258, Behavioral Science Statistics OR	
MATH 119, Elementary Statistics	3
Electives, transferable, lower division.....	6
Total Units = 18	

Recommended electives: Anthropology 215, 290.

***Note: Check University Statistics course requirement.**

Transfer Information

Common university majors related to the field of Anthropology include:

Anthropology, Archeology, Biological Anthropology, Global Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn

an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Anthropology (ANTH)

102 Introduction to Physical Anthropology 3 hours lecture, 3 units Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of human evolution, variation and adaptation. Emphasis is placed on the study of primates, human heredity, variability of modern populations and fossil records of early hominids and hominoids. This course is the basis for advanced courses in Life and/or Behavioral Sciences or students majoring in Anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ANTH 2).

103 Introduction to Cultural Anthropology 3 hours lecture, 3 units Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course presents an overview of cultural anthropology using a comparative, cross-cultural approach. Emphasis is placed on the study of how various peoples around the world have adapted to their environments and developed behaviors to meet their biological, economic, psychological, social and political needs. This course is designed for students planning to take advanced courses in Social and/or Behavioral Sciences or students majoring in Anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ANTH 4).

104 Laboratory in Physical Anthropology 3 hours lab, 1 unit Letter Grade or Credit/No Credit Option

Prerequisite: Anthropology 102 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is intended for anthropology majors, as well as non-majors who have an interest in biological anthropology. Students perform field and laboratory studies in genetics, human variation, human osteology, anthropometry, hominid evolution, comparative primate anatomy, primate behavior, and forensic anthropology. Students practice the ability to think critically through data analysis, written reports, and classroom discussions. In addition, students develop an educational exhibit to teach fellow students about some aspect of biological anthropology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 Introduction to Archaeology 3 hours lecture, 3 units Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory study of the history and theory of archaeology. Emphasis is placed on the techniques of archaeological data collection and analysis, cultural innovations, reconstruction and interpretation of the past and Cultural Resource Management (CRM) work. This course is designed for students planning to major in Anthropology and/or to conduct upper division work in archaeology at a four-year institution. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ANTH 6).

115 Introduction to Archaeological Field Work 2 hours lecture, 6 hours lab, 4 units Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Anthropology 265: Introduction to Archaeological Field Work.

This course provides an introduction to the basic techniques of archaeological field work, including site survey, site layout, excavation, laboratory analysis, and report writing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Archaeological Artifact Analysis**2 hours lecture, 3 hours lab, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Anthropology 265:

Archaeological Artifact Analysis or Laboratory Analysis of Archaeological Materials.

Description, classification, and analysis of archaeological materials including laboratory work in cataloging and documentation, methods used in artifact typology and serration, and the preparation of archaeological reports. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Introduction to California Indians**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a comparative study of numerous Native American cultures located in California and peripherally related cultural areas. Anthropological materials for ethnographic, ethnohistorical, ethnological and archaeological sources will be utilized. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 Cultures of Latin America**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

A review of the non-industrialized people living in contemporary Latin America will include Native American Indian cultures in Mexico, Central America and South America in contrast with their peasant Mestizo neighbors, and in turn these cultures in contrast with their urban counterparts. Contemporary anthropological research, ethnohistoric, historic and archaeological data will be used to discover the diversity of cultures throughout Spanish and Portuguese America. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Behavioral Sciences: Community Health Work

Description

The Certificate of Completion in Community Health Work is designed to introduce current and potential Community Health Workers (CHWs) to core concepts in the field of community health. This program prepares students to work in a variety of health settings that utilize entry level front line health workers. These settings may include public and private health and human service institutions, especially those that address underserved communities.

Program Emphasis

Program emphasis is placed on providing students with both vocational and academic aspects of Community Health Work through a combination of coursework and practical experience.

Career Options

Career options for students completing the Certificate of Completion in Community Health Work include Health Educator, Information Resource personnel for health facilities and the community, Organizer, Interpreter, and Health Advocate. In addition, this program includes core academic courses that provide a basis for continued formal academic pursuits in the field of Health, Human Services, or Behavioral Sciences.

Certificates of Completion: Behavioral Sciences

Community Health Work

The Community Health Work Certificate Program provides students who work in, or plan to work in, the field of Community Health Work with a fundamental academic and practical base for success in the field.

Courses**Units**

HUMS 103, Introduction to Community Health Work . 3
and

PSYC 101, General Psychology 3

HEAL 101, Health and Life-Style..... 3

PSYC 230, Psychology of Lifespan Development 3

HUMS 100, Public Assistance and Benefits Program .. 1

HUMS 113, Capstone for Community Health Workers . 3

Total Units = 16

Behavioral Sciences: Human Services

Program Emphasis

The Human Services and Social Welfare program is designed to prepare for employment or retraining in private and public community service agencies such as welfare departments, child development and adult, including elderly, programs and other human service organizations and institutions. Students learn the skills and knowledge necessary to work as paraprofessionals or professional aids under the supervision of workers with professional degrees. Completion of the Certificates of Achievement also provides a basis for further academic preparation for university social work, gerontology, and other human service professional degrees.

Faculty	Office	Telephone
Veronica Ortega Welch	A-1T	(619) 388-3238

Career Options

Employment and career ladder opportunities available upon successful completion of the Human Services Certificate of Achievement and/or Associate in Arts degree include client advocate, case manager aide, crisis relief worker, homeless shelter worker, substance abuse counselor aide, rehabilitation counselor aide, child care assistant, senior day care and counselor aide, community agency volunteer. Core courses also provide the basis for transfer to university human service programs. Refer to the *Transfer Information* section of the program for specific course requirements for university transfer.

Certificate of Completion Health and Human Services Aide*

The Health and Human Services Aide Certificate of Completion is designed for persons interested in working in health and mental health agencies and other settings as case aides. Under the supervision of qualified professionals, case aides assist clients with completion of papers for financial assistance, emergency assistance and other funding programs and with eligibility screening for appropriate services. The certificate also provides fundamental information related to social work principles and fields of service. HUMS 120 is articulated with San Diego State University's Social Work 120.

Courses:	Units
HUMS 100, Public Assistance and Benefits Programs .	1
HUMS 110, Social Work Fields of Service	3
HUMS 120, Introduction to Social Work	3
HUMS 115, Human Service Internship or	
HUMS 125, Health Services Fields of Practice.....	3
	Total Units = 10

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Core Curriculum

Courses:	Units
HUMS 100, Public Assistance and Benefits Programs	1
HUMS 110, Social Work Fields of Service	3
HUMS 120, Introduction to Social Work	3
HUMS 115, Human Service Internship or	
HUMS 270, Work Experience.....	3-4
HEAL 101, Health and Life Style.....	3
PSYC 101, General Psychology.....	3
SOCO 101, Principles of Sociology.....	3
AODS 158, Chemical Dependency Family Counseling Techniques.....	3
PSYC 135, Marriage and Family Relations or	
CHIL 141, Child, Family and Community	3
	Total Units = 25-26

Certificates of Achievement: Behavioral Sciences

Human Services Emphasis

The Certificates of Achievement provides basic training both in the classroom and through agency internships or work experience in social work concepts and community agency structure and program characteristics. Students select one (or more) area(s) of emphasis in the Adult/Gerontology, Alcohol and other Drugs and/or Early Childhood Tracks. Students who are interested in preparing for transfer to baccalaureate programs are advised to complete requirements for the Associate in Arts Degree in Human Services and consult specific university degree preparation in the Transfer Information section.

Adult/Gerontology Track

Courses Required for the Major:	Units
Human Services Core Curriculum	25-26
HUMS 101, Introduction to Human Aging	3
SOCO 110, Contemporary Social Problems.....	3
	Total Units = 31-32

Alcohol and Other Drugs Track

Courses Required for the Major:	Units
Human Services Core Curriculum	25-26
AODS 150, Introduction to Chemical Dependency	3
AODS 156, Chemical Dependency Case Management	3
Total Units = 31-32	

Early Childhood Track

Courses Required for the Major:	Units
Human Services Core Curriculum	25-26
CHIL 101, Human Growth and Development.....	3
CHIL 141, The Child, Family and Community, or	
CHIL 270, Work Experience	3-4
Total Units = 31-33	

Associate in Arts Degree: Behavioral Sciences

Human Services Emphasis

The Associate in Arts Degrees with an emphasis in Human Services requires completion of one of the Certificates of Achievement, Human Services Emphasis (Adult/Gerontology Track, Alcohol and Other Drugs Track, or Early Childhood Track). Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Alcohol & Other Drug Studies 150, 154, 156; Anthropology 102, 103, Biology 107; Business 101; Child Development 151, 160, 165, 175, 180; Spanish language competence.

Transfer Information

Common university majors related to the field of Human Services include:

Human Development, Child Development, Gerontology, Social Work.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer

programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Human Services (HUMS)

100 Public Assistance and Benefits Program

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to and an overview of public assistance and benefits awarded by local, state and federal programs. Students gain a working knowledge of eligibility, appeal process and fiscal aspects of benefits programs as well as major changes effected under the Welfare Reform Act. This course is designed for training of paraprofessional workers and retaining of caseworkers in local agencies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101 Introduction to Human Aging

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to the field of social gerontology. A multidisciplinary approach is utilized to examine the basic biological, psychological and social theories of aging. Emphasis is placed on the special needs and problems impacting the aged population. Historical, social and cross-cultural issues in aging are examined. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Introduction to Community Health Work

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Personal Growth 127 with a grade of "C" or better, or equivalent.

This course is an introductory study of the field of Community Health Work (CHW). Emphasis is placed on the role of the Community Health Worker within the

health care system as promoters of health and healthy living in the community. Topics include healthy living and optimal wellness education, public and preventive health. This course is designed for students interested in Community Health Work and is required for students pursuing Certificates in Community Health Work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Introduction to Youth Development Work
3 hours lecture, 3 units
Grade Only

This course is a theoretical and practical study of youth development work. Emphasis is placed on preparing youth workers to assist and mentor young people through youth development and workforce readiness programs. This course is designed for students interested in the field of youth development and is required for students pursuing the Certificate Program in Youth Development Work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Social Work Fields of Service
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to the major fields of social work practice in institutions, public and private agencies and other community settings. Students examine and differentiate between the predominant settings in which social work is practiced and the role of social work in contemporary society in relation to social injustice, diversity, cross-cultural issues and economic factors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

113 Capstone for Community Health Workers
3 hours lecture, 3 units
Grade Only

Prerequisite: Human Services 103 with a grade of "C" or better, or equivalent.

This course provides students in the Community Health Work (CHW) Certificate Program the opportunity to discuss and analyze their experiences while performing their roles and responsibilities as community health workers (CHWs) in the field. Emphasis is placed on helping students apply knowledge gained through the Certificate Program to improve performance, especially in the areas of healthy lifestyles, preventive care, community development, team participation, and health behavior modification. This course is designed

and required for students completing the CHW Certificate Program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Human Services Internship
1 hour lecture, 6 hours lab, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Human Services 110 and 120, each with a grade of "C" or better, or equivalent. This course is designed to provide students in the Human Services Certificate program with practical experience in the field of human services. Students will provide internship support, working as a paraprofessional or professional aide in public or private community service agencies under the supervision of workers with professional degrees. (FT) This course offered during the spring semester. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 Capstone for Youth Development Workers
3 hours lecture, 3 units
Grade Only

Prerequisite: Human Services 106 with a grade of "C" or better, or equivalent.

This course provides students completing the Youth Development Work (YDW) Certificate Program the opportunity to integrate course material and practical field experience in a seminar setting using a case-study format. Emphasis is placed on assessing community assets, resource acquisition, and the application of youth development models to actual program and individual cases. This course is designed for students pursuing the Youth Development Work Certificate Program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Introduction to Social Work
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to the field of social work. It covers the historical development of social work as a profession. The core knowledge base, including theoretical perspectives underpinning the profession are introduced. Emphasis is placed on social work roles, training, and methods on intervention and core social work values and ethics. Human Services 120 requires students to complete 40 hours of volunteer work with a social services agency. (FT) This course

offered during the fall semester. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Health Services Fields of Practice

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to and overview of private, public and clinical community health settings and the health services field. Students gain a working knowledge of public and private community health care systems and delivery, with emphasis on services provided by public and social agencies. Issues relating to access to health care, vulnerable populations, ethical issues and policy development are examined. This course helps prepare for beginning positions and/or retraining in public and private agencies and for community volunteer work in health and human service settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by arrangement, 1-4 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Human Services 110 and 120, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units during the semester, including work experience.

This course is designed to provide on the job learning experience for students employed in a job related to the Human Services major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Students must complete a minimum of seven units during the semester, including work experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Behavioral Sciences: Psychology

Description

Psychology is a behavioral science that emphasizes the understanding of behavior (feelings, actions, and thoughts) of individuals. It should be noted that

psychology typically focuses on the study of humans though psychologists have interests in other species. Psychology as a science is most closely related to the biological sciences, although its application often involves personal and/or cultural philosophical beliefs or values. Students who major in psychology are expected to be able to think critically and scientifically about behavior, and be able to apply the principles of psychology to the understanding of behavior.

Program Emphasis

The psychology program has two primary goals. The first is to provide the basic science courses that are foundations for further understanding of other courses in psychology and related fields as well as preparation for transfer to other institutions for further study. The second goal is to provide courses that may include additional information regarding psychology that are of general interest to community college students or are applications of psychological principles.

Faculty	Office	Telephone
James Evans	A1-R	(619) 388-3257
Marie St. George	A-1U	(619) 388-3371
William Weiner	A1-U	(619) 388-3654
Veronica Ortega Welch	A-1T	(619) 388-3238

Career Options

Most career options directly related to psychology require graduate level degrees. However, there are several applied and paraprofessional occupations that may not require education beyond the associate degree. The following is a sample of the many career options available with preparation in this major beyond the associate degree: advertising researcher, clinical psychologist, community college instructor, school counselor, counseling psychologist, drug abuse counselor, employment counselor, engineering psychologist, industrial psychologist, manager, marriage and family counselor, mental health worker, organizational psychologist, personnel analyst, probation officer, psychometrist, and research psychologist.

Academic Programs

The associate degree in Behavioral Sciences with an emphasis in Psychology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

**Associate in Arts Degree:
Behavioral Sciences
Psychology Emphasis**

Courses Required for the Major:	Units
PSYC 101, General Psychology	3
PSYC 211, Learning	3
PSYC 258, Behavioral Science Statistics OR	
MATH 119, Elementary Statistics.....	3
PSYC 260, Introduction to Physiological Psychology .	3
Electives - transferable, general education	6
Total Units = 18	

Recommended electives: Psychology 135, 137, 155, 290, 296; transferable science, computer, mathematics, and other general education courses in biology and philosophy. **SDSU Note:** Current lower division psychology course requirements for San Diego State University psychology majors are met by the City College Associate in Arts degree, Psychology Emphasis. Consult with a counselor for other District requirements.

Transfer Information

Common university majors related to the field of Psychology include:

Behavioral Science, Biopsychology, Clinical Psychology, Cognitive Psychology, Cognitive Science, Counseling, Developmental Psychology, Psychobiology, Psychology, Social Psychology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Psychology (PSYC)

101 General Psychology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of the concepts, principles and terminology of psychology as a science. Emphasis is placed on introducing students to the diverse areas that make up the field of psychology, preparing students for further study in the behavioral sciences and providing students with greater insight into human behavior. This course is designed for students planning to take advanced courses in the Social and Behavioral Sciences and/or students majoring in Psychology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Psychology (PSYC) 101 and Black Studies (BLAS) 104 combined: maximum credit, one course. (CAN PSY 2).

135 Marriage and Family Relations

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course examines the behaviors related to courtship, engagement, marriage, and family life as well as how science helps us understand these experiences. It surveys historical, cross cultural, and social perspectives of families. The course addresses interpersonal communication, economic management, and sexuality as they relate to the family. This course can be beneficial to students pursuing advanced degrees in child development or family studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

137 Human Sexual Behavior

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course explores the psychological, social, and physiological dimensions of human sexual behavior. Students review specific theories and research findings and focus on individual sexual development, functioning, and healthy decision making. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Psychology (PSYC) 137 and Black Studies (BLAS) 165 combined: maximum credit, one course.

155 Introduction to Personality

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of the fundamental Personality Theories within the field of Psychology. Emphasis is placed on the personal life experiences of each of the major personality theorists, their research methods and approaches to the study and understanding of personality, and clinical applications of them. This course is an elective for students seeking a stronger understanding of psychological theory. Students from many majors or backgrounds take this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

161 Introduction to Counseling

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Survey of basic counseling concepts used to maintain and change behavior. Emphasis on experiential learning in the skills of effective relating and problem-solving. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Introduction to Social Psychology

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent or Assessment Skill Level W5 and R5.

Social psychology examines how individuals are influenced by their social environment. Special attention is given to social cognition and perception, self-justification, conformity, group dynamics, prejudice, aggression, prosocial behavior and applied social psychology. Emphasis will be placed on

developing critical and integrative ways of thinking about theory and research in social psychology. This course is for anyone who is interested in the subject of social psychology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

211 Learning

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Psychology 210.

Students learn about the basic principles and research in animal and human learning. Subjects include scientific versus nonscientific approaches to behavior studies, operant and respondent conditioning, observational and cognitive learning, and motivation as related to self-control. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230 Psychology of Lifespan Development

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

This course is designed for students interested in studying the psychological development of humans in all their sociocultural diversity from conception to death. Students learn major theoretical positions related to growth and change. The course emphasizes the variety of factors that shape similarities and differences in life. Psychology majors wishing to transfer are advised to take this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

245 Abnormal Psychology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W5 and R5.

This course provides a comprehensive survey of troubled patterns of behavior. Students explore theoretical models as they relate to etiology, treatment, and prognosis of psychopathologies. Students also learn how the DSM-IV helps identify and assess various disorders. Topics include legal and social policy issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

255 Introduction to Psychological Research
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

This course is an introduction to scientific methodology in psychology, including descriptive, experimental, and applied research, as well as an introduction to psychological research reports. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

258 Behavioral Science Statistics
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory study of statistics for the Behavioral Sciences. Emphasis is placed on acquainting students with the concepts underlying statistical methods and research approaches, basic statistical analyses and principles. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Psychology (PSYC) 258 , Mathematics (MATH) 119 or Biology (BIOL) 200 combined: maximum credit, one course. (CAN PSY 6).

260 Introduction to Physiological Psychology
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

Students learn about the physiological determinants of behavior. Subjects include behavior evolution, the nervous system, and endocrine glands as well as their relationship to perception, learning, motivation, emotion, and personality. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PSY 10).

Behavioral Sciences: Social Work

Description

Social work is an applied behavioral science that emphasizes the application of behavioral science principles in a variety of cultural contexts. Although it is a behavioral science, its application typically involves personal and/or cultural philosophical beliefs or values. Social Work students are expected to be able to think critically and scientifically about behavior, and be able to apply the principles of the behavioral sciences, and have an understanding of the role of values in cultural settings. As a profession, social work focuses on methods to improve the quality of life for people by working with many different kinds of social groups.

Program Emphasis

The social work program has two primary goals. The first is to provide the basic science courses that are foundations for further understanding of other courses in social work and related fields as well as preparation for transfer to other institutions for further study. The second goal is to provide courses that may include additional information regarding the Behavioral Sciences that are of general interest to community college students, or are applications of Behavioral Science principles.

Career Options

Most career options directly related to professional (licensed) social work require graduate level degrees. However, there are several applied and paraprofessional occupations that may not require education beyond the associate degree. The following is a sample of the many settings in which individuals with preparation in social work beyond the associate degree may find employment: social services departments, hospitals, academic and community mental health facilities, child care programs, services for the aged, alcohol and other drug treatment programs, family services agencies, and other community organizations.

Academic Programs

The associate degree in social work requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Behavioral Sciences Social Work Emphasis

Courses Required for the Major:	Units
BIOL 107, General Biology, Lecture & Laboratory	4
ECON 120, Principles of Economics I	3
HEAL 101, Health and Life-Style.....	3
PSYC 101, General Psychology	3
PSYC 135, Marriage and Family Relations	3
SOCO 101, Principles of Sociology.....	3
SOCO 110, Contemporary Social Problems.....	3
PSYC 258, Behavioral Statistics OR	
MATH 119, Elementary Statistics.....	3
Total Units = 25	

Transfer Information

Common university majors related to the field of Social Work include: Counseling, Social Work.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

There are no courses specific to the Social Work discipline.

Behavioral Sciences: Sociology

Description

Sociology is a behavioral science that emphasizes relationships among people from simple face-to-face relationships through formal organizations to whole societies. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from divisions of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sports. Sociologists seek to understand interaction of individuals with institutions and social organizations and the norms, values, beliefs, and traditions that make social life possible and meaningful. It stresses how behavior is influenced by societal structures and how consensus (agreement) and conflict (disagreement) among groups affects society. Sociology students are expected to be able to think critically and scientifically about human behavior, and to be able to apply the principles of sociology to an understanding of behavior.

Program Emphasis

The sociology program has two goals. The first goal is to provide basic sociology courses that are foundations for further understanding of other courses in sociology and related fields and to prepare for transfer to baccalaureate institutions for further study. The second goal is to offer courses that may provide additional information regarding sociology of interest to community college students, or that are applications of sociological principles.

Faculty	Office	Telephone
Francisco Moreno	A1T	(619) 388-3653
Sarah Pitcher	A1T	(619) 388-3606

Career Options

Most career options directly related to sociology require graduate level degrees. However, there are several applied and paraprofessional occupations that may not require education beyond the associate degree. The list following includes some of the many career options available with preparation in sociology beyond the

associate degree: advertising researcher, community college professor, criminologist, manager, probation officer, social services professional, and university professor.

Academic Programs

The associate degree with a major in Behavioral Sciences with an emphasis in Sociology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Behavioral Sciences Sociology Emphasis

Courses Required for the Major:	Units
SOCO 101, Principles of Sociology.....	3
SOCO 110, Contemporary Social Problems.....	3
PSYC 258, Behavioral Statistics OR	
MATH 119, Elementary Statistics.....	3
Electives - transferable, general education	9
Total Units = 18	

Recommended electives: Sociology 290; transferable computer, mathematics and philosophy courses.

Transfer Information

Common university majors related to the field of Sociology include:

Behavioral Science, Community Studies, Gerontology, Law, Policy Analysis, Social Ecology, Social Science, Sociology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Sociology (SOCO)

101 Principles of Sociology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

The basic facts, concepts and generalizations of sociology are covered. Content includes the scientific study of social interaction and organization with special reference to present-day America, including cross-cultural and multicultural analysis. This course is useful for those considering careers in counseling, teaching, social work, and nursing. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Sociology (SOCO) 101 and Black Studies (BLAS) 115 combined: maximum credit, one course. (CAN SOC 2).

110 Contemporary Social Problems

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course requires students to identify and analyze present day social problems in the United States, with emphasis on sociological factors involved, while including cross-cultural and multicultural analysis. Students will use scientific methods of approaches to and criteria for evaluating proposals for social betterment. This course is useful for students pursuing careers in criminology, counseling, education, law, medicine, and dental hygiene. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN SOC 4).

125 Sociology of the Family

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is designed to investigate the structures and functions of the family institution historically, cross-culturally, and in American Society. Attention is on changing gender roles, family stability, family structure and definitions of the family. In addition,

emphasis is placed on the family's relationship to economic structures, political institutions, and belief systems. This course is useful for students contemplating majors or careers in sociology, counseling, psychology, social work, and related fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Advanced Principles of Sociology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

A course designed to continue the examination of the major ideas that have shaped contemporary sociology. Special attention is given to classical social thinkers and to the origin of sociology as a science. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

223 Globalization and Social Change

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Sociology 101 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course evaluates the social and political changes brought on by globalization among industrialized, industrializing, and underdeveloped nations. It presents arguments and theories for and against globalization and supplements with empirical examples. The course is useful for those considering careers in law, politics, business, teaching, and non-profit organizations dealing with human rights issues, political advocacy, and international affairs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Certificates of Completion: Behavioral Sciences Youth Development Work

Description

The Youth Development Work Certificate Program is designed to offer certification to current and potential frontline community youth development workers working in a variety of settings, including public and private after school programs, service related agencies, recreational programs and job development centers. This program is both vocational and academic, offering courses in theoretical and practical topics related to youth development.

Program Emphasis

Emphasis is placed on providing students with a balance of vocational training and academic instruction in the area of Youth Development.

Career Options

Career options include employment in public and private after school programs, service related agencies, recreational programs and job development centers. In addition, the coursework provides the foundation for pursuing more advanced work in behavioral science, human service, social work or public health.

Courses Required

Units

HUMS 106, Introduction to Youth Development Work **3 and**

HUMS 100, Public Assistance and Benefits Program .. 1

SPEE 180, Intercultural Communication 3

HUMS 116, Capstone for Youth Development Workers 3

Choose one of the following:

CHIL 101, Human Growth and Development..... 3
or

PSYC 230, Psychology of Lifespan Development 3

Choose one of the following:

ANTH 103, Introduction to Cultural Anthropology 3

or

CHIL 141, The Child, Family and Community..... 3

Total Units= 16

Bilingual Studies

Associate in Art Degree
 Bilingual Studies 28*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The Bilingual Studies program provides an interdisciplinary approach to the interaction of the Chicano with other cultures in a bilingual, multicultural setting. It helps to prepare students for transfer to a four-year university major in Liberal Studies with an emphasis in Elementary Education. Bilingual Studies enhances understanding of one of the country's fastest growing population groups.

Program Emphasis

Bilingual Studies courses are taught in English and the curriculum is designed to meet District and baccalaureate general education and multicultural course requirements. The program offers courses in bilingual studies, Chicano culture, history of Mexico and the United States, language and literature, speech, music and physical education.

Faculty	Office	Telephone
Vacant	A1-M	(619) 388-3634
Vacant	A1-C	(619) 388-3237

Career Options

Students completing the associate degree in Bilingual Studies will be able to work as teachers' aides in bilingual elementary classrooms. Students who complete the additional lower division transfer requirements for San Diego State University will be able to transfer with junior standing in the Liberal Studies major with emphasis in Elementary Education. This major prepares students to become elementary school

teachers both in traditional and bilingual, bicultural classrooms.

Academic Programs

The associate degree in Bilingual Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Bilingual Studies

Courses Required for the Major:	Units
CHIC 141A, 141B, U.S. History from a Chicano Perspective.	3,3
CHIC 203, Introduction to Spanish for Spanish Speakers AND	
CHIC 204, Intermediate Spanish for Spanish Speakers OR	
SPAN 201, Third Course in Spanish AND	
SPAN 202, Fourth Course in Spanish.....	10
ENGL 101, Reading and Composition	3
MUSI 110, Music for Elementary School Teachers.....	3
PHYE 240, Physical Education in the Elementary School.....	3
SPEE 103, Oral Communication.....	3
Total Units = 28	

Recommended electives: Courses that meet lower division preparation for the San Diego State University Liberal Studies major with an emphasis in Education. See a counselor.

Transfer Information

Common university majors related to the field of Bilingual Studies include:
 Liberal Studies, Education.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Biology

Associate in Science Degree:

	Units
Transfer Track	23-24*
Allied Health Track	21*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Biology is a natural science that focuses on physical and chemical processes of living organisms. This discipline explores how organisms acquire and use energy to maintain homeostasis, how they reproduce, and how they interact with each other and their environment. Scientific processes are emphasized as a means of answering these biological questions. Biologists rely heavily on a chemistry foundation since living organisms are chemical systems.

Program Emphasis

The biology program serves four areas of study. First, it provides a broad background of studies for the biology major preparing for transfer to a four-year institution. Second, the Applied Biology curriculum provides preparation for entry level employment as a biotechnology technician. The biology program also offers support courses in human anatomy, human physiology and general microbiology which may be used to satisfy prerequisites for nursing programs and other allied health fields. Fourth, the biology program provides courses in natural science to fulfill general education requirements.

Faculty	Office	Telephone
Minou Djawdan-		
Spradley	A-208	(619) 388-3290
Michael J. Leboffe	A-208	(619) 388-3285

David Singer	A-227	(619) 388-3277
Gary Wisehart	A-227	(619) 388-3550
Donna DiPaolo	A-228	(619) 388-3715
Anita Hettena	A-229	(619) 388-3581
Laurie Mc Connico	A-229	(619) 388-3568
Roya Lahijani	A-229	(619) 388-3289

Career Options

The following list is a sample of the many career options available for the biology major. A few of these require an associate degree; most require a baccalaureate degree and some require a graduate level degree: agricultural consultant, animal health technician, biotechnology technician, dentist, environmental consultant, field biologist, forester, horticulturist, high school or college teacher, marine biologist, microbiologist, public health technician, physician, pharmaceutical researcher, research biologist and veterinarian. In addition, a background in biology may be required for the following: registered nurse, physical therapist, respiratory therapist, dental hygienist, medical technician, physician's assistant and optometrist.

Academic Programs

The two associate degrees in biology require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The Associate Degree requires a minimum of 60 units.**

Associate in Science Degree: Biology

Transfer Track

Courses Required for the Major:	Units
BIOL 210A & 210B, Introduction to the Biological Sciences I, II	4,4
CHEM 200, 200L, General Chemistry I & Laboratory	3,2
CHEM 201, 201L, General Chemistry II & Laboratory	3,2
MATH 121, Basic Techniques of Applied Calculus I & MATH 122, Basic Techniques of Calculus II	
OR	
MATH 150, Calculus Analytical Geometry I.....	5-6
Total Units = 23-24	

Recommended electives: Biology 100 (Mesa), 101, 110, 115, 130, 180, 200, 205, 215, 230, 232, 235, 250 (Mesa & Miramar) 290, 296.

Associate in Science Degree: Biology

Allied Health Track

Consult the Nursing Education faculty (City College) or a counselor to verify current course requirements for associate degree and baccalaureate nursing program preparation.

Courses Required for the Major:	Units
BIOL 105, 106, Principles of Biology & Laboratory (Miramar)	3,1
OR	
BIOL 107, General Biology - Lecture & Laboratory	4
BIOL 205, General Microbiology	5
BIOL 230, Human Anatomy	4
BIOL 235, Human Physiology	4
CHEM 100, 100L, Fundamentals of Chemistry &	3,1
Total Units = 21	

Recommended electives: Biology 101, 130, 180, 215, 250; Chemistry 130, 130L.

Transfer Information

Common university majors related to the field of Biology include:

Agricultural Science, Biochemistry, Bioengineering, Bioinformatics, Biological Sciences, Biophysics, Botany and Plant Sciences, Cell Biology, Conservation, Developmental Biology, Ecology, Entomology, Exercise Science, Genetics, Kinesiology, Marine Biology, Medical Sciences, Microbiology, Molecular Biology, Natural Sciences, Neuroscience, Nursing, Nutrition and Food Science, Psychobiology, Toxicology, Zoology and Animal Science.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Biology (BIOL)

101 Issues in Environmental Biology

**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 100. This is a course in contemporary issues in environmental biology. Topics include basic ecological principles, biodiversity, human population dynamics, human resource management, and pollution. These are viewed within the context of their environmental, economic, cultural, and ethical setting. Issues are examined utilizing the process of scientific inquiry. The laboratory is coordinated with lectures, and emphasizes the environmental issues of Southern California. Several field trips will be required, some on the weekend. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 General Biology - Lecture and Laboratory

**3 hours lecture, 3 hour lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with credit for Biology 103, 104, or 105, 106, or 210A and 210B.

This course is an examination of living organisms and their environment. The lecture and laboratory are intended for students planning on taking more advanced courses in the Life Sciences or students majoring in Education, Child Development, Physiological Psychology, or related areas. Topics that are emphasized in this course include the fundamental chemical and physical processes common to all living organisms, the interactions between organisms and their environment, classical and molecular genetics, metabolism, plant and animal anatomy and physiology, animal behavior, evolution, cellular and molecular biology, and the experimental and cognitive processes used to examine these fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit for

Biology (BIOL) 107 if taken after 210A, 210B. (CAN BIOL 2).

110 Introduction to Oceanography

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is an introductory course designed to acquaint the student with general oceanography. Topics include history of oceanography, sea floor properties, plate tectonics, properties of sea water, ocean currents, waves and tides, life in the sea, pollution, and the significance of the oceans to humans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Cancer Biology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 123.

This is an introductory course that examines the basic biology of cancer and the approaches currently taken in cancer treatment. Basic principles of cell biology and genetics are explored to unravel the mechanisms of cancer development and the development of effective cancer therapeutics and preventative measures. The course emphasizes the process of scientific inquiry to illustrate how cancer biologists gather and analyze data in order to better understand and treat this disease estimated to be the number two killer in the US. The course is intended for all that want to learn about the types of cancer, causes of cancer, treatments of cancer, and the social impact of this disease on patients, families and society. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Marine Biology

3 hours lecture, 3 hours lab, 4 units

Grade Only

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course in biology is designed to serve as an elective in the natural sciences. This is a survey of the marine organisms, emphasizing their natural history

and special adaptations to the ocean environment. Topics include the marine environment, plankton, marine plants, marine invertebrates, fishes, marine birds, and marine mammals. Several field trips are required to local marine habitats, Sea World, Stephen Birch Aquarium and the Natural History Museum. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Human Heredity

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces students to the concepts and applications of human heredity. It deals with both classical Mendelian genetics and modern molecular genetics. Topics include gamete formation, human karyotypes, genetic crosses, sex-linked inheritance, structure and function of DNA and RNA, gene expression, transcription and translation, genetic engineering, and population genetics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

180 Plants and People

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is an introductory course that examines the interdependence of humans and plants. This course is intended for all that want to learn about the uses of plants, especially those students with an interest in biology, anthropology, environmental sciences, and/or agriculture. Emphasis is on plant ecology as well as the basic biology of plant groups that provide us with food, medicine, recreation, decoration, and material goods as well as those that produce stimulating, intoxicating, or harmful effects. Basic principles of taxonomy, cell structure, plant physiology, plant anatomy, ecology and genetics are explored as they relate to these plants. Current environmental and economic issues and the role of molecular genetics in future plant development and the importance of genetic diversity are also examined. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit for Biology (BIOL) 180 or 215 if taken after 210A or 210B.

200 Biological Statistics

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Biology 105 and 106, or 107, or 210A, and Mathematics 116, each with a grade of "C" or better, or equivalent.

This is an introductory course in statistics using biological examples and experimental design. Students learn methods and gain experience in defining and solving quantitative problems in biology. Descriptive and inferential statistics, basic probability, binomial and normal distributions are introduced. Students learn to estimate population parameters, test hypotheses, linear regression and correlation using clinical and biological data and experiments. This course is applicable for biological science majors and required for preparation for San Diego State University biology majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Biology (BIOL) 200, Mathematics (MATH) 119 or Psychology (PSYC) 258 combined: maximum credit, one course.

205 General Microbiology

**3 hours lecture, 6 hours lab, 5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Biology 105 and 106, or Biology 107, and Chemistry 100 and 100L, each with a grade of "C" or better, or equivalent.

This introductory course covers fundamental aspects of microbiology including taxonomy, anatomy, growth and reproduction, metabolism, genetics and applications, host-parasite relations, immunology, and control of microorganisms. Emphasis in the laboratory is upon basic methods for culturing, staining, enumerating, differentiating and identifying microorganisms. The course meets requirements to enter paramedical or medical fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BIOL 14).

210A Introduction to the Biological Sciences I

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill

Levels W5 and R5; and concurrent enrollment in Chemistry 200 and Chemistry 200L.

This course covers biological chemistry, cell structure and function, cellular metabolism, classical and molecular genetics, and evolutionary biology. This is the first semester of a two-semester sequence designed for biological science and pre-professional majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Biology (BIOL) 210A, 210B and 215 combined: maximum credit, one series.

210B Introduction to the Biological Sciences II

**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Biology 210A with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This is an introductory course which is a continuation of Biology 210A. This course emphasizes the developmental and physiological processes of the Five Kingdoms, the phylogenetic relationships of major evolutionary groups of organisms, behavior, and ecological principles including population and community ecology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Biology (BIOL) 210A, 210B and 215 combined: maximum credit, one series.

215 Introduction to Zoology

**2 hours lecture, 6 hours lab, 4 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Biology 105 and 106, or 107, each with a grade of "C" or better, or equivalent.

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This is an introductory course that surveys the basic principles of animal biology. These principles include morphology, life processes and evolutionary relationships of the invertebrates and vertebrates. Laboratories include the identification of organisms, dissection and recognition of the anatomy of varied animal representatives, embryological development, histology, behavior and physiology. This course is designed for Biology Majors and for students seeking to satisfy degree requirements in allied health and animal sciences majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit for Biology (BIOL) 180 or 215 if taken after 210A or 210B. (CAN BIOL 4).

230 Human Anatomy

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Biology 105 and 106, or Biology 107, or Biology 160 with a grade of "C" or better, or equivalent. This course is a systems approach to the study of human body structure from the microscopic level of organization to the gross level. Structure related to function from study of histological slides, photomicrographs, anatomical models and charts, and mammalian (cat) dissection. This course is intended to meet the requirements of students in the fields of nursing, physical therapy, recreational therapy, occupational therapy, athletic training, chiropractic, psychology, physical education, and biology or those who wish to extend their knowledge of the human body beyond the scope of introductory biology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BIOL 10) (CAN BIOL SEQ B = BIOL 230 + 235).

232 Experience in Human Dissection

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Biology 230 with a grade of "C" or better, or equivalent.

Advisory: Preregistration counseling with instructor is highly recommended.

This course provides a supervised study and actual experience in human dissection. Mastery of dissection techniques and human anatomy at this level assists students pursuing careers in nursing, medicine, and other allied health professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

235 Human Physiology

**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Biology 105 and 106, or Biology 107 with a grade of "C" or better, or equivalent.

Advisory: Biology 230 and Chemistry 100 and 100L, each with a grade of "C" or better, or equivalent.

This is an introductory course which investigates the functions of the human body with emphasis on the nervous, endocrine, muscular, cardiovascular, respiratory, digestive, excretory and reproductive systems. This course is intended to meet requirements for students in the fields of nursing, paramedical sciences, psychology, biology and physical education. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BIOL 12) (CAN BIOL SEQ B = BIOL 230 + 235).

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

A student may sign up for 1 to 3 units each semester for a maximum of 6 units. For advanced students in biology who wish to continue with a special investigation. The course consists of individualized research problems, conferences with the instructor at prearranged intervals and a final report on the work completed. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Black Studies

	Units
Associate in Arts Degree	
Black Studies	21*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Black Studies program at City College provides an interdisciplinary and systemic approach to the historical and contemporary study of African people in Africa and in the Americas. The program is designed to provide enrichment in the social sciences and humanities by giving students in these areas the opportunity to link the tools of formal analysis to a specific cultural area in the African experience. The student's career and future alternatives may be increased by adding a specialized dimension at the undergraduate level. Students preparing for transfer to a four-year university may major in a African Studies or humanities, law, social work, or public administration. This will enhance their opportunities in local, national and international organizations, both public and private, through participation in the program.

Program Emphasis

Black Studies courses are taught in English. The curriculum includes transfer courses which help to meet District and baccalaureate general education and multicultural requirements. The program offers courses in African history, as well as art, economics, United States history, literature, music, Psychology, Sociology and politics from a Black perspective.

Faculty	Office	Telephone
Alazar Tesfamariam	A1-E	(619) 388-3366
Donna Watson	C224-B	(619) 388-3795

Career Options

Most careers related to Black Studies require education beyond the associate degree. A list of some sample

careers include: social scientist, counselor, international business person, historian, social worker, teacher and public administrator.

Academic Programs

The associate degree in Black Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Black Studies

Courses Required for the Major:	Units
BLAS 100, Introduction to Black Studies.....	3
BLAS 104, Black Psychology OR	
BLAS 130, The Black Family.....	3
BLAS 110, Afro-American Art OR	
BLAS 120, Black Music.....	3
BLAS 115, Sociology from a Black Perspective OR	
BLAS 116, Contemporary Social Problems from a Black Perspective OR	
BLAS 135, Introduction to Black Politics.....	3
BLAS 140A, History U.S., Black Perspective OR	
BLAS 140B, History U.S., Black Perspective.....	3
BLAS 145A, Introduction to African History OR	
BLAS 145B, Introduction to African History	3
BLAS 150, Black Women in Literature and the Media OR	
BLAS 155, Afro-American Literature	3
Total Units = 21	

Recommended electives: Black Studies 165, 290, 296.

Transfer Information

Common university majors related to the field of Black Studies include:

Africana Studies, Afro-American Studies, Black Studies, Ethnic Studies, Liberal Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Black Studies (BLAS)

100 Introduction to Black Studies

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 or R5.

This course is a survey of the Black Studies discipline including its social and academic origins, goals and development. Emphasis is placed on providing students with an understanding of the fundamental areas of study within the field and of the interdisciplinary approach to studying the African experience in America and the world. This course is intended for students who wish to major in Black Studies and/or who wish to gain general knowledge of the Black experience. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

104 Black Psychology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to psychological concepts and principles as they relate to African American behaviors and lifestyles. Emphasis is placed on comparing Euro-American theories as they have been traditionally applied to African Americans with contemporary Afro-centric theories and the ways in which they may be applied to create a greater understanding of the behaviors, lifestyles and psychological needs of African Americans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Black Studies (BLAS) and Psychology (PSYC) 101 combined: maximum credit, one course.

110 Afro-American Art

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

An historical approach to the foundations of the Art of Black Americans from 1650 to present, including the influence of African and European art styles and traditions. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Sociology from a Black Perspective

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of African American society and culture. Emphasis is placed on analyzing the origins, nature, structure and dynamics of African American life from a systemic perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Black Studies (BLAS) 115 and Sociology (SOCO) 101 combined: maximum credit, one course.

116 Contemporary Social Problems from a Black Perspective

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 or 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

A sociological analysis of institutional variation and the process of social change, and how it affects the Black American. An exploration of those group variations in life style which cannot be accounted for by social condition. Emphasizes contemporary urban situations. An examination of the relations between various racial, cultural, ethnic, and minority groups. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Black Music

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of African American musical forms and styles in historical perspective. Emphasis is placed on providing students with an understanding and appreciation for the African roots of a variety of African American music genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 The Black Family**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of the African American family. Emphasis is placed on the socio-cultural and psychological issues surrounding the history of the Black family in America and contemporary African American dating, marriage and divorce patterns, gender roles and extended family, kin and community networks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Introduction to Black Politics**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

This course is a survey of African American experiences with the United States political system from the Colonial era to the present. Emphasis is placed on the role of race in American political culture, practices and institutions as well as the ideas, tactics and organizations developed and employed by African Americans in their struggle for political power. This course is intended for students who wish to major in Black Studies and/or who wish to gain general knowledge of the Black experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140A History of the U.S., Black Perspectives**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

This course is a survey of American history from the colonial period to 1877, with emphasis on the experience of African Americans and the contributions they have made to the political, social, economic, and cultural development of the country. This course is intended for transfer students planning to major in African American Studies, history, political science, or other social sciences. The complete one-year course, 140A and 140B, satisfies the graduation requirement in American Institutions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Black Studies (BLAS) 140A,

140B, Chicano Studies (CHIC) 141A, 141B and History (HIST) 109, 110 combined: maximum credit, one series.

140B History of the U.S., Black Perspectives**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

This course covers the history of the United States from Reconstruction to the present with emphasis on African American experience and contributions. It focuses on political, social, economic, cultural, and intellectual trends, the persistence of racism, and the struggle for full equality for all Americans. NOTE: The complete one-year course of Black Studies 140A and 140B satisfies the graduation requirements in American institutions and California state government. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Black Studies (BLAS) 140A, 140B, Chicano Studies (CHIC) 141A, 141B and History (HIST) 109, 110 combined: maximum credit, one series.

145A Introduction to African History**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of African History from the Stone Age through the beginnings of European colonization in the 1870s. Emphasis is placed on providing students with a broad presentation of the geographical features of the continent and its connections to the rest of the world, local and regional ways of life and institutions, slavery, European conquest and colonization and African resistance to colonization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

145B Introduction to African History**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of African History from the late nineteenth century to the present. Emphasis is placed on providing students with a broad presentation of European colonization and colonial rule, African independence movements, nation-building, economic development and the continuing quest for African

unity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150 Black Women in Literature and the Media
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

Analyzes the literary achievements of Black women. Examines the images of Black women in literature and the media, past and present, including realistic self-images as presented by Black women themselves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155 Afro-American Literature
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

This course is a survey of African American cultural expression through language and literature in historical perspective. Emphasis is placed on understanding and interpreting the cultural, ethnic and political dynamics that influence literary, musical and theoretical texts. Topics include African praise songs, slave narratives, African American folktales, poetry, lyrics, spirituals,

raps, short stories, novels, speeches and essays. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165 Sexuality and Black Culture
3 hours lecture, 3 units
Grade Only

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

Limitation on Enrollment: This course is not open to students with credit for Black Studies 265: Psychology and Social Aspects of Black Sexuality. An in-depth examination and analysis of social and psychological factors that determine the nature of human sexuality in the Black community. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Black Studies (BLAS) 165 and Psychology (PSYC) 137: maximum credit, one course.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

BUSINESS STUDIES DEGREE						
CORE						
Units	Class	Description	The Core is required for the Business Studies associate degrees. All courses in the Core are articulated with San Diego State University courses and some meet California State University and University of California general education requirements. The Core courses also meet all the District general education requirements for an AS Degree except for the science requirement. Business 119 also meets the Districts reading and written expression requirement. To receive a degree in Business Studies, the student must complete the Core and complete one of the four areas below. In Small Business Management the student has a choice of coursework. Real Estate does not offer a degree option, only Certificates of Completion.			
3	BUSE 119*	Business Communications				
3	BUSE 140*	Business Law & the Legal Environment				
4	CISC 181*	Information Processing & Computer Programming				
3	ECON 120*	Principles of Economics				
3	PHIL 102B*	Introduction to Philosophy Values & Ethics				
16	Total	<p>Only one associate degree can be earned in the Business Studies area: Transfer or Small Business Accounting or Small Business Management or Retail Management.</p>				
Transfer (SDSU)	Small Business Accounting	Small Business Management Coursework in:			Retail Management	Real Estate
		Starting & Managing a Small Business	Community Service	Financial Services		
ACCT 116A/B	ACCT 128A/B	BUSE 155	6 units from BUSE 245A/B/C/D	ACCT 102	ACCT 116A	REAL 101
ECON 121*	ACCT 102	BUSE 150		BUSE 113 or ECON 121	BUSE 101	REAL 110
MATH 119*	ACCT 150	MARK 100		CBTE 180	BUSE 150	
MATH 121*	ACCT 121	ACCT 128A/B	6 units from BUSE 158A/B/C/D or 277A/B/C/D	CONF 110	MARK 100	
Area A1*	ACCT 120	BUSE 157		BUSE 90A/B/C/D or BUSE 277C	MARK 110	
Area A2*	ACCT 116A/B	SPEE 103*			SPEE 103	
Area A3*	BUSE 101*	SPEE 180*	CBTE 180	ACCT 150	BUSE 100	
Area B1*	BUSE 245C	BUSE 101*	SPEE 103*	ACCT 128A/B	SPEE 135	
Area B2*	SPEE 180*	6 units from BUSE 245A/B/C/D	MARK 100	BUSE 92 or BUSE 119*		
Area B3*	BUSE 277C or BUSE 245C		BUSE 101*	BUSE 245C		
Area C1*			BUSE 150	BUSE 101*		
Area C2*or 1		CBTE 180	BUSE 155	SPEE 180*	SPEE 180*	
Area D* (not 2)			SPEE 180*			
Science	BIOL 101	BIOL 101	BIOL 101	BIOL 101	BIOL 101	
Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	Health Ed.*	
Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	Am. Inst.*	
PE*	PE*	PE*	PE*	PE*	PE*	
Total 70	Total 62	Total 62	Total 62	Total 64	Total 60	
<p>BOLD = articulate to SDSU and other four year institutions * = class meets general education or district graduation requirements</p>						

Business Studies

Accounting, Business, Economics, Consumer Studies, Marketing, Real Estate, Supervision

Description

A wide variety of programs are offered for both transfer and career-focused students. Employment certificates of completion, certificates of achievement and associate degree programs are available to students interested in entry-level employment or in upgrading business skills.

Program Emphasis

The Business Studies department offers five program areas. These include the Business Studies Transfer area and four areas with entry level vocational coursework: Small Business Accounting, Small Business Management, Retail Management, and Real Estate. There are many certificates in each area that students may take to prepare them for certain job skills. However only one associate degree can be awarded. **A student must choose an associate degree in Transfer or Small Business Accounting or Small Business Management or Retail Management.** See each area for course requirements for specific vocations.

Faculty	Office	Telephone
Leroy Brady	T-311	(619) 388-3999
M. Salley Deaton	A-1 (I)	(619) 388-3279
Armando Dubon	A-16 (G)	(619) 388-3663
Alex Obiya	A-1 (I)	(619) 388-8665
Julie Tunnell	A-16	(619) 388-3110

Careers

Career opportunities available upon successful completion of each of the Business Studies awards are described in each area section. Most careers listed may require education beyond the associate degree level.

Academic Programs

The associate degree in Business Studies requires completion of the courses listed in each degree emphasis. Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. The Business Studies Transfer area provides lower division transfer preparation for the School of Business Administration at San Diego State University. **The associate degree requires a minimum of 60 units**

Core Curriculum

The Business Studies Core Curriculum is required for the associate degree in all Business Studies areas. All courses in the core are articulated with San Diego State University courses and some meet California State University and University of California general education requirements.

Courses:	Units
*BUSE 119, Business Communications OR	
ENGL 101, Reading and Composition.....	3
BUSE 140, Business Law & the Legal Environment....	3
CISC 181, Principles of Information Systems.....	4
ECON 120, Principles of Economics I	3
PHIL 102B, Introduction to Philosophy: Values.....	3
Total Units = 16	

*Business 119 is required for San Diego State University School of Business Administration degrees in Finance, Information Decision Systems, Management, and Marketing.

**Business 119 is required for all non-transfer course work and degrees.

Transfer

Associate in Science Degree: Business Studies

San Diego State University Business Administration

Courses Required for the Major:	Units
Business Studies Core Curriculum.....	16
ACCT 116A, Financial Accounting.....	4
ACCT 116B, Managerial Accounting	4
ECON 121, Principles of Economics II	3
MATH 119, Elementary Statistics	3
MATH 121, Basic Techniques of Applied Calculus I....	3
Total Units = 33	

Transfer Information

Common university majors related to the field of Business include:

Accounting, Agricultural Business, Apparel Design and Merchandising, Business Administration, Business Economics, Business Information Systems, Business Law, Construction Management, E-Business, Economics, Entrepreneurship, Finance/Financial Services, Health Administration, Hospitality Management, Human Resources, Industrial Engineering and Technology, International Business, Management, Marketing, Public Administration, Real Estate, Transportation.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Small Business Accounting

Small Business Accounting Requirements:
Core
Certificate of Achievement (Some courses may be repeated in the certificates and/or core but only need to be taken once) Small Business Bookkeeper Tax Preparer
Other Requirements Accounting 116A/B Business 101 Business 245C Speech 180
Many general education and district requirements are already included in the degree requirement. Additional requirements for an AS degree: Science Health Education American Institutions P. E.

**Certificate of Completion:
Small Business Bookkeeper***

The Small Business Bookkeeper's certificate prepares for entry-level employment as a small business bookkeeper.

Courses:	Units
ACCT 102, Basic Accounting.....	3
ACCT 128A, Small Business Accounting- Recordkeeping	1.5
ACCT 128B, Small Business Accounting-Payroll.....	1.5
ACCT 150, Computer Accounting Applications	3
Total Units = 9	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

**Certificate of Completion:
Tax Preparer***

Accounting 120 & 121 have been approved by the California Tax Education Council. Completion of the two classes with a grade of "C" or better, provides the student with 60 hours (45 hours of federal credit and 15 hours of California credit) towards the California tax preparer certificate. San Diego City College provider number is 2006.

Courses:	Units
ACCT 102, Basic Accounting.....	3
ACCT 120, Federal Income Tax.....	3
ACCT 121, California Income Tax.....	1
Complete 3 units from:	
BUSE 245C, Small Business Internship-Acctng OR BUSE 277C, Service Learning- Community**	3
Total Units = 10	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

**Student must complete BUSE 277C for three units to meet the requirement for the Tax Preparer certificate.

***Both BUSE 245C or BUSE 277C must have a Tax Preparation subject matter.

**Associate in Science Degree:
Business Studies**

Small Business Accounting Emphasis

The Small Business Accounting associate degree prepares for entry-level positions as bookkeepers, account clerks, accounting technicians, tax aides or accounting trainees.

Courses Required for the Major	Units
Business Studies Core Curriculum.....	16
Certificate of Completion, Tax Preparer	10
Certificate of Completion, Small Business Bookkeeper	9
and	
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 190, Introduction to Quicken	2
or	
CBTE 140, Microsoft Excel.....	2

**Complete the Following Other Courses
Required for the Major:**

ACCT 116A, Financial Accounting.....	4
ACCT 116B, Managerial Accounting	4
BUSE 101 Business Mathematics.....	3

BUSE 245C, Small Business Internship-Accounting ...	3
SPEE 180, Intercultural Communication	3
BIOL 101, Issues in Environmental Biology	4
Less courses already applied in one or more certificates or core	(6)

Total Units = 43-46

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students interested in careers as professional accountants should select the Business Studies San Diego State University Transfer Option. **The associate degree requires a minimum of 60 units.**

Small Business Management

The Small Business Management area prepares individuals for a variety of employment opportunities in business. Coursework includes starting and managing a small business, entry level positions in the financial services industry, and the development and management of community service projects.

Small Business Management

Coursework in starting and managing a small business.

Coursework in Starting and Managing a Small Business Requirements:
Core
Certificate of Achievement (Some courses may be repeated in the certificates and/or core but only need to be taken once) Management and Team Building Certificate of Completion Starting a Business Certificate of Completion Business Communications Certificate of Completion
Many general education and district requirements are already included in the degree requirement. Additional requirements for an AS degree: Science Health Education American Institutions P. E.

Certificate of Completion: Management and Team Building*

This certificate is designed for persons who currently own, operate or work for a small business and want to strengthen business skills.

Courses:	Units
BUSE 155, Managing the Small Business	3
BUSE 119, Business Communications.....	3
BUSE 150, Human Relations in Business	3
MARK 100, Principles of Marketing.....	3
Total Units = 12	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Starting a Business*

This certificate is designed for persons planning to start or operate a small business who want a "quick start."

Courses:	Units
ACCT 128A, Small Business Accounting-Recordkeeping.....	1.5
ACCT 128B, Small Business Accounting-Payroll.....	1.5
BUSE 119, Business Communications.....	3
BUSE 155, Managing the Small Business	3
BUSE 157, Starting a Small Business	3
Total Units = 12	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Business Communications*

This certificate is designed to enhance communication skills for individuals working in a business environment by improving speaking skills, negotiating skills, presentation skills, and multicultural awareness.

Courses:	Units
BUSE 119, Business Communications.....	3
BUSE 150, Human Relations in Business	3
SPEE 103, Oral Communication.....	3
SPEE 180, Intercultural Communications.....	3
Total Units = 12	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Achievement: Business Studies

Small Business Management Emphasis

Coursework in starting and managing a small business. This program is designed for persons planning to start, operate or work in a small business. The focus is on managerial, marketing, financial, legal, communication and practical day-by-day decision-making concerns in small business.

Courses Required for the Major	Units
Certificate of Completion, Management and Teambuilding	12
Certificate of Completion, Starting a Business	12
Certificate of Completion, Business Communications	12
BUSE 101, Business Mathematics	3
BUSE 140, Business Law and the Legal Environment.....	3
CBTE 180, Microsoft Office.....	3

Select 6 units from:

BUSE 245A, Small Business Internship-Marketing	
BUSE 245B, Small Business Internship-Operations	
BUSE 245C, Small Business Internship-Accounting	
BUSE 245D, Small Business Internship-Buying and Inventory	
BUSE 245E, Small Business Internship-Marketing	
BUSE 245F, Small Business Internship-Operations	
BUSE 245G, Small Business Internship-Accounting	
BUSE 245H, Small Business Internship-Buying and Inventory	6
Less courses already applied in one or more certificates or core	(12)

Total Units = 39

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Associate in Science: Business Studies

Small Business Management Emphasis

Coursework in starting and managing a small business.

Courses Required for the Major	Units
Business Studies Core Curriculum.....	16
Certificate of Achievement, Small Business Management Emphasis.....	39
BIOL 101, Issues in Environmental Biology	4
Less courses already applied in one or more certificates or core.....	(6)
Total Units = 49	

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students who plan to transfer to a four-year college or university should select the Business Studies San Diego State University Transfer option. **The associate degree requires a minimum of 60 units.**

Recommended electives: Business 100.

Small Business Management

Coursework in community service

Coursework in Community Service Requirements:
Core
Certificate of Completion (Some courses may be repeated in the certificates and/or core but only need to be taken once) Working Education Students in Free Enterprise Business Presentations
Other Requirements Business 101 Business 150 Business 155 Marketing 100 Speech 180
Many general education and district requirements are already included in the degree requirement. Additional requirements for an AS degree: Science Health Education American Institutions P. E.

Certificate of Completion: Working Education*

This certificate is designed for persons who want actual job experience running a small business. Areas of specialization include marketing, operations, accounting, and buying and inventory.

Courses:	Units
Complete 6-12 units from:	
BUSE 245A, Small Business Internship-Marketing	
BUSE 245B, Small Business Internship-Operations	
BUSE 245C, Small Business Internship-Accounting	
BUSE 245D, Small Business Internship-Buying and Inventory	
BUSE 245E, Small Business Internship-Marketing	
BUSE 245F, Small Business Internship-Operations	
BUSE 245G, Small Business Internship-Accounting	
BUSE 245H, Small Business Internship-Buying and Inventory	6-12
Total Units = 6-12	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Students in Free Enterprise (SIFE)*

This certificate is designed for persons who want actual job experience in teamwork, leadership, and management. Areas of specialization include projects in the community, elementary and junior high, high school, and on-campus educational activities.

Courses:	Units
Complete 6-12 units from:	
BUSE 158A, SIFE-High School Projects OR	
BUSE 277A, Service Learning-High School Projects	
BUSE 158B, SIFE-Elementary & Junior High Projects OR	
BUSE 277B, Service Learning-Elementary & Junior High School Projects	
BUSE 158C, SIFE-Community Projects OR	
BUSE 277C Service Learning-Community	
BUSE 158D, SIFE-On-Campus Educational Projects OR	
BUSE 277D, Service Learning-on Campus.....	6-12
Total Units = 6-12	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Business Presentations*

This certificate is designed for persons who want to improve their verbal, written, and computer skills.

Courses:	Units
BUSE 119, Business Communications.....	3
CBTE 180, Microsoft Office.....	3
SPEE 103, Oral Communication.....	3
Total Units = 9	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Associate in Science: Business Studies Small Business Management

Coursework in community service.

Courses Required for the Major	Units
Business Studies Core Curriculum.....	16
Certificate of Completion, Working Education	6-12
Certificate of Completion, Students in Free Enterprise.....	6-12
Certificate of Completion, Business Presentations	9
Complete the Following Other Courses Required for the Major:	
BUSE 101, Business Mathematics.....	3
BUSE 150, Human Relations in Business	3
BUSE 155, Managing the Small Business	3
MARK 100, Principles of Marketing.....	3
SPEE 180, Intercultural Communication	3
BIOL 101, Issues in Environmental Biology	4
Less courses already applied in one or more certificates or core	(3)
Total Units = 53-65	

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students who plan to transfer to a four-year college or university should select the Business Studies San Diego State University Transfer option. **The associate degree requires a minimum of 60 units.**

Recommended electives: Business 100, 201.

Small Business Management

Coursework in financial services.

Financial Services Coursework Requirements:
Core
Certificate of Completion (Some courses may be repeated in the certificates and/or core but only need to be taken once) Financial Services Job Skills Writing & Computation Small Business Bookkeeper (See page 142)
Other Requirements Business 101 Business 245C Speech 180
Many general education and district requirements are already included in the degree requirement. Additional requirements for an AS degree: Science Health Education American Institutions P. E.

Certificate of Completion: Financial Services*

This certificate is designed to prepare students for entry-level positions in the financial services industry. Students study basic financial and investment planning techniques, portfolio management, basic computerized bookkeeping, and current banking and global corporate trends.

Courses:	Units
ACCT 102, Basic Accounting	3
BUSE 113, International Finance OR ECON 121, Principles of Economics II	3
CBTE 180, Microsoft Office	3
CONF 110, Personal Financial Management	3
ECON 120, Principles of Economics I	3
Total Units = 15	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Job Skills*

This certificate concentrates on developing and understanding skills necessary to secure and keep a job such as preparing for interviews and writing resumes. Learning techniques for time management and organization are also taught.

Courses:	Units
Select all BUSE 090 courses (5.5 units) OR 5 units in BUSE 277C (a repeatable course) BUSE 090A, Learning Skills and BUSE 090B, Work Success and BUSE 090C, Business Internship Seminars and BUSE 090D, Workplace Competencies	5.5
OR BUSE 277C, Service Learning - Community	5
Total Units = 5-5.5	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Writing/Computation*

This certificate concentrates on improving written and computational skills necessary for entry-level jobs.

Courses:	Units
BUSE 101, Business Mathematics	3
BUSE 092, Introduction to Business Communications OR BUSE 119, Business Communications	3
Total Units = 6	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Associate in Science: Business Studies

Small Business Management

Coursework in financial services.

Courses Required for the Major	Units
Business Studies Core Curriculum	16
Certificate of Completion, Financial Services	15
Certificate of Completion, Job Skills	5-5.5
Certificate of Completion, Small Business Bookkeeper	8-9

Complete the Following Other Courses Required for the Major:

- BUSE 101, Business Mathematics 3
- BUSE 245C, Small Business Internship-Accounting ... 3
- SPEE 180, Intercultural Communication 3
- BIOL 101, Issues in Environmental Biology 4
- Less courses already applied in one or more certificates or core(6)

Total Units = 51-52.5

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students who plan to transfer to a four-year college or university should select the Business Studies San Diego State University Transfer option. **The associate degree requires a minimum of 60 units.**

Recommended electives: Business 100, 201.

Retail Management

The Western Association of Food Chains (WAFC) Retail Management program incorporates both educational knowledge and technical skills, and is structured to lead students to competence in several areas. This program provides a strong foundation for students intending to pursue communications, liberal arts, and other areas where general management competencies are important.

Retail Management

Coursework in retail management.

Coursework in Retail Management Requirements:
Core
Certificate of Completion (Some courses may be repeated in the certificates and/or core but only need to be taken once) Retail Management Foundation Courses Retail Management Intermediate Courses Retail Management Advanced Courses
Other Requirements Speech 180

Many general education and district requirements are already included in the degree requirement. Additional requirements for an AS degree:

- Science
- Health Education
- American Institutions
- P. E.

Certificate of Completion: Retail Management Foundation Courses*

This Certificate of Completion incorporates the foundation courses for The Western Association of Food Chains (WAFC) Retail Management Certificate of Achievement. Included are written and oral communication skills, basic business math and computer competencies.

Courses:	Units
BUSE 119, Business Communications.....	3
BUSE 101, Business Mathematics.....	3
CISC 181, Principles of Information Systems.....	4
SPEE 103, Oral Communication.....	3
Total Units = 13	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Retail Management Intermediate Courses*

This Certificate of Completion incorporates the intermediate courses for the Western Association of Food Chains (WAFC) Retail Management Certificate of Achievement. Included are accounting, marketing, and supervision skills.

Courses:	Units
ACCT 116A, Financial Accounting.....	4
and	
MARK 100, Principles of Marketing.....	3
BUSE 100, Introduction to Business.....	3
Total Units = 10	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Completion: Retail Management Advanced Courses*

This Certificate of Completion incorporates the advance courses for the Western Association of Food Chains (WAFC) Retail Management Certificate of achievement. Included are team building and retailing skills.

Courses:	Units
BUSE 150, Human Relations in Business	3
MARK 110, Principles of Retailing	3
SPEE 135, Interpersonal Communication	3
Total Units = 9	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Certificate of Achievement: Business Studies Retail Management Emphasis

The Western Association of Food Chains (WAFC) Retail Management Certificate has been developed and agreed upon by a curriculum task force comprised of both college and retail food industry professionals.

Courses Required for the Major	Units
ACCT 116A, Financial Accounting	4
BUSE 101, Business Mathematics	3
BUSE 119, Business Communications.....	3
BUSE 150, Human Relations in Business	3
CISC 181, Principles of Information Systems.....	4
MARK 100, Principles of Marketing.....	3
MARK 110, Principles of Retailing	3
SPEE 103, Oral Communication	3
BUSE 100, Introduction to Business	3
SPEE 135, Interpersonal Communication	3
Total Units = 32	

Associate in Science Degree: Business Studies

Coursework in retail management. The Western Association of Food Chains (WAFC) Retail Management coursework incorporates both educational knowledge and technical skills and is structured to lead students to competence in several areas. This coursework provides a strong foundation for students intending to pursue communications, liberal arts, and other areas where general management competencies are important.

Courses Required for the Major	Units
Business Studies Core Curriculum.....	16
Certificate of Completion, Retail Management Foundation Courses	13
Certificate of Completion, Retail Management Intermediate Courses.....	10
Certificate of Completion, Retail Management Advanced Courses	9
Additional course required for Retail Management AS Degree;	
SPEE 180, Intercultural Communication	3
BIOL 101, Issues in Environmental Biology	4
Less courses already applied in one or more certificates or core	(7)
Total Units = 48-55	

NOTE: Some courses may be repeated in the certificates and/or core but only need to be taken once.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. Students interested in careers as professional accountants should select the Business Studies San Diego State University Transfer Option. **The associate degree requires a minimum of 60 units.**

Real Estate

Certificate of Completion: Real Estate Salesperson*

This certificate is designed for students interested in exploring a career in real estate sales. Real Estate 101, Real Estate 120, and one additional course from the elective list are required to take the Real Estate Salesperson's License Examination. For questions about DRE licensure requirements, contact the DRE at 619-525-4192 or www.dre.ca.gov.

Courses:	Units
REAL 101, Real Estate Principles.....	3
REAL 120, Real Estate Practice	3

Select three to four units from the following:

ACCT 102, Basic Accounting	3
or	
ACCT 116A, Financial Accounting	4
BUSE 140, Business Law and the Legal Environment .	3
ESCR 101, Escrow Procedures - Beginning	3
ESCR 111, Escrop Procedures - Advanced.....	3
REAL 105, Legal Aspects of Real Estate I	3
REAL 110, Principles of Real Estate Appraisal I	3
REAL 115, Real Estate Finance I	3
REAL 125, Real Estate Economics.....	3
REAL 130, Real Property Management.....	3
REAL 151, Real Estate Computer Applications	3
REAL 166, Common Interest Development.....	3
BANK 102, Mortgage Brokerage and Banking	4
Total Units = 9-10	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion: Real Estate Appraisal*

This certificate is designed for students interested in careers in real estate appraisal. All of the courses in this Certificate of Completion have been approved by the Office of Real Estate Appraisers (OREA) as applying toward completion of acceptable education for the following appraisal licenses: Trainee License (completion of 90 hours of acceptable education related to real estate appraisal, which must include 15 hours of instruction on the Uniform Standards of Professional Appraisal Practice (USPAP); Residential License (completion of at least 90 hours of acceptable education relating to real estate appraisal, which must include 15 hours of instruction on USPSP); Certified Residential (completion of at least 120 hours of acceptable education relating to real estate appraisal, which must include 15 hours of instruction on USPSP);

Certified General (completion of at least 180 hours of acceptable education relating to real estate appraisal, which must include 15 hours of USPAP). For questions about OREA's licensure requirements, contact the OREA office in Sacramento at (916) 552-9000 or www.orea.ca.gov. Note: Additional OREA education requirements for appraisal licenses will be in effect as of January 1, 2008.

Courses:	Units
REAL 101, Real Estate Principles	3
REAL 110, Principles of Real Estate Appraisal I.....	3
REAL 111, Introduction to USPAP	1
REAL 140, Real Estate Appraisal II.....	3
Total Units = 10	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Courses

Accounting (ACCT)

102 Basic Accounting

**3 hours lecture, 3 units
Grade Only**

Advisory: Business 92 or English 43, and English 42 and Mathematics 35, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4 and M30.

Limitation on Enrollment: This course is not open to students with credit for more advanced Accounting courses.

Theory and practice in the fundamentals of accounting transactions; business documents, journals and ledgers; opening, adjusting and closing entries; payroll. (FT) Associate Degree Credit only and not Transferable.

116A Financial Accounting

**4 hours lecture, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

This introductory financial accounting course provides instruction in the theory and practice of accounting applicable to recording, summarizing, and reporting of business transactions for external uses. Topics also include coverage of asset valuation, revenue and expense recognition, and appropriate accounting for various asset, liability, and capital accounts. This course is required for business majors preparing for and

planning to transfer to, a four-year college or university. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BUS 2) (*CAN BUS SEQ A = ACCT 116A + 116B*).

116B Managerial Accounting

**4 hours lecture, 4 units
Grade Only**

Prerequisite: Accounting 116A with a grade of "C" or better, or equivalent.

This course shows students the extent to which management accounting can facilitate both operating and strategic business decisions. It emphasizes how information is used for managerial planning and control. The following areas are examined: cost-volume-profit relations, cost accounting systems, budgeting, differential analysis, and product pricing strategies. This course is required for the associate degree and is generally required for a four-year degree. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BUS 4) (*CAN BUS SEQ A = ACCT 116A + 116B*).

120 Federal Income Tax

**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Accounting 116A with a grade of "C" or better, or equivalent.

This course introduces the student to tax concepts and tax laws that govern individuals who pay federal income taxes. Emphasis is placed on recognizing the social, economic, and political factors that Congress considers when they create tax laws. This course relates tax codes to the individual and identifies how tax planning skills can determine economic outcomes. Furthermore, it demonstrates and differentiates between tax avoidance and tax evasion. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 California Income Tax

**1 hour lecture, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Accounting 120. This is a study of the structure of California personal income taxation, tax planning and underlying social economic issues. An emphasis will be placed on tax concepts rather than tax return preparation. The course contrasts and compares California requirements to Federal Income Tax. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128A Small Business Accounting - Recordkeeping

**1.5 hours lecture, 1.5 units
Grade Only**

Advisory: Concurrent enrollment in Accounting 128B.

Limitation on Enrollment: This course is not open to students with previous credit for Accounting 128.

This course is an introduction to basic recordkeeping required to adequately manage the accounting documentation necessary to run a small business. Emphasis is placed on the practical application of recording, summarizing, and reporting business transactions for internal as well as completing federal, state and local reporting requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128B Small Business Accounting - Payroll

**1.5 hours lecture, 1.5 units
Grade Only**

Advisory: Concurrent enrollment in Accounting 128A.

Limitation on Enrollment: This course is not open to students with previous credit for Accounting 128.

This course is an introduction to basic payroll requirements for a small business operating in California. Emphasis is placed on determining who is an employee and the practical application of preparing payroll, payroll deposits, quarterly and annual payroll reports for both California and the federal government. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Computer Accounting Applications

**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Accounting 116A with a grade of "C" or better, or equivalent.

This course illustrates to the student how to use accounting computer programs in a commercial business enterprise. As a basis for instruction, it demonstrates the use of QuickBooks Pro accounting software on a PC. The full accounting cycle and payroll is evaluated within a typical business environment. Business transactions are identified, labeled, recorded, and processed for both service and merchandise businesses. Financial statements are constructed, evaluated, and reviewed for accuracy and completeness. The main objective is to provide the student with a complete guide to creating and maintaining a proper accounting system while using a popular accounting software program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Mortgage Brokerage and Banking

Description:

The Mortgage and Banking program prepares students with the knowledge and skills necessary for initial employment in the mortgage and banking industry and facilitates advanced employment opportunities for persons already employed in the industry.

Program Emphasis:

The program course content relates specifically to California regulations with regard to mortgage brokerage and banking and the real estate industry. Individual courses emphasize the knowledge and skills with specific hand-on training on current industry software essential for specific employment in loan processing, loan underwriting, and loan closing. The entire program provides overall education and training for entry-level employment into the mortgage, brokerage and banking industry with completion of a Certificate of Achievement and/or an Associate in Science Degree.

Career Options:

Courses in the Mortgage Brokerage and Banking program prepare students for careers in loan processing, loan underwriting, and loan closing.

Certificate of Completion: Loan Closer

Courses:	Units
BANK 102, Mortgage Brokerage and Banking	4
and	
BANK 108, Principles of Loan Closing	4
	Total Units = 8

The Loan Closer certificate prepares the student with the knowledge and skills necessary for employment as a loan closer in the mortgage brokerage and banking industry.

Certificate of Completion: Loan Processor

Courses:	Units
BANK 102, Mortgage Brokerage and Banking	4
and	
BANK 104, Principles of Loan Processing	5
	Total Units = 9

The Loan Processor certificate prepares the student with the knowledge and skills necessary for employment as a loan processor in the mortgage brokerage and banking industry.

Certificate of Completion: Loan Underwriter

Courses:	Units
BANK 102, Mortgage Brokerage and Banking	4
and	
BANK 106, Loan Underwriting	5
	Total Units = 9

The Loan Underwriter certificate prepares the student with the knowledge and skills necessary for employment as a loan underwriter in the mortgage brokerage and banking industry.

Banking (BANK)

102 Mortgage Brokerage and Banking

**4 hours lecture, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5, and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 201.

This course is an introduction to the mortgage brokerage and banking industry. Students will learn the history, concepts, vocabulary, loan products and product flow of the mortgage banking industry, and the functions of the many players in a loan transaction. Course content will also include information on the state of the economy and how it affects real estate lending and the secondary markets. In addition, the legal and financial impacts of fraud within the industry will be discussed. Throughout the course, emphasis will be placed on the importance of follow-through, quality customer service, and ethics as they relate to the mortgage brokerage and banking industry. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Principles of Loan Processing

4 hours lecture, 3 hours lab, 5 units
Grade Only

Advisory: Completion of or concurrent enrollment in Banking and Finance 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 202.

This practical, hands-on course teaches the basics of loan processing from application to submission; applicable laws; qualifying and preliminary tax analysis; ways to detect fraud; and how to obtain sufficient documentation to satisfy the underwriters. Additionally, students will learn the importance of setting time priorities, quality customer service, follow-through, and ethics as they relate to the mortgage brokerage and mortgage banking industry. Course content relates specifically to California regulations. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Loan Underwriting

5 hours lecture, 5 units
Grade Only

Advisory: Completion of or concurrent enrollment in Banking and Finance 104 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 205.

This course introduces students to FHA, VA, conventional, and other loan underwriting; identifies where underwriting fits into the mortgage process; outlines its components, risks, comparative state laws, rules, and regulations; covers appraisal review and analysis of key areas; and emphasizes both quality control and the fundamental importance of ethics in loan underwriting. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Principles of Loan Closing

3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: Banking and Finance 106 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Banking and Finance 206.

This course is designed to provide students with an analysis of loan documentation, including investor requirements, and the steps required to smoothly close a loan. Course content also includes escrow and its

function; title insurance and its function; the interaction between escrow and title companies; loan guarantees and insurance; lock requirements and conditions; loan shipping; review of loan documents; and the fundamental importance of ethics as it pertains to loan closing. Course content relates specifically to California regulations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Business (BUSE)

090A Learning Skills

1.5 hours lecture, 1.5 units
Grade Only

This is a course designed to teach the skills necessary to become a successful learner, both in college and in the years beyond college. Emphasis is placed on time management, organizational skills, and basic thinking, reading and writing techniques. Students will be able to successfully learn, retain and communicate information. This course is intended for the beginning or returning certificate student planning to major in vocational education. (FT) Associate Degree Credit.

090B Work Success

1.5 hours lecture, 1.5 units
Grade Only

This is a course designed to teach the skills necessary to become a successful employee. Emphasis is placed on understanding and developing the skills necessary to secure and keep a job. Students will be able to look for employment, prepare for an interview, and model the qualities of a successful employee. This course is intended for the beginning or returning student planning to seek gainful employment. (FT) Associate Degree Credit.

090C Business Internship Seminars

1 hour lecture, 1 unit
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

The purpose of this course is to introduce students to employment opportunities in the local job market. Each class includes five industry presentations that require students to research the particular business, write a practice resume for that business, and conduct a mock interview for that business. This course is intended for students majoring in the computer technology options of the Business Studies certificates of completion, certificates of achievement, and associate in science

degrees. (FT) Associate Degree Credit only and not Transferable.

090D Workplace Competencies

**1.5 hours lecture, 1.5 units
Grade Only**

This course teaches the necessary SCANS (Secretary's Commission on Achieving Necessary Skills) skills for a student to become a successful participant in today's workforce. Emphasis is on time management, organizational skills, and basic thinking, reading, and writing techniques. Students are able to successfully select, learn, retain, analyze, and communicate information. This course is intended for the beginning or returning certificate student planning to major in vocational education. (FT) Associate Degree Credit only and not Transferable.

092 Introduction to Business Communications

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with credit for Business 119 or Office Information Systems 115.

Review of principles and mechanics of English grammar as specifically applied to the field of business. Presents business vocabulary, dictionary usage, spelling, sentence structure, punctuation, and the principles and techniques of business writing. Practice in writing various types of business letters, resumes, memos, and informal business reports is emphasized. Three units of credit at this level may be applied to the associate degree.

095 Small Business Alphabetic Filing

**.75 hour lecture, 2.25 hours lab, 1.5 units
Grade Only**

This course offers instruction in the association of Records Managers and Administrators (ARMA) alphabetic filing rules and techniques. These rules are widely used in business to create and maintain files. Instruction is activity oriented, including the use of a microcomputer software package to learn basic filing skills. (FT) Associate Degree Credit only and not Transferable.

100 Introduction to Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill

Levels W4 and R4; or Business 92 with a grade of "C" or better, or equivalent.

This is an introductory course for both business and non-business majors. The course provides a broad understanding of the business community, its functions, terminology, occupational choices in the various fields of business and the place of business in the American economy as a whole. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

101 Business Mathematics

**3 hours lecture, 3 units
Grade Only**

This course provides students with a comprehensive study of business mathematics and reviews basic mathematics such as decimals, fractions, and percentages. It also covers the topics of bank services, payroll, mathematics of buying and selling, interest and loans, taxes, insurance, depreciation, and other business computations. This course is intended for students interested in pursuing careers in business. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

113 International Finance

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 or R5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the fundamentals of international finance. Emphasis is placed on an understanding of the international monetary system, balance of payments analysis, foreign exchange markets, global banking, international cash management and budgeting, and international investment management and evaluation. This course is intended for the student planning to prepare for entry-level employment in international banking, brokerage houses, or financial exchanges. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Business Communications

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the principles of effective business communications. Students

experience the broad development of and the ability to analyze, organize, and compose various types of written and oral business communications. Students develop clear, concise, and persuasive letters, memorandums, and reports. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Business Law and the Legal Environment

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the legal system and the laws that govern business in America. The course also increases students' understanding of legal concepts. Topics include judicial and administrative systems, ethics, contracts, torts, bankruptcy, agency, business organizations, security regulations, regulation of property, and protection of intellectual property interest. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN BUS 8).

150 Human Relations in Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Designed to assist employees and employers in understanding human behavior in social institutions, business and industry. Areas for discussion include: leadership, communication, status, decision-making, motivation, personnel problems. Case problem method of instruction used. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

155 Managing the Small Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 35, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M30; Business 101 with a grade of "C" or better, or equivalent.

This course is a study of the elements involved in successfully operating a small business. Key issues include human resource management, marketing for small business, and legal issues. This course is intended for the student who plans to major in Business Studies or Business Management. This course is also intended for students from any discipline who are interested in owning or operating a small business. (FT) Associate

Degree Credit & transfer to CSU and/or private colleges and universities.

157 Starting a Small Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 35, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M30; Business 101 with a grade of "C" or better, or equivalent.

This course is a study of the skills required for writing an effective business plan. Emphasis is placed on creating a business plan that identifies key decisions for the entrepreneur, including, financing, marketing, and determining the business location. This course is designed for students planning to major in Business Studies and/or planning on starting their own business. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158A Students in Free Enterprise - High School Projects

**9 hours lab, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

In this course students develop and implement projects to help them learn and teach free enterprise to high school students. Projects can include collaboration with high school classes, free enterprise educational projects for high school students, mentoring, and shadowing. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158B Students in Free Enterprise - Elementary and Junior High Projects

**9 hours lab, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

In this course students develop and implement projects to help them learn and teach free enterprise to elementary and junior high school students. Projects can include interactive lessons in small business and

the free enterprise system and creating curriculum materials to help young children learn about free enterprise. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158C Students in Free Enterprise - Community Projects

**9 hours lab, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

In this course students develop and implement projects to help them learn and teach free enterprise in the community. Projects can include working with community organizations in projects such as trade shows, presentations, and entrepreneurial ventures designed to increase knowledge of free enterprise. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

158D Students in Free Enterprise - On-Campus Educational Projects

**9 hours lab, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

In this course students develop and implement projects to help them learn and teach free enterprise on the San Diego City College campus. Projects will include operating the Small Business Resource Center, planning small business workshops, and other projects designed to increase knowledge of free enterprise on campus. Students gain hands-on experience in project planning, development, implementation and evaluation. This course is intended for the student who plans to major

in Entrepreneurial and Community Service. It is also recommended for students from any discipline who are interested in project development, the development of teaching skills, or the enhancement of communication and planning skills. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245A Small Business Internship - Marketing **9 hours lab, 3 units Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in marketing a small business. Students are responsible for the marketing function for the Student Business on campus. Classroom time provides marketing theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional marketing skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service". It is also intended for students from any discipline who are interested in learning the marketing function of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245B Small Business Internship - Operations **9 hours lab, 3 units Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in the operations and human resource functions of a small business. Students are responsible for operations and human resources of the Student Business on campus. Classroom time provides management theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional management skills for use in operating a

small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service". It is also intended for students from any discipline who are interested in learning the operations functions of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245C Small Business Internship - Accounting
9 hours lab, 3 units
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in accounting for a small business. Students are responsible for accounting for the Student Business on campus. Classroom time provides accounting theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional accounting skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Small Business Management, Entrepreneurial and Community Service, or Small Business Accounting". It is also intended for students from any discipline who are interested in learning the accounting functions of small business. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245D Small Business Internship - Buying and Inventory
9 hours lab, 3 units
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Business 245 and/or 275. Business 245A, B, C, and D combined may be taken a total of four times.

This course provides theory and practical experience in purchasing and inventory control for a small business. Students are responsible for purchasing supplies and

inventory for the Student Business on campus. Classroom time provides theory in purchasing and inventory control and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional skills for use in purchasing for a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Small Business Management or Entrepreneurial and Community Service". It is also intended for students from any discipline who are interested in learning the buying and inventory functions of small business Segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245E Small Business Internship - Marketing
3 hours lab, 1 unit
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides theory and practical experience in marketing a small business. Students are responsible for the marketing function for a Student Business on campus. Classroom time provides marketing theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional marketing skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Business Studies - Computer Technology option". It is also intended for students from any discipline who are interested in learning the marketing function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245F Small Business Internship - Operations
3 hours lab, 1 unit
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides theory and practical experience in the operations and human resource functions of a small business. Students are responsible for operations and human resources of the Student Business on campus. Classroom time provides management theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more

professional management skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the student who plans to major in Business Studies - Computer Technology option". It is also intended for students from any discipline who are interested in learning the operations function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245G Small Business Internship - Accounting
3 hours lab, 1 unit
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides theory and practical experience in accounting for a small business. Students are responsible for accounting for the Student Business on campus. Classroom time provides accounting theory and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional accounting skills for use in operating a small business. In each segment of this course, students gain experience in a separate business function. This course is intended for the student who plans to major in Business Studies - Computer Technology option. It is also intended for students from any discipline who are interested in learning the accounting function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245H Small Business Internship - Buying and Inventory
3 hours lab, 1 unit
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides theory and practical experience in purchasing and inventory control for a small business. Students are responsible for purchasing supplies and inventory for the Student Business on campus. Classroom time provides theory in purchasing and inventory control and an opportunity to evaluate and enhance skills learned. Through these experiences, students will develop more professional skills for use in purchasing for a small business. In each segment of this course, students gain experience in a separate business function. "This course is intended for the

student who plans to major in Business Studies - Computer Technology option". It is also intended for students from any discipline who are interested in learning the purchasing function of a small business in the computer technology area. Course segments may be taken in any order. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study
Hours by Arrangement, 1-4 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For advanced students in business who wish to pursue special problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Consumer Studies (CONF)

110 Personal Financial Management
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M20.

This course explores theories and techniques of managing personal income, with an emphasis on financial goal setting, culminating in the development of a personal financial plan. It includes practical methods of gaining maximum advantages from income through efficient spending, effective use of credit, savings, budgeting, insurance, and investment. Stock portfolios and retirement and estate planning are discussed. This is a required course for a Certificate of Completion in Skills for Success and Certificate of Achievement and/or Associate Degree in Consumer Resource Management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Economics (ECON)

120 Principles of Economics I

3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Introduction to basic economic principles and theory relating to problem analysis, structure of our institutions and the formation of public policies. Emphasis is placed on the broad overall performance (macro-analysis) of the economy with concentration in such areas as incomes, employment and output; economic stability and growth; fiscal and monetary policy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ECON 2).

121 Principles of Economics II

3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

A continued study of principles and applications regarding specific economic sectors (micro analysis). Various competitive models in a market economy are studied in detail. Economics of labor unions, farming, international trade and finance provide a background for study and analysis of many current world and domestic problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ECON 4).

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Marketing (MARK)

100 Principles of Marketing

3 hours lecture, 3 units
Grade Only

Advisory: English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course provides a comprehensive overview of the foundations, principles, processes, and goals of marketing and an analysis of how marketing functions in current business practice. It is designed for students majoring in marketing, as well as for those interested in a review of the field. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

ESCROW (ESCR)

101 Escrow Procedures — Beginning

3 hours lecture, 3 units
Grade Only

This course covers methods and techniques of escrow procedure for various types of real estate transactions, including the legal and ethical responsibilities of persons engaged in escrow work. Some of the topics included are types of escrow, preparation of documents, terminology, phraseology, title and escrow procedures, and the method of adjusting taxes, rents, and other charges. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Escrow Procedures — Advanced

3 hours lecture, 3 units
Grade Only

This course covers a study of exchanges, loan escrow, sales of trust deeds and notes, consummation of land contracts and leasehold escrows. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Real Estate (REAL)

101 Real Estate Principles

**3 hours lecture, 3 units
Grade Only**

This course covers the fundamentals of the economics of land ownership and use and the responsibility of broker, owner and purchaser; terminology and definitions and the varied vocational opportunities in the general field of real estate are also covered. Completion of this course is required prior to taking the exam for the California Real Estate Salesperson's License. This course also applies as an elective toward the State's educational requirements for the broker's examination. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Legal Aspects of Real Estate I

**3 hours lecture, 3 units
Grade Only**

This course is a study of California Real Estate law. Emphasis is placed on the practical application of the law to legal problems arising from real estate transactions, statutory enactment and case law, legal instruments, zoning ordinances, and city and county planning decisions. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Principles of Real Estate Appraisal I

**3 hours lecture, 3 units
Grade Only**

This course is an introductory course covering the purposes of appraisals, the appraisal process, and the different approaches, methods, and techniques used to determine the value of various types of property. Emphasis is on residential and special purpose property. This course applies toward the State's educational requirements for the California Real Estate Appraisal license, broker's examination, and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Real Estate Finance I

**3 hours lecture, 3 units
Grade Only**

This course analyzes the financing of real estate. Topics will include types of financing sources; loans and loan processing; governmental loans, methods of financing

residential properties; with an overview of financing business, income, commercial and industrial properties; and property appraisal and taxation. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Real Estate Practice

**3 hours lecture, 3 units
Grade Only**

This course examines the principles of real estate practice as they pertain to day-to-day operations in a real estate office. Topics include listings, valuations, prospecting, selling, financing, exchanges, taxation and specialized brokerage operations. Professional and ethical activities are stressed. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Real Estate Economics

**3 hours lecture, 3 units
Grade Only**

This course deals with trends and factors that affect the value of real estate; the nature and classification of land economics; the development of property, construction and subdivision, economic values and real estate evaluation; real estate cycles and business fluctuations; residential market trends; real property and special purpose property trends. This course applies toward the State's educational requirements for the broker's examination and as an elective for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Real Property Management

**3 hours lecture, 3 units
Grade Only**

This course is a practical approach to the principles and practices of managing income properties, including leasing, tenant relations, collections, and rent schedules; budgets and purchasing; market economics; landlord-tenant law, evictions, prohibited discrimination, property maintenance; taxation; and record keeping, and marketing. This course applies as an elective toward the State's educational requirements for the broker's examination and for the salesperson's license. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Real Estate Appraisal II**3 hours lecture, 3 units
Grade Only**

This course examines appraisal principles and procedures for complex properties, emphasizing income producing properties. Highest and best use, market analysis, lease analysis, and depreciation estimates are also considered. This course applies as an elective toward the State's educational requirements for the broker's examination and toward the educational requirements for various appraisal licenses issued by the State's Office of Real Estate Appraisers (OREA). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Real Estate Computer Applications**3 hours lecture, 3 units
Grade Only**

This is an introductory course covering basic computer hardware, functions, software, and Internet resources available to enhance productivity for Real Estate Professionals. The course introduces students to a myriad of general and commercial software products designed or adapted for use in the Real Estate Industry. Emphasis is placed on Internet tools and resources for the California Real Estate Salesperson and Broker. This course applies toward the State's educational requirements for the California Real Estate Salesperson and Real Estate Broker. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Common Interest Development**3 hours lecture, 3 units
Grade Only**

This course is a study of Common Interest Developments (CID) and the management of related Homeowner's Associations (HOA). Emphasis is placed on providing students with up-to-date management procedures and the application of California law where appropriate. This course is designed for students pursuing a career in Real Estate and/or those interested in CIDs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270).

Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Supervision (SUPR)**101 Introduction to Supervision****3 hours lecture, 3 units
Grade Only**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the fundamentals of management, the functions and concepts of supervision, and the role of the supervisor in the organization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Management and Organization for Supervisors**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 or English 56 or Business 92 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

An analysis of the managerial functions of organizing, staffing, directing, planning, controlling, and the principles pertaining to those functions (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Supervisor/Employee Communications**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5; or Business 92 with a grade of "C" or better, or equivalent.

This course is designed to develop communications skills for supervisors, consistent with good human relations principles. The emphasis will be on listening and speaking in a variety of on-the-job situations such as one-to one, small group, and large group communications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Chemistry

See "Physical and Earth Sciences" on page 336.

Chicano Studies

	Units
Associate in Arts Degree:	
Chicano Studies	23*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Chicano Studies program provides an interdisciplinary approach to the interaction of the Chicano with other cultures in a bilingual, multicultural setting. It helps to prepare students for transfer to a four-year university major in Mexican American, Ethnic or Intercultural Studies and for other professional fields including the social sciences, humanities, law, law enforcement, border and immigration occupations, international business, social work, public administration and teaching. Chicano Studies courses enhance understanding of one of the country's fastest growing population groups.

Program Emphasis

Chicano Studies courses are taught in English and the curriculum is designed to meet District and baccalaureate general education and multicultural course requirements. The program offers courses in anthropology, bilingual studies, Chicano culture, history of Mexico and the United States, language and literature, psychology and sociology from a Chicano perspective.

Faculty	Office	Telephone
Vacant	A1-M	(619) 388-3634
Vacant	A1-C	(619) 388-3237

Career Options

Most careers related to Chicano or Mexican American Studies require education beyond the associate degree. A list of sample careers includes: anthropologist, immigration officer, peace officer, counselor, international business person, historian, health worker,

social worker, translator, and travel and tourism advisor.

Academic Programs

The associate degree in Chicano Studies requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

**Associate in Arts Degree:
Chicano Studies**

Courses Required for the Major:	Units
CHIC 110A & 110B, Introduction to Chicano Studies	3,3
CHIC 130, Mexican Literature in Translation OR	
CHIC 135, Chicano Literature OR	
CHIC 138, Literature of La Raza in Latin America Translation.....	3
CHIC 141A, 141B, U.S. History from a Chicano Perspective	3,3
CHIC 210, Chicano Culture	3

Select one of the following courses:

CHIC 203, Introductory Spanish for Spanish Speakers OR	
CHIC 204, Intermediate Spanish for Spanish Speakers OR	
SPAN 201, Third Course in Spanish OR	
SPAN 202, Fourth Course in Spanish	5
Total Units = 23	

Recommended electives: Chicano Studies 150, 201, 290, 296.

Transfer Information

Common university majors related to the field of Chicano Studies include:

Chicana-Chicano Studies, Ethnic Studies, Latin American Studies, Mexican-American Studies, Raza Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Chicano Studies (CHIC)

110A Introduction to Chicano Studies

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5/R5.

This course is an introductory survey of the field of Chicano Studies and the factors that influence the Chicano culture. Emphasis is placed on the historical development of the Chicano people including their Mesoamerican roots, cultural identification, political activities, and their contemporary roles and influence in United States culture, society and economy. This course is designed for students majoring in Chicano Studies and/or Social Sciences and can be used for transfer General Education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110B Introduction to Chicano Studies

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a continuation of Chicano Studies 110A. Emphasis is placed on the historical development of the Chicano people including their connections to the indigenous people of the Southwestern and Western United States, their historical and contemporary experiences as residents of border of territories and as transnational actors as well as their contemporary roles and influence in United States culture, society and economy. This course is designed for students majoring in Chicano Studies and/or Social Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130 Mexican Literature in Translation

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

A survey of Mexican literature in translation, introducing students to authors of the novel, short

story poem, essay, and folklore. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Chicano Literature

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course is a survey of Chicano literature. The genres to be studied include poetry, the novel, essay, short story, and theater. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

138 Literature of La Raza in Latin America in Translation

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

A survey of the novels, short stories, poetry and major Latin American writers, from the end of the Colonial Period to the present. Emphasis will be given to major contemporary authors reflecting the universality of Mestizo (Raza) masterpieces. This course is for all students with an interest in the study of Latin American literature. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

141A United States History from a Chicano Perspective

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of early American history from the Mexican/Chicano perspective. It covers the period of discovery to the period of Reconstruction with emphasis on the evolution, influence, and experience of the Chicano. It includes their contributions to the political, social, economic, and cultural development of the United States. This general education course would be of interest to students studying history, ethnic studies, or other social sciences. This course partially satisfies the American Institutions requirement for the associate degree and for transfer to CSU. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chicano

Studies (CHIC) 141A, 141B, Black Studies (BLAS) 140A, 140B, or History (HIST) 109, 110 combined: maximum credit, one series.

141B United States History from a Chicano Perspective

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This is a survey course in American history that covers the period of transition of the southwest from its Spanish-Mexican roots to its American acquisition in 1848. The course traces 19th century developments, slavery in the former Mexican territories, Native Americans, immigration and repatriation and includes constitutional development and government in California. This is a survey course recommended for those students who intend to transfer to a four-year college or university. The complete six-unit sequence, Chicano Studies 141A and 141B, satisfies the graduation and degree requirements in American Institutions and California State Government. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chicano Studies (CHIC) 141A, 141B, Black Studies (BLAS) 140A, 140B or History (HIST) 109, 110 combined: maximum credit, one series.

150 History of Mexico

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is a survey of Mexican history from the earliest pre-Columbian times to the present. Special emphasis is given to major historical developments from the time of the Spanish Conquest to the Revolution of 1910. In this course special consideration is given to the economic, political, social, and cultural factors which have shaped modern Mexico. This course prepares students for careers dealing with Mexico and/or Mexican culture. This course satisfies an elective requirement for the Associate Degree in Chicano Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

170 La Chicana

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

La Chicana in American society as viewed through a historical and sociological perspective. Her role in Chicano culture, family, religion, education, economics, and politics. Contemporary problems and conditions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Chicano Images in Film

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a critical approach to cinematic images of Chicanos as depicted in selected films. Focus is placed on stereotypical and negative portrayals during early cinema with an examination of the more realistic and complex portraits of more recent times. Film genres such as early Hollywood features, documentaries and the emerging "Chicano film" are examined. This course is designed for students interested in film studies with a special focus on the Chicano experience in film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Pre-Columbian Cultures of MesoAmerica

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an examination of the archaeological, economic, social, political, cultural, and religious systems of MesoAmerica. This course satisfies an elective requirement for the Associate Degree in Chicano Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

203 Introductory Spanish for Spanish Speakers

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

A survey of Spanish grammar, understanding and

speaking Spanish, with special emphasis on reading and writing Spanish. The Spanish of the Southwest will be studied as an effective and legitimate instrument of communication. Students will read community newspapers as well as Chicano and Mexican writers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chicano Studies (CHIC) 203, 204 and Spanish (SPAN) 201, 202 combined: maximum credit, one series.

204 Intermediate Spanish for Spanish Speakers

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

An advanced review of grammar. Conversational and written Spanish emphasized. Spanish and Chicano literary works will be selected to acquaint the student with the historical background, literature, and culture of the Spanish-speaking people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chicano Studies (CHIC) 203, 204 and Spanish (SPAN) 201, 202 combined: maximum credit, one series.

210 Chicano Culture

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of the Indo-Hispano roots of Chicano culture in the United States. Emphasis is placed on the historical development of Chicano popular culture and its expression through music, art, radio, television, newspapers, literature and festivities in urban and rural contexts. This course is designed for students majoring in Chicano Studies and/or Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For students with advanced background in Chicano Studies who wish to study special problems or work on specialized projects. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Child Development

	Units
Certificate of Completion:	
Assistant Teacher	10-13
Family Child Care	9
Infant/Toddler Care	9
Residential Care Workers	12
School Age Child Care	12
Certificate of Achievement:	
Associate Teacher	18-19
Teacher	26-29
Master Teacher	35-39
Associate in Science Degree:	
Child Development	26-29*
Site Supervisor	35-38*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

Child Development offers programs for career and transfer students. Certificates of Completion, Certificates of Achievement and Associate Degree programs are available to students interested in a range of child development opportunities and in meeting the requirements for the State of California Child Development Permits and the California State Department of Social Services, Title 22, Community Care Licensing.

Program Emphasis

The Child Development program offers course work, training and supervised practicum experiences to meet

state licensing requirements for working in centers, schools, child care homes and service related agencies. The skills and knowledge gained in beginning courses provide the framework and foundation for more specialized courses.

Faculty	Office	Telephone
Susan Fontana	Child Development Center F-Building	(619) 388-3205
Berta Harris	A-1-D	(619) 388-3877
Gloria Lyon	Child Development Center, F-Building	(619) 388-3205 (619) 388-3648
Sue Martin	A-1-C	(619) 388-3237

Career Options

The San Diego Community College District offers certificates, degrees and transfer options in the field of Child Development/Early Childhood Education. The **Family Child Care** Certificate offered at City, Mesa, and Miramar and the **Home Day Care** Certificate offered at Mesa provides skills and knowledge for child care in family settings. The **Infant/Toddler Care** Certificate of Completion offers skills for working with children aged birth to three years. The **School Age Child Care** Certificate of Completion offered at City and Mesa provides training for working with school age children.

The **Assistant Teacher** Certificate of Completion prepares an individual to work in public and private child care settings. The Certificate of Achievement options, **Associate Teacher, Teacher, and Master Teacher**, prepare individuals for higher level instructional positions. The **Assistant Teacher, Associate Teacher, Teacher, and Master Teacher** certificates meet the requirements for the State of California Child Development Permits. The Child Development Associate in Science Degrees prepare for teacher, master teacher, director, and site supervisory positions.

Academic Programs

*Certificates of Completion

*These are department awards in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion: Assistant Teacher*

This certificate prepares students to assist in the instruction of children under the supervision of an Associate Teacher or higher. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101, Human Growth and Development.....	3
CHIL 180, Nutrition, Health & Safety for Children.....	3
Select one course from:	
CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science	
CHIL 141, The Child, Family and Community.....	3
Select one course from:	
CHIL 160, Observing and Understanding Children	
CHIL 161, Observations and Issues in Child Development	
CHIL 270, Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D, Child Development Center Practicum	1-4
Total Units = 10-13	

Certificate of Completion: Family Child Care*

This certificate prepares students with basic training to care for children in a licensed home/family setting. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 100, Introduction to Child Development OR	
CHIL 101, Human Growth and Development.....	3
CHIL 180, Nutrition, Health & Safety for Children.....	3
Select one course from:	
CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science	
CHIL 175, Infant-Toddler Growth and Development	3
Total Units = 9	

Certificate of Completion: Infant/Toddler Care*

This certificate prepares students with basic training to work with children aged birth to three years in licensed home/family care and center programs. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 100, Introduction to Child Development OR	
CHIL 101, Human Growth and Development.....	3
CHIL 175, Infant-Toddler Growth and Development	3
CHIL 176, Principles of Infant/Toddler Caregiving	3
Total Units = 9	

Certificate of Completion: Residential Care Workers*

This certificate is designed to meet the State requirements for positions in residential care programs.

Courses	Units
CHIL 101, Human Growth and Development.....	3
CHIL 141, The Child, Family and Community.....	3
CHIL 175, Infant-Toddler Growth and Development	3
CHIL 188, Child Abuse	3
Total Units = 12	

Certificate of Completion: School Age Child Care*

This certificate prepares students for entry level positions as before- and after-school care providers, recreation leaders, and camp counselors. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 100, Introduction to Child Development OR	
CHIL 101, Human Growth and Development.....	3
CHIL 152, School Age Program Planning	3
Select two courses from:	
CHIL 185, Computer Usage with Young Children	
MATH 210A, Concepts of Elem School Mathematics I	
MUSI 110, Music for Elementary School Teachers	
PHYE 240, Physical Education in the Elementary Schools	6
Total Units = 12	

For the Certificates of Completion listed above, one or more of the following courses is recommended to gain experience and credits required for higher level permits:

- CHIL 160, Observing and Understanding Children
- CHIL 161, Observations and Issues in Child Development
- CHIL 270, Work Experience
- CHIL 291, or 291A, or 291B, or 291C, or 291D, Child Development Center Practicum

Certificate of Achievement: Child Development

Associate Teacher

This certificate prepares students to provide instruction to children and supervise Assistant Teachers. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:	Units
CHIL 101, Human Growth and Development.....	3
CHIL 141, The Child, Family and Community.....	3
CHIL 180, Nutrition, Health & Safety for Children.....	3

Select two courses from:

CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science	3,3

Select three or more units from:

CHIL 160, Observing and Understanding Children	
CHIL 161, Observations and Issues in Child Development	
CHIL 270, Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D, Child Development Center Practicum	3-4

Total Units = 18-19

Certificate of Achievement: Child Development

Teacher

This certificate prepares students to provide instruction to children and supervise Assistant and Associate Teachers. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:	Units
CHIL 101, Human Growth and Development.....	3
CHIL 111, Curriculum: Music/Motor Skills	3
CHIL 121, Curriculum: Art	3
CHIL 131, Curriculum: Language/Science	3
CHIL 141, The Child, Family and Community.....	3
CHIL 180, Nutrition, Health & Safety for Children.....	3
CHIL 151, Program Planning	3

and concurrent enrollment in:

CHIL 270, Work Experience OR	
CHIL 275, Supervised Field Study	2-4

Select one of the following three options:

CHIL 160, Observing & Understanding Children AND	
CHIL 161, Observation & Issues in Child Development	
OR	

CHIL 165, Children with Special Needs OR	
CHIL 175, Infant-Toddler Growth and Development	3-4

Total Units = 26-29

Certificate of Achievement: Child Development

Master Teacher

This certificate prepares students to provide instruction to children and supervised Assistant/Associate Teachers and Teachers. It further prepares the Master Teacher to coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major: **Units**

CHIL 101, Human Growth and Development.....	3
CHIL 111, Curriculum: Music/Motor Skills.....	3
CHIL 121, Curriculum: Art	3
CHIL 131, Curriculum: Language/Science	3
CHIL 141, The Child, Family and Community.....	3
CHIL 151, Program Planning	3
CHIL 180, Nutrition, Health & Safety for Children	3

AND

Select one of the following three options that is NOT part of your Specialization (see Specializations listed below) to complete the minimum 24 unit core requirement:

CHIL 160, Observing & Understanding Children AND	
CHIL 161, Observation & Issues in Child Development	
OR	

CHIL 165, Children with Special Needs OR	
CHIL 175, Infant-Toddler Growth and Development.....	3-4

AND

CHIL 215, Adult Supervision & Mentoring in Early Childhood Settings.....	3
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AND

CHIL 270, Work Experience, OR	
CHIL 275, Supervised Field Study (with concurrent enrollment in CHIL 151, Program Planning) ...	2-4

AND

Select one of the following Specializations for a total of 6 - 7 units:

Guiding Young Children

CHIL 160, Observing & Understanding Children	
CHIL 161, Observation & Issues in Child Development	

CHIL 162, Observing and Guiding Child Behavior **or**

<u>Family Life</u>	
CHIL 160, Observing & Understanding Children	
CHIL 161, Observation & Issues in Child Development	

CHIL 188, Child Abuse **OR**

Special Needs

CHIL 165, Children with Special Needs	
CHIL 166, Special Needs Curriculum OR	

Infant/Toddler

CHIL 175, Infant-Toddler Growth and Development
 CHIL 176, Principles of Infant/Toddler Caregiving **OR**

School Age

CHIL 152, School-Age Program Planning **AND**
Select one course from:
 CHIL 185, Computer Usage with Young Children **OR**
 MATH 210A, Concepts of Elementary School
 Mathematics **OR**
 MUSI 110, Music for the Elementary School Teachers **OR**
 PHYE 240, Physical Education in the Elementary
 Schools 6-7
Total Units = 35-39

**Associate in Science Degree:
 Child Development**

This degree prepares students to provide instruction to children and supervise Assistant and Associate Teachers. Child Development courses must be completed with a grade of "C" or better. Additional general education and graduation requirements are listed in the Academic Requirements section of this catalog. The Associate Degree requires a minimum of 60 units.

Courses Required for the Major	Units
CHIL 101, Human Growth and Development.....	3
CHIL 111, Curriculum: Music/Motor Skills.....	3
CHIL 121, Curriculum: Art	3
CHIL 131, Curriculum: Language/Science	3
CHIL 141, Child, Family and Community.....	3
CHIL 180, Nutrition, Health & Safety for Children....	3
CHIL 151, Program Planning	3

and concurrent enrollment in:

CHIL 270, Work Experience, **OR**
 CHIL 275, Supervised Field Study 2-4

Select one of the following three options:

CHIL 160, Observing & Understanding Children **AND**
 CHIL 161, Observation & Issues in Child Development
OR

CHIL 165, Children with Special Needs **OR**
 CHIL 175, Infant-Toddler Growth and
 Development..... 3-4

Total Units = 26-29

**Associate in Science Degree:
 Child Development
 Site Supervisor**

This degree prepares students to supervise single site programs, provide instruction to children and coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better. Additional general education and

graduation requirements are listed in the Academic Requirements section of this catalog. The Associate Degree requires a minimum of 60 units.

Courses Required for the Major **Units**

CHIL 101, Human Growth and Development.....	3
CHIL 111, Curriculum: Music/Motor Skills.....	3
CHIL 121, Curriculum: Art	3
CHIL 131, Curriculum: Language/Science	3
CHIL 141, Child, Family and Community	3
CHIL 151, Program Planning	3

and concurrent enrollment in:

CHIL 270, Work Experience, OR	
CHIL 275, Supervised Field Study.....	2-4
CHIL 180, Nutrition, Health & Safety for Children	3
CHIL 202, Administration of Early Childhood Programs	3
CHIL 210, Supervision of Early Childhood Programs	3
CHIL 215, Adult Supervision and Mentoring in Early Childhood Settings.....	3

Select one of the following three options:

CHIL 160, Observing & Understanding Children
AND

CHIL 161, Observation & Issues in Child Development
OR

CHIL 165, Children with Special Needs **OR**
 CHIL 175, Infant-Toddler Growth and
 Development..... 3-4

Total Units = 35-38

Recommended electives: (select from courses not already taken): Child Development 100, 152, 160, 161, 162, 165, 166, 175, 176, 185, 188, 202, 210, 215, 270, 275, 290, 291, 291A, 291B, 291C, 291D.

**Courses offered by San Diego Community College
 District that meet experience requirements for
 Certificates and Degrees:**

- CHIL 160, Observing & Understanding Children, 2 units (16 days)
- CHIL 161, Observation & Issues in Child Development, 2 units (16 days)
- CHIL 270, Work Experience, 1 unit (16 days)
- CHIL 270, Work Experience, 2 unit (32 days)
- CHIL 270, Work Experience, 3 unit (48 days)
- CHIL 270, Work Experience, 4 unit (64 days)
- CHIL 275, Supervised Field Study, 2 units (32 days)
- CHIL 291, Child Development Practicum, 1 unit (16 days)
- CHIL 291, Child Development Practicum, 2 unit (32 days)

CHIL 291A, Child Development Practicum,
1 unit (16 days)

CHIL 291B, Child Development Practicum,
1 unit (16 days)

CHIL 291C, Child Development Practicum,
1 unit (16 days)

CHIL 291D, Child Development Practicum,
1 unit (16 days)

Transfer Information

Common university majors related to the field of Child Development include:

Child Development, Family and Consumer Studies and Sciences, Gerontology, Human Development, Liberal Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Child Development (CHIL)

101 Human Growth and Development

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of the interrelationship between the physical, cognitive and psychosocial growth and development of the individual from conception through adolescence. Emphasis is placed on positive relationships with family members, peers and other significant individuals. Theories and philosophies of human development and cross-cultural patterns are explored. Observations of children and educational programs are required. This course is a core requirement for the State of California Child Development Permit and the State of California Community Care Licensing,

Title XXII. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN FCS 14).

111 Curriculum: Music/Motor Skills

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course is a study of the development and significance of music and perceptual motor activities in child development from infancy through kindergarten. Emphasis is placed on basic teaching techniques and selecting suitable materials and equipment for various age and maturity levels among preschool children. This course is designed for students who have an interest in working with children ages 0 - 5 in settings such as preschools, daycares etc. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Curriculum: Art

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory study of the function of creativity and the affective domain in early childhood educational programs. Emphasis is placed on the development of art curriculum activities, basic teaching skills, guidance techniques, equipment and materials. Students select appropriate activities for a variety of age and maturity levels based on child development theories and concepts. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Curriculum: Language/Science

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course is an introductory study of the function of language, math and science learning in early childhood educational programs. Emphasis is placed on the development of language and science curriculum activities, basic teaching skills, guidance techniques, equipment and materials. Students select appropriate activities for a variety of age groups and maturity levels based on child development theories and concepts. This course may be used for licensing, child development permits, transfer and general interest for working with

children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 The Child, Family and Community

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of the dynamics of human development and socialization in a culturally pluralistic society. Emphasis is placed on the influences of contemporary family living and cultural patterns on the child, school-family relationships, and community resources and services that support and strengthen families. This course is a core requirement for California Child Development teacher/director center permits as well as for the State of California Department of Community Care Title XXII licensing child care centers requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN FCS 12).

151 Program Planning

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Child Development 101; and either Child Development 111 or 121 or 131, each with a grade of "C" or better, or equivalent.

Corequisite: Child Development 270 or 275.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course focuses on planning the preschool learning environment to promote optimal development. It emphasizes curriculum planning, guidance, safety, record keeping, observation techniques, resource units, and daily plans. The course partially fulfills State of California Permit requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 School Age Program Planning

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Child Development 101 and Mathematics 210A and Mathematics 210B and Music 110 and Physical Education 47, each with a grade of "C" or better, or equivalent.

This course is a practical study of school age program planning. Emphasis is placed on the details of planning a school age child development center, curriculum

development, staff training and child guidance, health and safety. This course is designed for students planning to work with school age children in community settings. This course may be used to partially fulfill State of California Child Development Permit Requirements and Title 21 teaching requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Techniques of Teaching Using the Reggio Emilia Approach

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: Not open to students with previous credit for Child Development 265E. This course is based on the early childhood philosophy, and teaching techniques adopted by the schools from Reggio Emilia, Italy. Emphasis is placed on the overall principles of the Reggio Emilia philosophy of valuing the capabilities of the child, collaborations between the teachers, family and community, strategies of emergent curriculum, project work and the documentation process. Adaptation strategies for the use of Reggio in traditional preschools and childcare programs are addressed. This course may be used for teachers and administrators as partial fulfillment of Title 22 and Child Development Permit Matrix curriculum requirements. It is also an elective for State of California Child Development Permits; Child Development associate degrees and certificates. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Observing and Understanding Children

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Child Development 160A. This course focuses on behavioral patterns and growth processes of young children through, observations and supervised participation in the campus Child Development Center. Emphasis is placed on the principles of observing, interpreting and guiding children's behavior. The course includes the study of children's developmental, safety and nutritional needs. The course fulfills the specialization requirements for the State of California Master Teacher Permit when taken with Child Development 161 and 162 or Child

Development 161 and 188. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Observations and Issues in Child Development

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Child Development 160B.

This course explores current issues in child development and how these issues influence the child and the family. Emphasis is placed on effective communication skills, positive guidance techniques, kindergarten readiness skills and appropriate classroom activities. The course includes supervised participation in the campus Child Development Center. This course fulfills the specialization requirements for the State of California Master Teacher Permit when taken with Child Development 160 and 162 or Child Development 160 and 188. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Observing and Guiding Child Behavior

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course explores various behavior management techniques, interpersonal communication, ideas and suggestions to assist caregivers in guiding children's behavior. Application of developmental, cultural and communication principles in combination with observation of real situations is the mode of study of this course. The focus will be on children from birth through age 10. The course can be used to meet degree and certificate requirements for Child Development and the Master Teacher Permit requirement if taken with Child Development 160 and 161. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Children with Special Needs

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

An educational and parenting approach to working with children with exceptionalities. Methods of integrating

the exceptional child into a mainstreamed educational program will be investigated. Differences and needs of each area of exceptionality will be investigated as well as the roles of different professionals in the educational process. The course is designed primarily for parents, teachers, nurses, social workers, and paraprofessionals employed in schools, day care centers, and child development programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

166 Special Needs Curriculum

**3 hours lecture, 3 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides an in-depth look at curriculum for children with special needs. Full inclusion of children with special needs into school and community settings is explored. Application of specific strategies for integrating children into typical settings is addressed as well as use of adaptive equipment. This course is designed primarily for parents, teachers, nurses, social workers, and paraprofessionals employed in schools, day care centers, and child development programs. The course partially fulfills requirements for the Child Development Certificate and Degree programs and partially meets the specialization requirements for the Master Teacher Permit if taken with Child Development 165. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Infant-Toddler Growth and Development

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines typical and atypical physical, social, emotional, and intellectual growth of the infant and toddler. The selection and maintenance of appropriate play materials and equipment for indoor and outdoor environments is discussed. Appropriate observations and visitations to the community are required. This course meets State of California Title 22 licensing regulations for teachers in infant toddler settings, and is beneficial for parents. This course fulfills the specialization requirement for State of California Master Teacher Permit when taken in addition to Child Development 176 (FT). Associate Degree Credit & transfer to CSU and/or private colleges and universities.

176 Principles of Infant/Toddler Caregiving
3 hours lecture, 3 units
Grade Only

Advisory: Completion of English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course explores principles and curriculum of an infant/toddler program that includes all aspects of infant and toddler development. Students will learn care strategies in a variety of caregiving situations. Content includes licensing and regulations, developmental needs, health, nutrition, and safety of the very young. The student learns to plan appropriate indoor and outdoor environments. Staff interaction, parent participation, and program development are included. This course fulfills major and master permit specializations when taken along with Child Development 160 and 161. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Nutrition, Health and Safety for Children
3 hours lecture, 3 units
Grade Only

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides students and child development professionals with a survey of the nutritional, health, and safety needs of children from infant/toddlers through preschool age. Topics may include, but are not limited to, the planning and execution of environments and activities that promote safety, balanced diet, and overall health for children. Students also learn the fundamentals of pediatric first aid and cardiopulmonary resuscitation (CPR). This course also meets the Title XXII, fifteen hour, Health and Safety Training requirement, including signs and symptoms of child abuse. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

185 Computer Usage with Young Children
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course explores principles of computer application in the Child Development field. Emphasis will be on the use of computers as an educational tool. Through the in-depth exploration of computer software applications, students will learn the functions, integration, and

flexibility of computer usage with young children. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

188 Child Abuse
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the causes and effects of child abuse and neglect. It is designed primarily for parents, teachers, nurses, and other childcare professionals to learn strategies for understanding and responding to the various forms of stress and violence that affect many children today. This course emphasizes the skills needed for conflict resolution and explores the environmental set-up and curriculum that promotes peaceful, cooperative and nonviolent play and interactions. Information about the history, current legislation, reporting responsibilities, and identification of abuse is also given. (FT) Associate Degree Credit only and not Transferable.

202 Administration of Early Childhood Programs
3 hours lecture, 3 units
Grade Only

Prerequisite: Child Development 101 and 141, each with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Child Development 111 and 121 or 131, each with a grade of "C" or better, or equivalent.

This course provides an overview of program administration including theoretical perspectives on early childhood education, licensing regulations, funding sources, budgetary considerations, personnel management, curriculum development, and teacher selection. The course meets State of California Title 22 licensing regulations for site supervisors. It also partially fulfills State of California matrix requirements for Program Director and Site Supervisor Permits. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Supervision of Early Childhood Programs
3 hours lecture, 3 units
Grade Only

Prerequisite: Child Development 141 and 151, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 201 or 201B.

This course examines early childhood supervisory techniques with emphasis on educational philosophy, professional growth, in-service staff training, program and staff evaluation, models of parent education and involvement, and supportive services. It partially fulfills the State of California Child Development Permit Matrix requirement for supervisors and directors and also meets the State of California Title 22 licensing regulations for directors. This course is designed for students who intend to go into supervisory positions in early childhood education. It also introduces students to the tools that help them organize and evaluate quality children's programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215 Adult Supervision and Mentoring in Early Childhood Settings

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Child Development 151 with a grade of "C" or better, or equivalent.

This course emphasizes the methods and principles of supervising adults in early childhood settings. Students study effective models for guidance and evaluation of adults, positive communication skills, and the role of the mentor in a teaching environment. It is designed for students who supervise other adults in the preschool classroom while simultaneously providing an appropriate setting for young children. This is a required course for the levels of Master Teacher, Site Supervisor and Program Director for the Child Development permit issued by the Commission on Teacher Credentialing. Associate Degree Credit only and not Transferable.

270 Work Experience

**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units during the semester, including work experience.

Program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

275 Supervised Field Study

**3-9 hours lab, 1-3 units
Grade Only**

Corequisite: Child Development 151.

Advisory: Child Development 160 with a grade of "C" or better, or equivalent.

This directed field study course provides students with an opportunity to apply classroom information in a practical setting with supervision from faculty as well as field-site supervisors. Intended for students who plan to teach or supervise in early childhood settings, this course partially fulfills the State of California requirement for experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Investigation of a special area in the field of Child Development. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291 Child Development Lab Practicum

**3-12 hours lab, 1-4 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4; and Child Development 160 or 161 with a grade of "C" or better, or equivalent.

This course provides supervised practical experience at the campus child development lab to supplement child development courses and related curriculum. Through on-site training, students gain practical knowledge in curriculum development, guidance strategies, observation, and child growth and development. This course is designed for students who plan careers in early childhood education and family support agencies or for parents who seek strategies and techniques for guiding children. The course may be used toward the field experience component for the State of California Child Development Permit. This course may be taken four times for credit. The combined maximum credit for Child Development 291 may not exceed 16 units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291A Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides directed laboratory experience in the campus Child Development Center. It is designed for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students become familiar with the operating policies and procedures of a preschool program and observe and access the development of children. This course may be used toward the experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291B Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides directed laboratory experience in the campus Child Development Center. It is designed for students who plan careers in early childhood education and family support programs and for parents who seek practical experience in guiding and teaching children. Students examine appropriate safety, health, and nutritional practices in a preschool setting with an emphasis on implementation with young children. This course may be used toward the experience component for the State of California Child Development Permit and toward the Health and Safety training requirements for Title 22. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291C Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

This course provides directed laboratory experience in the campus Child Development Center for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students explore teaching practices that enhance children's learning in the classroom and assist in the planning and implementation of developmentally appropriate activities. This course may be used toward the experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

291D Child Development Center Practicum
3 hours lab, 1 unit
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

This course provides directed laboratory experience in the campus Child Development Center for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. Students examine the role of routines and transitional activities in the organization and structure of an early child development setting. The class emphasizes positive guidance and discipline for young children. This course may be used toward the field experience component for the State of California Child Development Permit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Communications

Radio and Television, Speech and Journalism

	Units
Certificate of Completion:	
Radio	9
Video/Film	9
Performance	9
News	9
Multimedia	9
Speech	9
Associate in Science Degree:	
Communications: Radio	37*
Video/Film	36.5*
Broadcast News	37*
Management	36*
Multimedia	36*
Associate in Arts Degree:	
Communications: Speech	18*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Communications: Radio and Television

Description

The Radio and Television program encompasses the fields of broadcasting and cablecasting news, radio, television, film, multimedia, and concert productions, along with the expanding area of industrial video applications. The field includes all aspects of creation and production both behind and in front of cameras and microphones on KSDS-FM and the television production facilities through theoretical and practical applications. The Radio and Television Department seeks to prepare the student for transfer to four-year institutions or employment in the field and facilitates training in television production and performance.

Program Emphasis

The Radio and Television program offers five areas of specialization: Radio; Radio and Television News; Video/Film; Management/Sales; and Multimedia. Certain core courses are central to each of these areas. Prospective students are advised that proficiency in English reading and writing skills is necessary for successful participation in the field. Students pursuing the Radio and Television News specialty should take additional courses in social sciences or political science. Students interested in the Management/Sales specialization are advised to take business courses as electives. The Radio and Television Department offers "hands-on" experience in all areas of the field. Through the use of the San Diego City College radio station, KSDS-FM, 88.3, and related facilities, students may focus on radio, news, management, sales performance and production. The adjacent television production studio provides state-of-the-art broadcast quality equipment and facilities for training in production and performance.

Faculty	Office	Telephone
Duane Gardella	C-107	(619) 388-3594
John Hildebrand	C-122-B	(619) 388-3041
Laura Castaneda	C-122-D	(619) 388-3043

Career Options

Examples of employment options available in entry level radio, television, and film production after successful completion of the associate degree program include: on-air-personality, radio news reporter, radio and television program writer/producer, television operations engineer, news photographer, audio engineer, director and videographer, and studio positions. Careers which require four-year degrees in radio and television include: motion picture writer/producer, radio and television salesperson, manager, news writer/reporter and news producer. Careers in multimedia and industrial/instructional video require an associate and often a four-year degree.

Academic Programs

The associate degrees in Radio and Television require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units. STUDENTS MUST COMPLETE THE CORE AND ONE AREA OF SPECIALIZATION.**

Certificate of Completion: Radio*

Courses:	Units
RTVC 105, Media Performance.....	3
RTVC 130, Radio Programming.....	3
Select three units from:	
RTVC 106, Acting for Radio/Voice-Over	
RTVC 107, Broadcast Audio	
RTVC 115, Radio & Television Management Principles	
RTVC 140, Radio & Television News Writing	
RTVC 132, Radio Remotes Special Events AND	
RTVC 247A, B, C, OR D, Radio Broadcasting Practicum.....	3
Total Units = 9	

Certificate of Completion: Video/Film*

Courses:	Units
RTVC 124, Electronic Field Production.....	3
Select six units from:	
RTVC 122, Television Production	
RTVC 124, Electronic Field Production	
RTVC 126, Staging Television & Film	
RTVC 128, Lighting For Television & Film	
RTVC 146, The TV News Field Report	
RTVC 167, Motion Picture Production.....	6
Total Units = 9	

Certificate of Completion: Performance*

Courses:	Units
RTVC 105, Media Performance.....	3
Select six units from:	
RTVC 106, Acting for Radio/Voice-Over	
RTVC 119, Acting for Film and Television	
RTVC 121, Performance for Television	6
Total Units = 9	

Certificate of Completion: News*

Courses:	Units
RTVC 140, Radio & Television News Writing	3
Select six units from:	
RTVC 145, Television News Production	
RTVC 146, The TV News Field Report	
RTVC 249A OR B OR C OR D Television News Workshop.....	6
Total Units = 9	

Certificate of Completion: Multimedia*

Courses:	Units
RTVC 151, Introduction to Multimedia	3
Select six units from:	
RTVC 152, Digital Audio Post Production	
RTVC 153, Nonlinear Editing	
RTVC 154, Interactive Game Design	
RTVC 157, Multimedia Production	6
Total Units = 9	

*These are department awards in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Associate in Science Degrees: Communications: Radio and Television

Core Courses

Students must complete the Core and one area of specialization. Radio and Television Core Courses Required for the Associate Degree:

Courses Required for the Major:	Units
RTVC 100, Introduction to Radio & Television	
OR	
RTVC 200, Introduction to Mass Communications	3
RTVC 107, Broadcast Audio	3
RTVC 110, Media Writing	3
RTVC 118, Television Studio Operations	3
RTVC 160, Introduction to Cinema	3
Total Units = 15	

Recommended electives: Radio and Television 200, 245, 249A,B,C,D; CBTE 101 or equivalent, or a typing certificate of 35 WPM.

Areas of Specialization

Radio

Courses Required for the Major:	Units
Core Courses.....	15
RTVC 105, Media Performance.....	3
RTVC 106, Acting for Radio/Voice-Over	3
RTVC 115, Radio & Television Management Principles	3
RTVC 130, Radio Programming.....	3
RTVC 131, Advanced Radio Performance	1
RTVC 132, Radio Remotes Special Events.....	2
RTVC 140, Radio & Television News Writing	3
RTVC 175, Radio & Television Sales	3
RTVC 247A,B,C, OR D, Radio Broadcasting Practicum	1
Total Units = 37	

Video/Film

Courses Required for the Major:	Units
Core Courses.....	15
RTVC 105, Media Performance.....	3
RTVC 115, Radio & Television Management Principles	3
RTVC 122, Television Production	3
RTVC 124, Electronic Field Production.....	3
RTVC 126, Staging Television & Film OR	
RTVC 128, Lighting For Television & Film	3
RTVC 123, Advanced Television Production OR	
RTVC 146, The TV News Field Report OR	
RTVC 119, Acting for Film and Television.....	3
RTVC 127, Basic Television Production Switcher Operations	0.5
RTVC 167, Motion Picture Production.....	3
Total Units = 36.5	

Recommended elective: Photography 105.

Broadcast News

Courses Required for the Major:	Units
Core Courses.....	15
RTVC 105, Media Performance.....	3
RTVC 121, Performance for Television	3
RTVC 124, Electronic Field Production.....	3
RTVC 126, Staging Television & Film OR	
RTVC 128, Lighting for Television & Film	3
RTVC 140, Radio & Television News Writing	3
RTVC 145, Television News Production	4
RTVC 146, Television News Field Report	3
Total Units = 37	

Management

Courses Required for the Major:	Units
Core Courses	15
RTVC 105, Media Performance	3
RTVC 115, Radio & Television Management Principles	3
RTVC 122, Television Production	3
RTVC 130, Radio Programming.....	3
RTVC 132, Radio Remotes & Special Events	2
RTVC 175, Radio & Television Sales	3
RTVC 176, Radio & Television Advertising Copy	1
BUSE 201, Business Organization and Management...	3
Total Units = 36	

Multimedia

Courses Required for the Major:	Units
Core Courses	15
RTVC 151, Introduction to Multimedia	3
Select twelve units from the following:	
RTVC 124, Video Production	
RTVC 152, Digital Audio Post Production	
RTVC 153, Non-linear Editing	
RTVC 154, Interactive Game Design	
RTVC 157, Multimedia Production	12
Select six units from the following:	
ARTG 125, Digital Media	
PHOT 180, Digital Imaging	
CISC 114, Introduction to Computer Graphics & Web Media.....	6
Total Units = 36	

Transfer Information

Common university majors related to the field of Radio and Television include: Communication, Film and Electronic Arts, Film and Television, Journalism, Mass Communication, Radio and Television, Television, Film and Media.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Radio and Television (RTVC)

100 Introduction to Radio and Television

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 100. This course is a historical survey of radio and television as sociological forces in everyday life; includes technological development, programming, ratings, economics, legal aspects and social control of broadcasting in America, the emergence of multimedia, and cross-cultural, international comparisons. It is advised that students take RTVC 100 prior to or in conjunction with the beginning core courses in the major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Media Performance

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 105. This introductory course provides instruction and practice in announcing, interpretation of copy, newscasting, music continuity, the operation of audio equipment, and interviewing. Students gain practice with commercial material and ad lib announcing. This course is part of the AS degree and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Acting for Radio/Voice-Over

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Radio and Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Drama 106, Drama 265 or Radio and Television 265: Acting for Radio/Voice-Over.

This is an introductory course to train actors in the fundamentals of voice technique, dialects and voice-over. Emphasis in the voice-over component includes microphone technique, character voices and cartoon voices for commercial use, as well as cold reading audio-taped audition skills. Other components include cold reading techniques, fundamental acting techniques required for voice-over work, and the production of a voice-over demo tape. This course provides a comprehensive introduction to students intending to enter a career in dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Broadcast Audio

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 107. This course offers instruction in the theory and practice of audio techniques used in the audio field: radio, television, multimedia, and film, including acoustics, audio language and terms, use of microphones, use of mixing consoles and related production equipment. Students will apply the learned materials to actual audio production. This course is part of the A.S. degree core and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Media Writing

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 110. This course is designed to cover the analysis and writing of radio, television, and film materials, including storytelling and screen writing; commercial copy; public service announcements; educational, instructional, and industrial program formats; and documentaries. This course is intended for the transfer student intending to major in Communications with emphasis in radio, television, film, or multimedia and to satisfy entry-level requirements for students obtaining employment in radio, television, industrial video, cinema, and multimedia. This course meets transfer requirements in the SDSU Communications

Department. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Radio and Television Management Principles

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 115. This course offers instruction in the business practices and interrelationships of stations, networks, and agencies. Covers the principles of radio, television, and cable advertising, merchandising, market research, audience measurement, and government regulation. This course is intended for transfer students and for those preparing for employment in the field of broadcast management in programming, promotions, sales, engineering and news departments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

118 Television Studio Operations

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 120. This course is an introduction to the theory, terminology, and operations within a television studio and control room. This introduction includes television directing, the operation of television audio equipment, TV cameras, and television switcher, fundamentals of TV lighting, graphics, video control, video tape recording and film for TV. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Acting for Film and Television

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Drama 119 or Drama 265:

Acting for Film and Television or Radio and Television 265: Acting for Film and Television.

This course introduces students to the skills required for on-camera performing techniques as used in the motion picture and television industry. Students participate in the selection, rehearsal, and on-camera performance of material from television and motion picture scripts including drama, sitcoms, soaps, and commercials. Emphasis is placed on cold-reading taped audition skills, improvisational and interview techniques, and the fundamental acting techniques required for camera, scene, and monologue studies. This course provides a comprehensive introduction to students intending to enter a career in the dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Performance for Television

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 105 with a grade of "C" or better, or equivalent.

This course offers instruction and practice in all phases of television announcing: performance, news, commercials, public service announcements, interviews, and talk shows. Instruction and practice using a teleprompter, scripts, and cue cards. Students will be videotaped in the City College television studio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Television Production

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 118 with a grade of "C" or better, or equivalent; and completion of or concurrent enrollment in Radio and Television 124 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 122A. This is an intermediate course in television production intended for the transfer student and the student seeking employment in the television, technical video, and multimedia industries. Emphasis is placed upon theory and practice in television production including planning, writing, producing, staging and directing interviews, commercials, public service announcements, dramatic pieces, multimedia and other program segments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Advanced Television Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 122 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 122B. This course involves the development of advanced production techniques. Emphasis is placed on individual projects in the producing and directing of television programs and segments, in conjunction with Radio and Television 122. This advanced production course is intended for transfer students and students seeking employment in the television, video production, and multimedia industries. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Electronic Field Production
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 118 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 124. This course is an introduction to the theory, terminology, and operation of remote electronic video production, including composition and in-camera editing techniques, camera operation, portable lighting, video recorder operation, audio control, and editing. This course includes the aesthetics and fundamentals of scripting, producing, and directing field location, multimedia, and multi-camera video production. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

126 Staging for Television and Film
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 126. This course involves theory and practice in the aesthetics and techniques of staging and design for television, multimedia, and film production. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Basic TV Production Switcher Operation
1.5 hours lab, .5 unit
Grade Only

Advisory: Radio and Television 100 and 118, each with a grade of "C" or better, or equivalent.

This course offers instruction and practice in advanced operation of the Grass Valley 200 video production switcher for television. The course is intended for students who wish to major in Television and Film/Video in the Radio and Television program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Lighting for Television and Film
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 128. This course involves theory and practice in the aesthetics and techniques of lighting for television, multimedia and film with emphasis on the essence of light and how the viewer is influenced by different applied techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Radio Programming
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Radio and Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 130. This course is an introductory study of radio programming including the programming formula, the "hot" clock, station image, marketing research, sales, the corporate ladder, identifying the format, radio format syndication, demographics, on-air personality, music scheduling and "day parting." The course is designed for students wishing to obtain an associate degree in Communications with an emphasis in Radio or Management and to transfer to a four-year institution or to further professional skills in radio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Advanced Radio Performance**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 130 with a grade of "C" or better, or equivalent, or professional experience. This course offers practice and critique within the "real radio" environment. The areas of emphasis include practical radio announcing experience on KSDS-FM, advanced radio production (analog and digital), copy writing for broadcast announcements, and assist in radio station promotions, music library maintenance and office administration. This course is intended for students wishing to major in Radio or to enhance their professional experience in radio broadcasting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Radio Remotes and Special Events**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course offers instruction in the theory and practice of concert production, planning, and promotion. Students will handle all aspects of staging live music concerts and simultaneous radio broadcast. Students will write promotional materials and critique concert productions. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Radio and Television News Writing**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 140A. This course offers instruction and practice in writing and editing news for radio and television, including rewriting from wire copy, newspapers, and documents. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Television News Production**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Radio and Television 118 and 140, each with a grade of "C" or better, or equivalent.

This intermediate course offers instruction and practice in television news production. Included in the course is practice in the areas of television news gathering, writing, field camera operation, and studio production. This course is designed for students who wish to major in news in the Radio/TV program. Weekly in-studio production for air on local cable channels includes practice in producing, directing, on-camera talent, staging, lighting, audio, studio camera, floor direction, video-switching and multimedia for television news. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

146 The TV News Field Report**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 124 or 140 with a grade of "C" or better, or equivalent.

This course involves theory and practice in the planning, writing, and production of the television news field report and mini-documentary. The course is designed to give students the ability to produce a news field report as a collaborating member of a two-person team comprising the reporter and videographer. Included are research techniques and news sources, selection of subjects, making contacts, outlining, shooting and editing techniques, and writing and assembly of the field report or mini-doc. This course is designed for transfer, for students majoring in Communications with an emphasis in News, and for students seeking employment in the television news industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Introduction to Multimedia**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Radio and Television 107, 110, and 124, each with a grade of "C" or better, or equivalent; and a working knowledge of both PC and Macintosh operations.

This course introduces students to a conceptual foundation in new media technology. Students learn fundamental concepts including production, distribution, access and storage as well as the impact of technology on communication. Students examine, analyze and critique multimedia products and develop concepts for new media. Requires the use of computers.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Digital Audio Post Production

**2 hours lecture, 3 hours lab, 3 units
Grade only**

Advisory: Radio and Television 107 with a grade of "C" or better, or equivalent.

This is an advanced audio course with emphasis on audio postproduction and synchronization with the visual image for radio, TV, video, multimedia and film using Digital Audio Workstations (DAWs). This course provides the benefit of specialized training to the more advanced production students. Students need computer skills at the level of operating both Mac OS and IBM-based Windows operating systems. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement for the more advanced multimedia production students. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Nonlinear Editing

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 124 and Computer and Information Sciences 121, each with a grade of "C" or better, or equivalent.

This is a digital video editing course to train students in post-production in video and film. Emphasis is placed on the aesthetic and technical principles in editing. This course utilizes computer-based nonlinear video post-production systems and focuses on broadcast, industrial, and multimedia applications. This course is designed for transfer, students majoring in Communications with an Emphasis in Video/Film or Multimedia, and for students wishing to enhance their employment opportunities in the broadcast, industrial, video, multimedia, and post-production areas. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

154 Interactive Game Design

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 151 or 157 with a grade of "C" or better, or equivalent.

An introduction to interactive multimedia game development including game design, development, production and engineering. Emphasis is placed on the critical analysis of the conceptual and technical

elements of game design. Students will formulate games by utilizing the process of brainstorming, designing, writing, flowcharting, documentation and assembling multimedia assets. Hands-on production of graphics, sound, animation, text, and possibly video (if students have completed a video production class) are necessary for the production of student game designs. The operation of the hardware, software, cameras and other equipment are necessary for the production of an interactive game. This course is intended for students who are planning to major in multimedia or students looking to enhance their job skills in the game industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

157 Multimedia Production

**2 hours lecture, 3 hours lab, 3 units
Grade only**

Advisory: Radio and Television 151 with a grade of "C" or better, or equivalent.

This course covers the design and production of new media technology. Students analyze the conceptual and technical elements involved in the production of a multimedia project. Students design, write, assemble, and produce multimedia projects for interactive audiences and develop the audio, video, computer graphics, animation, and text necessary for the creation of a multimedia product. The students utilize hardware, software, computers, cameras and other necessary equipment. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement for the more advanced multimedia students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Introduction to Cinema

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Telecommunications 160.

This course is an historical, aesthetic, and critical survey of cinema with emphasis on the evolution of techniques now used in the production of feature, documentary, educational television, and industrial film. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

167 Motion Picture Production**3 hours lecture, 3 units
Grade Only**

Advisory: Radio and Television 110 and 160, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 167.

This course is an introduction to basic cinematography for motion pictures and television, including composition of shots, editing, sound recording and mixing, animation, special effects, and script writing. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Radio and Television Sales**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 175.

This course offers a detailed analysis of sales and sales management aspects of radio and television broadcasting and cablecasting, including office organization, research, promotion, traffic, operations, contact procedures, and sales and sales management functions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

176 Radio and TV Advertising Copy**1 hour lecture, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Radio and Television 100, with a grade of "C" or better, or equivalent.

This course involves the analysis and writing of radio and television commercial copy with practical experience in writing for KSDS and other radio, television, and cable companies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Introduction to Mass Communications**3 hours lecture, 3 units
Grade only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed to provide students with a basic understanding of industries, technologies, issues, and historical foundations that make up mass communications in the United States. The course includes discussions about current practices, problems, issues and significant trends. The origin and current operations of each media industry are analyzed through the insights of scholars, creative talent, business, and government leaders. The economic, political, societal, and organizational aspects affecting new media are explored. This is a course for transfer students and those seeking employment in communications. Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN JOUR 4).

245 Television Workshop**3-9 hours lab, 1-3 units
Grade Only**

Prerequisite: Radio and Television 122 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 245.

This is a television production workshop designed to give students an opportunity to work on individual productions and specials to augment their course work in the department and to prepare them for professional employment in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247A Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247.

This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of live music programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247B Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247.

This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of radio news programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247C Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247.

This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of radio sports programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

247D Radio Broadcasting Practicum**3 hours lab, 1 unit
Grade Only**

Advisory: Radio and Television 105 or 140 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Telecommunications 247.

This is an advanced radio broadcasting course designed to provide students additional opportunity to apply previously studied theory to radio program production. The emphasis of this class is on the development and production of programming for KSDS-FM. This course is part of the A.S. degree program and can be used for transfer or skills development/enhancement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**249A Television and News Workshop -
Producing****2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 145 with a grade of "C" or better, or equivalent.

This advanced course includes instruction and practice in producing television news. Emphasis is placed on the role of the producer in the television news team. This course is designed for the student who wishes to gain additional proficiency in producing in the news major in the Radio/TV program. By its very nature, television news varies and the student has unique weekly news gathering experiences. Skills and proficiencies are enhanced by supervised repetition and practice within class periods. Learning objectives are obtained through active participatory experience in weekly group assignments. The student works in subjects including news writing and editing, assignment editing, CNN Newsource compiling, story selection, program timing, studio production and program back timing and pacing. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**249B Television News Workshop - Tape
Coordinating****2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 145 with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in tape coordinating for television news. Emphasis is placed on the role of the tape coordinator in the television news team. This course is designed for the student who wishes to gain additional proficiency in tape coordinating in the news major in the Radio/TV program. By its very nature, television news varies and the student will have unique weekly news gathering experiences. Skills and proficiencies are enhanced by supervised repetition and practice within class periods. Learning objectives are obtained through active participatory experience in weekly group assignments. The student works in subjects including news writing and editing, video tape editing and coordinating, assignment editing, CNN Newsource compiling, story selection, program timing, and hands-on studio production. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249C Television News Workshop - Assignment Editing

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 145 with a grade of "C" or better, or equivalent.

This course offers instruction and practice in assignment editing for television news. Emphasis is placed on the role of the assignment editor in the television news team. This course is designed for the student who wishes to gain additional proficiency in assignment editing in the news major in the Radio/TV program. By its very nature, television news varies and the student unique weekly news gathering experiences. Skills and proficiencies are enhanced by supervised repetition and practice within class periods. Learning objectives are obtained through active participatory experience in weekly group assignments. The student will work in subjects including assignment editing, news writing and editing, video tape editing, CNN Newsource compiling, story selection, program timing, studio production and program back timing and pacing. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249D Television News Workshop - Reporting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Radio and Television 145 with a grade of "C" or better, or equivalent.

This advanced course offers instruction and practice in reporting for television news. Emphasis is placed on the role of the reporter in the television news team. This course is designed for the student who wishes to gain additional proficiency in assignment reporting in the news major in the Radio/TV program. By its very nature, television news varies and the student has unique weekly news gathering experiences. Skills and proficiencies are enhanced by supervised repetition and practice within class periods. Learning objectives are obtained through active participatory experience in

weekly group assignments. The student works in subjects including reporting in studio, field reporting, news writing and editing, assignment editing, CNN Newsource compiling, story selection and timing and studio production. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment. To receive credit a student must complete a minimum of seven units during the semester, including work experience. A program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Theoretical and practical study of a special area in the field of radio and television. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Communications: Speech

Description

The Speech Communication program is designed to offer an Associate in Arts Degree or Certificate of Proficiency, as well as communication classes that provide training for occupations in which public presentation and verbal skills are important. It can also serve as a core for the Selected Studies degree, or assist non-native speakers improve speaking skills. Most of the courses also meet transfer requirements to four-year institutions.

Program Emphasis

The Speech Communications department offers a two-year Associate in Arts degree. Students may also select courses leading to the Certificate of Completion in Speech Communication. The courses in this program will increase speaking proficiency in English for successful participation in many other careers. The Speech Communications department offers courses in presentation skills using multi-media.

Faculty	Office	Telephone
Tanya Medina	C-225G	(619) 388-3598
Erin Engstrom	A-1C	(619) 388-3183
Deanna Shelton	A-1C	(619) 388-3182

Career Options

Speech Communication skills are necessary for most public communications and management jobs. Speaking and presentations skills are required in vocations that require contact with the public.

Academic Programs

The Speech Communication Certificate of Proficiency and the associate degree in Speech Communication require completion of courses listed below.

Certificate of Completion: Speech*

Courses:	Units
SPEE 103, Oral Communication	3
Select 6 units from:	
SPEE 101, 104, 111, 135, 160, 170, 180	6
Total Units =	9

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

Associate in Arts Degree: Communications: Speech

Courses Required for the Major:	Units
SPEE 101, Voice and Articulation	3
SPEE 103, Oral Communication	3
SPEE 135, Interpersonal Communication	3
SPEE 160, Argumentation	3
SPEE 170, Small Group Communication or	
SPEE 104, Advanced Public Communication	3
SPEE 180, Intercultural Communication	3
Total Units =	18

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Anthropology 103; Speech Communications 99, 111, 290; and courses in Dramatic Arts, Journalism, Psychology, Radio & Television and Sociology.

Transfer Information

Common university majors related to the field of Speech Communications include:

Communication, Communicative Disorders, Graphic Communications, Journalism, Marketing, Public Relations.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Speech Communications (SPEE)

099 Voice and Diction for Non-Native Speakers of English

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4; and English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent.

This course is intended for non-native speakers of English who want to learn and practice American English vocal standards. The class emphasizes American English standards of pronunciation, listening comprehension, ear-training techniques, effective use of vocal variables of voice-rate, pitch force and quality, vocabulary building, conversation with correct use of grammar, sentence structures, common American idioms, pronunciation, and reading. (FT) Associate Degree Credit only and not Transferable.

101 Voice and Articulation

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is an introduction to basic techniques of clear articulation to develop effective voice usage in standard American English. The emphasis in this course is on effective sound production and vocal quality. It is recommended for people who deal with the public such as selling and providing public services. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Oral Communication

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Chicano Studies 103, Black Studies 152, or Bilingual Studies 103.

This course offers a wide variety of reading, application and speaking assignments designed to expose students to all the major skills of speechmaking. Students focus on the following basic elements: ethics; analyzing the audience; visual aids; choosing a topic and specific purpose; outlining, listening, organizing a speech; delivery; small group communication; informative and persuasive speaking; speaker credibility; effective use of language; library research; and communication and/or speeches to entertain. All students give several speeches both with and without visual aids. This course is designed to prepare students for majors in Communications as well as for the general population. Designated sections of this course are taught from a specific cultural perspective and are cross-listed under Bilingual Studies, Black Studies, and Chicano Studies in the catalog and class schedule. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN SPCH 4).

104 Advanced Public Communication

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Speech Communications 103 with a grade of "C" or better, or equivalent.

This course covers theory, practice and critical analysis of public communication, including speeches on subjects of current interest both local and global. It includes an introduction to the relationship between rhetorical theory and criticism and rhetorical practice in public communication (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Oral Interpretation

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Speech Communications 103 with a grade of "C" or better, or equivalent.

This course involves theory and practice in the interpretational performance of literature. The course concentrates on the development of analytical skills and emphasizes the use of verbal and nonverbal communication in the interpretation of various literary genres including prose, poetry and drama. Literature is selected from a wide variety of world cultures and is taught from a multicultural perspective. The course is designed for the transfer student intending to major in Speech Communications. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Interpersonal Communication**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56 each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

The course emphasizes the development of effective interpersonal skills, strategies and practice in oral and written communication. Personal, situational, and cultural influences of interaction will be covered. It pays particular attention to human perception, interpersonal dynamics, listening, conflict management, and verbal and non verbal symbol systems. The course is intended for students who communicate in a one-on-one situation including majors in communication, fashion, allied health, public service and business. This course is also intended for students who are interested in further development of effective interpersonal skills in work, volunteer, and personal environments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN SPCH 8).

160 Argumentation**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: Speech Communications 103 with a grade of "C" or better, or equivalent.

This is a course in the construction and analysis of argument. The course emphasizes the essentials of argumentation: theory, research, and analyses of propositions, tests of evidence, construction and application of arguments to everyday life and public policy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN SPCH 6).

170 Small Group Communication**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Speech Communications 103 with a grade of "C" or better, or equivalent.

This course offers practical experience in the techniques of leading and participating in small group discussions. Small group techniques such as panels, symposiums, problem solving, conflict resolution, leadership skills and parliamentary procedures are covered. Community building through service learning is presented as a tool to creating collective consciousness and an altruistic philosophy. This course

is designed for students intending to major in speech communications, business, international business, education, and all fields of study and certifications that require group and team building skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN SPCH 10).

180 Intercultural Communication**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Speech Communications 103 with a grade of "C" or better, or equivalent.

Intercultural communication is the study of communication between members of differing cultures. The discipline focuses on the relationship between culture and communication emphasizing social psychological variables, verbal and nonverbal language systems, cross-cultural communication breakdowns and conflict resolution. Practical application of intercultural communication principles to contemporary problems of cross-cultural and international communication will be stressed. This course is designed for students intending to major in speech communications, international business, business education, social sciences, nursing, mass communications, and all fields of study and certifications that require cross-cultural contact and/or awareness of cultural distinctions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study**Hours by Arrangement, 1-3 units****Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Advanced special work in debate, radio interpretation, public address. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Journalism (JOUR)

200 Introduction to Newswriting and Reporting 2 hours lecture, 3 hours lab, 3 units Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better or equivalent. This course serves as preparation for the major for students preparing to transfer and is also intended to serve as an elective for students interested in learning to write for newspapers and other publications. The course is an introduction to evaluating, gathering, and writing news in accepted journalistic style under newsroom conditions. Topics include the role of the reporter and the legal and ethical issues related to reporting. Students have writing and reporting experiences, including personal interviews, speech, meeting and other event coverage, deadline writing, and use of AP style. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210A Journalism Workshop I 6-9 hours lab, 2-3 units Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed to provide experience in the production and publication of a student newspaper. Emphasis is placed on helping beginning students gain experience in the gathering and writing of news and features. Students at this level learn the basic principles of reporting, news writing, copy editing, photography, and newspaper design and layout. Assignments focus on routine stories, and may include editorials or features such as profiles. Copy editing is limited to reading for technical errors. This class is designed for students with an interest in print media and provides instruction in the journalistic process on an entry level. Skills developed in this course include research techniques and the evaluation and analysis of information. Students are guided by ongoing advice, criticism, and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for at least 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week and contribute more extensively to the layout and/or production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210B Journalism Workshop II 6-9 hours lab, 2-3 units Letter Grade or Credit/No Credit Option

Prerequisite: Journalism 210A with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress in the gathering and writing of news and features. This class provides exposure to the journalistic process beyond the entry level and guides students to polish reporting, newswriting, editing, design, and photography skills, tackle more complex subjects, and assume more responsibility for the design of their own pages. Students continue to develop research skills and engage in the evaluation and analysis of information and are guided by ongoing advice, criticism and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for at least 6 hours per week, while students enrolled in the course for 3 units are expected to participate at least 9 hours and contribute more extensively to the layout and/or production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210C Journalism Workshop III 6-9 hours lab, 2-3 units Letter Grade or Credit/No Credit Option

Prerequisite: Journalism 210B with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress to an intermediate level in the gathering and writing of news and features. Students conduct in-depth reporting and write more sophisticated news stories and may also serve as section editors or assist editors with copy editing, assignments, photography, the news budget, and design. Additionally students develop skill in setting newspaper policies, mentoring others, working in teams, and uncovering news stories. Students are guided by ongoing advice, criticism, and evaluation from a faculty adviser. Student enrolled in the course for 2 units are expected to participate in the production of the student newspaper for 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week, and contribute more extensively to the layout and production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210D Journalism Workshop IV

6-9 hours lab, 2-3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Journalism 210C with a grade of "C" or better, or equivalent.

This course is designed to provide additional ongoing experience in the production and publication of a student newspaper. Emphasis is placed on helping students progress to an advanced level in the gathering and writing of news and features. In addition to reporting and writing, students at this level, assume responsibility for organizing and managing the newsroom, which includes conducting story conferences, developing the news budget, assigning stories, coaching reporters, and editing and designing the paper in its entirety. Students may also make photo assignments and provide coaching for novice photographers. Students are guided by ongoing advice, criticism and evaluation from a faculty adviser. Students enrolled in the course for 2 units are expected to participate in the production of the student newspaper for 6 hours per week, while students enrolled for 3 units are expected to participate at least 9 hours per week and contribute extensively to the layout and production of the paper. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Computer Business Technology

	Units
Certificate of Completion:	
Business Presentations	9-11
Computer Software Applications	9-11
E-Commerce	12
Office Communications	11-13
Word Processing	11-13
Certificate of Achievement:	
Administrative Assistant	23-25
Legal Administrative Assistant	24-26
Associate in Science Degree:	
Administrative Assistant	25.5-27.5*
Legal Administrative Assistant	26-28*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Programs are offered for both transfer and career-oriented students. Employment certificates of completion, certificates of achievement and associate degree programs are available to students interested in entry-level employment or in upgrading business, computer applications, or legal assistant skills.

Program Emphasis

The Computer Business Technology department offers the following program options: certificates of completion in Computer Software Applications, E-Commerce, Office Communications, and Word Processing; certificates of achievement and associate of science degrees in Administrative Assistant, Legal Administrative Assistant.

Faculty	Office	Telephone
Barbara Riva	A16-E	(619) 388-3107
Theresa Savarese	A1-H	(619) 388-3367

Career Options:

Career/job opportunities available upon successful completion of each of the Computer Business Technology options are described in each curriculum section. Some career options may require education beyond the associate degree or certificate.

**Certificate of Completion:
Business Presentations***

The Certificate of Completion in Business Presentations is designed to provide students with business communications skills necessary in the modern office. Instruction will be offered in the production of business letters and graphic presentation of an analytical business report using a computer presentation software package; in the production of a slide computer presentation; and in the utilization of current office telecommunications equipment. Preparation for beginning employment is also offered in information processing and communication in clerical or administrative areas.

Courses	Units
BUSE 119, Business Communications.....	3
**CBTE 095, Keyboarding/Typing Speed Development	
**CBTE 101, Keyboarding for Computers or	
**CBTE 102, Keyboarding or	
**CBTE 103, Beginning Computer Keyboarding	1-3
CBTE 120, Beginning Microsoft Word	2
CBTE 200, Office Telecommunications	2
CISC 128, Introduction to Computer Presentations	1
Total Units = 9-11	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

**Certificate of Completion:
Computer Software Applications***

The Certificate of Completion in Computer Software Applications is designed to provide exposure to the microcomputer software applications area. Successful completion of this certificate provides preparation in computer skills needed by the transfer student or for entry-level clerical support positions. This certificate is

also appropriate for retraining and for improving promotional opportunities.

Courses:	Units
**CBTE 095, Keyboarding/Typing Speed Development or	
**CBTE 101, Keyboarding for Computers or	
**CBTE 102, Keyboarding or	
**CBTE 103, Beginning Computer Keyboarding	1-3
CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word	2
CBTE 122, Intermediate Microsoft Word	3
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 151, Introduction to Microsoft Access	1
Total Units = 9-11	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

**Certificate of Completion:
E-Commerce***

This certificate prepares students for employment in a variety of Web Based Occupations that utilize the leading edge technologies of E-Commerce.

Courses:	Units
CBTE 173, Introduction to E-Commerce.....	3
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 161, Learning the Internet.....	1
CBTE 162, Web Page Creation	2
CBTE 200, Office Telecommunications.....	2
BUSE 119, Business Communications.....	3
Total Units = 12	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

**Certificate of Completion:
Office Communications***

Successful completion of the Certificate of Completion in Office Communications offers preparation for beginning positions as a clerk, receptionist or word processor. Instruction is also provided in basic office skills including ability to use telecommunications equipment required for entry-level employment in a business, professional, educational, or industrial office.

Courses:	Units
**CBTE 095, Keyboarding/Typing Speed Development or	
**CBTE 101, Keyboarding for Computers or	
**CBTE 102, Keyboarding or	
**CBTE 103, Beginning Computer Keyboarding	1-3
CBTE 120, Beginning Microsoft Word	2
CBTE 211, Office Administration	3
CBTE 200, Office Telecommunications	2
CBTE 205, Records Management.....	3
Total Units = 11-13	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

Certificate of Completion: Word Processing*

The Word Processing Certificate of Completion is designed to provide broad exposure to word processing for students interested in desktop publishing. Successful completion of this certificate also provides preparation in basic office skills for entry-level positions in business, professional, educational or industrial settings.

Courses:	Units
BUSE 119, Business Communications	3
**CBTE 095, Keyboarding/Typing Speed Development or	
**CBTE 101, Keyboarding for Computers or	
**CBTE 102, Keyboarding or	
**CBTE 103, Beginning Computer Keyboarding	1-3
CBTE 120, Beginning Microsoft Word	2
CBTE 122, Intermediate Microsoft Word.....	3
CBTE 170, Desktop Publishing	2
Total Units = 11-13	

*This is a department award in recognition of information on the transcript and does not imply meeting a graduation requirement.

****Note: Students may take a departmental keyboarding test to waive keyboarding course requirement.**

Administrative Assistant

Prepares the student for employment in business or civil service as a general office clerk, clerk-typist, file clerk, receptionist, cashier, word processor, machine transcriptionist, or other positions not requiring stenography.

Certificate of Achievement: Computer Business Technology Administrative Assistant

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers or	
CBTE 102, Keyboarding or	
CBTE 103, Beginning Computer Keyboarding.....	1-3
CBTE 111, Introduction to Windows 95 or	
CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word or	
CBTE 130, Beginning Corel WordPerfect(Miramar)	2
CBTE 122, Intermediate Microsoft Word	3
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 170, Desktop Publishing	2
CBTE 205, Records Management.....	3
CBTE 210, Computers in Business or	
CBTE 211, Office Administration	3
BUSE 101, Business Mathematics.....	3
BUSE 119, Business Communications.....	3
Total Units = 23-25	

Associate in Science Degree: Computer Business Technology Administrative Assistant

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers or	
CBTE 102, Keyboarding or	
CBTE 103, Beginning Computer Keyboarding.....	1-3
CBTE 111, Introduction to Windows 95 or	
CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word or	
CBTE 130, Beginning Corel WordPerfect (Miramar)	2
CBTE 122, Intermediate Microsoft Word	3
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 170, Desktop Publishing	2
CBTE 198A, Project Lab I or	
CBTE 198B, Project Lab II	0.5
CBTE 200, Office Telecommunications.....	2
CBTE 205, Records Management.....	3
CBTE 210, Computers in Business or	
CBTE 211, Office Administration	3
BUSE 101, Business Mathematics.....	3
BUSE 119, Business Communications.....	3
Total Units 25.5-27.5	

For graduation requirements see **Requirements for the Associate Degree** on page 64.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: Computer and Information Sciences 130; Computer Business Technology 126, 161, 270; Business 150.

Legal Administrative Assistant

Provides training for specialized secretarial work in law offices, in legal departments of banks, insurance companies, real estate firms, or other business organizations, or civil service.

Certificate of Achievement: Computer Business Technology Legal Administrative Assistant

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers or	
CBTE 102, Keyboarding or	
CBTE 103, Beginning Computer Keyboarding.....	1-3
CBTE 111, Introduction to Windows 95 or	
CBTE 114, Introduction to Microsoft Windows	1
CBTE 120, Beginning Microsoft Word or	
CBTE 130, Beginning Corel WordPerfect(Miramar)	2
CBTE 122, Intermediate Microsoft Word.....	3
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 164, Introduction to Microsoft Outlook	1
CBTE 205, Records Management.....	3
CBTE 221, Legal Office Procedures I	3
CBTE 222, Legal Office Procedures II	3
BUSE 119, Business Communications.....	3
LEGL 110 (City, Miramar), Legal Communications.....	3
Total Units = 24-26	

Associate in Science Degree: Computer Business Technology Legal Administrative Assistant

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers or	
CBTE 102, Keyboarding or	
CBTE 103, Beginning Computer Keyboarding.....	1-3
CBTE 111, Introduction to Windows 95 or	
CBTE 114, Introduction to Microsoft Windows	1
CBTE 120, Beginning Microsoft Word or	
CBTE 130, Beginning Corel WordPerfect (Miramar)	2
CBTE 122, Intermediate Microsoft Word	3
CBTE 140A, Introduction to Microsoft Excel.....	1
CBTE 164, Introduction to Microsoft Outlook	1
CBTE 200, Office Telecommunications	2

CBTE 205, Records Management.....	3
CBTE 221, Legal Office Procedures I	3
CBTE 222, Legal Office Procedures II.....	3
BUSE 119, Business Communications.....	3
LEGL 110 (City, Miramar), Legal Communications	3
Total Units = 26-28	

For graduation requirements see **Requirements for the Associate Degree** on page 64.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: Business 140, 150; Computer Business Technology 126, 161, 170, 198A or 198B, 210, 270.

Courses

COMPUTER BUSINESS TECHNOLOGY (CBTE)

Formerly Office Information Systems (OFCE)

Note: CBTE course numbers differ from the OFCE course numbers. For an accurate cross reference, contact the School of Business and Information Technology at 619-388-3488.

051 Basic Computer and Software Skills .75 hours lecture, .75 hours lab, 1 unit Grade Only

This course is designed to assist students in learning basic computer skills through computer hands on practice. Students learn and apply the basics of the Windows operating systems environment, data organization and management, and word processing software. This course emphasizes how to read a computer-training book and familiarizes the student with computer terminology. Credit for this course may be applied to the associate degree. (FT) Associate Degree Credit only and not Transferable.

095 Keyboarding /Typing Speed Development 3 hours lab, 1 unit Credit/No Credit Only

Advisory: Ability to type/keyboard by touch. Development of speed and accuracy. Short intensified drills, timed writings, and remedial work. This course combined with CBTE 95 may be repeated for a maximum of four units. (FT) Associate Degree Credit only and not Transferable.

101 Keyboarding for Computers**.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 101, 102, or 164.

This course is designed for all individuals needing basic keyboarding skills. Keyboarding for Computers teaches students to key by touch using a computer and word processing software. No previous computer or typing experience is required. This course, or sections of this course, may be offered through distance education. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

114 Introduction to Microsoft Windows**.75 hours lecture, .75 hours lab, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 with a grade of "C" or better, or equivalent.

This basic course presents an overview of the features of the Microsoft Windows operating system and the components of managing files and folders in the Windows environment. In this hands-on course, students learn to use and customize the start menu; work with Windows accessory programs; open data files; manage disks, folders and files; create shortcuts; and customize the desktop. This course is designed for those students planning to major in this field and may also be useful to students who wish to upgrade their computing skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Beginning Microsoft Word**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Computer Business Technology 120A or 120B.

This course is an introduction to text editing features in Microsoft Word including insert, delete, find and replace, move and copy, headers and footers, pagination, character and document formatting, spell check, tables, and mail merge basics. This course, or

sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Intermediate Microsoft Word**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 120, each with a grade of "C" or better, or equivalent.

This course is a continued application of Microsoft Word text editing features including creation of envelopes and labels, mail merge, sorting, styles, templates, wizards, macros, document notations, tables of contents and indexes, online forms, columns, drawing tools, and introduction to creating Web pages. This course, or sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Introduction to Power Point**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5/R5; and Computer Business Technology 114 with a grade of "C" or better, or equivalent.

This course provides students with the basic knowledge of how to create, modify, and present Power Point slide shows. Students apply and modify both text and graphics. They use current software to integrate other programs with Power Point. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Microsoft Excel**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 111, each with a grade of "C" or better, or equivalent.

This course teaches the fundamentals of Microsoft Excel. Students create and format worksheets and charts and use Excel's wizards and productivity features to enter functions and analyze data. This course, or sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Introduction to Microsoft Access**.75 hour lecture, .75 hours lab, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 111, each with a grade of "C" or better, or equivalent.

This course covers basic Access skills. Students receive hands-on practice in creating, modifying, and sorting database tables, performing queries, creating reports, and designing forms. This course, or sections of this course, may be offered through distance education.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160A Introduction to Online Learning**.5 hour lecture, .5 hour lab, .5 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 101 with a grade of "C" or better, or equivalent.

This course is an introduction to developing the skills necessary to succeed in an online or web-based course. Students will learn and apply the basics of the Windows environment, data organization and management, the Internet, the World Wide Web, e-mail, and word processing software. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

161 Learning The Internet**.75 hour lecture, .75 hours lab, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 111, each with a grade of "C" or better, or equivalent.

This course is designed for students who are interested in an introduction to the Internet. Students receive hands-on practice using Netscape to navigate the World Wide Web and link to Internet resources. Topics include creating and sending: e-mail, FTP, and file downloading, locating newsgroups and other discussion tools, conducting business on the Internet, and creating Web pages using HTML. This course, or sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

162 Web Page Creation**1.5 lecture hours, 1.5 lab hours, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 111 and 161, each with a grade of "C" or better, or equivalent.

This course provides a hands-on approach to planning, designing, and creating Web pages for an intranet or World Wide Web site. Students learn to use HTML, wizards and templates to create Web pages with hypertext links and video, graphics, and audio enhancements. This course, or sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

163 Introduction to Microsoft FrontPage**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 101 with a grade of "C" or better, or equivalent.

This is an introduction to creating a web page using Microsoft FrontPage. Students will learn to design, create, manage, and publish web sites on the Internet for personal or business use. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

164 Introduction to Microsoft Outlook**.75 hours lecture, .75 hours lab, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 101 with a grade of "C" or better, or equivalent.

This course is an introduction to the features of Microsoft Outlook. Students will learn how to message, schedule appointments, organize and manage tasks and contacts lists and customize Outlook. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Webpage Creation with Dreamweaver**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent or Assessment Skill Level W5/R5; Completion of or concurrent enrollment in

Computer Business Technology 101 and Computer Business Technology 114 and Computer Business Technology 161, each with a grade of "C" or better, or equivalent.

Students will develop skills used in creating a personal or business webpage. Working on a team or individually, students will, using a hands-on approach, plan, design, and create Web pages for an Intranet or World Wide Web site. Students learn to use a HyperText Markup Language (HTML) editor to create Extensible HyperText Markup Language (XHTML) and Cascading Style Sheets (CSS) and add behaviors, and to use templates and library items to create Web pages containing hypertext links, video, graphic, and multimedia files. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Desktop Publishing

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 111, each with a grade of "C" or better, or equivalent.

This course is designed for office support staff, administrative assistants, small business owners, and others who require a basic knowledge of desktop publishing. Students in this hands-on course learn the features of desktop publishing software by designing and creating professional quality publications for business and home. This course, or sections of this course, may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Microsoft Office

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 161, each with a grade of "C" or better, or equivalent.

This course is designed for students interested in learning a business software suite. This course covers the Microsoft Office Professional suite, which is an integrated collection of software applications (word processing, spreadsheet, database, and presentations) that share data and work in a similar and consistent manner. This course will also provide instruction on how to seamlessly integrate data within and between the programs in an efficient manner. (FT) Associate

Degree Credit & transfer to CSU and/or private colleges and universities.

190 Introduction To Quicken

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 153A.

This course is designed to prepare students for employment in a home-based office or small business office. This course provides hands-on practice with Quicken, a program for organizing and managing financial information and performing on-line banking and bill payments in small businesses and home-based offices. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198A Project Lab I

**1.5 hours lab, .5 unit
Credit/No Credit Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Students in this course design and complete hands-on individualized projects applicable to Computer Business Technology courses to upgrade their software skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Office Telecommunications

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 142.

This course is designed to provide students with a fundamental working knowledge of voice, data, and video telecommunications that can be applied in their business and personal lives. The course introduces telecommunications networks, transmitting, receiving, and satellite technologies. Topics covered in this course include basic communication theory, fundamentals of telephone systems, components of data communications systems, and basic Web page

development using and HTML editor. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Records Management

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 and 111, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 157.

This course is designed to prepare students for employment in the field of Information Management Technology. The course covers the fundamentals of Records Management including the principles of indexing and filing; the major filing systems—alphabetical, numerical, subject, and geographic; the role of the records management and the records manager in the information industry; selection of systems, equipment, and supplies; design, control, and maintenance of a records center; and provides experience in using the computer to manage records. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Computers in Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 192.

This course is designed to prepare students for a computer related career. Computers in Business is an introductory course which covers the latest developments in computer technology, office automation, electronic communication, and the World Wide Web. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

211 Office Administration

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5. Computer Business Technology 101, 102, 103 or 120 with a grade of "C" or better, or equivalent. Type by touch or Knowledge of Microsoft Word.

This course is designed to introduce the practical application of current office administration procedures, duties, and human relations. Specific topics include telephone and reception, transcription; mail procedures, data entry (10-key by touch), reference resources, job seeking, human relations, ethical behavior, office etiquette and dress, time management, communication systems, and oral and computer presentations. This course is recommended for the CBTE major to be a "capstone" course and is suggested to be taken at the end of their coursework. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

221 Legal Office Procedures I

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 171.

This course is an introduction and orientation to the law office and procedures according to federal and state legal systems and is designed to prepare students for a position in a law office or law related field. The course includes structure of the courts, practices and procedures of the law, legal terminology, vocabulary building, preparation of court documents, an introduction to legal research, legal calendaring and client contact. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

222 Legal Office Procedures II

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Computer Business Technology 221 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Office Information Systems 172.

This course is a continuation of Computer Business Technology 221 with emphasis on techniques of completing and handling court documents and legal forms relating to civil procedures in various areas of California law. This course or sections of this course may be offered through distance education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units during the semester, including work experience.

Program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Information Systems

Computer and Information Sciences, Information, Network and Web Technologies, Microsoft

	Units
Certificate of Completion:	
Certified Convergent Network Technologist	9.5
Computer Programming	15
Internet Fluency	5
Microsoft Certified Database Administrator	10.5
Microsoft Certified System Engineer	17
Microsoft Certified Systems Engineer 2003	13-14.5
Microsoft Certified Systems Engineer 2003 - Security	14.5
Certificate of Achievement:	
Computer Information Systems	31
Associate in Science Degree:	
Computer Information Systems	31*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

City College offers transfer and certification programs in the Computer Information Systems (Information Technology) field. These programs include computer literacy; application, web, and database programming; database administration; and a variety of vendor specific and vendor neutral industry-standard certification training. The roles of the various information system professionals are to design, implement, operate, and maintain a computer information system. This system can be based on a large central mainframe computer serving hundreds of users or a small personal microcomputer on a desk. These professionals also provide services in the networking areas such as systems engineers, systems administrators, and networks specialists.

Program Emphasis

The Information Technology department's goals includes transfer and vocational programs including

industry standard certifications. The Information Technology department offers Certificates of Completion, a Certificate of Achievement and an Associate Degree option.

Faculty	Office	Telephone
Larry Forman	A17-F	(619) 388-3666
John Hammond	A17-H	(619) 388-3114
Rose La Muraglia	A16-G	(619) 388-3719
Patrick Mahoney	A17-E	(619) 388-3112
Richard Pelletier	A17-G	(619) 388-3113

Career Options

Some careers in the Information Technology field require education beyond the associate degree in either Business, Computer Information Systems, Information Technology, Electronics, or Computer and Information Sciences. Careers in the Information Technology field include: computer consultant, help desk technician, instructional lab technician, sales specialist in computer hardware and software, support technician, computer assembler, systems integrator, network administrator, network specialist, systems engineer, systems administrator, database professionals, and web designers. Most careers in the field of Information Decision Systems require education beyond the associate degree. Careers include: applications programmer, computer operator, database administrator, maintenance programmer, programmer/analyst, and systems analyst.

Academic Programs

The programs that follow, Certificates of Completion, Certificate of Achievement and Associate Degree for preparation for transfer, require completion of the courses listed below.

Certificate of Completion Certified Convergent Network Technologist*

The Certified in Convergent in Network Technologies (CCNT) certificate provides students with competency-based training addressing convergence services. This certificate provides students with the required knowledge to perform the following job roles: Telco/Service Provider Technical Sales Professionals Network Administrators and Engineers Product Manager.

Courses:	Units
INWT 090A, Convergent Network Technology: Basic Data Communications	2
INWT 090B, Convergent Network Technology: Basic Telecommunications	1.5
INWT 090C, Convergent Network Technology: Broadband Technologies	2
INWT 090D, Convergent Network Technology: Computer Telephony Integration	1
INWT 090E, Convergent Network Technology: Local Area Networks (LANs)	2
INWT 090F, Convergent Network Technology: Voice Over IP (VoIP) Essentials.....	1
Total Units = 9.5	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion Computer Programming*

This certificate of completion in computer programming requires completion of the courses listed below and is meant to prepare students who are planning on preparing for entry-level positions in computer programming and/or information technology. The certificate of completion also offers students the opportunity to learn or enhance computer programming skills.

Courses:	Units
CISC 186, Visual Basic Programming.....	4
CISC 190, Java Programming.....	4
CISC 192, C/C++ Programming.....	4
CISC 210, System Analysis and Design.....	3
Total Units = 15	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion Internet Fluency*

This Certificate of Completion in Computer Information Systems requires completion of the courses listed below. The certificate is meant to prepare students who are planning for entry-level positions in the field of information technology, as well as for those students who wish to take courses or work in e-commerce.

Courses:	Units
CBTE 161, Learning the Internet.....	1
CBTE 162, Web Page Creation	2
CISC 114, Introduction to Computer Graphics & Web Media	2
Total Units = 5	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion Microsoft Certified Database Administrator*

Upon successful completion of this certificate, students will be prepared to take Microsoft Certified Database Administrator (MCDBA) exams and to become successful Microsoft Database Administrator.

Courses:	Units
MSFT 130, Installing, Configuring, and Administering Windows Clients.....	2.5
MSFT 132, Manage and Maintain Windows Server.....	3
MSFT 170, Programming a Microsoft SQL Server.....	2.5
MSFT 171, Microsoft SQL Server System Administration	2.5
Total Units = 10.5	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion: Microsoft Certified System Engineer*

Upon successful completion of this certificate, students will be prepared to take Microsoft Certification exams and for becoming successful Microsoft Certified System Engineers.

Courses:	Units
MSFT 051, Installing, Configuring, and Administering Windows 2000 Professional.....	2.5
MSFT 052, Installing, Configuring, & Administering Microsoft Windows 2000 Server	2.5
MSFT 053, Implementing & Administering a Microsoft Windows 2000 Network Infrastructure	2.5
MSFT 054, Implementing & Administering a Microsoft Windows 2000 Directory Infrastructure	2.5
MSFT 055, Designing a Microsoft Windows 2000 Directory Services Infrastructure.....	2.5

MSFT 056, Designing a Microsoft Windows 2000 Network Infrastructure.....	2
MSFT 057, Designing Security for a Microsoft Windows 2000 Network.....	2.5
Total Units = 17	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion Microsoft Certified Systems Engineer 2003*

Upon successful completion of this certificate, students will be prepared to take the Microsoft Certified Systems Engineer (MCSE) exams and to become successful information technology professionals as MCSE generalists.

Courses:	Units
MSFT 130, Installing, Configuring, and Administering Windows Clients.....	2.5
MSFT 132, Manage and Maintain Windows Server.....	3
MSFT 134, Implementing, Managing, and Maintaining Network Infrastructure I	1.5
MSFT 136, Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure II	1.5
MSFT 138, Planning, Implementing, and Maintaining a Microsoft Windows Server Active Directory Infrastructure	1.5
MSFT 140, Designing Security for Microsoft Networks	1.5

Select one course from the following:

MSFT 160, Microsoft Exchange Server Administration or	
MSFT 170, Programming a Microsoft SQL Server	
MSFT 171, Microsoft SQL Server System Administration or	
MSFT 070, Microsoft Sequel Server Database Design and Implementation or	
MSFT 071, Microsoft SQL Server System Administration or	
MSFT 080, Microsoft Exchange Server Administration or	
INWT 140, Security + Certification Training	1.5-3
Total Units = 13-14.5	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion Microsoft Certified Systems Engineer 2003 - Security*

Upon successful completion of this certificate, students will be prepared to take the Microsoft Certified Systems Engineer (MCSE) exams and to become successful information technology professionals as MCSE specializing in network security.

Courses:	Units
MSFT 130, Installing, Configuring, and Administering Windows Clients.....	2.5
MSFT 132, Manage and Maintain Windows Server.....	3
MSFT 134, Implementing, Managing, and Maintaining Network Infrastructure I	1.5
MSFT 136, Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure II	1.5
MSFT 138, Planning, Implementing, and Maintaining a Microsoft Windows Server Active Directory Infrastructure	1.5
MSFT 140, Designing Security for Microsoft Networks	1.5
INWT 140, Security + Certification Training	3
Total Units = 14.5	

*This is a departmental award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Associate in Science Degree: Computer Information Systems

Courses Required for the Major:	Units
ACCT 116A, Financial Accounting	4
ACCT 116B, Managerial Accounting	4
BUSE 119, Business Communications.....	3
BUSE 140, Business Law & the Legal Environment....	3
CISC 181, Principles of Information Systems.....	4
CISC 186, Visual Basic Programming.....	4
ECON 120, Principles of Economics I	3
MATH 119, Elementary Statistics.....	3
CISC Elective(s)*	3
Total Units = 31	

*Choose a minimum of 3 units in CISC. Students should consult with their counselor prior to choosing electives to ensure electives meet program and/or transfer goals.

Note: Only one Computer and Information Sciences (CISC) course from the above list may be used to satisfy SDCCD general education requirements.

Recommended electives: Computer and Information Sciences 110, 114, 123, 150, 190, 192, 210; Economics 121; Mathematics 116, 121.

Transfer Information

Common university majors related to the field of Computer Information Systems include:

Bioinformatics, Business Information Systems, Cognitive Science, Computer Science and Engineering, Geographic Information Systems, Graphic Communications, Information Systems.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Computer and Information Sciences (CISC)

114 Introduction to Computer Graphics and Web Media

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

This course offers a hands-on introduction to the fundamental concepts, current applications and state-of-the-art hardware and software in computer graphics and computer visualization technology. Students use professional authoring software to design, develop, debug and document computer presentations for use in business and the world wide web. Hands-on introduction to computer graphics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Introduction to Operating Systems

**.75 hour lecture, .75 hour lab, 1 unit
Grade Only**

This course is an introductory hands-on study of computer operating systems for general users. Emphasis is placed on the commands and utilities necessary for effective use of computer systems. This course may be offered for Disk Operating System (DOS), Macintosh,

Microsoft Windows, OS/2, and Unix. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Introduction to Computer Presentations
.75 hour lecture, .75 hour lab, 1 unit
Grade Only

This course is an introductory hands-on study of current applications, hardware and software used to prepare effective presentations on desktop computers. Emphasis is placed on planning, designing, developing, presenting, and evaluating slide, overhead, and computer projection presentations using a combination of text and graphics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Introduction to Local Area Networks
.75 hour lecture, .75 hour lab, 1 unit
Grade Only

This is an introductory study of microcomputer local area and wide area network development, use and administration. Emphasis is placed on presenting students with a breadth of knowledge from wiring to applications and including hardware, software, transmission media, packets, frames, network topology, routing, protocols and layering. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Intermediate Local Area Networking
.75 hour lecture, .75 hour lab, 1 unit
Grade Only

This course is an introductory study of Internetworking and network applications. Emphasis is placed on presenting students with a breadth of knowledge from wiring to applications and including Internet architecture, protocols, datagrams, routing, the client server model, electronic mail, web document technologies, network management and security. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Introduction to Computer and Information Sciences
3 hours lecture, 3 units
Grade Only

A Level I course. A survey of computer systems and techniques; history of computer and information sciences; computer equipment and programming systems; flowcharting, systems study, design, development and implementation. The use of computers in the solution of typical business management problems and tasks is emphasized. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

152 Introduction to the Linux Operating System
3 hours lecture, 3 hours lab, 4 units
Credit/No Credit Only

Limitation on Enrollment: This course is not open to students with credit for Computer and Information Sciences 151.

This introductory course to the Linux Operating systems is for new users to learn the programs and services that made the Linux System so increasingly popular, including: the shell, communicating to other users, manipulating files using the file structure, setting file access permissions, full-screen text editing, and programming simple shell scripts. The Novell SuSE Linux implementation is used in the course, but other versions of Linux are also appropriate. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

181 Principles of Information Systems
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to basic principles and theory relating to problem solving and analysis in business organizations using computers and software packages. Emphasis is placed on computer organization, data processing systems, decision support systems, and systems analysis. Business software is reviewed with an emphasis on spreadsheet systems including hands-on spreadsheet applications. This course is intended for the transfer student planning to major in business, economics, or social science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CSCI 2).

186 Visual Basic Programming
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course is an introduction to programming using Visual Basic. The course covers the fundamentals of event oriented programming in a Windows environment. Students learn to use and program a mouse, windows, forms, menus, dialog boxes, icons, buttons, text fields, files, graphics, and other components of a Windows environment in Visual Basic. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Course List. (CAN CSCI 12).

187 Data Structures and Object-Orientation
3 hours lecture, 3 hours lab, 4 units
Grade Only

This course introduces students to the topic of data structures and object-oriented software engineering. It covers basic data structures such as collections and linked structures (e.g. stacks, queues, lists, arrays, trees, and hashes) from the perspective of object-oriented implementation. It discusses issues of object-oriented analysis, design, and implementation in popular programming languages such as C++, C#, and Java. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

189A Introduction to Programming I
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: Computer and Information Sciences 150 and 181, each with a grade of "C" or better, or equivalent; English 51 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Computer Information Sciences 190-Java Programming.

Using the popular programming language Java, this course introduces students to the process of developing simple software applications to solve typical human problems. This includes language syntax, structure, and semantics as well as the basics of object-oriented software engineering. CISC 189A and B together are a slower-paced version of CISC 190, with more programming practice. CISC 189A is the first of the two-course sequence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Computer and Information Sciences (CISC) 189A and 189B are equal to CISC 190. No credit for CISC 189A or 189B if taken after 190 (per catalog).

189B Introduction to Programming II
3 hours lecture, 3 hours lab, 4 units
Grade Only

Prerequisite: Computer and Information Sciences 189A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Computer and Information Sciences 190-Java Programming.

Using the popular programming language Java, this course continues the process of students learning how to solve business problems by developing useful software applications. This includes more advanced concepts like abstract data structures, graphics, and data persistence. CISC 189A and B together are a slower-paced version of CISC 190, with more programming practice. CISC 189B is the second of the two-course sequence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Computer and Information Sciences (CISC) 189A and 189B are equal to CISC 190. No credit for CISC 189A or 189B if taken after 190 (per catalog).

190 Java Programming
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course is an introduction to programming using Java. The course covers the fundamentals of object oriented programming utilizing the Java programming language for general purpose business programs and interactive World Wide Web based Internet programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

192 C/C++ Programming
3 hours lecture, 3 hours lab, 4 units
Grade Only

Advisory: English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; and Computer and Information Sciences 186 with a grade of "C" or better, or equivalent.

This course presents basic programming concepts using the C++ programming language. The organization of standard I/O classes is emphasized. Structured and object oriented programming techniques are presented and used to design and implement a variety of programming problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CSCI 16).

193 Microsoft C# Software Engineering 1
3 hours lecture, 3 hours lab, 4 units
Grade Only

This course applies industry-standard software engineering principles to the study of the object-oriented, general purpose programming language Microsoft C#, a member of the Microsoft Visual Studio.NET software development toolset. Coverage includes the typical topics of an introductory

programming course. Extensive hands-on training is included in the laboratory sessions. This course can be offered in-class or online. This course is designed for students pursuing a degree in Computer Science or Information Systems and for vocational/professional students who are updating their programming skills set. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Object Oriented Programming Using C++
3 hours lecture, 3 hours lab, 4 units
Grade Only

This course introduces students to Object Oriented Programming (OOP) using the C++ programming language and includes the essential concepts related to OOP including use of classes and objects, inheritance, templates, polymorphism, pointers and references, and I/O streams. Students may apply this course to an Associate Degree or Certificate and may be transferred to CSU and private colleges and universities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 System Analysis and Design
3 hours lecture, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6. This course is an introductory, experiential study of the phases of the object-oriented software development life cycle (OOSDLC), including: stakeholder and requirements analysis; use cases development; software architecture; project management; user interface considerations; interactive and prototyping methodology; component construction; quality assurance; and configuration management. This course is intended for students seeking advanced knowledge and applications in Computer and Information Sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study
Hours by Arrangement, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. Typically for advanced students in Computer and Information Sciences who wish to pursue special problems and projects related to the area. The student will meet with the instructor at specific intervals and will be expected to accomplish primary research,

problem analysis and report preparation relating to an approved project or course of study. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

**Information, Network, and Web
 Technology (INWT)**

**081 Microsoft Office: Troubleshooting and
 Problem Solving**
6 hours lab, 2 units
Grade Only

Advisory: Computer Business Technology 180 with a grade of "C" or better, or equivalent. This course is designed to cover the major components of the Microsoft Office software and includes coverage of the newly bundled applications such as FrontPage, Publisher, and PhotoDraw. Emphasis is placed on a more detailed understanding of Microsoft Office with its new functions for total Internet integration and collaboration. Content includes problem solving, troubleshooting and advanced solutions to client issues with the software components. (FT) Associate Degree Credit only and not Transferable.

**090A Convergent Network Technology: Basic
 Data Communications**
2 hours lecture, 2 units
Credit/No Credit Only

Corequisite: Information, Network, and Web Technologies 90B, 90C, 90D, 90E, and 90F.
Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265C, Convergent Network Technology Basic Data Communications. This course provides students with basic data communications knowledge and skills. The student is introduced to the technology of networking architecture, packet - switching, fiber optics, data modalities for blended solutions. This course follows Computer-Prep Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Basic Data

Communications exam. (FT) Associate Degree Credit only and not Transferable.

090B Convergent Network Technology: Basic Telecommunications

**1.5 hours lecture, 1.5 units
Credit/No Credit Only**

Corequisite: Information, Network, and Web Technologies 90A, 90C, 90D, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265D, Convergent Network Technology Basic Telecommunications.

This course provides students with basic telecommunications knowledge and skills. The student is introduced to the technology of networks, business communications systems, signaling, Internet telephony and switching. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Basic Telecommunications exam. (FT) Associate Degree Credit only and not Transferable.

090C Convergent Network Technology: Broadband Technologies

**2 hours lecture, 2 units
Credit/No Credit Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90D, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265E, Convergent Network Technology: Broadband Technologies.

This course provides students with basic broadband technologies knowledge and skills. The student develops an understanding for Convergent Technologies and the need for transmitting more than one type of signal simultaneously by way of divided channel. Emphasis is placed on the exploration of the technology of voice and data integration, frame relay, Synchronous Optical Network (SONET), Asynchronous Transfer Mode (ATM)/cell relay, Switched Multi-megabit Digital Service (SMDS), Broadband Integrated Services Digital Network (BISDN), Digital Subscriber Line (DSL), and Virtual Private Network (VPN). This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Broadband Technologies exam. (FT) Associate Degree Credit only and not Transferable.

090D Convergent Network Technology: Computer Telephony Integration

**1 hour lecture, 1 unit
Credit/No Credit Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90E, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265F, Convergent Network Technologies: Computer Telephony Integration. This course is designed to provide students with instruction in Computer-Telephony Integration (CTI) Essentials that build on Convergent Technologies competencies. The student is introduced to the technology of merging voice, video and data on a single network, and the intersection of telephone, television, cable and Internet networks. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Computer-Telephony Integration (CTI) Essentials exam. (FT) Associate Degree Credit only and not Transferable.

090E Convergent Network Technology: Local Area Networks (LANs)

**2 hours lecture, 2 units
Credit/No Credit Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90D, and 90F.

Limitation on Enrollment: This course is not open to students with previous credit for Computer & Information Sciences 265H, Convergent Network Technology: Local Area Networks (LANs).

This course provides students with basic training in local area networks (LANs). The student develops a critical understanding of the concepts and technology of LAN topologies, information transfer, transmission techniques, media standards, and network management. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take Computer-Prep Certified in Convergent Network Technologies (CCNT) Local Area Networks (LANs) exam. (FT) Associate Degree Credit only and not Transferable.

090F Convergent Network Technology: Voice Over IP (VoIP) Essentials

**1 hour lecture, 1 unit
Credit/No Credit Only**

Corequisite: Information, Network, and Web Technologies 90A, 90B, 90C, 90D, and 90E.

Limitation on Enrollment: This course is not open to students with previous credit for Computer &

Information Sciences 265G, Convergent Network Technology: Voice Over IP (VOIP) Essentials.

This course is designed to assist students in learning Voice Over IP. This course builds knowledge of Convergent Technologies and focuses on understanding the principles of transmitting voice calls and fax over the Internet. Students analyze VoIP networks, bandwidth compression, the Gateway, packet prioritization, Resource Reservation Protocol (RSVP), H.320 and H.323, and Wide Area Network (WAN) engineering issues. This course follows Computer-Prep Official Curriculum and is intended to prepare students to take the Computer-Prep Certified in Convergent Network Technologies (CCNT) Voice Over IP (VoIP) Essentials exam. (FT) Associate Degree Credit only and not Transferable.

100 Survey of Operating Systems

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

This project-based course is a survey of several operating systems (OS) and provides students with the opportunity to gain hands-on experience in the installation and configuration of desktop operating systems. The students work with one legacy, two current Windows, and a current version of a Linux operating systems. This course is intended for students seeking a degree or career in Information Technology and provides students with concepts and practices which includes the installation and configuration of client systems used in the Help Desk, Systems Administration, and support technician fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Desktop Support Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Information, Network, And Web Technologies 100 with a grade of "C" or better, or equivalent. This course prepares students with the knowledge and skills required to take and pass the first Microsoft Desktop Support Technician exam (Exam 70-271). Students completing this course are prepared for an entry level position in the desktop support industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Network + Training

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This is a project-oriented course that provides students with the knowledge and skills to support, maintain, and deploy networking systems and devices. This course follows the official Computing Technology Industry Association (CompTia) curriculum and is intended to prepare students to take the Network + exam and develop the job skills of a network support technician. This course may be taken three times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Security+ Certification Training

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Computer and Information Sciences 130 or Electronic Systems 229 or Microsoft 050 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills needed to plan, implement, and monitor network security policies, procedures, and technologies in any type of network environment. Students learn general security concepts, communications security, infrastructure security, basic principles of cryptography, and operations and organizational security factors affecting network environments. This course prepares students for the Security + exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Microsoft (MSFT)

050 Microsoft Networking Essentials

**.5 hours lecture, 1.5 hours lab, 1 unit
Grade Only**

This course introduces students to networking terms, concepts, and standards based on the Microsoft Official Curriculum (MOC). Topics include administrative planning, security, and disaster recovery. This course follows the Microsoft Official Curriculum and is intended to prepare students to start the Microsoft Certified Systems Engineer (MCSE) or the Microsoft Certified Systems Administrator (MCSA) certification tracks. (FT) Associate Degree Credit only and not Transferable.

051 Installing, Configuring, and Administering Windows 2000 Professional

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

This course provides students with the knowledge and skills necessary to implement, administer, and troubleshoot Windows 2000 Professional as a desktop operating system in any network environment. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE Certification Exam 70-210. (FT) Associate Degree Credit only and not Transferable.

052 Installing, Configuring, and Administering Microsoft Windows 2000 Server

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 51 with a grade of "C" or better, or equivalent.

This course offers students the opportunity to gain the knowledge and skills necessary to implement, administer, and troubleshoot Microsoft Windows 2000 Server as a member server of a domain in an active directory environment. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE Exam 70-215. (FT) Associate Degree Credit only and not Transferable.

053 Implementing and Administering a Microsoft Windows 2000 Network Infrastructure

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 52 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills necessary to install, manage, monitor, configure, and troubleshoot DNS, DHCP, Remote Access, Network Protocols, IP Routing, and WINS in a Windows 2000 network infrastructure. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE certification exam 70-216. (FT) Associate Degree Credit only and not Transferable.

054 Implementing and Administering a MSFT Windows 2000 Directory Infrastructure

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 52 with a grade of "C" or better, or equivalent.

This course is intended to provide support professionals with the knowledge and skills necessary to install, configure, and troubleshoot the Windows 2000 active directory security solutions. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE certification exam 70-217. (FT) Associate Degree Credit only and not Transferable.

055 Designing a Microsoft Windows 2000 Directory Services Infrastructure

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 52 with a grade of "C" or better, or equivalent.

This course offers students the opportunity to gain the knowledge and skills necessary to analyze business requirements and design directory service architecture and design solutions for desktop management. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE certification exam 70-219. (FT) Associate Degree Credit only and not Transferable.

056 Designing a Microsoft Windows 2000 Network Infrastructure

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Prerequisite: Microsoft 55 with a grade of "C" or better, or equivalent.

This course offers students the opportunity to gain the knowledge and skills necessary to analyze the business requirements for a network infrastructure and design a network infrastructure that meets business requirements. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE certification exam 70-221. (FT) Associate Degree Credit only and not Transferable.

057 Designing Security for a Microsoft Windows 2000 Network

**1.5 hours lecture, 3 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 56 with a grade of "C" or better, or equivalent.

This course presents an overview of the knowledge and skills necessary to analyze business requirements for security and to design a security solution that meets business requirements. This course follows the Microsoft Official Curriculum and is intended to prepare students to take the Microsoft MCSE certification exam 70-220. (FT) Associate Degree Credit only and not Transferable.

058 Managing a Microsoft Network Environment 4.5 hours lab, 1.5 units Grade Only

This course provides students with the knowledge and skills necessary to install, manage, monitor, configure, and troubleshoot Dynamic Host Configuration (DHCP), Remote Access, and Network Protocols in a Windows network environment. This course follows the Microsoft Official Curriculum (MOC) and is intended to prepare students to take the Microsoft Certified Systems Engineer (MCSE) Certification Exam 70-218 (or current test). This course may be taken three times with new technologies. (FT) Associate Degree Credit only and not Transferable.

070 Microsoft Sequel Server Database Design and Implementation 4.5 hours lab, 1.5 units Grade Only

This course provides students with the knowledge and skills to program a Microsoft Sequel Server (SQL) database. Emphasis is placed on creating and managing databases, data types, tables, and indexes, and implementing stored procedures, user-defined functions, and triggers. Course content also includes programming across multiple servers, optimizing query performance, analyzing queries and managing transactions and locks. This course follows the Microsoft Official Curriculum (MOC) and helps students prepare for the Microsoft Certification exam 70-229 (or current test). This course may be taken three times with new technologies. (FT) Associate Degree Credit only and not Transferable.

071 Microsoft SQL Server System Administration 6 hours lab, 2 units Grade Only

Advisory: Microsoft 52 with a grade of "C" or better, or equivalent.
This course is required for the Microsoft Certified Systems Engineer (MCSE) program. Students gain an understanding of the product's architecture and perform the procedures to install, configure, and administer the program using the current version of Microsoft SQL Server System. This course follows the Microsoft Official Curriculum (MOC) and helps the student prepare for the Microsoft Certification Exam 70-228 (or current test). This course may be taken three times with new technology. (FT) Associate Degree Credit only and not Transferable.

080 Microsoft Exchange Server Administration 4.5 hours lab, 1.5 units Grade Only

Advisory: Microsoft 52 with a grade of "C" or better, or equivalent.
This course provides students with the knowledge and skills necessary to install, configure and administer a Microsoft Exchange Server. Emphasis is placed on practical hands-on learning through projects in each chapter. This course follows the Microsoft Official Curriculum (MOC) and provides the student with the skills required to pass the Microsoft Certification 70-224 (or current test). This course may be taken three times with new technology. (FT) Associate Degree Credit only and not Transferable.

130 Installing, Configuring, and Administering Windows Clients 1 hour lecture, 4.5 hours lab, 2.5 units Grade Only

Advisory: Microsoft 50 with a grade of "C" or better, or equivalent.
This course provides students with the knowledge and skills necessary to install, configure, administer, and troubleshoot a Microsoft Windows client operating system in a network environment. The course follows the Microsoft Official Curriculum (MOC) and it is intended to prepare the students to take the Microsoft's client component of the Microsoft Certified Systems Engineer (MCSE) or Microsoft Systems Administrator (MCSA) certification exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Manage and Maintain Windows Server 1.5 hours lecture, 4.5 hours lab, 3 units Letter Grade or Credit/No Credit Option

Prerequisite: Microsoft 130 with a grade of "C" or better, or equivalent.
This course provides students with the knowledge and skills necessary to install, manage, and troubleshoot Windows server. The students will learn to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows server environment. This course follows the Microsoft Official Curriculum (MOC) and it is intended to prepare students to take the Microsoft's server component of the Microsoft Certified Systems Engineer (MCSE), Microsoft Certified Database Administrator (MCDBA), or Microsoft Certified Systems Administrator (MCSA) certification exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

134 Implementing, Managing, and Maintaining Network Infrastructure I

**.5 hour lecture, 3 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 130 and Microsoft 132, each with a grade of "C" or better, or equivalent. This course is the first part of the Microsoft Implementing, Managing, and Maintaining a Microsoft Server Network Infrastructure series and provides students with the knowledge and skills necessary to configure, manage, and troubleshoot a Windows Server network infrastructure. The students learn to implement routing; plan, implement, manage, and maintain Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Software Update Services (SUS); implement security, and implement a network access infrastructure through various techniques. This course follows the Microsoft Official Curriculum (MOC) and it is intended to prepare students to take the Microsoft's Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure (Network Services) component of the Microsoft Certified Systems Engineer(MCSE) certification exam (Microsoft Exam # 70-291). This course may be taken three times with new technologies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

136 Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure II

**.5 hour lecture, 3 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 130 and Microsoft 132, each with a grade of "C" or better or equivalent. This course is the second part of the Microsoft Server Network Infrastructure series and provides students with the knowledge and skills necessary to plan and maintain a Windows Server (current edition) Network Infrastructure. Students learn the needed strategies to plan, optimize, and troubleshoot the Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), Windows Internet Naming Service (WINS); and IPSec (Internet Protocol Security) network access. This course follows the Microsoft Official Curriculum (MOC) and it is intended to prepare students to take the Microsoft's Planning and Maintaining a Microsoft Windows Server Network Infrastructure component of the Microsoft Certified Systems Engineer (MCSE) and Microsoft exam # 70-293. This course may be taken three times with new technologies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

138 Planning, Implementing, and Maintaining a Microsoft Windows Server Active Directory Infrastructure

**.5 hours lecture, 3 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 130 and Microsoft 132, each with a grade of "C" or better, or equivalent. This course is one of the core courses covering Microsoft's Active Directory Services (ADS) and is required for the Microsoft Certified Systems Engineer (MCSE) Certification. The students work with a current version of Microsoft's Windows Server Active Directory. This course provides students with hands-on practice in planning, implementing, and maintaining forests, sites, domains, and organizational units (OU) while following industry standards. This course follows the Microsoft Official Curriculum (MOC). It is intended to prepare students to take the Microsoft's Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure Certification Exam (Microsoft exam 70-294) that is required for the MCSE certification. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Designing Security for Microsoft Networks

**1 hour lecture, 1.5 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 130 and Microsoft 132, each with a grade of "C" or better, or equivalent. This course provides students with the knowledge and skills to design a secure network infrastructure. Topics include assembling the design team, modeling threats, and analyzing security risks in order to meet business requirements for securing computers in a networked environment. The course encourages decision-making skills through an interactive tool that simulates real-life scenarios that the target audience may encounter. This course follows the Microsoft Official Curriculum (MOC) and it is intended to prepare students to take the Microsoft's certification exam that focuses on the Microsoft Certified Systems Engineer's security design requirement (Exam 79-298). This course may be taken three times with new technologies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Microsoft Exchange Server Administration

**1 hour lecture, 4.5 hours lab, 2.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 132 with a grade of "C" or better, or equivalent. This course provides students with the knowledge and skills necessary to install, configure and administer a

Microsoft Exchange Server. Emphasis is placed on practical hands-on learning through projects in each chapter. This course follows the Microsoft Official Curriculum (MOC) and provides the student with the skills required to pass the Microsoft Certification 70-284 (or current test). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Programming a Microsoft SQL Server

**1 hour lecture, 4.5 hours lab, 2.5 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Microsoft 132 with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills to program a Microsoft Sequel Server (SQL) database. Emphasis is placed on creating and managing databases, data types, tables, and indexes, and implementing stored procedures, user-defined functions, and triggers. Course content also includes programming across multiple servers, optimizing query performance, analyzing queries and managing transactions and locks. This course follows the Microsoft Official Curriculum (MOC) and helps students prepare for the Microsoft Certification exam 70-229 (or current test.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

171 Microsoft SQL Server System

Administration

**1 hour lecture, 4.5 hours lab, 2.5 units
Grade Only**

Prerequisite: Microsoft 132 with a grade of "C" or better, or equivalent.

This course is required for the Microsoft Certified Systems Engineer (MCSE) program. Students gain an understanding of the product's architecture and perform the procedures to install, configure, and administer the program using the current version of Microsoft Sequel (SQL) Server System. This course follows the Microsoft Official Curriculum (MOC) and helps the student prepare for the Microsoft Certification Exam 70-228 (or current test). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Technical Illustration

"Engineering Technology" on page 237

Construction Trades

**Construction Systems, Electrical, Pipefitting,
Plumbing, Sheet Metal**

	Units
Certificate of Achievement:	
Electrical Trade Option	24
Pipefitting Trade Option	21
Plumbing Trade Option	24
Sheet Metal Trade Option	21
Associate in Science Degree:	
Electrical Trade Option	24*
Pipefitting Trade Option	21*
Plumbing Trade Option	24*
Sheet Metal Trade Option	21*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

This program is designed for the student who is interested in a construction-related career. The specialized trade options of Electrical, Plumbing, and Sheet Metal are offered parallel to the apprenticeship related instructional programs. Each option provides in-depth information and a working knowledge of tools, materials and techniques used in the industry. These courses are not designed for the handyman, but for the individual pursuing a career in a related field. Program planning should occur with the assistance of a department member. All courses have been designed to be taken sequentially.

Certificate of Achievement: Construction Trades

Electrical Trade Option (Non-apprentice)

	Units
Courses Required for the Major:	
ELEC 060A, Introduction to Electrical Construction I.....	3
ELEC 060B, Introduction to Electrical Construction II.....	3

ELEC 065A, Intermediate Electrical Construction I....	3
ELEC 065B, Intermediate Electrical Construction II...	3
ELEC 070A, Advanced Electrical Construction I.....	3
ELEC 070B, Advanced Electrical Construction II	3
ELEC 075A, Electrical Construction Specialties I	3
ELEC 075B, Electrical Construction Specialties II	3
Total Units =	24

Certificate of Achievement: Construction Trades

Pipefitting Trade Option (Non-apprentice)

	Units
Courses Required for the Major:	
PLBG 160A, Introduction to Plumbing I.....	3
PLBG 160B, Introduction to Plumbing II.....	3
PLBG 065A, Intermediate Plumbing I.....	3
PLBG 065B, Intermediate Plumbing II.....	3
PLPF 080, Introduction to Pipefitting.....	3
PLPF 085, Intermediate Pipefitting.....	3
PLPF 090, Advanced Pipefitting.....	3
Total Units =	21

Certificate of Achievement: Construction Trades

Plumbing Trade Option (Non-apprentice)

	Units
Courses Required for the Major:	
PLBG 160A, Introduction to Plumbing I.....	3
PLBG 160B, Introduction to Plumbing II.....	3
PLBG 065A, Intermediate Plumbing I.....	3
PLBG 065B, Intermediate Plumbing II.....	3
PLBG 070A, Advanced Plumbing I.....	3
PLBG 070B, Advanced Plumbing II.....	3
PLBG 075A, Plumbing Construction Specialties	3
PLBG 075B, Plumbing Code.....	3
Total Units =	24

Certificate of Achievement: Construction Trades

Sheet Metal Trade Option (Non-apprentice)

	Units
Courses Required for the Major:	
SHEE 060A, Level I Sheet Metal/HVAC	3
SHEE 060B, Level I Sheet Metal/HVAC	3
SHEE 065A, Level II Sheet Metal/HVAC	3
SHEE 065B, Level II Sheet Metal/HVAC	3
SHEE 070A, Level III Sheet Metal/HVAC.....	3
SHEE 070B, Level III Sheet Metal/HVAC.....	3
SHEE 075A, Level IV Sheet Metal/HVAC.....	3
Total Units =	21

Associate in Science Degree: Construction Trades

Electrical Trade Option (Non-apprentice)

Courses Required for the Major:	Units
ELEC 060A, Introduction to Electrical Construction I.....	3
ELEC 060B, Introduction to Electrical Construction II.....	3
ELEC 065A, Intermediate Electrical Construction I ...	3
ELEC 065B, Intermediate Electrical Construction II...	3
ELEC 070A, Advanced Electrical Construction I.....	3
ELEC 070B, Advanced Electrical Construction II.....	3
ELEC 075A, Electrical Construction Specialties I	3
ELEC 075B, Electrical Construction Specialties II	3
Total Units = 24	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Pipefitting Trade Option (Non-apprentice)

Courses Required for the Major:	Units
PLBG 160A, Introduction to Plumbing I.....	3
PLBG 160B, Introduction to Plumbing II.....	3
PLBG 065A, Intermediate Plumbing I	3
PLBG 065B, Intermediate Plumbing II	3
PLPF 080, Introduction to Pipefitting.....	3
PLPF 085, Intermediate Pipefitting	3
PLPF 090, Advanced Pipefitting.....	3
Total Units = 21	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Plumbing Trade Option (Non-apprentice)

Courses Required for the Major:	Units
PLBG 160A, Introduction to Plumbing I.....	3
PLBG 160B, Introduction to Plumbing II.....	3
PLBG 065A, Intermediate Plumbing I	3
PLBG 065B, Intermediate Plumbing II	3
PLBG 070A, Advanced Plumbing I.....	3
PLBG 070B, Advanced Plumbing II.....	3

PLBG 075A, Plumbing Construction Specialties	3
PLBG 075B, Plumbing Code.....	3
Total Units = 24	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Construction Trades

Sheet Metal Trade Option (Non-apprentice)

Courses Required for the Major:	Units
SHEE 060A, Level I Sheet Metal/HVAC	3
SHEE 060B, Level I Sheet Metal/HVAC	3
SHEE 065A, Level II Sheet Metal/HVAC	3
SHEE 065B, Level II Sheet Metal/HVAC	3
SHEE 070A, Level III Sheet Metal/HVAC.....	3
SHEE 070B, Level III Sheet Metal/HVAC.....	3
SHEE 075A, Level IV Sheet Metal/HVAC.....	3
Total Units = 21	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Courses

Construction Systems (CONS)

060A Construction Systems - Introduction to HVAC I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 301.

In this course, trade mathematics and drawings, the tools of the trade, blueprint terminology and basic rigging equipment and procedures as applicable to HVAC are covered. This course is designed to give the construction HVAC student an understanding of copper and plastic piping practices. (FT) Associate Degree Credit only and not Transferable.

060B Construction Systems - Introduction to HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 60A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 302. This course introduces the construction HVAC trainee to the basic concepts and environmental concerns related to heating, ventilation and air conditioning, including: soldering, brazing, ferrous metal piping practices, basic electricity, heating and cooling. This course also describes the HVAC program and the career opportunities available in the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

061A Construction Systems - Intermediate HVAC I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 60B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 303. This course instructs the HVAC trainee in the properties of air, and covers chimneys, flues and vents. Students are introduced to basic mechanical procedures commonly performed in HVAC service work, such as the operation, installation and servicing of electric furnaces. This course also introduces the student to alternating current and electronic components and circuits used in HVAC systems. (FT) Associate Degree Credit only and not Transferable.

061B Construction Systems - Intermediate HVAC II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Construction Systems 61A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 304. This course instructs the HVAC trainee in HVAC controls and metering devices and introduces the trainee to control circuit analysis. This course also covers compressors and heat pumps and instructs the student in leak detection, evacuation, recovery and charging service procedures used to troubleshoot, repair and/or maintain proper operation of the mechanical

refrigeration system. (FT) Associate Degree Credit only and not Transferable.

062A Construction Systems - Advanced HVAC I 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Construction Systems 61B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 305. This course instructs the HVAC trainee in preventive maintenance and provides an introduction to troubleshooting applying to all types of HVAC equipment. This course also covers troubleshooting electronic controls, gas heating, electric heating and oil heating. (FT) Associate Degree Credit only and not Transferable.

062B Construction Systems - Advanced HVAC II 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Construction Systems 62A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 306. This course instructs the HVAC trainee in troubleshooting cooling, accessories, heat pumps and commercial heating and cooling systems. This course also covers water and air balance, steam systems and customer relations. (FT) Associate Degree Credit only and not Transferable.

063A Construction Systems - HVAC Specialties I 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Construction Systems 62B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 307. This course covers advanced blueprint reading and specifications as they relate to HVAC, indoor air quality and energy conservation equipment commonly used in HVAC systems. This course also covers energy management systems and the methods of water treatment and water treatment equipment used with HVAC systems. (FT) Associate Degree Credit only and not Transferable.

063B Construction Systems - HVAC Specialties II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 63A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Heating, Ventilation, Air Conditioning Apprenticeship (HVAC) 308.

This course covers commercial heating and cooling systems, maintenance of these systems and system start-up and shut down. This course also covers commercial and industrial refrigeration systems, equipment, refrigerated warehouses, walk-in coolers display cases, etc. (FT) Associate Degree Credit only and not Transferable.

070A Construction Systems - Introduction to Low Voltage Building Systems I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 301A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. Associate Degree Credit only and not Transferable.

070B Construction Systems - Introduction to Low Voltage Building Systems II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 70A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 301B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in industry standards, and building codes, residential and commercial construction methods, basic electrical theory, electrical meters, OSHA safety standards, and ladders and rigging. (FT) Associate Degree Credit only and not Transferable.

071A Construction Systems - Intermediate Low Voltage Building Systems I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 70B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 302A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in mathematics related to the trade, electronic theory, electronic measurement tools and techniques, AC and DC electrical systems and grounding, and blueprint reading related to the trade. (FT) Associate Degree Credit only and not Transferable.

071B Construction Systems - Intermediate Low Voltage Building Systems II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 71A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 302B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in types of cabling, switches and relays, terminating conductors, low-voltage codes and standards, and computer cabling applications. (FT) Associate Degree Credit only and not Transferable.

072A Construction Systems - Advanced Low Voltage Building Systems I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 71B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 303A.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in wire and cable selection, advanced buses and networks, fiber optic installation, cable and satellite television systems, and wireless communications. (FT) Associate Degree Credit only and not Transferable.

072B Construction Systems - Advanced Low Voltage Building Systems II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Construction Systems 72A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Construction Electronic Systems Technician 303B.

This course provides the Construction Systems - Low Voltage Building Systems student with instruction in site survey, job planning and documentation, maintenance and repair, supervision, and fire and security alarm systems. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Courses

Electrical (ELEC)

060A Introduction to Electrical Construction I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 108 or Electrical Apprenticeship 301A.

This course provides the electrical worker with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit only and not Transferable.

060B Introduction to Electrical Construction II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 60A or Electrical 301A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 109 or Electrical Apprenticeship 301B.

This course provides the electrical student with instruction in basic principles of electrical safety and hazard procedures including working with toxins and vapors. Students will also be provided with instruction in techniques used to hand bend conduits and install anchors and supports. Additional instruction will include an introduction to basic electrical theory and test equipment, the use of NEC boxes, fittings and conductors, and the interpretation of related electrical blueprints and commercial/industrial/residential symbols, diagrams and schematics used for wiring. (FT) Associate Degree Credit only and not Transferable.

065A Intermediate Electrical Construction I

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 60B or Electrical 301B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 110 or Electrical Apprenticeship 302A.

This course covers intermediate electrical techniques including principles of alternating currents, characteristics of circuits, transformers, motor theory applications, grounding purposes and methods, National Electrical Code (NEC) requirements for conduit bending, types of bends, specifications for boxes and fittings, and location considerations. (FT) Associate Degree Credit only and not Transferable.

065B Intermediate Electrical Construction II

2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Electrical 65A or Electrical 302A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 111 or Electrical Apprenticeship 302B.

This course covers the installation of connections for conductor termination and splices; use of cable pulling instruments and NEMA and NEC standards for cable tray; installation of electrical service and related components and equipment; use of manual take-off methods and troubleshooting techniques; identification of ratings for current breakers and fuses and regulations for sizing, use, and installation of relay switches, conductors and overrides; electrical lighting principles, types and applications. (FT) Associate Degree Credit only and not Transferable.

070A Advanced Electrical Construction I 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Electrical 65B or Electrical 302B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 212 or Electrical Apprenticeship 303A.

This course includes instruction in branch load calculations for circuits and varied electrical appliances; introduction to and identification of electrical conductors; devices used for overprotection of loads, currents, circuits and fuses; fill requirements for boxes/raceways; principles of wiring devices, switches and receptacles and their locations; requirements for distribution equipment; settings for voltage, switch gear, circuits and components; distribution system transformers and their characteristics; types of components; NEC requirements; methods for locating and troubleshooting problems. (FT) Associate Degree Credit only and not Transferable.

070B Advanced Electrical Construction II 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Electrical 70A or Electrical 303A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 213 or Electrical Apprenticeship 303B.

This course provides the electrical worker with instruction in basic lighting and NEC requirements for lighting fixtures for indoor and outdoor use; an introduction to motor basics, calculations, transformers, instruments for testing, wiring, protection, maintenance, and troubleshooting for various types of motors and motor controls; introduction to heating, ventilation, and air conditioning (HVAC) systems and refrigeration theory, compressors, operating systems and system maintenance equipment, and safety requirements for varied locations; principles for combustion, hazardous materials and their reactions in varied locations, and the use of safety equipment. (FT) Associate Degree Credit only and not Transferable.

075A Electrical Construction Specialties I 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Electrical 70B or Electrical 303B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 222 or Electrical Apprenticeship 304A.

This course provides the electrical worker with instruction in calculations for wiring commercial and residential dwellings and NEC requirements for lighting and specialty fixtures; characteristics and types of standby emergency electrical systems and system applications, size of disconnect switches, feeder and branch circuits for DC systems; theory and operating principles for solid-state devices, operational amplifier circuits, specialty and transformers and components of fire alarm and security systems; installation methods for smoke and heat detectors. (FT) Associate Degree Credit only and not Transferable.

075B Electrical Construction Specialties II 2 hours lecture, 3 hours lab, 3 units Grade Only

Prerequisite: Electrical 75A or Electrical 304A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Building Construction 223 or Electrical Apprenticeship 304B.

This course is designed to provide the electrical worker with advanced instruction of controls for motors, starters, relays, switches and transformers; installation and connection of gas burner controls and commercial and industrial HVAC control systems; NEC and OSHA requirements for connecting and grounding varied welding machines; installation and protection of heat-tracing and freeze protection equipment; principles and maintenance of motors and selection of materials and tools required for high voltage termination/splices according to manufacturer's specifications. (FT) Associate Degree Credit only and not Transferable.

270 Electrical Work Experience Hours by arrangement, 1 - 4 units Grade Only

Advisory: Completion of English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: To receive the work experience credit, concurrent enrollment in seven units of credit (must include related Electrical Trade option and may include work experience credit) for a fall or spring semester and/or one other class during a summer session.

(60-300 hours) The Electrical Work Experience program is designed to provide an opportunity to extend occupational learning through employment and coordinate the on-the-job training and the classroom instruction. The goals and learning objectives will be

designed by the student cooperatively with the employer and Work Experience instructor/coordinator. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Pipefitting (PLPF)

080 Introduction to Pipefitting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (PLBG) 65B or Plumbing (PLBG) 320 with a grade of "C" or better, or equivalent.

Limitation on enrollment: This course is not open to students with credit for Pipefitting (PLPF) 325.

This course is designed to give the Pipefitting student an introduction to blueprint drawings and detail sheets, piping systems, standards and specifications, and trade math. This course also includes advanced blueprint reading and trade math as well as motorized equipment and above ground pipe installation. (FT) Associate Degree Credit only and not Transferable.

085 Intermediate Pipefitting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Pipefitting (PLPF) 80 or Pipefitting (PLPF) 325 with a grade of "C" or better, or equivalent.

Limitation on enrollment: This course is not open to students with credit for Pipefitting (PLPF) 330.

This course is designed to give the Pipefitting student instruction in pipe hangers and supports, identifying and installing valves, field routing and vessel trim, spring can supports, planning work activities and performing non-destructive examination testing. (FT) Associate Degree Credit only and not Transferable.

090 Advanced Pipefitting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Pipefitting (PLPF) 85 or Pipefitting (PLPF) 330 with a grade of "C" or better, or equivalent.

Limitation on enrollment: This course is not open to students with credit for Pipefitting (PLPF) 335.

This course is designed to give the pipefitting student instruction in advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, in-line specialties,

special piping, hot taps, and maintaining valves. (FT) Associate Degree Credit only and not Transferable.

270 Pipefitting Work Experience

**Hours by arrangement, 1-4 units
Grade Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on enrollment: To receive the work experience credit, concurrent enrollment in seven units of credit (must include related Pipefitting Trade option and may include work experience credit) for a fall or spring semester and/or one other class during a summer session.

The Pipefitting Work Experience program is designed to provide an opportunity to extend occupational learning through employment and coordinate the on-the-job training and the classroom instruction. The goals and learning objectives will be designed by the student cooperatively with the employer and work experience instructor/coordinator. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Plumbing (PLBG)

160A Introduction To Plumbing I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 35, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 60A, 105 or Plumbing (Apprenticeship) 305.

This course is designed to give the plumbing student introductory information regarding OSHA (Occupational Safety & Health Administration) standards of safety and precautions for working on the construction site; a review of math as it relates to plumbing, hand and power tool usage, basic plumbing blueprint reading and basic rigging. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160B Introduction To Plumbing II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Apprenticeship) 305 or Plumbing (Construction Trades) 160A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 60B, 110 or Plumbing (Apprenticeship) 310.

This course is designed to give the plumbing student an introduction to reading and interpreting the IAMPO(International Association of Plumbing & Mechanical Officials) uniform plumbing codes and residential plumbing drawings, identifying various types of pipe and the procedures for working with the pipe. This course will also include identification of various plumbing lines and their components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165A Intermediate Plumbing I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 160B or Plumbing (Apprenticeship) 310 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 65A, 115 or Plumbing (Apprenticeship) 315.

This course is designed to provide the intermediate plumbing student the knowledge of introductory plumbing math, the identification of various commercial drawings, the installation of DWV (Drain, Waste & Vent) piping components and systems for commercial properties utilizing local and National Plumbing Codes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165B Intermediate Plumbing II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 165A or Plumbing (Apprenticeship) 315 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 65B, 120 or Plumbing (Apprenticeship) 320.

This course is designed to give the intermediate plumbing student the ability to perform testing of water supply piping and systems, installation of the components of a water supply system, and the ability

to read and interpret commercial plumbing drawings for project requirements according to local and national codes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170A Advanced Plumbing II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 165B or Plumbing (Apprenticeship) 320 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 70A, 125 or Plumbing (Apprenticeship) 325.

This course is designed to provide the advanced plumbing student with the ability to perform applications of advanced math for plumbers and methods of handling waste. This course also provides information relating to water softening measures, methods of locating buried lines, the installation and maintenance of waste pressure booster systems, and the prevention of backflow. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170B Advanced Plumbing II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 175B or Plumbing (Apprenticeship) 340 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 70B, 130 or Plumbing (Apprenticeship) 330.

This course is designed to provide the advanced plumbing student with the ability to organize job tasks, clean and disinfect potable water systems, thaw frozen pipes, install main to meter water services and solar systems. This course also covers the ability to rough-in fixtures for residential, commercial and handicapped settings and install natural gas and storm drainage systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175A Plumbing Construction Specialties
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Plumbing (Construction Trades) 170B or Plumbing (Apprenticeship) 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing

(Construction Trades) 75A, 135 or Plumbing (Apprenticeship) 335.

This course is designed to introduce the plumbing student to specialty topics such as swimming pool installation, medical gas systems, mobile home and mobile home park plumbing systems, and private water waste and treatment systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175B Plumbing Code

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 170A or Plumbing (Apprenticeship) 325, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 75B or Plumbing (Apprenticeship) 340.

This course is designed to prepare the advanced plumbing student to apply plumbing codes to correctly design and build plumbing systems. Primary topics include coverage of codes pertaining to plumbing fixtures and fittings, water heaters and fuel piping, drainage, waste and vent systems, sewage and reclaimed water systems, sizing and standards, and alternate plumbing systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Plumbing Work Experience

**300 hours lab, 4 units
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: Student must be concurrently enrolled in a related plumbing course. To receive credit, a student must complete a minimum of seven units including work experience during Fall or Spring semester.

This course consists of a program of on-the-job learning experiences for plumbing students employed in related plumbing fields. Students may repeat this course up to three additional times for a total of 16 units. During summer sessions, one other course must be taken concurrently. One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270).

Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Sheet Metal (SHEE)

060A Level I Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 105 or 301A. This course introduces the Sheet Metal/HVAC trade. Topics include the tools of the trade, safety practices, trade mathematics, blueprints and drawings, and basic rigging. (FT) Associate Degree Credit only and not Transferable.

060B Level I Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 60A or Sheet Metal 301A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 110 or 301B. This course continues the introductory level of Sheet Metal and HVAC trades. Topics include intermediate math, duct and air distribution theory and installation, welding concepts, insulation, and electricity related to the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

065A Level II Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 60B or Sheet Metal 301B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 115 or 302A. This course is an intermediate level introduction to the concepts of cooling and sheet metal layout. Topics include layout and line development, mathematics and measurements used in the trade, bend allowances and triangulation. (FT) Associate Degree Credit only and not Transferable.

065B Level II Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 65A or Sheet Metal 302A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 120 or 302B.

This course is a continuation of the principles of air flow. Other topics include associated equipment, principles of refrigeration, fiberglass ducts and an introduction to triangulation. (FT) Associate Degree Credit only and not Transferable.

070A Level III Sheet Metal

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 65B or Sheet Metal 302B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 125 or 304A. In this course, students will review the principles of triangulation, layout and pattern development using a variety of tools, equipment and materials, as well as the fundamentals of welding, brazing, cutting, and field measuring and fitting. (FT) Associate Degree Credit only and not Transferable.

070B Level III Sheet Metal

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 70A or Sheet Metal 304A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 130 or 304B. This course covers shop production and organization, air balancing and an introduction to a comprehensive review of fabrication. (FT) Associate Degree Credit only and not Transferable.

075A Level IV Sheet Metal

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 70B or Sheet Metal 304B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Sheet Metal 135 or 305A. In this course, students will continue to review fabrication as well as louvers, dampers, access doors, the use of hoods and ventilators, and how to design fume and exhaust systems per OSHA and ACGHI standards. (FT) Associate Degree Credit only and not Transferable.

075B Level IV Sheet Metal/HVAC

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Sheet Metal 075A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Sheet Metal 305B. This course covers advanced HVAC troubleshooting and Sheet Metal roofing. Topics include troubleshooting and repair of gas and electric heating systems, cooling systems, heat pumps, and electronic controls, as well as system balancing. Sheet Metal topics include metal roof system applications and installation. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Cosmetology

	Units
Certificate of Completion:	
Teacher Training Program	12
Certificate of Achievement:	
Cosmetology	42.5
Associate in Science Degree:	
Cosmetology	49.5*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Cosmetology program is designed to provide entry level skills to students interested in a career in the cosmetology profession. California State law requires that persons enrolling in Cosmetology courses must be at least sixteen years of age. Students in the Cosmetology program will be required to comply with and maintain standards of dress and grooming. Excessive absences may result in exclusion from the program. All prospective students are required to attend an orientation program.

Orientation

Students must bring proof of placement test scores to the orientation session and Student Handbook.

Program Enrollment

Program add codes are required for both transfer and continuing students for spring, summer and fall semesters. Mid-spring and mid-fall courses are also part of the program and new courses begin each nine weeks. Program vacancies are filled by students from a waiting list.

Program Hours

Cosmetology courses are offered during the day and evening.

Full-Time Program: For students enrolled in lecture courses numbered 50, 60, 70, 81 and 95: 7:50 A.M.- 8:50 A.M., Monday through Friday.

For students enrolled in laboratory 50L, 60L, 70L, 80L & 90L: 8:50 A.M.- 4:00 P.M., Monday through Friday.

Half-Time Evening Program: Lecture: Monday 5:00 - 10:00 P.M. and 5:30 - 10:00 P.M., Tuesday through Friday (laboratory only)

NOTE: A nine-week summer session is required for both full-time day and half-time evening students.

Prior Hours:

Students who have hours previously completed in a cosmetology program must provide written verification of hours completed. This is done by submitting State Board documentation to the Cosmetology Department.

The California State Board of Barbering and Cosmetology requires 1600 hours of instruction and a passing score on the State Board examination to become a licensed cosmetologist eligible for employment. Students participate in practical and theoretical training under the supervision of a State licensed and community college credentialed instructor at all times while enrolled in the program.

Program Emphasis

Students are expected to learn fundamental practices and procedures of cosmetology services. This includes laboratory instruction in client cosmetology services. Students are required to purchase all textbooks, uniforms, practical kits, tools and small manually handled equipment. Instructional opportunities provide the student with salon site visitation, guest speakers, exposure to the cosmetology industry, small business concepts and current changes in the field of cosmetology which lead to career opportunities and advancement. Students are provided with opportunities to develop skills in sales, community and client relations, care of skin, hair and nails, as well as salon management. A grade of "C" or better must be maintained in order to advance in the course sequence. As of January 1, 1995, the California State Board of Cosmetology requires 400 hours of instruction for manicuring program licensure application.

Note: Half-time students should enroll in laboratory sections A & B, for example, Cosmetology 50LA & 50LB.

Faculty	Office	Telephone
Constance Calhoun	A1-F	(619) 388-3284
Patricia Grooms-Jones	A1-G	(619) 388-3296
Sylvia Leon	A16-A	(619) 388-3660
Sudabeth Phillips	A1-K	(619) 388-3613

Career Options

Some careers in cosmetology require education beyond the associate degree. Examples of careers in cosmetology include: salon owner/manager, cosmetologist (salon services), platform stylist (demonstrates products and techniques for

manufacturer), competition stylist, cosmetology instructor, technical writer for trade magazine, seminar/demonstration speaker and education specialist (for a manufacturer).

Academic Programs

The associate degrees in Cosmetology require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Completion: Teacher Training Program

After completing three or more years of work experience as a cosmetologist and passing the California State Board exam in Cosmetology, students may continue their education while concurrently working in a salon or industry by enrolling in the following courses to earn a specialized certificate in the Cosmetology Teacher Training Program and become eligible to take the California State Board Instructor's Examination in Cosmetology for licensing.

Courses Required:	Units
COSM 091A, Cosmetology Teacher Training Program I	6
COSM 091B, Cosmetology Teacher Training Program II	6
Total Units = 12	

Certificate of Achievement: Cosmetology

Courses Required for the Major:	Units
COSM 50L, Fundamentals of Cosmetology OR	
COSM 50LA, 50LB, Fundamentals of Cosmetology I & II.....	6
COSM 50, Rules, Regulations, and Physiology.....	2.5
COSM 60L, Intermediate Cosmetology Lab I OR	
COSM 60LA, 60LB, Intermediate Cosmetology Lab IA & IB	6
COSM 60, Facials, Hairstyling & Haircutting.....	2.5
COSM 70L, Intermediate Cosmetology Lab II OR	
COSM 70LA, 70LB, Intermediate Cosmetology Lab IIA IIB	6
COSM 70, Chemistry and Chemical Services.....	2.5
COSM 80L, Advanced Cosmetology Lab IA OR	

COSM 80LA, 80LB, Advanced Lab IA & IB.....	6
COSM 81, Basic Business Practices	2.5
COSM 90L, Advanced Cosmetology Lab II OR	
COSM 90LA, 90LB, Advanced Lab IIA & IIB	6
COSM 95, State Board Review.....	2.5
Total Units = 42.5	

Associate in Science Degree: Cosmetology

Courses Required for the Major:	Units
Certificate of Achievement, Cosmetology	42.5
BUSE 100, Introduction to Business.....	3
CHEM 100, Fundamentals of Chemistry	3
CHEM 100L, Fundamentals of Chemistry Lab	1
Total Units = 49.5	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Cosmetology 290, 92.

Courses

Cosmetology (COSM)

050L Fundamentals of Cosmetology

**18 hours lab, 6 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110, 110A and 110B or 50LA and 50LB.

This course is an introduction to the basic fundamentals of Cosmetology. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling, manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for the California State Bureau of Barbering and Cosmetology licensure. (FT) Associate Degree Credit only and not Transferable.

050LA Fundamentals of Cosmetology I
9 hours lab, 3 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110, 110A or 50L.

This course is an introduction to the basic fundamentals of Cosmetology. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling, manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for 50LB and the California State Bureau of Barbering and Cosmetology licensure. (FT) Associate Degree Credit only and not Transferable.

050LB Fundamentals of Cosmetology II
9 hours lab, 3 units
Grade Only

Prerequisite: Cosmetology 50LA with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50 or 60 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 110 or 110B or 50L.

This course is a continuation of Cosmetology 50LA, an introduction to the basic fundamentals of Cosmetology, at a more advanced level. Course content includes basic procedures of draping, shampooing, conditioning, haircutting, wet hairstyling, manicuring, pedicuring, facials, make-up, and removing unwanted hair. This course is intended to prepare students for 60LA and the California State Bureau of Barbering and Cosmetology licensure exam. Associate Degree Credit only and not Transferable.

050 Rules, Regulations, and Physiology
2.5 hours lecture, 2.5 units
Grade Only

Corequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 111, 111A or 111B.

This is an introduction to the basic principles of anatomy and physiology, including bone structure, circulation, muscle and nerve components of the body as well as hair structure. This course incorporates bacteriology, sanitation, sterilization and cosmetology rules and regulations as required for licensure in the State of California. Emphasis is placed on consumer protection and health of the community as related to cosmetology services. (FT) Associate Degree Credit only and not Transferable.

060L Intermediate Cosmetology Lab I
18 hours lab, 6 units
Grade Only

Prerequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60 or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120, 120A and 120B or 60LA and 60LB. Must obtain an Add Code from the instructor for enrollment.

This course provides for the supervised application of the basic fundamentals of Cosmetology. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. The main focus of this course is intended to prepare students for 70L, 70LA, and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

060LA Intermediate Cosmetology Lab IA**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60, or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120 or 120A or 60L.

This course is designed to cover the first half of Cosmetology 60L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. This course together with Cosmetology 60LB is intended to prepare students for 70L or 70LA and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

060LB Intermediate Cosmetology Lab IB**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 60LA or Cosmetology 50L with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50, 60, or 70 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 120 or 120B or 60L.

This course is a continuation of Cosmetology 60LA. It covers the second half of Cosmetology 60L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of Cosmetology 50L is included to develop skill level and subject matter mastery of the following subjects: state board set, manicuring, pedicuring, artificial nails, facials, make up, removing unwanted hair, sanitation safety and client protection. This course together with Cosmetology 60LA is intended to prepare students for 70L or 70LA and 70LB and the California State Bureau of Barbering and Cosmetology examination. This course also prepares students for client services. (FT) Associate Degree Credit only and not Transferable.

060 Facials, Hairstyling and Haircutting**2.5 hours lecture, 2.5 units
Grade Only**

Prerequisite: Cosmetology 50 with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB; or Cosmetology 70L; or Cosmetology 70LA and 70LB.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 122.

This course is an introduction to concepts related to facials, hairstyling and haircutting. Included in this course are basic principles of histology for the skin including diseases and disorders. Advanced facial treatments, massage and skin analysis for a diverse clientele are incorporated as well as advanced make-up techniques that include application, analysis, and corrective procedures. Basic principles of design used for haircutting, fingerwaving, wet hairstyling, blow drying, marcel and electric curling iron, pressing, artificial hair care and artificial hair styling are introduced. This course incorporates communication skills as related to client services and professionalism intended to support students in their employment goals. This course is intended to prepare students for Cosmetology 70 and 80 and the California State Bureau of Barbering and Cosmetology Exam. (FT) Associate Degree Credit only and not Transferable.

070L Intermediate Cosmetology Lab II**18 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 60L; or Cosmetology 60LA and 60LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130, 130A, 130B, 70LA, or 70LB. Must obtain an Add Code from the instructor for enrollment.

This course is an introduction to the basic laboratory fundamentals of chemicals and hair design. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from Cosmetology 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed

on preparing students for 80L, 80LA, and 80LB and the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

070LA Intermediate Cosmetology Lab IIA

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 60L; or Cosmetology 60LA and 60LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130 or 130A or 70L.

This course is an introduction to the basic laboratory fundamentals of chemicals and hair design and covers the first half of COSM 70L. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from COSM 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed on preparing students for 80L or 80LA and 80LB and the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

070LB Intermediate Cosmetology Lab IIB

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 70LA and Cosmetology 60L; or Cosmetology 60LA and 60LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 130 or 130B or 70L.

This course is a continuation of Cosmetology 70LA and covers the second half of Cosmetology 70L. The course provides an intermediate-level introduction to the basic laboratory fundamentals of chemicals and hair design. Course content includes basic procedures of hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. A review of the topics from Cosmetology 60L is included to maintain subject matter mastery and to prepare students for client services. Emphasis is placed on preparing students for 80L or 80LA and 80LB and the California State Bureau of Barbering and

Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

070 Chemistry and Chemical Services

**2.5 hours lecture, 2.5 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Cosmetology 060L; or Cosmetology 60LA and 60LB; or Cosmetology 070L; or Cosmetology 70LA and 70LB; or Cosmetology 080L; or Cosmetology 80LA and 80LB; or Cosmetology 090L; or Cosmetology 90LA and 90LB with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 131. Must obtain an Add Code from the instructor for enrollment.

This eight-week course is an introduction to the techniques used for hair coloring, permanent waving, relaxing and soft perming. An understanding of chemistry and formulation methods is included for all techniques. In addition, an advanced understanding of the relationship between all types of hair textures and basic chemical types and professional products is taught. Emphasis is placed on the development of consultation skills as related to client services and professionalism. This course is intended to prepare the student for the California State Bureau of Barbering and Cosmetology examination. (FT) Associate Degree Credit only and not Transferable.

080L Advanced Cosmetology Lab I

**18 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 70L; or Cosmetology 70LA and 70LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140, 140A, 140B, 80LA, or 80LB. Must obtain an Add Code from the instructor for enrollment.

This course is an introduction to senior level techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring, haircutting, and wet hairstyling. This course is intended to prepare the student for 90L, 90LA, and 90LB, the California State Bureau of Barbering and Cosmetology examination as well as to introduce students to marketing strategies and to support their

efforts in meeting professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

080LA Advanced Cosmetology Lab IA

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 70L; or Cosmetology 70LA and 70LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60 or 70 or 81, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140 or 140A or 80L.

This course is an introduction to senior level techniques related to client services in Cosmetology and covers the first half of Cosmetology 80L. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring, haircutting, and wet hairstyling. This course together with Cosmetology 80LB is intended to prepare the student for 90L or 90LA and 90LB, the California State Bureau of Barbering and Cosmetology examination as well as to introduce students to marketing strategies and to support their efforts in meeting professional and employment goals. (FT) Associate Degree Credit and not Transferable.

080LB Advanced Lab IB

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 80LA and Cosmetology 70L; or Cosmetology 70LA and 70LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60 or 70 or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 140 or 140B or 80L.

This course is a continuation of Cosmetology 80LA and covers the second half of Cosmetology 80L. It provides increased senior level techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, thermal pressing and curling as well as advanced level facials, manicuring, haircutting, and wet hairstyling. This course together with Cosmetology 80LA is intended to prepare the student for 90L or 90LA and 90LB, the California State Bureau of Barbering and

Cosmetology examination as well as to introduce students to marketing strategies and to support their efforts in meeting professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

081 Basic Business Practices

**2.5 hours lecture, 2.5 units
Grade Only**

Prerequisite: Cosmetology 50, 60, and 70, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 50L; or Cosmetology 50LA and 50LB; or Cosmetology 60L; or Cosmetology 60LA and 60LB; or Cosmetology 70L; or Cosmetology 70LA and 70LB; or Cosmetology 80L; or Cosmetology 80LA and 80LB; or Cosmetology 90L; or Cosmetology 90LA and 90LB with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 151. This eight-week course is an introduction to basic business practices as related to the Cosmetology industry. Emphasis is placed on bookkeeping, business law and taxation, insurance, salesmanship, resume writing, interview techniques, business plan writing, and marketing. In addition, this course incorporates interpersonal relationships as they relate to client services and professionalism in the salon. (FT) Associate Degree Credit only and not Transferable.

090L Advanced Cosmetology Lab II

**18 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 80L; or Cosmetology 80LA and 80LB with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150, 150A, 150B, 90LA, or 90LB. Must obtain an Add Code from the instructor for enrollment.

This course focuses on perfecting competence in advanced techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and

employment goals. (FT) Associate Degree Credit only and not Transferable.

090LA Advanced Lab IIA

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 80L; or Cosmetology 80LA and 80LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150 or 150A or 90L.

This course covers the first half of Cosmetology 90L and focuses on perfecting competence in advanced techniques related to client services in Cosmetology. Course content includes advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

090LB Advanced Lab IIB

**9 hours lab, 3 units
Grade Only**

Prerequisite: Cosmetology 90LA; or Cosmetology 80L; or Cosmetology 80LA and 80LB, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Cosmetology 60, 70, or 81 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 150 or 150B or 90L.

This course is a continuation of Cosmetology 90LA and covers the second half of Cosmetology 90L. It provides an increased focus on perfecting competence in advanced techniques related to client services in Cosmetology. Course content includes more advanced procedures for hair coloring, permanent waving, soft curl permanent waving, chemical straightening, and thermal pressing and curling. Emphasis is placed on assignments that focus on advanced techniques for facials, manicures, haircuts and wet hairstyling. A mock board examination and practical drills prepare students

for the California State Bureau of Barbering and Cosmetology exam. These proficiencies support students in their efforts to meet their professional and employment goals. (FT) Associate Degree Credit only and not Transferable.

091A Cosmetology Teacher Training Program I

**3 hours lecture, 10 hours lab, 6 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Cosmetology 152A and Student must have a valid California Cosmetology License and a minimum of one year of full time salon/industry experience. Trainee must provide proof of valid cosmetology license.

This course is offered for the experienced/licensed cosmetologist to become a qualified cosmetology instructor. Training for the course will consist of practical and theoretical principles of effective teaching methods which include lesson planning, oral presentations, evaluations, test construction, and procedures to ensure environmental health and safety. Emphasis is focused on preparation for California Bureau of Barbering and Cosmetology Instructor Licensure and prospective employment in private and public Cosmetology Schools. (FT) Associate Degree Credit only and not Transferable.

091B Cosmetology Teacher Training Program II

**3 hours lecture, 10 hours lab, 6 units
Grade Only**

Prerequisite: Cosmetology 91A with a grade of "C" or better, or equivalent.

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Cosmetology 152B. A valid California Cosmetology License and a minimum of one year of full time salon/industry experience.

Phase II of the Cosmetology Teacher Training program will provide the trainee with an opportunity to acquire additional skills, expand career options, workplace skill competencies, subject mastery skills and California State Board examination strategies necessary for acquiring their State Cosmetology Instructor's license. A total of 300 hours of lecture/demonstration and laboratory training to include technical and practical aspects of cosmetology science. This course is offered as a non-degree/credit for a specialized certificate. Associate Degree Credit only and not Transferable.

092 Extended Laboratory Practice

**6-18 hours lab per week
(9 week course), 1-3 unit
Credit/No Credit Only**

Prerequisite: Cosmetology 60 and Cosmetology 60L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course is continued laboratory practice for advanced cosmetology students who need to complete 1600 hours mandated for examination and for licensure by the California State Board of Cosmetology. Emphasis is placed on client services (including chemical and non-chemical services) and an understanding of all types of hair texture. This course teaches communication skills as related to client services and professionalism and is intended to support students in their employment goals. This course, in combination with Cosmetology 220, may be taken three times for credit. Associate Degree Credit only and not Transferable.

095 State Board Review

**2.5 lecture, 2.5 units
Grade Only**

Prerequisite: Cosmetology 81 with a grade of "C" or better, or equivalent.

Corequisite: Cosmetology 90L.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course is designed to review information related to and required for successful completion of the State of California Licensure Examination for Cosmetology. (FT) Associate Degree Credit only and not Transferable.

290 Independent Study in Cosmetology

**Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

This course is designed to deal with current problems and topics of special interest in cosmetology. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Disability Support Programs and Services

Description

Disability Support Programs and Services (DSPS) provides services and courses to support students with disabilities in the achievement of their academic and vocational goals. The instructional component promotes equal participation in mainstream academic programs through preparatory and skill maintenance courses, and offers courses for personal growth.

Faculty

Vince Ceccacci
Pamela Finkel
Erika Higginbotham
Barbara Mason
Brian Stockert

Office

A-115
A-115
A-115
A-115
A-115

Telephone

(619) 388-3513
(619) 388-3513
(619) 388-3513
(619) 388-3513
(619) 388-3513

Career Options

Consult a DSPS counselor.

Academic Programs

The DSPS program is not an academic program designed to prepare professionals in the field of special education or rehabilitation. DSPS courses are designed for the student with a disability. Students consult with a DSPS counselor to develop the Student Education Plan and identify courses appropriate to support the academic or vocational goal. While several courses are recommended for students with any disability, some curricula focus on special skills particular to one disability, i.e., visual impairment or learning disability.

Distinctive Features

The DSPS program integrates adaptive computer technology in the classroom, coordinating instruction and access devices with the Computer Business Technology and Computer Information Sciences departments and the Independent Learning Center. Learning Disability course offerings include strategy programs in sentence, paragraph writing and mathematics based on university research.

Note: DSPS courses are also listed in the Physical Education and Computer Information Sciences sections of the catalog. Additional courses are offered at Mesa and Miramar College campuses. Consult the appropriate semester class schedule.

Courses

Disability Support Programs and Services (DSPS)

Courses listed under DSPS have been designed for students with disabilities. DSPS courses are also listed under Physical Education (PHYE) and Computer and Information Sciences (CISC). Additional DSPS classes are offered at Mesa and Miramar campuses. See appropriate catalog.

020 Introduction to Accessible Computers

**1 hour lecture, 1 unit
Credit/No Credit Only**

This course introduces students with disabilities to accessible computer programs and equipment. The course provides an overview of software and hardware resources that allow disabled students to compete in educational and business settings. Not Applicable to Associate Degree, Occupational/Vocational basic skills.

021 Accessible Computing Lab

**1.5 - 6 hours lab, .5 - 2 units
Credit/No Credit Only**

Limitation on Enrollment: This course is not open to students with credit for Disability Support Programs and Services (DSPS) 76.

This course is offered for students who benefit from adaptive computer access. The course modules teach students how to use the necessary adaptive hardware or software needed to access the computer. Training in all modules is individualized. Students also have the option of completing only those sections of the modules that are relevant to the goals on their Student Educational Contract (SEC). This course may be taken four times for credit. Credit for this course does not apply to the associate degree.

027 Career Planning for Students with Disabilities

**2 hours lecture, 2 units
Credit/No Credit Only**

This course is designed to assist students with disabilities in acquiring an understanding of the world of work. Emphasis is placed on developing and pursuing goals for employment and on identifying community, state, and national assistance resources. Throughout the course, students evaluate their individual career goals, analyze their job skills, research the job market and construct an effective resume and cover letter for

prospective employers. Course material also emphasizes preparing students to meet the psychological, social and cognitive demands of employment. (FT) Credit for this course does not apply to the associate degree.

034 College Success Skills

**1 hour lecture, 1 unit
Credit/No Credit Only**

Limitation on Enrollment: This course is not open to students with credit for Disability Support Programs and Services (DSPS) 29.

This course is designed to assist students with disabilities to achieve their educational goals by providing them with an orientation to the college campus, policies, procedures and support services such as financial aid, tutoring, counseling, computer labs, and career and transfer information. Emphasis is placed on time management, mental and physical health, study skills, self-advocacy, accommodations, and interpersonal relationships as they relate to individual disabilities and college success. Throughout the course, students clarify goals, develop an education plan and identify the courses, services and programs that will lead to their success. Credit for this course does not apply to the associate degree.

038 Math Strategies for the Learning Disabled

**3 hours lecture, 3 units
Credit/No Credit Only**

This course is designed for students with verified disabilities related to mathematics. It is taught as a lecture class that can be taken independently or in conjunction with Mathematics 32/Mathematics 35. This class utilizes a strategies-oriented course developing competency with basic mathematical operations and pre-algebra concepts. This course, in combination with Disability Support Programs and Services 73, may be taken four times for credit. Credit for this course does not apply to the associate degree.

040 Individual Assessment and Educational Planning

**.5 hour lecture, .5 unit
Credit/No Credit Only**

Limitation on Enrollment: This course is not open to students with credit for Disability Support Programs and Services (DSPS) 50.

This course is designed to facilitate students' awareness of individual learning aptitude as compared to measured academic achievement. Standardized achievement and aptitude assessment instruments are individually administered during the course in accordance with California Community College Learning

Disabilities Eligibility Model to document a learning profile related to community college academic demands. Related academic study strategies and possible learning disability accommodations are addressed when appropriate. Credit for this course does not apply to the associate degree.

Learning Disabled

041 Introduction to Applied Study Skills and Strategies

**.5 hour lecture, 2 - 3 hours lab, .5 - 1.5 units
Credit/No Credit Only**

This course is designed for students who are enrolled in a college course in which they have a verified disability related limitation. It is recommended for students who would benefit from formal assessment and small group instruction in applied study skills and learning strategies. The course provides guided instruction in the application of study skill strategies to a mainstreamed course. The focus of the course is on developing generalized study skills that (1) relate to successful learning in the community college setting and (2) that can be altered through individual effort and instruction. Individually guided practice of study skills is supported in an individual and/or small group setting. This course may be taken for lab credit four times with different content for a maximum of four units. Credit for the course does not apply to the associate degree.

043 Advanced Applied Study Strategies

**2 - 3 hours lab, .5 - 1 unit
Credit/No Credit Only**

This course is intended primarily for students needing advanced academic disability related support in addition to the campus wide academic support services currently available. The focus of this class is to provide individualized study assistance for students in mainstream degree applicable college classes. Emphasis is placed on the application of study strategies to a specific course. Both study strategies and assistive technology are utilized to meet the demands of a mainstream course content. Computer assisted instruction is used to review related basic skills instruction and to support research skill development. This course may be taken four times with different content for a maximum of four units. Credit for the course does not apply to the associate degree.

048 Effective Sentence Writing and Grammar

**2 hours lecture, 2 units
Credit/No Credit Only**

This course is designed for students who have verified disabilities related to effective sentence writing skills. It is intended to prepare students for a more successful entry into the mainstream basic skills English curriculum. Multisensory learning strategies are emphasized that assist in the recognition of acceptable sentence structures and appropriate grammar. Sentence writing instruction progresses from very simple to more complex structures. Credit for the course does not apply to the associate degree.

049 Writing Structured Paragraphs

**2 hours lecture, 2 units
Credit/No Credit Only**

This course is designed for students who demonstrate difficulty with written language. It is intended to prepare students who have a writing related disability to more successfully meet the minimum college requirements for multi-paragraph essay writing. This course is unique for the highly structured and sequential strategies applied to essay writing. Additionally, the course emphasizes the application of assistive computer technology for facilitating organizational pre-writing strategies, document checking, and written language fluency. Credit for the course does not apply to the associate degree.

Drama

See "Visual and Performing Arts" on page 394.

Courses

Education (EDUC)

100 Tutor Training

**.5 hour lecture, 1.5 hours lab, 1 unit
Credit/No Credit Only**

Advisory: English 51 and English 56 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M20.

Limitation on Enrollment: Student must have completed a minimum of 12 units of college credit with an accumulated grade point average of 3.0 or better in subject area he/she will tutor.

This course prepares college-level students for tutoring adult/college students. Student trainees learn about tutoring methods as well as how to use appropriate

written and mediated instructional materials. The course includes supervised tutoring practice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Teaching as a Profession

**2 hours lecture, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5;

Limitation on Enrollment: Must meet safety and health clearance standards for a public school field experience placement.

This course is designed for students considering teaching as a profession, for paraprofessionals, and for volunteer tutors working in the public school system. Career exploration, foundations of education, critical issues, and an introduction to literacy acquisition are addressed. Standards for the teaching profession and conditions for effective learning are discussed. Guided observations of public school classrooms in a variety of subject areas are a requirement of the course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

270 Teaching as a Profession-Work Experience

**Hours by arrangement, 1-4 units
Grade Only**

Prerequisite: Education 200 with a grade of "C" or better, or equivalent, and approval of Work Experience Coordinator.

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units, including Work Experience, during the semester (or four units during the summer session) and must meet safety and health clearance standards for public school Work Experience placement.

This course is directed work study designed to provide the pre-service teacher with an opportunity to apply classroom theory in a public school setting with an assigned Work Experience supervisor. It is the purpose of this course to provide early supervised experience to pre-service teachers in order that they may begin to develop fluency with fundamental skills of literacy development, individual and small group tutoring, classroom management, and other routine teaching skills required in public schools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Electricity

"Engineering Technology" on page 237

Electronics

"Engineering Technology" on page 237

Engineering

	Units
Certificate of Achievement:	
Drafting Option	19
Associate in Science Degree:	
Engineering	36*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The engineering curriculum is heavily based on mathematics and physical sciences. Students benefit by having access to state-of-the-art CAD/CAM facilities as well as to a high technology center that is at the cutting edge of new technologies, thereby enhancing career choices and rewards. This pre-engineering preparation provides an excellent foundation for transfer to a four-year university as an engineering major.

Program Emphasis

University schools of engineering have similar science and mathematics requirements but may differ in preparation for various engineering options. Courses offered in the San Diego City College Engineering program meet basic requirements for lower division preparation for California universities. Some universities may also require engineering courses as preparation for specific engineering majors. The Engineering program is designed to prepare students for transfer to California State University and University of California institutions.

Faculty	Office	Telephone
Fred Julian	A-107D	(619) 388-3720
Farnaz Khoromi	A-107C	(619) 388-3527
Truc Ngo	A-107C	(619) 388-3527
David Fierro	A-107E	(619) 388-3489
Robert Pruitt	A-107E	(619)388-3875

Career Options

Most careers in engineering require education beyond the associate degree. A list of career options available to persons with baccalaureate engineering preparation include: aerospace, agricultural, architectural, biomedical, chemical, civil, computer, electrical, environmental, industrial, mechanical and nuclear engineering.

Academic Programs

The associate degree in engineering requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Engineering Drafting Option

Courses Required for the Major	Units
ENGE 108, Dimensioning and Tolerancing.....	3
ENGE 111, Introduction to Computer Aided Design ...	3
ENGE 151, Engineering Drawing.....	2
ENGE 152, Engineering Design	3
MATH 96, Intermediate Algebra with Geometry	5
ENGL 101, Reading and Composition	3
Total Units = 19	

Associate in Science Degree: Engineering

Courses Required for the Major	Units
CHEM 200, 200L, General Chemistry I and Laboratory	3,2
MATH 150, Calculus Analytic Geometry I.....	5
MATH 151, Calculus Analytic Geometry II.....	4
MATH 252, Calculus Analytic Geometry III	4
MATH 255, Differential Equations.....	3
PHYS 195, Mechanics.....	5
PHYS 196, Electricity and Magnetism	5
PHYS 197, Waves, Optics, and Modern Physics	5
Total Units = 36	

Recommended electives: Engineering 198, 200, 210, 240, 250, 260, 270, 290.

Transfer Information

Common university majors related to the field of Engineering include:

Agricultural Engineering, Architectural Engineering, Aviation and Aerospace Engineering, Bioengineering and Technology, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science

and Engineering, Construction Management, Electrical Engineering, Engineering, Engineering Physics, Engineering Technology, Environmental Engineering, Industrial Engineering and Technology, Manufacturing Engineering, Materials Science and Engineering, Mechanical Engineering, Nuclear Engineering, Structural Engineering.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Engineering (ENGE)

050 Building Educational Bridges Through Robotics Competitions

**1 hour lecture, 1.5 hours lab, 1.5 units
Credit/No Credit Only**

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265A: Building Educational Bridges through Robotics Competitions.

This introductory course addresses the knowledge, skills and activities needed to organize, promote and manage a robotics competition team. Team building and collaborative learning are stressed. State-of-the-art computer software, employing pedagogically developed graphical command boxes, is used to develop effective, easy to use and understand programs to control the robots. Not Applicable to Associate Degree and not a basic skills course.

101 Introduction to Engineering

**1.5 hours lecture, 1.5 units
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: This course is not open to students with previous credit for Engineering 265B: Introduction to Engineering.

This course is an introduction to engineering in the work environment, including familiarization with the different occupations of engineering. Emphasis is placed on engineering requirements, analysis, design, implementation and testing of actual engineering problems. Students learn the proper use of engineering tools including computers, statistics and computer simulations. This course is designed to help students decide whether to embark on an engineering or technical career. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Dimensioning and Tolerancing

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: This course is not open to students with credit for Manufacturing Technology 108. This course is an introductory study of dimensioning and tolerancing. The course content emphasizes symbology, datum reference, tolerances of location and of form and runout and includes a complete orientation to American National Standard Institute Standard Y14.5 This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Introduction to Computer-Aided Design

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Drafting 111.

This course is an introductory study of computer-aided design, engineering, and manufacturing. Emphasis is placed on providing the student with a hands-on overview of microcomputer systems and executable features of interactive software programs that are used in industry. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

151 Engineering Drawing

6 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course is a study of engineering design with an emphasis on developing drawing skills and techniques for engineers. Course content includes elementary

orthographic and pictorial drawing, sections and dimensioning, instrument and freehand drawing as an aid to visualization and design, and computer-aided design (CAD). This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGR 2).

152 Engineering Design

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Engineering 151 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with Drafting 120.

This course is a study of engineering design with an emphasis on the presentation and interpretation of engineering drawings. Course content includes tolerance studies, gear and computer -aided manufacturing (CAM) design, as well as fit and function studies relating to manufacturing processes with computer -aided drawing (CAD) as they influence design decisions. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198 Computer Applications in Engineering

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a presentation of computer applications in Engineering through specific software and hardware currently utilized by practicing engineers. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Statics

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 151 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Engineering Technology 150. This course is a study of the applications of the principles of mechanics to rigid bodies in equilibrium. Course content emphasizes areas of friction, centroids, center of gravity, analysis of structures, moments of

inertia and methods of virtual work. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGR 8).

210 Properties of Materials

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 200 and 200L, each with a grade of "C" or better, or equivalent.

This course is a study of the chemical, physical and mechanical properties of engineering materials including metals, ceramics, polymers and composites. Emphasis is placed on function and structure as they relate to specific design considerations. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGR 4).

240 Digital Systems

**3 hours lecture, 3 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Limitation on Enrollment: This course is not open to students with credit for Physical Science 265: Digital Systems.

This course is an introduction to modeling, analysis, and design of digital systems, primarily at the Logic Design Level. Students apply the basic theory of switching networks, use Boolean algebra to analyze and synthesize switching networks, design logic gate networks, use simplification schemes to minimize part count and cost while providing optimum performance, and design and analyze sequential and combinational circuits using flip-flops and logic gate networks. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

250 Dynamics

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Engineering 200 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 252.

Limitation on Enrollment: This course is not open to students with credit for Engineering Technology 250. This course is a study of the fundamental principles of bodies in motion with an emphasis on kinematics and kinetics of particles and rigid bodies, moving reference frames, work-energy, linear and angular momentum relationships and their application to engineering problems. Vector notation is used throughout the course. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

260 Electric Circuits

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Physics 196 and Mathematics 151, each with a grade of "C" or better, or equivalent. This course is an introduction to network analysis, basic network theorems, mesh and nodal analysis with

independent and controlled sources. Course content emphasizes steady state and transient responses of networks, complex frequency transformation; A.C. circuit analysis, power, reactive apparent power, and power factor as well as balanced three-phase electric power systems. This course is designed for the transfer student planning to major in engineering or disciplines included in the physical sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGR 12).

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

**Engineering Technology Mecomtronics
"Engineering Technology" on page 237**

Engineering Technology

Air Conditioning, Computer Technical Illustration, Electricity, Electronics, Engineering Technology, Machine Technology, Manufacturing Engineering Technology, Engineering Technology Mecomtronics, Pre-Engineering Technology

	Units
Certificate of Completion:	
Basic Refrigeration and Control Systems	11
Computer Technical Illustration	9
C.N.C. Operator	16
C.N.C. Technology	12
Manufactory Technology	10
Pre-Engineering Technology	13-14
Advanced Manufacturing	11
Manufacturing Fundamentals	13
Certificate of Achievement:	
Air Conditioning, Heating, and Advanced Refrigeration	31
Heating, Ventilation, Air Conditioning, and Refrigeration System Design	25
Stationary Engineering Hospital and General Maintenance Technical	32
Computer Technical Illustration	23
Electricity	20
Lineman	30
Electrical Control Systems	25
Electronics	27
Electronic Communication Systems Option	39
Electronic Microprocessor/Microcontroller Design Option	38.5
C.N.C. Technology	20
Computer Aided Manufacturing Technology	32
Electronics Manufacturing	30
Fabrication Manufacturing	32

	Units
Associate in Science Degree:	
Air Conditioning, Refrigeration and Environmental Control Technology	36*
Computer Technical Illustration Engineering Emphasis	26*
Electricity	34*
Lineman	20*
Electronic Communication Systems Option	30*
Electronic Microprocessor/Microcontroller Design Option	46*
Computer Aided Manufacturing Technology	45.5*
Mecomtronics: Electronics and Computer Engineering Technology	32*
Manufacturing Engineering Technology Option: Electronics	52*
Manufacturing Engineering Technology Option: Fabrication	48-49*
	50-51*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Pre-Engineering Technology

Description

The Certificate of Completion in Pre-Engineering Technology prepares students for entry level positions in engineering and technology areas. Courses in this certificate provide basic skills in math, technical writing, science for technical applications and drafting used in most engineering and technology related fields. These foundation courses will prepare students for the more academically rigorous engineering technology programs.

Faculty	Office	Telephone
David Fierro	A-107E	(619) 388-3489
Farnaz Khoromi	A-107C	(619) 388-3527
Fred Julian	A-107D	(619) 388-3720
Truc Ngo	A-107C	(619) 388-3527
Robert Pruitt	A-107E	(619) 388-3875

Career Options

Entry level engineering drafting and design; Entry level technical writing; Entry level technician.

Academic Programs

The Pre-Engineering Technology Certificate of Completion requires completion of the courses listed below.

Certificate of Completion: Pre-Engineering Technology*

Courses:	Units
ENGN 110, Science for Technical Applications	4
and	
MATH 096, Intermediate Algebra and Geometry.....	5
and	
TEHW 101, Introduction to Technical Writing.....	3
And Select one course from:	
ENGE 111, Introduction to Computer-Aided Design or	
ENGE 151, Engineering Drawing or	
TECI 101, Basic Technical Illustration.....	2-3
Total Units =	14-15

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Engineering Technology (ENGN)

110 Science for Technical Applications

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M40.

This science course presents basic vocabulary, concepts and scientific techniques that are used to analyze and understand technical applications. Students are introduced to the language and tools of chemistry and physics. Students learn to interpret atomic structure, use the periodic table, classify and identify properties of common compounds, analyze chemical bonding and reactions, and relate technical applications to chemical properties. Students also learn to determine the effect of force on linear motion, analyze various physical phenomena, and analyze various forms of energy. This course is intended for beginning students who are enrolling in an engineering technology major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: ENGN 110, CHEM 100 and PHYS 100 combined: maximum credit, one course.

120 Principles of Engineering Technology

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an introduction to the field of engineering technology. Emphasis is placed on providing students with a balance of theoretical and practical engineering principles through hands-on projects related to design, thermodynamics, hydraulics, electrical circuits, and materials. This class is designed for students interested in the pursuing an academic or vocational career in engineering technology or electronics, including, but not limited to advanced-level high school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Digital Electronics

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a project-based study of digital electronics for the field of engineering technology. Emphasis is placed on the application of digital electronics to product development for current and future market trends. Topics include Ohm's and Kirchhoff's laws as they apply to circuit analysis, capacitance, digital versus analog waveforms, digital circuit design, flip-flops, spec sheet analysis, and

microprocessor programming. This class is designed for students interested in the pursuing an academic or vocational career in engineering or electronics, including, but not limited to advanced-level high school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Engineering Design and Development
2 hours lecture, 3 hours lab, 3 units
Grade Only

This course is a hands-on, project-based study of the field of Engineering Design. Emphasis is placed on providing students with practical knowledge related to the field, including the fundamentals of design, portfolio development, sketching, modeling, dimensioning, presentation, production and marketing. This class is designed for advanced-level high school students interested in engineering or engineering technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Engineering Computer Integrated Technology
2 hours lecture, 3 hours lab, 3 units
Grade Only

This course is a hands-on, project-based study of the integration of computers in the field of Engineering. Emphasis is placed on providing students with working knowledge of Computer Modeling, Computer Numerical Control (CNC), Computer-aided Manufacturing (CAM) software, robotics and automation, and Computer Integrated Manufacturing (CIM). This class is designed for advanced-level high school students interested in pursuing an academic or vocational career in engineering or engineering technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

128 Electronics for Technology
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; Engineering Technology 110 with a grade of "C" or better, or equivalent.

Electronics for Technology introduces electronics to non-electronics majors. It's a fast-paced course and progresses through basic electronics to devices and then to digital electronics. Some attention is given to industries and businesses currently using electronics. The course is designed for students with non-electronics majors to gain fundamental electronics knowledge and experience. (FT) Associate Degree Credit

& transfer to CSU and/or private colleges and universities.

130 Introduction to Engineering Design
2 hours lecture, 3 hours lab, 3 units
Grade Only

This course is an introductory study of Engineering Design. Emphasis is placed on providing students with an overall perspective on the design process as well as on the details of product development, including computer-aided design (CAD). Topics include the history of design, current career opportunities, portfolio development, geometric relationships, modeling, dimensioning, production and marketing. This class is designed for students interested in the pursuing an academic or vocational career in engineering technology or electronics, including, but not limited to advanced-level high school students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Applied Mechanics
3 hours lecture, 3 units
Grade Only

Prerequisite: Mecomtronics 120A with a grade of "C" or better, or equivalent; Physics 195 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 182 with a grade of "C" or better, or equivalent; Mathematics 150 with a grade of "C" or better, or equivalent.

This course is a study of fundamental principles of bodies at rest and in motion. The course content emphasizes areas of friction, centroids, center of gravity, analysis of structures, moments of inertia and methods of virtual work. In addition, emphasis is also placed on kinematics and kinetics of particles and rigid bodies, moving reference frames, work-energy, linear and angular momentum relationships and their application to engineering problems. This course is intended for students enrolled in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

275 Engineering Technology Industrial Internship
1 hour lecture, 9 hours lab, 4 units
Grade Only

Prerequisite: Manufacturing Engineering Technology 101, 105 and 115, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Manufacturing Engineering Technology 110 and 230, each with a grade of "C" or better, or equivalent.

This is an industrial internship course for multiple programs under Engineering Technology field. Students apply technical knowledge learned in previous courses in the program to design and conduct experiments; analyze and interpret data; design manufacturing systems, processes and components; and identify, formulate and solve technical problems. Throughout the internship, students have opportunities to acquire new knowledge and sharpen their problem solving, communication and team work skills. The internship experience also helps students with personal growth, professional development and awareness of the impact of engineering solutions on the industry and society. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Air Conditioning, Refrigeration, and Environmental Control Technology

Description

The Air Conditioning, Refrigeration, and Environmental Control Technology program offers a comprehensive program in refrigeration, air conditioning and heating, including solar energy and ventilation, dealing with the technology of controlled environments for structures, enclosures and processes from water fountains to large central air conditioning systems. Alternative energy systems such as solar and wind systems are explored.

Program Emphasis

The program has a series of complementary certificates which, with the appropriate general education and graduation requirements, lead to an Associate in Science degree. The program offers Certificates in Basic Refrigeration and Control Systems; Air Conditioning, Heating, and Advanced Refrigeration; Heating, Ventilation, and Air Conditioning, Refrigeration Systems Design; Stationary Engineering Hospital and General Maintenance Technology; and an Associate Degree in Air Conditioning, Refrigeration, and Environmental Control Technology. *E.P.A. Examination preparation is included in AIRE 100 and AIRE 103 courses. The college program is an authorized E.P.A. testing center. Exams are offered a number of times during the year.*

Faculty	Office	Telephone
Thomas Davies	A-107D	(619) 388-3425

Career Options

Air conditioning and refrigeration contractor, dispatcher, manufacturer's service representative, sales engineer, service engineer, service manager, and service technician.

Academic Programs

The certificates of completion and achievement and associate degree require completion of the courses listed below.

Certificate of Completion: Basic Refrigeration and Control Systems*

Courses:	Units
AIRE 100, Thermal and Refrigeration Theory.....	4
AIRE 103, Thermal/Refrigeration Lab.....	2
AIRE 124, Control Systems Theory	3
AIRE 125, Control Systems Lab.....	2
Total Units = 11	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology Air Conditioning, Heating, and Advanced Refrigeration

Courses Required for the Major:	Units
AIRE 100, Thermal and Refrigeration Theory.....	4
AIRE 103, Thermal and Refrigeration Lab	2
AIRE 122, Construction Drawings and Estimating	3
AIRE 123, Construction Drawings & Estimating Lab ..	1
AIRE 124, Control Systems Theory	3
AIRE 125, Control Systems Lab.....	2
AIRE 126, Fluid Flow Dynamics.....	3
AIRE 127, Fluid Flow Dynamics Lab.....	2
AIRE 132, Advanced Refrigeration Theory	3
AIRE 133, Advanced Refrigeration Lab.....	2
AIRE 134, Heating, Solar & Alternative Energy Systems Theory.....	4
AIRE 135, Heating, Solar & Alternative Energy Systems Laboratory	2
Total Units = 31	

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology Heating, Ventilation, and Air Conditioning, Refrigeration Systems Design

Courses Required for the Major:	Units
AIRE 100, Thermal and Refrigeration Theory.....	4
AIRE 103, Thermal and Refrigeration Lab	2
AIRE 122, Construction Drawings and Estimating	3

AIRE 123, Construction Drawings & Estimating Lab... 1
AIRE 124, Control Systems Theory..... 3
AIRE 125, Control Systems Lab 2
AIRE 126, Fluid Flow Dynamics..... 3
AIRE 127, Fluid Flow Dynamics Lab 2
AIRE 138, HVAC/Refrigeration Systems Design 3
AIRE 139, HVAC/Refrigeration Systems Design Lab ... 2
Total Units = 25

Certificate of Achievement: Air Conditioning, Refrigeration, and Environmental Control Technology

Stationary Engineering Hospital and General Maintenance Technician

Courses Required for the Major:	Units
AIRE 100, Thermal and Refrigeration Theory..... 4	4
AIRE 103, Thermal and Refrigeration Lab 2	2
AIRE 122, Construction Drawings and Estimating 3	3
AIRE 123, Construction Drawings & Estimating Lab... 1	1
AIRE 124, Control Systems Theory..... 3	3
AIRE 125, Control Systems Lab 2	2
AIRE 126, Fluid Flow Dynamics..... 3	3
AIRE 127, Fluid Flow Dynamics Lab 2	2
AIRE 134, Heating, Solar & Alternative Energy Systems Theory..... 4	4
AIRE 135, Heating, Solar & Alternative Energy Systems Laboratory 2	2
BLDC 260, Building Codes and Zoning (Mesa only).... 3	3
BUSE 150, Human Relations in Business 3	3
Total Units = 32	

Associate in Science Degree: Air Conditioning, Refrigeration, and Environmental Control Technology

Courses Required for the Major:	Units
Certificate of Achievement, Air Conditioning, Heating and Advanced Refrigeration31	31
AIRE 138, HVAC/Refrigeration Systems Design 3	3
AIRE 139, HVAC/Refrigeration Systems Design Lab ... 2	2
Total Units = 36	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Air Conditioning, Refrigeration and Environmental Control Technology 198, 270, 290, 296.

Courses

Air Conditioning, Refrigeration, and Environmental Control Technology (AIRE)

100 Thermal and Refrigeration Theory

4 hours lecture, 4 units
Grade Only

Advisory: Completion of or concurrent enrollment in Air Conditioning, Refrigeration, and Environment Control Technology 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 100.

This course is a study of conceptual elementary thermodynamics, including molecular theory of temperature, pressure and heat. Emphasis is placed on the refrigeration cycle, cycle components, their thermal performance and applications. Course content includes an introduction to the refrigeration and solar industry, its history, publications, organizations and employment opportunities. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Thermal/Refrigeration Lab

6 hours lab, 2 units
Grade Only

Advisory: Completion of or concurrent enrollment in Air Conditioning, Refrigeration, and Environment Control Technology 100 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Environmental Control Technology 103.

This course is a hands-on, project-oriented study of the tooling, materials, methods and equipment used in Heating, Ventilation and Air Conditioning (HVAC) and refrigeration. Emphasis is placed on projects related to heat transfer and saturation, system evacuation, charging, leak testing and use of precision instruments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Construction Drawings and Estimating

3 hours lecture, 3 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, And Environmental Control Technology 123 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 35 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is a study of the generation, reading and interpretation of construction drawings from initial concepts to actual building construction. Emphasis is placed on how the Heating, Ventilation and Air Conditioning (HVAC) systems are integrated into the structure by architects, engineers and ultimately the construction contractors and subcontractors. Course content includes architectural, mechanical, electrical and plumbing drawings, and also covers job planning, sources and use of pricing guidelines, municipal, county, state and federal codes, energy codes and standards, specifications and computer software programs used in the development of construction drawings and used for construction estimating. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Construction Drawings and Estimating Lab
3 hours lab, 1 unit
Grade Only

Corequisite: Air Conditioning, Refrigeration, And Environmental Control Technology 122 with a grade of "C" or better, or equivalent.

Advisory: Mathematics 35 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This laboratory course provides practice in the reading of construction drawings and plans for structures and building components. Students use pricing guides for Heating, Ventilating and Air Conditioning (HVAC), computer-aided drafting software, engineering and architectural scales, and elementary sketching and drawing techniques to complete laboratory projects. This course is intended for students pursuing certificates or an associate degree in Air Conditioning, Refrigeration and Environmental Control Technology. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Control Systems Theory
3 hours lecture, 3 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Air Conditioning, Refrigeration, and Environment Control Technology 125 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 124.

This course is a study of electricity as it relates to the prime movers and controls for Heating, Ventilation and Air Conditioning (HVAC) and refrigeration. Emphasis is placed on the theory, construction and application of the elementary refrigeration system, electrical control and circuits, compressor relays and other electromechanical controls. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Control Systems Lab
6 hours lab, 2 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 125.

Survey of electrical instrumentation and hardware used in the field of "HVAC" and refrigeration and accessories. Projects designed to develop ability to sketch, test, and fabricate complete basic electrical control systems for refrigeration and elementary air conditioning units. Includes logic and schematic circuits and their construction. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Fluid Flow Dynamics
3 hours lecture, 3 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Air Conditioning, Refrigeration, and Environment Control Technology 127 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 126.

Fundamental laws governing air flow in ducting systems; fans, system curves, fan curves, common methods of air distribution; friction losses in ducts; use of system calculators; laws of hydronics; pipe sizing, pump sizing; pressure losses in hydronic systems; air psychrometries; water treatment and air filtration fundamentals. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Fluid Flow Dynamics Lab
6 hours lab, 2 units
Grade Only

Corequisite: Air Conditioning, Refrigeration, and Environment Control Technology 126.

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 127.

This laboratory course provides practice in fluid measuring methods and instrumentation. Emphasis is placed on working with instruments such as pitot tube

devices and velometers to illustrate the interaction of fluid systems curves. Course content also includes air psychometries, air and hydronic system balancing and measurement of sound. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Advanced Refrigeration Theory

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 132.

A comprehensive analysis of refrigeration systems involving Molier diagrams and system balance in terms of heat and equipment. Standard multi-stage, low temperature, and cascade systems are included. Complex mechanical system controls studied. Fluid velocities and correct piping methods, lubrication systems and lubricants, refrigerant performance, centrifugal, screw and absorption systems are included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

133 Advanced Refrigeration Lab

**6 hours lab, 2 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 133.

A rigorous series of projects on the functioning of normal and abnormal refrigeration systems designed to equip students with the ability to solve difficult mechanical problems. Preparation of Molier diagrams for refrigeration systems and heat pumps, adjustment and installation of various systems, specific control devices such as back pressure regulators, head pressure controls, etc. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

134 Heating, Solar and Alternative Energy Systems Theory

**4 hours lecture, 4 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 134.

This course covers basic heating principles, equipment and processes; the process of combustion, including the chemistry of combustion is studied with respect to a variety of common fuels. The technology utilized in the actual combustion processes and the equipment are studied and maintenance procedures and the sizing of vent systems are included. Theory, equipment sizing and operation of solar systems and the integration of

solar and standard hydronic heating systems are included in this course as well as solar heat load calculation and system estimating. The economics of energy systems and alternative energy systems are explored. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Heating, Solar and Alternative Energy Systems Laboratory

**6 hours lab, 2 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 135.

This course involves a series of demonstrations and lab projects to provide knowledge and understanding of the operation of heating and solar energy systems. Combustion testing equipment and instrumentation are utilized. Orsatt Analysis and use of electronic and combustion analyzers are included. Training and practice on common types of heating and solar systems includes hydronic balancing, solar angle determination and optimization, collector efficiencies and shadow grapey construction. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

138 HVAC/Refrigeration System Design

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 138.

An intensive course on the theory of design for heating, refrigeration, air conditioning, and solar energy systems. Includes building envelope heat load calculations, equipment selection criteria, system selection and optimization. Energy conservation techniques in design and hydronic system design applications are included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

139 HVAC/Refrigeration System Design Lab

**6 hours lab, 2 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 139.

Applied design techniques for the development of complete "HVAC" refrigeration and solar designs in an occupationally similar environment. A series of design projects includes applied heat load estimation; applied psychometries; system and equipment selection criteria; and use of design manuals, tables, and manufacturers catalogs. Applied energy conservation

techniques are included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198 Computer Applications in Air Conditioning, Refrigeration, Environmental Control Technology

2 hours lecture, 3 hours lab, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Environmental Control Technology 198.

Presentation of computer applications in Air Conditioning, Refrigeration, Environmental Control Technology as required for employment in local business and industry. Instruction will be on a specific software and hardware as currently used in Air Conditioning, Refrigeration, Environmental Control. Specific software and hardware will be announced for each course section, each semester. (FT) Associate Degree Credit only and not Transferable.

270 Work Experience in Air Conditioning, Refrigeration, Environmental Control Technology

Hours by Arrangement, 1-4 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. To receive credit a student must complete a minimum of seven units during the semester, including work experience. This course is not open to students with credit for Environmental Control Technology 270.

A program of on-the-job learning experience for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Air Conditioning, Refrigeration, Environmental Control Technology

Hours by Arrangement, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. This course is not open to students with credit for Environmental Control Technology 290.

For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer Technical Illustration

Description

Provides an opportunity to develop the theory and techniques necessary for employment as a technical illustrator in the fields of engineering, manufacturing, publishing and scientific industries. Students will plan and produce drawings from specific data, blueprints and prototypes. Production methods, visual skills, technical documentation procedures and developments, as they apply to the technical illustration industry, will be studied.

Faculty

Farnaz Khoromi

Office

A107C

Telephone

(619) 388-3527

Career Options

Technical Illustrator, graphic specialist, technical publications specialist, manager technical publications, CAD drafter, CAD illustrator, CAD designer, engineering technician, computer graphics specialist.

Academic Programs

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Completion: Computer Technical Illustration*

Prepares students with drafting and Computer Aided Design (CAD) experience to obtain entry-level Technical Illustration positions.

Courses:	Units
TECI 101, Basic Technical Illustration.....	3
TECI 102, Advanced Technical Illustration.....	3
TEHW 101, Introduction to Technical Writing.....	3
	Total Units = 9

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Achievement: Computer Technical Illustration

Prepares students for entry-level positions in Technical Publications with emphasis on graphic design.

Courses Required for the Major:	Units
TECI 101, Basic Technical Illustration.....	3
TECI 102, Advanced Technical Illustration.....	3
ARTG 120, Illustration	3
ENGL 101, Reading and Composition	3
ENGE 111, Introduction to Computer-Aided Design.....	3
MAFG 102, Print Reading and Symbology.....	3
MATH 96, Intermediate Algebra and Geometry	5
Total Units = 23	

Associate in Science Degree: Computer Technical Illustration

Prepares students for entry level positions in Technical Illustration, Technical Publications with emphasis in technical illustrating, technical writing and graphic design.

Courses Required for the Major:	Units
TECI 101, Basic Technical Illustration.....	3
TECI 102, Advanced Technical Illustration.....	3
ARTG 120, Illustration	3
ARTG 125, Digital Media.....	3
ENGL 101, Reading and Composition	3
ENGE 111, Introduction to Computer-Aided Design.....	3
MAFG 102, Print Reading and Symbology.....	3
MATH 96, Intermediate Algebra and Geometry	5
Total Units = 26	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Computer Technical Illustration Engineering Emphasis

Prepares students for entry level positions in Technical Illustration with emphasis in engineering, graphics, engineering design including CAD.

Courses Required for the Major:	Units
TECI 101, Basic Technical Illustration.....	3
TECI 102, Advanced Technical Illustration.....	3
ARTG 120, Illustration	3
ARTG 125, Digital Media.....	3
ENGL 101, Reading and Composition	3

ENGE 111, Introduction to Computer-Aided Design.....	3
ENGE 151, Engineering Drawing.....	2
ENGE 152, Engineering Design	3
ENGE 198, Computer Applications in Engineering	3
MAFG 102, Print Reading and Symbology.....	3
MATH 96, Intermediate Algebra and Geometry	5
Total Units = 34	

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Mathematics 104, 116.

Courses

Technical Illustration (TECI)

050 Bridging to Technical Illustration

**1 hour, 1 unit
Grade Only**

This course is designed to assist students in exploring the possibility of pursuing a career in the field of technical illustration. This introductory course, outlines career options within the field, places of employment, overview of the current technology, areas of specialization, testing requirements and professional organizations. (FT) Associate Degree Credit only and not Transferable.

101 Basic Technical Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

This course covers the basics of technical illustration as it applies to the technical publications industry. Emphasis is placed on visualization skills, technical document analysis, and illustration development. Projects progress from technical illustration of mechanical details on CAD to pictorial procedures as required by industry. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

102 Advanced Technical Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Technical Illustration 101 with a grade of "C" or better, or equivalent.

This course is a continuation of Basic Technical Illustration 101. This course is designed to emphasize advanced pictorial problems of complex mechanical

assemblies as they apply to current technical illustration industrial standards. Projects will progress from CAD generated technical illustrations of exploded views in isometric, wireframe, and solids modes to exploring current procedures of pictorial development as required by industry. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Electricity

Description

The electricity program provides the student with an opportunity to master the skills required for success in the electrical trade. Entering students are not required to have any knowledge of the electrical trade. The two-year curriculum leads to a Certificate of Achievement or an Associate in Science degree.

Program Emphasis

The program begins with an introduction to basic electrical theory and continues through advanced electrical theory, installation and maintenance of industrial equipment, familiarization with electrical codes and blueprints, and the characteristics and uses of motor controls.

Faculty	Office	Telephone
Mike Brown	T-205	(619) 388-3111

Career Options

Employment may be found as an electrician, electric lineman, maintenance electrician, electrical helper, electrical motor repairer, appliance repairer, or protective signal installer and repairer.

Academic Programs

The certificates of achievement and associate degree, Electricity, require completion of the courses listed below.

Certificate of Achievement: Electricity

Courses Required for the Major:	Units
ELCT 111, Electrical Theory I.....	3
ELCT 111L, Electrical Laboratory I.....	2
ELCT 121, Electrical Theory II	3
ELCT 121L, Electrical Laboratory II	2
ELCT 131, Electrical Theory III	3
ELCT 131L, Electrical Laboratory III	2
ELCT 141, Electrical Theory IV	3
ELCT 141L, Electrical Laboratory IV	2
Total Units =	20

Certificate of Achievement: Electricity

Lineman

Completion of this program will not guarantee employment as a Lineman with San Diego Gas and Electric Company.

Courses Required for the Major:	Units
ELCT 190, Electric Lineman IA.....	5
ELCT 191, Electric Lineman IB.....	5
ELCT 192, Electric Lineman IIA.....	5
ELCT 193, Electric Lineman IIB.....	5
ELCT 194, Electric Lineman IIIA	5
ELCT 195, Electric Lineman IIIB	5
Total Units =	30

Certificate of Achievement: Electricity

Electrical Control Systems Option

Courses Required for the Major:	Units
Complete requirements for the Certificate of Achievement, Electricity	20
AND , in addition, complete:	
ELCT 200, Electric Control Systems.....	3
ELCT 200L, Electric Control Systems Laboratory.....	2
Total Units =	25

Associate in Science Degree: Electricity

Courses Required for the Major:	Units
Complete the Certificate of Achievement, Electricity	20
Total Units =	20

Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended elective: Electricity 270.

Associate in Science Degree: Electricity Lineman

Completion of this program will not guarantee employment as a Lineman with San Diego Gas and Electric Company.

Courses Required for the Major:	Units
ELCT 190, Electric Lineman IA	5
ELCT 191, Electric Lineman IB	5
ELCT 192, Electric Lineman IIA.....	5
ELCT 193, Electric Lineman IIB.....	5
ELCT 194, Electric Lineman IIIA	5
ELCT 195, Electric Lineman IIIB	5
Total Units = 30	

Complete the Certificate of Achievement, Electricity. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Recommended elective: Electricity 270.

Transfer Information

Common university majors related to the field of Electricity include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Electricity (ELCT)

020 Blueprint Reading for Electricians

**3 hours lecture, 3 units
Grade Only**

This course is a practical survey of blueprint reading for electricians. Emphasis is placed on architectural considerations and electrical symbology for residential,

commercial, and industrial blueprints. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

030 Modern Commercial Wiring

**3 hours lecture, 3 units
Grade Only**

This course is a study of modern commercial wiring systems. Emphasis is placed on practical application of the material through in-class projects. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

040 Data, Voice and Video Cabling for Electricians

**3 hours lecture, 3 units
Grade Only**

This course is a study of current data, voice and video cabling systems. Emphasis is placed on practical application of the material through in-class projects. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

111 Electrical Theory I

**3 hours lecture, 3 units
Grade Only**

Corequisite: Electricity 111L.

Advisory: English 56 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M50.

This course is a study of the fundamentals of electrical theory including basic safety practices and a history of industrial electricity and electronics. Course topics include the theory and application of fundamental units of measurement, wire splicing, permanent magnets, electromagnets, and electrical/electronic symbols. This course includes a study of the theory of electricity sources including batteries, mechanical generators, photocells, and thermocouples. In addition, Basic Ohm's Law theory including calculations of DC voltage, DC current, resistance, DC power, inductance and capacitance in DC circuits is discussed. This course is designed as preparation for the major in electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111L Electrical Laboratory I**6 hours lab, 2 units
Grade Only***Corequisite:* Electricity 111.*Advisory:* English 56 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M50.

This course involves laboratory practice in basic electricity. Laboratory time includes instruction and laboratory assignments in the proper use and care of electrical tools, meters, instruments, and equipment with an emphasis on safe working habits. Laboratory assignments include the application of basic direct and alternating current circuitry and wattage of fabricated circuits. Students gain additional practice in the development of electrical diagrams using proper symbols and nomenclature. An introduction to inductance and capacitance in direct current or DC circuits is included. This course is designed as a preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121 Electrical Theory II**3 hours lecture, 3 units
Grade Only***Prerequisite:* Electricity 111 and 111L, each with a grade of "C" or better, or equivalent.*Corequisite:* Electricity 121L.

This course involves a detailed study of the theory of alternating current including the generation of AC; electrical degrees, effective and average values; addition and subtraction of phasors; resistance, inductance, and capacitance in AC circuits; reactance; and impedance. This course also includes an in-depth study of single-phase series and parallel circuits, three-phase power generation, current and voltage relationships in wye and delta connected power sources and loads. A study of three-phase transformers with various connections and under various load conditions is also included. This course is designed as a preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

121L Electrical Laboratory II**6 hours lab, 2 units
Grade Only***Prerequisite:* Electricity 111 and 111L, each with a grade of "C" or better, or equivalent.*Corequisite:* Electricity 121.

This course involves laboratory practice in direct current and alternating current circuits. Activities

include practice with basic DC motor circuits, power transmission lines, and instruction in the safe use of three-phase power supplies. This course also includes practice using AC voltmeters, AC ammeters, and AC wattmeters to measure phase angle, real power, apparent power, watts, vars, volt-amps, and power factor in single-phase and poly-phase circuits including three-phase circuits with wye and delta connections. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Electrical Theory III**3 hours lecture, 3 units
Grade Only***Prerequisite:* Electricity 121 and 121L, each with a grade of "C" or better, or equivalent.*Corequisite:* Electricity 131L.

This course involves practice in planning the installation of electrical circuits on construction jobs according to the National Electrical Codes and Blueprints. This course also includes practice in making detailed drawings of electrical wiring circuits using standard symbols and estimating the wiring material required to complete a single-family dwelling. Planning the installation of communication circuits, heating systems, service entrance equipment, remote control systems, motor starting equipment, circuit protective devices, control components, and pilot devices is also included. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131L Electrical Laboratory III**6 hours lab, 2 units
Grade Only***Prerequisite:* Electricity 121 and 121L, each with a grade of "C" or better, or equivalent.*Corequisite:* Electricity 131.

This course involves laboratory practice in the installation of construction wiring materials including installation and connection of lighting circuits, receptacle circuits, special purpose circuits, communication circuits, heating systems, service entrance equipment, remote control systems, electric motor circuits, and pilot devices. Safety is emphasized through practice in the installation of electrical equipment according to blueprints and local and national codes. Instruction and practice in fire prevention and construction site safety habits are also included. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141 Electrical Theory IV**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 131 and 131L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 141L.

This course involves the advanced theory of the characteristics and uses of direct current generators, direct current motors, direct current motor controls, alternating current generators, and three-phase motors. This course also includes the advanced theory of the characteristics and uses of three-phase motors and three-phase controllers, single-phase motors and single-phase controllers, electronic devices, and static controls. Digital and logic controls are also investigated. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

141L Electrical Laboratory IV**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 131 and 131L, each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 141.

This course involves laboratory practice and experimentation with DC generators, DC motors, three-phase alternators, squirrel-cage induction motors, and wound rotor induction motors. This course also includes laboratory practice and experimentation with induction motors, synchronous motors, and single-phase motors, including split-phase, capacitor start, universal, and repulsion-start induction run motors. Additionally, experiments are conducted with phase sequence, frequency, selsyn systems, and SCR speed controls. This course is designed as preparation for the major in Electricity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Electric Lineman IA**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better or equivalent, or Assessment Skills Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 302. This course provides an orientation in the power distribution and line construction industry. Basic electrical principles and safety on the job are emphasized. Topics include basic mathematical computations, including trigonometry fundamentals,

electron theory and the fundamentals of magnetism. Students will combine electrical theory with laboratory and practical applications in the course of study. (FT) Associate Degree Credit only and not Transferable.

191 Electric Lineman IB**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 190, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 304. This course involves the study of the power distribution and line construction industry. Topics include methods of producing electricity, A.C. and D.C. meters and circuitry and electric batteries. Students will also learn about Ohm's Law and Kirchhoff's Law and electromagnetic induction. (FT) Associate Degree Credit only and not Transferable.

192 Electric Lineman IIA**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 191, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 310. This course is a study of alternating current circuits, A.C. and D.C. motors and generators, pole and overhead construction, and transformers and voltage regulators. Topics include schematics, shunt and series capacitors and safety issues outlined by the Occupational Safety and Health Act (OSHA). Calculating power used by electrical circuits is also covered. (FT) Associate Degree Credit only and not Transferable.

193 Electric Lineman IIB**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 192, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 312. This course is a continuation of pole and overhead line construction. Topics covered include state safety orders for line construction and maintenance, transmission and distribution systems and conductors and electrical systems faults. Students will also learn about short circuits, system protective concepts and how to identify control circuits from wiring diagrams. (FT) Associate Degree Credit only and not Transferable.

194 Electric Lineman IIIA**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 193, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 320. This course covers advanced theory of electrical distribution lines and systems. Other topics include phasing, system groundings, substations and the use of electrical instruments. Students will also learn how to connect transformers in accordance with the state code. Usage of fusing tables and reference tables, including technical symbols are also covered. (FT) Associate Degree Credit only and not Transferable.

195 Electric Lineman IIIB**5 hours lecture, 5 units
Grade Only**

Prerequisite: Electricity 194, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for San Diego Gas and Electric 322. This course is a continuation of advanced theory of electrical distribution lines and systems. Topics include the use of "hot sticks" and special equipment; repair and maintenance of poles and lines both cold and energized, safety practices and the local/state requirements. Students will be expected to master competencies such as those included in elements of electricity, overhead pole and electrical line construction, safety codes and applications, electric power system, transformer and meter installations, and exploration of underground electrical distribution. (FT) Associate Degree Credit only and not Transferable.

200 Electrical Control Systems**3 hours lecture, 3 units
Grade Only**

Prerequisite: Electricity 121 and Electricity 121L each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 200L.

This course is a study of electrical control system theory emphasizing standard motor controls, transducers, static control devices, programmed controllers, and remote electronic controls. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200L Electrical Control Systems Laboratory**6 hours lab, 2 units
Grade Only**

Prerequisite: Electricity 121 and Electricity 121L each with a grade of "C" or better, or equivalent.

Corequisite: Electricity 200.

This course is a hands-on laboratory in electrical control systems. Emphasis is placed on standard motor controls, transducers, static control devices, programmed controllers, and remote electronic controls. This course is intended for students in the Electricity Program as well as for working electricians who want to further their skills and/or fulfill state certification and accreditation requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Electronics

Description

Electronics is a field of technology that is concerned with the installation, operation, repair, maintenance, calibration, modification and service of electronic circuitry, components and systems. Technicians are also trained to diagnose problems arising from electro-mechanical malfunctions and to assist engineers or technologists in preparing prototypes of electronic units or systems.

Program Emphasis

Graduates of the Electronics program understand the physical sciences, mathematics, applications and customer relations necessary in the installation, construction, programming, operation, maintenance and diagnosis of microcomputers and microprocessor based systems.

Faculty

Fred Julian
Farnaz Khoromi
Robert Pruitt

Office

A-107D
A-107C
A-107E

Telephone

(619) 388-3720
(619) 388-3527
(619)388-3875

Career Options

Electronic Technician

Academic Programs

Certificate of Achievement: Electronics

This certificate of achievement provides basic preparation for electronic technicians.

Courses Required for the Major:	Units
ELDT 123, 123L, Introduction to Digital Circuits and Laboratory	3,1
ELDT 124, 124L, Basic DC/AC Electronics and Laboratory	4,1
ELDT 125, 125L, DC/AC Circuit Analysis with PSpice and Laboratory	4,1
ELDT 126, 126L, Introduction to Programming with C and C++ and Laboratory.....	3,1
ELDT 143, 143L, Semiconductor Devices and Laboratory	3,1.5
ELDT 144, 144L, OP-AMPS, Sensors & Computers and Laboratory	3,1.5
Total Units = 27	

Certificate of Achievement: Electronics

Electronic Communication Systems Option

This program prepares students to function in entry level positions in electronic communication systems.

Courses Required for the Major:	Units
Complete the requirements for the Certificate of Achievement: Electronics, as specified above,.....	27
In addition, complete:	
ELDT 227, 227L, Lasers and Fiberoptics & Laboratory	3,1
ELDT 228, 228L, Communication Circuits and CET/NARTE Preparation & Certification Laboratory	3,1
ELDT 229, 229L, Advanced Telecommunications Networks & Laboratory.....	3,1
Total Units = 39	

Certificate of Achievement: Electronics

Electronic Microprocessor/Microcontroller Design Option

This program provides basic preparation in the electronic microprocessor and/or microcontroller occupation.

Courses Required for the Major:	Units
Complete all the requirements for the Certificate of Achievement: Electronics, as specified above,.....	27
In addition, complete:	
ELDT 224, 224L, Microprocessor Design & Laboratory	3,1.5
ELDT 230, 230L, Advanced Computer Designs & Laboratory	3,1
ELDT 231, Advanced System Interfacing	3
Total Units = 38.5	

Associate in Science Degree: Electronics

Electronic Communication Systems Option

An Associate in Science Degree may be earned in Electronic Communication Systems. Complete the appropriate Certificate of Achievement in Electronic Systems and add: Electronic Systems 230, 230L, 231.

Courses Required for the Major:	Units
Complete all the requirements for the Certificate of Achievement, Electronic Communication Systems Options, as specified above,	39
In addition, complete:	
ELDT 230, 230L, Advanced Computer Designs & Laboratory	3,1
ELDT 231, Advanced System Interfacing	3
Total Units = 46	

Associate in Science Degree: Electronics

Electronic Microprocessor/Microcontroller Design Option

An Associate in Science Degree may be earned in Electronic Microprocessor/Microcontroller Design Option. Complete the appropriate Certificate of Achievement in Electronic Systems and add: Electronic Systems 230, 230L, 231.

Courses Required for the Major:	Units
Complete all the requirements for the Certificate of Achievement, Electronic Microprocessor/Microcontroller Design Option, as specified above,.....	38.5

In addition, complete:

ELDT 230, 230L, Advanced Computer Designs & Laboratory	3,1
ELDT 231, Advanced System Interfacing.....	3

Total Units = 45.5

Additional general education and graduation requirements for the associate degree are listed in the catalog ACADEMIC REQUIREMENTS section. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 198, 270, 290.

Transfer Information

Common university majors related to the field of Electronics include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Electronic Systems (ELDT)

100 Electronic Assembly and Certification

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: English 43 and English 42 and Mathematics 35, each with a grade of "C" or better or equivalent, or Assessment Skills Levels W4 and R4 and M30.

Limitation on Enrollment: This course is open to students with credit for Electronic Systems 110 or Digital Technology 100.

This is a combination electronic survey and electronic assembly course. Using a modular approach, students are systematically promoted from one electrical concept to the next. Topics include D.C. electronics, A.C. electronics, semiconductors, power supplies, amplifiers, oscillators, digital gates, and fiber optics (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123 Introduction to Digital Circuits

**3 hours lecture, 3 units
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 123L.

Limitation on Enrollment: This course is not open to students with credit for Electronic Systems 220, 223 or Digital Technology 223.

This course is an introduction to digital technology with an emphasis on understanding, constructing and troubleshooting integrated circuits. Course content includes number systems and codes, truth tables, Boolean functions, combinatorial logic, registers, counters and device characteristics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123L Digital Circuits Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 123.

Limitation on Enrollment: This course is not open to students with credit for Electronic Systems 222A, 223L or Digital Technology 223L.

This laboratory course is designed to demonstrate the concepts studied in Electronic Systems 123 and to familiarize students with a variety of digital electronic components and circuits. Emphasis is placed on

developing students' skills in designing, analyzing and constructing simple logic circuits including basic digital blocks, combinational networks, and sequential networks. (FT). Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Basic DC/AC Electronics

**4 hours lecture, 4 units
Grade Only**

Advisory: Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40; and concurrent enrollment in Electronic Systems 124L.

Limitation on Enrollment: This course is not open to students with credit for Electronics Technology 120A or Digital Technology 124.

This course is a study of basic electricity and electrical circuit concepts. Course content includes Ohm's and Kirchhoff's Laws, Superposition Theorem, Thevenin's and Norton's Theorems, direct current (DC) series and parallel circuits, the generation and nature of alternating current (AC), power, capacitance, inductance, and magnetic circuits. Throughout the course, students apply the concepts of basic electronics to solve problems commonly found in industrial settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124L Basic DC/AC Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40; and concurrent enrollment in Electronic Systems 124.

Limitation on Enrollment: This course is not open to students with credit for Electronics Technology 121A or Digital Technology 124L.

This laboratory course demonstrates the basic concepts of electricity and electrical circuits and familiarizes students with various electronic components and circuits. Course content is designed to develop students' skills in reading schematic diagrams, fabricating simple circuits, and safely using basic test equipment for measuring and troubleshooting. Equipment used in this laboratory includes volt-ohm-amp meters, oscilloscopes, digital multimeters (DMMs), function generators, and power supplies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 DC/AC Circuit Analysis with Pspice

**4 hours lecture, 4 units
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 125L.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 125. This course is a study of direct current and alternating current (DC/AC) electronic circuit analysis. Course material emphasizes circuit simulations on computers utilizing Pspice application to analyze current; voltage; resistance; capacitance; inductance; power and energy as well as series, parallel, and combination circuits; network theorems; transformers; passive filters, and response curves. (FT). Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125L DC/AC Circuit Analysis Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 125.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 125L. This laboratory course demonstrates the basic concepts of computer assisted direct current and alternating current (DC/AC) circuit analysis. Equipment used in this course includes microcomputers utilizing industry standard software applications Pspice), volt-ohm-amp meters (VOMs), oscilloscopes, digital multimeters (DMM's), function generators, and power supplies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Using C and C++ for Technology

**3 hours lecture, 3 units
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 126L.

This course is an introduction to the C and C++ programming languages as they apply to the analysis of the theoretical concepts of electronic technology. The course is structured around a variety of prepared programming assignments that emphasize problem solving techniques and use of the computer as a problem solving tool with applications in electronics. Students work with state of the art and industry

standard microcomputers, hardware, software application programs, and compilers. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126L Using C and C++ for Technology Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 126.

This course provides the laboratory component to the study of C and C++ programming languages as they apply to the analysis of the theoretical concepts of electronic technology. The course is structured around a variety of prepared programming assignments that emphasize problem solving techniques and use of the computer as a problem solving tool with applications in electronics. Students work with state of the art and industry standard microcomputers, hardware, software application programs and compilers. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Semiconductor Devices

**3 hours lecture, 3 units
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 143L.

Limitation on Enrollment: This course is not open to students with credit for Electronic Systems 140A or Digital Technology 143.

This course is an introductory study of the characteristics and operation of semiconductor devices and their associated circuitry. Emphasis is placed on junction diodes, bipolar-junction transistors, power supplies, feedback, linear integrated circuits (IC's), multistage amplifiers, push-pull amplifiers, junction field-effect transistors (JFETs), metal oxide semiconductor field-effect transistors (MOSFETs) and PSpice analysis. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143L Semiconductor Devices Laboratory

**4.5 hours lab, 1.5 units
Grade Only**

Advisory: Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent; and Mathematics

96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 143.

Limitation on Enrollment: This course is not open to students with credit for Electronics Technology 142A or Digital Technology 143L.

This laboratory course focuses on the theoretical concepts of electronic devices and circuits through practical experimentation, Pspice analysis and computer simulation. Course content and materials include circuit operation, testing, troubleshooting and measurement of diodes, transistors and field-effect transistors (FETs), the use of computer-aided engineering software, microcomputers, oscilloscopes, digital multimeters (DMM's), function generators, and power supplies. (FT). Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 OP-AMPS, Sensors and Computers

**3 hours lecture, 3 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 144L; and completion of or concurrent enrollment in Electronic Systems 143 and 143L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144.

This course is a study of operational amplifier theory and circuit applications. Course content emphasizes sensors, transducers, data conversions, and the associated circuitry necessary to condition outputs for interface to a computer. Applications to analog-to-digital and digital-to-analog conversions, optical sensors, displacement transducers and instrumentation devices are included. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144L OP-AMPS and Sensors Laboratory

**4.5 hours lab, 1.5 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 144; and completion of or concurrent enrollment in Electronic Systems 143 and 143L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144L.

This course provides the laboratory component to the study of operational amplifier theory and circuit applications. Course content emphasizes sensors, transducers, data conversions and the associated circuitry necessary to condition outputs for interface to a computer. Applications to analog-to-digital and digital-to-analog conversions, optical sensors, displacement transducers and instrumentation devices are included. This course is designed as preparation for majors in the field of Electronics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

198 Computer Applications in Electronics
2 hours lecture, 3 hours lab, 3 units
Grade Only

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 198. This course is a presentation of computer applications in electronics through specific software and hardware currently utilized in local in electronics business and industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

224 Microprocessor Design
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in Electronic Systems 123 and Electronic Systems 123L, each with a grade of "C" or better, or equivalent and concurrent enrollment in Electronic Systems 224L. This course is an applied study of digital circuits in microcomputer systems. Throughout the course, students examine the overall architecture of microcomputer systems, the interfacing of memory and input/output (I/O) devices, and machine language programming for the Z-80 microprocessor. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

224L Microprocessor Design Laboratory
4.5 hours lab, 1.5 units
Grade Only

Advisory: Completion of or concurrent enrollment in Electronic Systems 123 and Electronic Systems 123L, each with a grade of "C" or better, or equivalent concurrent enrollment in Electronic Systems 224. This laboratory course demonstrates the application of digital circuits in microprocessor systems. Course content includes assembly of printed circuit boards, troubleshooting of microprocessor-based designs and software/firmware design and troubleshooting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

227 Introduction to Lasers and Fiber Optics
3 hours lecture, 3 units
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 227L; and completion of or concurrent enrollment in Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 144. This course is an introductory study of lasers, optical power meters, and laser systems designed to familiarize students with various industry supported lasers/fiber optics families. Emphasis is placed on providing students with a working knowledge of lasers and the ability to troubleshoot in the field. Topics covered include the properties of light, emission and absorption of light, lasing action, the temporal and spatial characteristics of lasers, optical energy, optical fibers, light sources, light receivers, fiber optic geometry, alignment and splicing techniques, communication links, and fiber optic system design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

227L Lasers and Fiber Optics Laboratory
3 hours lab, 1 unit
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 227; and completion of or concurrent enrollment in Electronic Systems 124 and 124L, each with a grade of "C" or better, or equivalent.

This laboratory course is designed to familiarize students with the elements and operation of lasers, optical power meters, and laser and fiber optics systems through experiments and projects conducted individually and in groups. This course provides students with the opportunity to enhance and further investigate the concepts presented in Electronic Systems 227. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

228 Communication Circuits and CET/NARTE Preparation

3 hours lecture, 3 units
Grade Only

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 228L; and completion of or concurrent enrollment in Electronic

Systems 143, 143L, 144, and 144L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 228.

This course is a study of basic communication theory and is designed to Prepare students to take the Associate Electronics Technician (CET) and the 3rd Class Radio Telecommunications Technician (NARTE) examinations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

228L Communication Circuits and Certification Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 228; and completion of or concurrent enrollment in Electronic Systems 143, 143L, 144, and 144L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 228L. This laboratory course is a verification of the theoretical concepts of communication theory and mastery of the basic electronic instruments used in industry. This course is designed to prepare students to take the Associate Electronics Technician (CET) and the 3rd Class Radio Telecommunications Technician (NARTE) examinations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

229 Advanced Telecommunications Networks

**3 hours lecture, 3 units
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 229L; and completion of or concurrent enrollment in Electronic Systems 126, 126L, 228, and 228L, each with a grade of "C" or better, or equivalent.

This course is a project-oriented course that focuses on local, metropolitan, and wide-area network hardware system design, installation, maintenance and troubleshooting. Hardware topics presented include topologies, transmission media, access and interfacing techniques. Hardware technologies utilized include Fiber Distributed Data Interface (FDDI), Asynchronous Transfer Mode (ATM), Fast Internet and Token Ring. This course prepares students to take the Network Plus exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

229L Advanced Telecommunications Networks Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and concurrent enrollment in Electronic Systems 229; and completion of or concurrent enrollment in Electronic Systems 126, 126L, 228, and 228L, each with a grade of "C" or better, or equivalent.

This is a team project-oriented course that familiarizes students with the hardware and software needed to establish, run, and maintain advanced telecommunications networks at the local, metropolitan, and wide-area levels. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Advanced Computer Designs

**3 hours lecture, 3 units
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 230L; and completion of or concurrent enrollment in Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 230. This course is an advanced practical study of operating systems, chip sets, system board configurations, and bus architecture. Emphasis is placed on the application of digital course material to modern microprocessor-based systems from a design perspective. This project oriented course examines: microprocessor machine language programming, hardware devices, hardware designs, system clock generation, bus characteristics, tri-state characteristics, buffers, I/O techniques, major microprocessor family comparisons, timing diagrams, memory organization, ROM, EPROM, RAM, memory mapping, memory refresh, decoding techniques and chip level troubleshooting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230L Advanced Computer Designs Laboratory

**3 hours lab, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Electronic Systems 230; and completion of or concurrent enrollment in Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 230L.

This is a practical course designed as a verification of the student's understanding of the theoretical concepts of computer and microprocessor based designs through construction and testing of a complete microcomputer system. Throughout the course, students work with several pieces of electronic test equipment currently used in the industry in order to build and troubleshoot their projects. Students are expected to locate and purchase necessary components and breadboarding materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

231 Advanced System Interfacing

**3 hours lecture, 3 units
Grade Only**

Advisory: Electronic Systems 224 and 224L, each with a grade of "C" or better, or equivalent; and concurrent enrollment in Electronic Systems 230 and 230L.

Limitation on Enrollment: This course is not open to students with credit for Digital Technology 231. This course is a continuation of the study of microprocessors and their support families. Course material emphasizes peripheral chips and various microprocessors that work together to add intelligence to modern electronic equipment. This course is designed to expose students to common usage microprocessor devices in order to gain a working knowledge of I/O techniques and to be able to troubleshoot in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

251 A+ Certification

**3 hours lecture, 3 units
Grade only**

This course is an open entry/exit course providing preparation for employment in the electronics industry by becoming an A+ Certified Technician. Students pass a rigorous proctored computer-based exam that tests their knowledge of configuring, installing, diagnosing, repairing, upgrading, and maintaining microcomputers and their peripherals. Upon passing the exam, students are awarded the A+ Certification with a specialty in Microsoft Windows/DOS environments. (FT) Associate Degree Credit only and not Transferable.

251L A+ Certification Laboratory

**3 hours lab, 1 unit
Grade only**

This course is an open entry/exit course providing preparation for employment in the electronics industry

by becoming an A+ Certified Technician. Using simulated examinations, students are systematically promoted from one major topic to the next. (FT) Associate Degree Credit only and not Transferable.

270 Work Experience

**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. To receive credit, a student must complete a minimum of seven units during the semester, including work experience. This course is not open to students with credit for Digital Technology 270.

A program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. To receive credit, a student must complete a minimum of seven units during the semester, including work experience. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**1-3 Hours by Arrangement, 1-3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration. This course is not open to students with credit for Digital Technology 290. For advanced students in Electronic Systems or Electro-Optical Technology who wish to pursue special problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Machine Technology

Description

The Machine Technology program offers a variety of instruction in the process of modern manufacturing. Emphasis is placed on CAD/CAM and C.N.C. technology.

Program Emphasis

The Machine Technology program prepares students for C.N.C. machining and is also ideal for students who need to upgrade prior machine shop training to comply with the current needs of industry.

Faculty	Office	Telephone
John Bollinger	T-103	(619) 388-3659

Career Options

CAD/CAM technician, C.N.C. machining technician

Academic Programs

The certificates of completion and achievement and the associate degrees in Machine Technology require completion of the courses listed below.

Certificate of Completion: C.N.C. Operator Option*

Courses:	Units
MACT 140, Machine Technology	4
MACT 150, Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MACT 170, Introduction to CNC Controlled Vertical Machining.....	4
MACT 171, Application of CNC Controlled Vertical and Electrical Discharge Machining (EDM) I.....	2
MACT 172, Application of CNC Controlled Vertical Machining and Electrical Discharge Machining (EDM) II.....	2
Total Units = 16	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Completion: C.N.C. Technology Option*

Courses:	Units
MACT 140, Machine Technology	4
MACT 150, Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MACT 160M, Introduction to CAD/CAM or MACT 160S, Introduction to CAD/CAM	4
Total Units = 12	

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Certificate of Achievement: Machine Technology

C.N.C. Technology Option

Courses Required for the Major:	Units
Certificate of Completion, C.N.C. Operator Option.....	16
MACT 160M, Introduction to CAD/CAM or MACT 160S, Introduction to CAD/CAM	4
Total Units = 20	

Certificate of Achievement: Machine Technology

Computer Aided Manufacturing Option

Courses Required for the Major:	Units
Certificate of Achievement, C.N.C. Technology Option	20
MACT 161M, Applications of CAD/CAM I or MACT 161S, Applications of CAD/CAM I	2
MACT 162M, Applications of CAD/CAM II or MACT 162S, Applications of CAD/CAM II	2
MACT 180M, Advanced CAD/CAM or MACT 180S, Advanced CAD/CAM	4
MACT 181M, Application in Advanced CAD/CAM I or MACT 181S, Application in Advanced CAD/CAM I	2
MACT 182M, Application in Advanced CAD/CAM II or MACT 182S, Application in Advanced CAD/CAM II.....	2
Total Units = 32	

Associate in Science Degree: Machine Technology

Computer Aided Manufacturing Option

An Associate in Science Degree may be earned in Computer Aided Manufacturing Option. Complete the Computer Aided Manufacturing Option Certificate of Achievement as specified above (32 units).

Courses Required for the Major:	Units
Certificate of Achievement, Computer Aided Manufacturing Option	32
Total Units = 32	

Additional general education and graduation requirements for the associate degree are listed in the catalog ACADEMIC REQUIREMENTS section. **The associate degree requires a minimum of 60 units.**

Recommended electives: Machine Technology 290.

Courses

Machine Technology (MACT)

140 Machine Technology

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40. This course is an introduction to the Machine Technology field. Emphasis is placed on safety, measurements, common formulas, machining applications, drawings, and career opportunities in the field. This course is designed for students planning to major in the occupational field of machine technology. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

150 Introduction to Computer Numerical Control (CNC) and Electrical Discharge Machining (EDM)

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40. This course is a study of advanced machining techniques including numerically controlled mills and lathes and electro-discharging machining. Emphasis is placed on introducing the student to Computer Numerical Control (CNC) programming using "G" and "M" codes. This course is designed for students majoring in Machine Technology and with previous machine laboratory experience. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

160M Introduction to CAD/CAM

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and concurrent enrollment in Machine Technology 161M. This course is an introductory, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs at

a basic level for both the Computer Numerical Control (CNC) Mill and CNC Lathe. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

160S Introduction to CAD/CAM

**3 hours lecture, 3 hours lab, 4.00 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and concurrent enrollment in Machine Technology 161S. This course is an introductory, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs at a basic level for both the Computer Numerical Control (CNC) Mill and CNC Lathe. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

161M Applications of CAD/CAM I

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 160M with a grade of "C" or better, or equivalent.

This course presents students with intermediate-level Computer Aided Design/Computer Aided Manufacturing CAD/CAM projects dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Mastercam software. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

161S Applications of CAD/CAM

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and concurrent enrollment in Machine Technology 160S. This course presents students with intermediate-level Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) projects dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Surfcam software. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may

be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

162M Applications of CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 161M with a grade of "C" or better, or equivalent.

This course presents students with advanced-level Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) exercises dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Mastercam. Students at this level work with minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

162S Applications of CAD/CAM II

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 161S with a grade of "C" or better, or equivalent.

This course presents students with advanced-level Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) exercises dealing with Computer Numerical Control (CNC) program generation for the CNC Mill and CNC Lathe using Surfcam software. Students at this level work with minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

170 Introduction to CNC Controlled Vertical Machining

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or

Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 150 with a grade of "C" or better, or equivalent.

This course is an introductory, hands-on study Computer Numerical Control (CNC) Vertical Machining theory and techniques. Emphasis is placed on Vertical Machining basic operations and Electrical Discharge Machining (EDM). (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

171 Application of CNC Controlled Vertical and Electrical Discharge Machining (EDM) I

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 170 with a grade of "C" or better, or equivalent.

This laboratory course provides exercises in Computer Numerical Control (CNC) Vertical Machining techniques and Electrical Discharge Machining (EDM) at an intermediate level. Students at this level work under moderate instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

172 Application of CNC Controlled Vertical Machining and Electrical Discharge Machining (EDM) II

**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 171 with a grade of "C" or better, or equivalent.

This laboratory course provides exercises in Computer Numerical Control (CNC) Vertical Machining techniques and Electrical Discharge Machining (EDM) at an advanced level. Students at this level work under minimal instructor supervision to increase efficiency and quality of work. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

180M Advanced CAD/CAM**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 160M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced modeling surface techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at a beginning level under direct instructor supervision. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

180S Advanced CAD/CAM**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 160S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at a beginning level under direct instructor supervision. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

181M Application in Advanced CAD/CAM I**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 180M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced modeling techniques for both the

Computer Numerical Control (CNC) Mill and CNC Lathe at an intermediate level under moderate instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

181S Application in Advanced CAD/CAM I**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 180S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an intermediate level under moderate instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

182M Application in Advanced CAD/CAM II**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 181M with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Mastercam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an advanced level under minimal instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

182S Advanced CAD/CAM II**6 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40; and completion of or concurrent enrollment in Machine Technology 181S with a grade of "C" or better, or equivalent.

This course is an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using Surfcam software. Emphasis is placed on generating programs using advanced surface modeling techniques for both the Computer Numerical Control (CNC) Mill and CNC Lathe at an advanced level under minimal instructor supervision. This course may be taken four times to enhance skills or proficiencies by supervised repetition and practice within class periods. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

**290 Independent Study in Machine Technology
Hours by Arrangement, 1 - 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For advanced students in machine technology who wish to pursue problems and projects relating to their particular subject area. The student meets with the instructor at specific intervals and is expected to do primary research, analyze problems and submit reports. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

**Manufacturing Engineering
Technology****Description**

Manufacturing Engineering Technology (MFET) program provides students the opportunity to acquire highly valued skills in an innovative, hands-on learning environment. The program features integrating

experiences through which students participate in all aspects of a manufacturing enterprise, from materials and processes to safety, design, automation, quality and lean manufacturing. Armed with these skills, MFET graduates can pursue rewarding, growth-oriented careers in such diverse industries as plastics, automotive, biomedical, electronics, aerospace, machining and other high-value manufacturing sectors.

Program Emphasis

MFET program has two options: Electronics and Fabrication. Upon successful completion of the program, students will be able to: A) For the Electronics Option: (1) Utilize and operate various test equipment, and use measurement results to support product development; (2) Demonstrate the knowledge of design tools used in electronics industry for product development; (3) Identify and apply quality control tools used in electronics manufacturing industry; (4) Explain and apply the fundamentals of electronics applications and theory; (5) Describe different types of materials, process flows, equipment and techniques used to manufacture electronics products. B) For the Fabrication Option: (1) Identify and utilize CAD/CAM (Computer-Aided Design/Computer-Aided Manufacturing) applications in various manufacturing processes; (2) Explain product design to optimize manufacturing efficiency; (3) Identify and apply quality control tools and instruments used in a manufacturing environment; (4) Demonstrate proficiency in programming and operation of NC/CNC (Numerical Control/Computer Numerical Control) equipment; (5) Describe different types of materials, process flows, equipment and techniques used in manufacturing.

Statement of Goals

The Manufacturing Engineering Technology (MFET) program is developed with two specific goals: 1) To train students with a high level of technical and non-technical skills, and prepare them for the highly competitive world of today's manufacturing. 2) To provide a continuous path for students to acquire a firm foundation of skills and knowledge in the field of manufacturing, transfer successfully to a 4-year college or university.

Faculty

Truc Ngo

Office

A-107B

Telephone

(619) 388-3394

Career Options

Areas of employment include manufacturing engineering or engineering technician, manufacturing operation management, equipment maintenance and troubleshooting, quality and production control, production planning, and automation. All MFET major

courses are transferable to 4-year colleges/universities. MFET graduates may also further their education by transferring to a number of four-year colleges and universities.

Academic Programs

The certificates of completion and achievement and associate degree require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Certificate of Completion: Manufacturing Fundamentals*

The Certificate of Completion on Manufacturing Fundamentals provides fundamental knowledge for students to enter the workforce in a manufacturing field.

Courses:	Units
MFET 101, Introduction to Manufacturing Engineering Technology	3
MFET 105, Print Reading and Symbolology.....	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Processes.....	4
Total Units = 13	

*This is a department award in recognition of information on the transcript and does not imply that graduation requirement has been met.

Certificate of Completion: Advanced Manufacturing*

The Certificate of Completion in Advanced Manufacturing furthers student's knowledge with the innovative experience and exposure to modern manufacturing practices.

Courses:	Units
MFET 150, Manufacturing Automation.....	3
MFET 210, Statistical Process Control	3
MFET 110, Industrial Safety	2
MFET 230, Lean Manufacturing	3
Total Units = 11	

*This is a department award in recognition of information on the transcript and does not imply that graduation requirement has been met.

Certificate of Achievement: Manufacturing Engineering Technology

Electronics Manufacturing

The Certificate of Achievement in Electronics Manufacturing focuses in the manufacturing of electronic devices and related products.

Courses:	Units
MFET 101, Introduction to Manufacturing Engineering Technology	3
MFET 105, Print Reading and Symbolology.....	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Processes	4
MFET 150, Manufacturing Automation	3
MFET 210, Statistical Process Control	3
ENGN 128, Electronics for Technology.....	3
MFET 220, Programmable Logic Controllers.....	3
MFET 110, Industrial Safety	2
MFET 230, Lean Manufacturing	3
Total Units = 30	

Certificate of Achievement: Manufacturing Engineering Technology

Fabrication Manufacturing

The Certificate of Achievement in Fabrication Manufacturing focuses in the manufacturing of non-electronic devices and related products.

Courses:	Units
MFET 101, Introduction to Manufacturing Engineering Technology	3
MFET 105, Print Reading and Symbolology.....	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Processes	4
MFET 150, Manufacturing Automation	3
MFET 210, Statistical Process Control	3
MACT 150, Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MFET 110, Industrial Safety	2
MFET 230, Lean Manufacturing	3
and Select one course from:	
MACT 160M, Introduction to CAD/CAM.....	4
or	
MACT 160S, Introduction to CAD/CAM	4
Total Units = 32	

Associate in Science Degree Manufacturing Engineering Technology - Option: Electronics

The Associate in Science Degree in Manufacturing Engineering Technology with Electronics Option prepares students with necessary skills, knowledge and

experience to take on important roles as team members or leaders in an electronics manufacturing enterprise.

Courses:	Units
MFET 101, Introduction to Manufacturing Engineering Technology	3
MATH 096, Intermediate Algebra and Geometry.....	3
ENGN 110, Science for Technical Applications	4
TEHW 101, Introduction to Technical Writing.....	3
MFET 105, Print Reading and Symbology	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Processes	4
MFET 150, Manufacturing Automation	3
MFET 210, Statistical Process Control	3
ENGN 128, Electronics for Technology	3
MFET 220, Programmable Logic Controllers	3
MFET 110, Industrial Safety	2
MFET 230, Lean Manufacturing	3

Select one course from:

ENGE 111, Introduction to Computer-Aided Design ...	3
or	
ENGE 151, Engineering Drawing	2
or	
TECI 101, Basic Technical Illustration	3
and Select one course from:	
MFET 250, Manufacturing Capstone Course	4
or	
ENGN 275, Engineering Technology Industrial Internship	4

Total Units = 48-49

Associate in Science Degree Manufacturing Engineering Technology - Option: Fabrication

The Associate in Science Degree in Manufacturing Engineering Technology with Fabrication Option prepares students with necessary skills, knowledge and experience to take on important roles as team members or leaders in a fabrication manufacturing enterprise.

Courses:	Units
MFET 101, Introduction to Manufacturing Engineering Technology	3
MATH 096, Intermediate Algebra and Geometry	5
ENGN 110, Science for Technical Applications	4
TEHW 101 Introduction to Technical Writing	3
MFET 105, Print Reading and Symbology	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Processes	4
MFET 150, Manufacturing Automation	3
MFET 210, Statistical Process Control	3
MACT 150, Intro/Computer Num Control (CNC) and Elec Dis Mach	4
MFET 110, Industrial Safety	2
MFET 230, Lean Manufacturing	3

and Select one course from:

ENGE 111, Introduction to Computer-Aided Design ..	3
or	
ENGE 151, Engineering Drawing	2
or	
TECI 101, Basic Technical Illustration	3
and Select one course from:	
MACT 160M, Introduction to CAD/CAM	4
or	
MACT 160S, Introduction to CAD/CAM	4
and Select one course from:	
MFET 250, Manufacturing Capstone Course	4
or	
ENGN 275, Engineering Technology Industrial Internship	4

Total Units = 50-51

Courses

Manufacturing Engineering Technology (MFET)

101 Introduction to Manufacturing Engineering Technology

**3 hours lecture, 3 units
Grade Only**

This course is designed for students who are interested in the field of Manufacturing Engineering Technology (MFET). The course introduces manufacturing principles, including manufacturing systems, design concepts, process and material selection, computer-integrated manufacturing, quality control and management, global competitiveness and manufacturing costs, safety and environmental concerns. It also provides an overview of the MFET program structure, job perspectives for graduates, salary ranges and various career options in manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101A Introduction to Manufacturing I

**1 hour lecture, 1 unit
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101 or Engineering Technology 120.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology (MFET). The module discusses common manufacturing terminologies, current business trends,

and design process involved with product and process development. It also provides an overview of the MFET program, job perspectives for graduates, salary ranges and various career options in manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101B Introduction to Manufacturing II

**1 hour lecture, 1 unit
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101A or Engineering Technology 120, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology. The module introduces manufacturing principles in a product realization process, automation, quality control and management, and lean manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

101C Introduction to Manufacturing III

**1 hour lecture, 1 unit
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 101.

This project-based module is designed for high school and entry college students who might be interested in the field of Manufacturing Engineering Technology. The module introduces environmental and safety rules, regulations and practices in manufacturing enterprises. In this module, students also apply previous knowledge and training in manufacturing engineering technology to work in teams, build robots that are capable of performing various challenging tasks and compete at the end of the module. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Print Reading and Symbolology

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and Mathematics 35, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 105A or 105B.

This course is a study of the types of symbols and engineering notations used for mechanical, electrical, electronic, hydraulic and pneumatic drawings. Representative drawings are used to demonstrate concepts and practice in interpreting the symbols and notations. Students view and handle typical parts represented by the symbols. This course is designed for students who are currently working in a manufacturing plant or pursuing a career in an engineering technology field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105A Print Reading I

**1.5 hours lecture, 1.5 units
Grade Only**

Advisory: Mathematics 35 with a grade of "C" or better, or equivalent, or Assessment Skill Level M30.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 105 or Engineering Technology 124 or 130.

This project-based module teaches student basic sketching techniques, print layout, views, and fundamentals of working and pictorial drawings. Students also learn drawing and annotation standards for different mechanical parts, the principles of dimensioning and tolerancing and their applications and practices in industrial prints. The module is designed for students who are interested in studying manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105B Print Reading II

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 105A or Engineering Technology 124 or 130, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 105.

This project-based module teaches student different types of scales, precision measurement instruments, methods for geometric tolerancing. Students also learn to interpret symbols and notes on electrical and electronic diagrams, precision sheet metal drawings and welding specifications. Module includes a final project in which students work in teams to generate a print for a part using different drafting symbols, notes, specifications and standards learned throughout the print reading modules. This module is designed for students who are interested in studying manufacturing.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Industrial Safety

**2 hours lecture, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

The course is a study of safety fundamentals in an industrial environment and their relationship to accident prevention. It introduces students to the Occupational Safety and Health Administration (OSHA) policies, procedures and standards for industries. Course topics include electrical safety, hazardous materials and conditions, fire protection, tools and machines, welding and cutting, personal protective equipment, hazard communication, construction, ergonomics and industrial hygiene. This course is designed for students who are currently or will be working in construction or general industries. Upon successful course completion, students may receive an OSHA 30-hour Construction and/or General Industry Outreach Training Completion Card. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Properties of Materials

**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M40; Engineering Technology 110 with a grade of "C" or better, or equivalent.

This lecture/lab course is a study of the chemical, physical and mechanical properties of industrial materials including metals, ceramics, polymers and composites. The course emphasizes the processes and tests used with different industrial materials during the manufacturing cycles. It also discusses function and structure as they relate to specific design considerations. This course is designed for students who are currently working in a manufacturing plant or pursuing a career in engineering and technology fields. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Manufacturing Processes

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Manufacturing Engineering Technology 115 with a grade of "C" or better, or equivalent or Engineering 210 with a grade of "C" or better, or equivalent.

This lecture/lab course provides basic understanding of how raw materials, including metals, polymers, ceramics and composites, are converted to finished products. In this course, students study commonly used and advanced manufacturing processes, understand the pros & cons of different industrial techniques. Students also learn key terms in manufacturing, and identify various types of equipment in common manufacturing processes. This course is designed for students who are pursuing a career in engineering or engineering technology fields, or working in a manufacturing industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Manufacturing Automation

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 120 with a grade of "C" or better, or equivalent. This lecture/lab course introduces students to the principles of manufacturing automation, process and machine control, programmable logic controllers, robotics, part handling and assembly. Students also learn concepts of group technology, flexible manufacturing systems and their applications in manufacturing industries. Through lectures, hands-on experience and demonstrations, students gain knowledge and skills in modern manufacturing that are necessary for seeking rewarding employment opportunities. This course uses a project-based learning approach. It is intended for students, technicians, technologists and engineers who are interest in manufacturing automation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150A Manufacturing Automation I

**1 hour lecture, 1.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101 or 101C or 120 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 150 or Engineering Technology 126.

This project-based module introduces students to the principles of manufacturing automation, computer-integrated manufacturing (CIM) which includes process and machine control, programmable logic controllers and robotics. Students also learn different applications of automation to improve quality and productivity in

manufacturing industries. This module is designed for students who are interested in modern manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150B Manufacturing Automation II

**1 hour lecture, 1.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 150A or Engineering Technology 126, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Manufacturing Engineering Technology 150.

This project-based module covers additional automation topics and applications in manufacturing industry, including sensors and actuators, part handling and assembly. Students also learn the concepts of group technology, flexible manufacturing systems and their applications. This module is designed for students who like to gain further knowledge and experience in modern manufacturing practices. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Statistical Process Control

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5 and M50; and completion of Mathematics 119 or Psychology 258 with a grade of "C" or better, or equivalent.

This lecture/lab course familiarizes students with the applications of statistics in process and quality control function. Students learn to acquire, analyze and interpret data from a process to determine if it is in statistical control and capable of meeting customer's requirements. Statistical techniques include the use of basic graphs and diagrams, control charts, process mean and variability, process capability, sampling and normal distribution. The course also introduces students to the concepts of Six Sigma and design of experiments as part of quality control and improvement. This course is designed for students who are interested in process control, quality improvement and industrial management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

220 Programmable Logic Controllers

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M50.

This course assists students in developing and building fundamental knowledge of the operation, construction, interfacing and programming of programmable logic controllers (PLCs). Students learn different hardware components, input and output devices associating with PLCs, and PLC applications in various manufacturing systems. Students also acquire hands-on experience on constructing, operating, configuring and programming PLCs. The course is designed for students, technicians, technologists and engineers from industry who are interested in automation and the integration of PLCs in manufacturing. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Lean Manufacturing

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 150 and 210, each with a grade of "C" or better, or equivalent.

This overview course focuses on the terminology, tools, techniques, concepts and principles of Lean Manufacturing. Students are introduced to different Lean tools including value stream mapping, 5-S process, seven deadly wastes, standardized work flow, error proofing, setup reduction, integrated reliability, and production and inventory control. This course uses a project-based approach; provides students with theories, guided discussions, hands-on exercises and industrial case-studies. Course is open to all students who are planning to join industry or currently working in a company instituting Lean Manufacturing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Manufacturing Capstone Course

**1 hour lecture, 9 hours lab, 4 units
Grade Only**

Prerequisite: Manufacturing Engineering Technology 101, 105 and 115, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Manufacturing Engineering Technology 110 and 230, each with a grade of "C" or better, or equivalent. This is a capstone course for the Manufacturing Engineering Technology program. It provides students the opportunity to apply a combination of skills and

knowledge to solve an industrial manufacturing problem. Students work together in groups to tackle an integrated, technical problem selected by industry and approved by program faculty. Topics include, but are not limited to, manufacturing materials and processes, design, quality, lean manufacturing and automation. This course is intended solely for students enrolled in the last semester of the Manufacturing Engineering Technology program, and is a major requirement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience

1- 4 units, 1 hour other

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment. To receive credit a student must complete a minimum of seven units during the semester, including work experience.

A program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Engineering Technology Mecomtronics

Description

MECOMTRONICS (MEchanics + COMputers + Telecommunications + elecTRONICS) is defined as an Engineering Technology discipline that combines the areas of mechanical and electronics technology, and computer hardware and software systems. This discipline has been created to respond to the specialized demands for the multifunctional engineering technician. MECOMTRONICS technicians are prepared with the knowledge and skills to work in a technologically diversified business environment. These technicians will be able to participate on a team to specify, trouble-shoot, develop, design, and prepare for production of cost-efficient, state-of-the-art products which can compete for value in a global economy.

Program Emphasis

The MECOMTRONICS curriculum is based on integrated technical and core (English, Math and Physics) competencies, and it emphasizes project-based learning using a just-in-time instructional delivery. Students will work in teams to learn concepts, solve problems and make discoveries in a workplace-related environment. Students will use traditional, as well as on-line electronics resources and industry supplied data as sources of information.

Faculty	Office	Telephone
Fred Julian	A-107D	(619) 388-3720
Carlos de la Lama	M-211	(619) 388-3362
Farnaz Khoromi	A-107C	(619) 388-3527
David Fierro	A-107E	(619) 388-3489

Career Options

R & D technician, electronics technician, engineer-in-training

Academic Programs

The associate degree in Engineering Technology MECOMTRONICS requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Science Degree: Engineering Technology Mecomtronics Electronics and Computer Engineering Technology

Program Prerequisite

Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50 or equivalent. English 51 and 56 each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Courses Required for the Major

Units

Semester I:

MCTR 102A, DC Circuits	3
ENGL 101, Reading and Composition	3
MATH 181, Mecomtronics College Algebra and Trigonometry I.....	3
MCTR 90, Science for Technical Applications	3

Semester II:

MCTR 103A, AC Circuits	3
MCTR 104A, Applied C Programming for Technology..	3
MATH 182, Mecomtronics College Algebra and Trigonometry II	3
MCTR 120A, Basic Physics for Technical Applications I	4

Semester III:

MCTR 201A, Electronic Deices and Circuits.....	3
MCTR 202A, Digital Electronics	3
ENGL 205, Critical Thinking and Intermediate Composition.....	3
MATH 183, Mecomtronics Calculus I	3
MCTR 120B, Basic Physics for Technical Applications II.....	4

Semester IV:

MCTR 204A, Industrial Electronics.....	4
MATH 184, Mecomtronics Calculus II	3
MCTR 120C, Basic Physics for Technical Applications III	4

Total Units = 52

Transfer Information

Common university majors related to the field of Mecomtronics include:

Electronics and Computer Engineering, Engineering Technology, Industrial Engineering, Industrial Technology, Manufacturing Engineering, Manufacturing Systems Engineering Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Mecomtronics (MCTR)

090 Science for Technical Applications

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This science course presents basic vocabulary, concepts and scientific techniques that are used to analyze and understand technical applications. Topics of study include the measurement of velocity and acceleration, the laboratory study of conductivity, Ohm's law, resistors in series and in parallel, the investigation of gas laws, capacitance bridge, Kirchoff's laws, AC voltage measurements, and the study of mass density and viscosity. The laboratory focuses on the specific current physical science needs of the Engineering Technology/MECOMTRONICS program. Analytical reading and problem solving are required for success in this course. The lectures address theory, concepts and problems required for a solid comprehension of basic physical science and for rapidly bringing the student's knowledge to a level where modern ideas can be understood. Associate Degree Credit only and not Transferable.

101A Basic Computer Systems Maintenance Support and Applications

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course focuses on computer hardware and software and their applications to engineering and maintenance. Students become computer literate as well as learn how to support, maintain, upgrade, and do basic hardware and software troubleshooting and use the computer for engineering problem solving and documentation using

spreadsheets and database software, word processors, and applications packages. Additional areas addressed in this course include software licensing requirements, use of the Internet, and manufacturer's computer bulletin boards to download software updates and technical specifications. This course is intended solely for the students enrolled in the first semester of the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

102A DC Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Corequisite: Mathematics 181.

Advisory: Mathematics 96 with a grade of "C" or better or equivalent, or Assessment Skill Level M50.

This course, the first semester of a two-semester sequence in electric circuits, introduces DC electronics principles and practices through integration of theory, application, and structured discovery activities. Emphasis is placed on activity-based learning through a variety of hands-on projects. Topics include but are not limited to fundamental aspects of DC circuits and passive devices, Kirchhoff's voltage and current laws; mesh and nodal analysis; DC network theorems; applications using P-Spice, Electronics Workbench, or equivalent software; DC measurements and instrumentation; magnetism. This course is intended solely for the students enrolled in the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

103A AC Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 102A with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 181 with a grade of "C" or better, or equivalent.

This course is the second semester of a two-semester sequence in electric circuits. Topics include DC (Direct Current) transient analysis in RL (resistor-inductor) and RC (resistor-capacitor) circuits; basic AC (alternating current) circuit theorems; phasor analysis of AC circuits; simulation of AC circuits using PSpice, Electronics Workbench or equivalent simulation software; and transformer and operation, application, and theory of basic electrical measurement instrumentation. This course is intended for students enrolled in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104A Applied C Programming for Technology

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mathematics 181 with a grade of "C" or better, or equivalent.

This is an introduction to structured programming using ANSI C, which is used in engineering technology. Programming problems applicable to engineering technology, physics, and mathematics are used to develop and illustrate the structures of the C programming language. Topics include data types, operators, functions, input/output operations, decision statements, loop structures, recursion, pointers, arrays, strings, and binary I/O operations. This course is intended solely for students enrolled in the second semester of the Engineering Technology/ Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

120A Basic Physics for Technical Applications I

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 90 and Mathematics 181, each with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 182.

This course is an introduction of physics presenting tools that are used in technical applications. Topics of study include measurement standards, scalar and vector quantities, kinetics in one, two and three dimensions, Newton's laws of motion, the gravitational force, the harmonic oscillator, work and energy, and momentum. The course centers on "hands-on" approaches to analysis of physical phenomena, without neglecting conceptual and calculation rigor. This course is intended for students in the Engineering Technology/ MECOMTRONICS program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120B Basic Physics for Technical Applications II

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 120A and Mathematics 182, each with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 183.

This course is the second in a sequence of three introductory technical physics courses intended for the Engineering Technology/MECOMTRONICS program. This sequence of courses presents the tools that are used in technical applications. The topics of study include angular momentum and torque, solids and fluids, waves, temperature, heat transfer, the first and second laws of thermodynamics, and kinetic theory. Emphasis is placed on the conceptual and calculational

nature of physical principles and on experimental studies that demonstrate the use of the equations discussed in the theory. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120C Basic Physics for Technical Applications III

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 120B and Mathematics 183, each with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 184.

This course is the third course in a three-course sequence in technical science and physics and is intended for students enrolled in the Engineering Technology/Mecomtronics program.

This course presents the tools that are used in technical applications. The topics of study include the electric fields, electric potential, circuit elements, DC and AC circuit analysis, magnetic field, electromagnetism, geometric and physical optics, the special theory of relativity, discoveries in modern physics and an introduction to quantum mechanics. Emphasis is placed on the conceptual and computational principles of physics and experimental studies that demonstrate the use of the equations discussed in the theory. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

131 Research, Composition and Presentation I

**2 hours lecture, 2 units
Grade Only**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This is the first semester English course for students enrolled in the Mecomtronics program. The course emphasizes competence in college-level composition, reading and writing principles, and the practice of effective, logical, and precise expression of ideas. Students read and write technical documents and prepare a variety of written and oral projects and a documented research report. Students will write a minimum of 5,000 words, including drafts and revisions, present two formal oral reports, and learn basic word processing skills. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

132 Research, Composition and Presentation II

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Mecomtronics 131 with a grade of "C" or better, or equivalent.

This is the second-semester English course for students enrolled in the Mecomtronics program. The course builds on skills learned in Mecomtronics 131, emphasizing more complex written projects and a documented field research paper. In addition, the student develops competence in the reading and writing of technical documents, the analysis and interpretation of written material, and the use of written sources as the starting point for expository writing. Students will write a minimum of 5,000 words, including drafts and revisions. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

133 Research, Composition and Presentation III

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Mecomtronics 132 with a grade of "C" or better, or equivalent.

The course builds on skills learned in Mecomtronics 132, emphasizing complex written projects including argumentation and persuasion, and a documented research project. In addition, students develop additional competence in the reading and writing of technical documents, the analysis and interpretation of written materials-both technical and rhetorical-and the use of written sources as the starting point for expository writing. Students will write a minimum of 5,000 words including drafts and revisions. This is the third-semester English course for students enrolled in the Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

201A Electronic Devices and Circuits

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 103A and Mathematics 182, each with a grade of "C" or better, or equivalent.

This is an introductory course on the theory, operation, and application of semiconductor junction devices. Emphasis is placed on activity-based learning through a variety of hands-on projects. Topics include but are not limited to physical principles of semiconductors, characteristics and operation of diodes, Zener diodes, bipolar junction transistors, junction field effect transistors, d-c characteristics, biasing and d-c stability of diodes and bipolar junction transistors, algebraic and load line analysis techniques, electronic simulation

using P-Spice, Electronics Workbench or equivalent, and applications of semiconductor devices. This course is intended solely for students enrolled in the third semester of the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

202A Digital Electronics

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 103A with a grade of "C" or better, or equivalent.

This is an introductory course to digital electronics and its applications to engineering. Emphasis is placed on activity-based learning through a variety of hands-on laboratory projects. Topics include applied Boolean algebra and number systems; Karnaugh maps; combinatorial logic and analysis; logic building blocks including gates, gate analysis, flip-flops, shift registers; and digital circuit simulation using Logic Works or equivalent software. This course is intended solely for students enrolled in the second semester of the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

203 Telecommunications

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 201A and Mecomtronics 202A and Mathematics 183, each with a grade of "C" or better, or equivalent.

This course focuses on telecommunications and networking for students in the Engineering Technology Mecomtronics program. The course provides students with a background in the theory of telecommunications and hands-on experience installing and administering a network. Students learn technical characteristics of telecommunications such as protocols, transmission characteristics, data representation, carrier techniques, and multiplexing. Students evaluate and select network components; install network hardware, software and cabling; troubleshoot network malfunctions; and perform network administration tasks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

204A Industrial Electronics

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mecomtronics 201A and Mecomtronics 202A and Mathematics 183, each with a grade of "C" or better, or equivalent.

This is a capstone course for the Engineering Technology/Mecomtronics program and introduces the fundamentals of industrial electronics as well as provides an environment in which students in this program use a combination of skills in a major project. Modern industrial electronics and control devices are introduced through various activities. Topics include but are not limited to logic controllers, thyristers, opto-electronic devices, and motors. This course is intended solely for students enrolled in the fourth semester of the Engineering Technology/Mecomtronics program. (FT) Associate Degree Credit & transfer to CSU and private colleges and universities.

206 Microcontrollers

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Mecomtronics 103A with a grade of "C" or better, or equivalent.

Advisory: Mathematics 107 with a grade of "C" or better, or equivalent; Mathematics 107L with a grade of "C" or better, or equivalent.

This course focuses on the fundamentals of both the hardware and software aspects of the microcontroller. Typical devices that are connected to the microcontroller are: switches, light emitting diodes, seven segment displays, stepper motors and a matrix keypad. An engineering evaluation board is used as the development system for the controller. Structured programming, using flow charts, is emphasized. Code is written in assembly language, compiled and then downloaded to the controller. This course is intended for students majoring in Engineering Technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Courses

Radio Frequency Technology (RAFT)

051 Introduction to the Radio Frequency Technology Industry

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a study of the San Diego Radio Frequency (RF) Microwave Technology industry. Emphasis is placed on understanding the current needs of the San Diego RF job market and gaining those skills in follow-on courses to obtain gainful employment. Course content includes identifying several RF companies in the San Diego area, discovering common job titles, defining the range of salaries and understanding common RF skill sets required for RF Technician positions. This course is designed for students seeking employment in the Wireless Telecommunication Industry. (FT) Associate Degree Credit only and not Transferable.

052 RF Microwave Technology I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is a basic study of basic Radio Frequency (RF) Microwave Technology. Emphasis is placed on the

assembly process related to RF Technology, including the testing and tuning of RF circuits. This course is designed for students seeking employment in the Wireless Telecommunications Industry. (FT) Associate Degree Credit only and not Transferable.

053 RF Microwave Technology II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an intermediate study of Radio Frequency (RF) Microwave Technology. Emphasis is placed on the assembly processes related to RF, including common circuits and test measurement methods. This course is designed for students seeking employment in the Wireless Telecommunications Industry. (FT) Associate Degree Credit only and not Transferable.

054 RF Microwave Technology III

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

This course is an advanced study of RF Microwave Technology. Emphasis is placed on the use and care of RF test equipment. This course is designed for students seeking employment in the Wireless Telecommunication Industry. (FT) Associate Degree Credit only and not Transferable.

English

English, English as a Second Language, Humanities

Associate in Arts Degree:

English

Units

18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The English program provides a breadth of course work designed to improve reading, writing, listening, speaking, and critical thinking skills. Reading courses focus on academic reading and study skills. The English for Speakers of Other Languages (ESOL) program offers four levels of academic English instruction including reading, listening/speaking, and composition. Writing classes range from developmental writing to transfer-level course in reading and composition, composition and literature, and intermediate composition and critical thinking, as well as a two-semester sequence in creative writing. Literature offerings include an introductory course and specialized courses such as British and American Literature and women in literature. Humanities courses explore cultural achievements of world civilizations. English department courses meet English Composition requirements for the associate degree and for University of California, and California State University, Communications in the English Language and Critical Thinking requirements. Literature courses may also meet general education, humanities, multicultural studies requirements and preparation for transfer.

Program Emphasis

The English major at the lower-division level emphasizes learning to read more critically and to write more effectively using strategies of narration, exposition and argument. The English major primarily serves students transferring to colleges and universities where the focus is on academic writing, research and criticism.

Faculty	Office	Telephone
Roberta Alexander	C-226A	(619) 388-3089
Chris Baron	C-226B	(619) 388-3261
Audrey Brey	C-224B	(619) 388-4838
Nancy Cary	C-224A	(619) 388-3278
Mary Coleman	C-224D	(619) 388-3940
Laurel Corona	C-206	(619) 388-3597
Gwyn Enright	C-208	(619) 388-3086
Virginia Escalante	C-225A	(619) 388-3596
Jennifer Feyen	C-204	(619) 388-3264
Maria Figueroa	C-225D	(619) 388-3695
Aileen Gum	C-226A	(619) 388-3610
Barry Hicks	C-223	(619) 388-3562
Jan Jarrell		(619) 388-3962
Karen Lim	C-224E	(619) 388-3084
Jan Lombardi	C-201	(619) 388-3587
Nadia Mandilawi	C-202	(619) 388-3420
Hector Martinez	C-215	(619) 388-3585
Kelly Mayhew	C-225D	(619) 388-3136
Elizabeth Meehan	C-224C	(619) 388-3509
Jim Miller	C-207	(619) 388-3554
Elva Salinas	C-224B	(619) 388-3411
Donna Watson	C-203	(619) 388-3607
Adam Waleign	C-205	(619) 388-3306

Career Options

Most careers require education beyond the associate degree. Strong linguistic, analytical and imaginative skills developed in English help to prepare students for employment in many fields including law, education, communications, governmental affairs or business.

Academic Programs

The associate degree in English requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: English

Courses Required for the Major:	Units
ENGL 101, Reading and Composition or ENGL 105, Composition and Literature.....	3
*ENGL 205, Critical Thinking and Intermediate Literature.....	3
**ENGL 215, English Literature I: 800-1799.....	3
**ENGL 216, English Literature II: 1800-Present.....	3

Select three units from:

ENGL 208, Introduction to Literature
ENGL 220 Masterpieces of World Literature I:
1500 BCE - 1600 CE

ENGL 221 Masterpieces of World Literature II:
1600 - Present..... 3

Select three units from:

**ENGL 210 American Literature I
**ENGL 211 American Literature II
ENGL 245 Writing Creative Nonfiction
ENGL 247 Writing Seminar-Poetry
ENGL 249 Introduction to Creative Writing
ENGL 254 Intermediate Fiction Writing 3

Total Units = 18

*Meets SDSU/CSU critical thinking requirement.

**Recommended sequences for UC transfer.

Not all courses are offered at each campus.
For graduation requirements see Requirements for the Associate Degree on page 64.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: English 202, 209, 238, 240, 245, 247, 249, 253, 254; Humanities 101, 102, 201, 202; Journalism 200, 210A/B/C/D.

Courses designed to support this and other majors:

ESOL 19, 20, 21, 22, 30, 31, 32, 40.

Transferable Units as Prep for the Major at SDSU

SDSU will accept a total of 12 units of literature and creative writing as preparation for the English Major. This includes any combination of lower division literature courses and up to six units of creative writing courses.

Note: English 215 and 216 are required by SDSU and UCSD. Other course electives are available at Mesa and Miramar Colleges.

Transfer Information

Common university majors related to the field of English include:

Creative Writing, Comparative Literature, English, Humanities, Language Studies, Linguistics, Literature.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

English for Speakers of Other Languages (ESOL)

The English for Speakers of Other Languages Program is designed to prepare students to read, write, speak and listen at a level that enables them to succeed in college courses.

The program consists of four levels and the student is assigned a level based on the result of his/her placement test.

The first level, L19, is a combined skills class in a lecture/lab format. Students who successfully complete this course are at the intermediate-low level. Some students at the beginning level may find ESOL 19 difficult. For these students, counselors are available to discuss options and resources, including classes at Continuing Education.

The second and third levels, L20 and L30, are made up of three courses. The grammar-writing component is a six-unit course; the reading and listening/speaking components are three units each.

The fourth level, L40, is a single course in reading and writing. Students who successfully complete ESOL 40 can read and write at an advanced level. They are prepared to take English courses one level below transfer (English 55 and 56).

019 Transitional English For ESOL Students
3 hours lecture, 6 hours lab, 5 Units
Letter Grade or Credit/No Credit Option

Advisory: Assessment Skill Level L19. Students are advised to take the English for Speakers Other Languages placement test prior to enrollment and perform at level 19.

Limitation on Enrollment: This course is not open to students with credit for English 007 or 58.

This course prepares students to read, write, listen and speak at the intermediate-low ESOL level to facilitate successful participation in a college setting. This course will emphasize development of reading and writing skills in academic contexts, focusing heavily on the production of complete sentences with minimal errors and basic paragraph and composition development. Satisfactory completion of this course will enable students to enroll in ESOL 20, 21 and 22. (FT) Credit does not apply to the associate degree.

020 Writing for Non-native Speakers of English I

6 hours lecture, 6 units
Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

Limitation on Enrollment: This course is not open to students with credit for English 008 or 60.

This course in writing and grammar prepares students to write at the intermediate-mid ESOL level. In this course, students learn to write paragraphs, basic compositions and other types of texts and practice critical reasoning in their writing. Students read and understand a variety of texts and develop academic study skills and work habits. Students also practice grammatical structures in the production and editing of compositions so that meaning is generally clear and not obscured by error. (FT) Credit does not apply to the associate degree.

021 Reading for Non-native Speakers of English I

3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

This course prepares students to read at the intermediate-mid ESOL level. In this course, students learn reading strategies and apply them as they read a variety of texts. Students practice identifying text organization, vocabulary and grammar to facilitate comprehension. Students also begin to use information from class readings in discussion, critical thinking and writing. (FT) Credit does not apply to the associate degree.

022 Listening and Speaking for Non-native Speakers of English I

3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 19 with a grade of "C" or better, or equivalent, or Assessment Skill Level L20.

This course prepares students to understand spoken English and to speak at the intermediate-mid ESOL level. In this course, students begin to develop communicative competence through listening to and participating in a variety of communicative activities. Students also begin to study grammatical structures

specifically related to oral/aural course work to make connections between structure and communicative needs. In addition, students discuss, write about and think critically about information from oral and written sources. (FT) Credit does not apply to the associate degree.

030 Writing for Non-native Speakers of English II

6 hours lecture, 6 units
Grade Only

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

Limitation on Enrollment: This course is not open to students with credit for English 009 or 61.

This course in writing and grammar prepares students to write at the intermediate-high ESOL level. In this course, students learn to write compositions and other types of texts that communicate a basic awareness of critical reasoning and the components of the academic essay and other types of writing. To achieve these goals, students learn and apply knowledge of syntax and grammatical structures in the production and editing of compositions so that errors, which may be frequent, will not obscure meaning. Students also read and understand a variety of texts as well as communicate a familiarity with academic study skills and work habits. Credit does not apply to the associate degree.

031 Reading for Non-native Speakers of English II

3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

This course prepares students to read at the intermediate-high ESOL level. In this course, students continue to develop reading skills needed for academic and workplace success. To achieve these goals, students read a variety of texts and apply appropriate reading strategies to facilitate comprehension. In addition, students engage in activities to build background knowledge as well as knowledge of text structure, grammar and vocabulary. Students also use information from class reading in class discussion, critical thinking and writing. (FT) Credit does not apply to the associate degree.

032 Listening and Speaking for Non-native Speakers of English II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 20, 21, and 22, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L30.

This course prepares students to understand spoken English and speak at the intermediate-high ESOL level. In this course, students continue to develop communicative competence through listening to and participating in a variety of communicative activities. Students also continue to develop knowledge of grammatical structures specifically related to oral/aural course work. In addition, students discuss, write about, and think critically about information from oral and written sources. (FT) Credit does not apply to the associate degree.

040 Reading and Writing for Non-native Speakers of English III

6 hours lecture, 6 units

Letter Grade or Credit/No Credit Option

Prerequisite: English for Speakers of Other Languages 30, 31, and 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Level L40.

Limitation on Enrollment: This course is not open to students with credit for English 010 or 62.

This course prepares students to read and write at the advanced ESOL level. In this course students write essays and other types of texts that have some complexity of expression, contain relatively few mechanical and grammatical errors and illustrate evidence of critical reasoning. Students also read academic and workplace texts and apply study skills and work habits necessary for success in further academic and vocational studies. Students who complete this course will be prepared to enter English 51 and 56. (FT) Credit does not apply to the associate degree.

Courses

English (ENGL)

Basic Skills Courses

All courses at this level are offered for college credit. Credit for these courses will not apply toward the associate degree, but will count toward the determination of a student's workload and eligibility for financial aid.

Reading

042 College Reading and Study Skills I (Formerly English 055)

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: Assessment Skill Level R3. This course is designed for native speakers of English. ESL students should enroll in ESOL 19, 20, 21, 22, 30, 31, 32 or 40 as recommended by the placement test for non-native English speakers.

Limitation on enrollment: This course is not open to students with previous credit for English 55.

This course is designed for students who need to improve their reading skills in order to succeed in college courses. In this course, students practice the reading process, reading extensively and intensively, and develop confidence and enjoyment in reading. Students also read and respond to a variety of materials, including non-fiction and textbook assignments, and learn strategies for reading difficult material to facilitate comprehension and critical thinking. In addition, students develop writing, vocabulary, discussion, and study skills. (FT) Credit for this course does not apply to the associate degree.

Writing

043 English Review (Formerly English 050)

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: Assessment Skill Level W3; or English 42 with a grade of "C" or better, or equivalent, or Assessment Skill Level R4. This course is designed for native speakers of English. ESOL students should enroll in English for Speakers of Other Languages 19, 20, 21, 22, 30, 31, 32, or 40 as recommended by the placement test for non-native speakers.

Limitation on enrollment: This course is not open to students with previous credit for English 50.

This course is designed for students who need review of and practice with writing unified paragraphs and purposeful basic compositions. In this course students develop knowledge of the writing process as well as knowledge of grammatical structures to compose clear and complete sentences, paragraphs, and short essays. Students also read texts as the basis for writing and develop critical thinking skills necessary for success in college courses. (FT) Credit for this course does not apply to the associate degree.

050 English Review

(see English 043 on page 277)

055 College Reading and Study Skills I

(see English 042 on page 277)

English 101 Preparatory Courses

All courses at this level are offered for college credit. Three units of course work at this level may be applied to the associate degree. Credit for courses at this level will count toward the determination of a student's workload and eligibility for financial aid.

Writing**051 Basic Composition****3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent; or English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

This course is designed to prepare students to write successfully at the transfer level. In this course students practice the writing process in the production and editing of essays. Students also review grammatical and mechanical structures as needed to support the successful expression of meaning. In addition, students read and think critically using a variety of texts which are the basis for writing and class discussion. A District-wide, timed-writing examination, holistically graded by English instructors, is part of the final course grade. Designated sections of this course may be taught from a specific cultural perspective and are cross-listed under Black Studies and Chicano Studies in the class schedule. Three units of English credit at this level (either English 51 or English 56) may be applied to the associate degree. (FT) Associate Degree Credit only and not Transferable.

Reading**056 College Reading and Study Skills II****3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent; or English 42 with a grade of "C" or better, or equivalent, or Assessment Skill Level R4.

This course is designed for students who need to develop advanced reading skills to succeed in transfer

level courses. In this course, students focus on academic reading and study skills and practice strategies to improve reading comprehension and critical thinking. Students also build writing, vocabulary, discussion and study skills to accurately express information and reflect the meaning of class readings. Three units of English credit at this level (either English 51 or English 56) may be applied to the associate degree. (FT) Associate Degree Credit only and not Transferable.

English Courses

(Also see Humanities)

092A Persuasive Writing**3 hours lecture, 3 units
Credit/No Credit**

This course is intended for students enrolled at San Diego State University; for Freshmen, a score of 150 or lower on the CSU English Placement Test (EPT), and for transfer students, a score of 7 or lower on the Transfer Writing Assessment (TWA). It is designed to help students develop methods of reading and writing necessary for success in SDSU's Rhetoric and Writing Studies 100. In this course, students read persuasive texts and integrate the ideas of multiple authors and their own into argumentative essays. The course stresses paragraph and essay development and reviews sentence structure, mechanics, and grammar as needed. (FT) Associate Degree Credit only and not Transferable.

092B Persuasive Writing II**3 hours lecture, 3 units
Credit/No Credit**

Enrollment is intended for students admitted to San Diego State University who have taken SDSU's Rhetoric and Writing Studies 92A, 94, or 95 and received a grade of Satisfactory Progress (SP). Only students who have not received credit for English 92A or Satisfactory Progress (SP) for RWS 92A or 97A at San Diego State University may enroll in English 92B. This course is designed to help students develop methods of reading and writing necessary for success in SDSU's Rhetoric and Writing Studies 100. In this course, students read persuasive texts and integrate the ideas of multiple authors and their own into argumentative essays. The course stresses paragraphs and essay development and reviews sentence structure, mechanics, and grammar as needed. To earn a grade of "CR," SDSU students must submit a passing final portfolio graded by SDSU's Rhetoric and Writing Studies (RWS) Department. (FT) Associate Degree Credit only and not Transferable.

097 College Writing Skills

**3 hours lab, 1 unit
Credit/No Credit Only**

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

This course provides the application of college writing skills for all disciplines. Emphasis is on the writing of organized, clear, concise, coherent, and carefully reasoned essay exams, book reports, research papers, technical reports, expository and argumentative essays, and other college writing assignments. The course is individualized, with students working on specific learning outcomes tailored to their needs. (FT) Associate Degree Credit and not transferable.

101 Reading and Composition

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; or English 92A or English 92B or English 64 with a grade of "C" or better, or equivalent. This course is designed for transfer-level students or for those who want to develop competence in college level reading and composition. In this course, students read, analyze, discuss and think critically using a variety of works and sources. Based on these activities, students write essays, fully-documented research projects, and other types of texts for various purposes and audiences. This written work, which demonstrates effective, logical, and precise expression of ideas, totals at least 6000 graded words. Designated sections of this course may be taught from a specific cultural perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 2) (CAN ENGL SEQ A = ENGL 101 + 105).

105 Composition and Literature

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; or English 064 or English 92A or 92B with a grade of "C" or better, or equivalent. This is a composition course using literature as a background for improving writing skills. Students discuss the general nature and elements of literature and literary criticism by reading and analyzing representative works of fiction, drama, and poetry. Based on this subject matter, students are required to write a variety of critical papers, including a research paper, comprising at least 6,000 graded words. This course is designed for transfer students and is suitable for those students interested in literature and in

developing strong critical and analytical writing skills. Designated sections of this course may be taught from a specific cultural perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 4) (CAN ENGL SEQ A = ENGL 101 + 105).

202 Introduction to Linguistics

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is designed to introduce students to the field of Linguistics. In this course, students develop an understanding of the nature of language through the study of core areas in linguistics including phonetics, phonology, morphology, syntax, semantics and pragmatics. Students also read, write and think critically about related fields such as psycholinguistics, sociolinguistics, historical linguistics, and animal communication. This course is designed for students who plan to transfer as well as for those with a general interest in linguistics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Critical Thinking and Intermediate Composition

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is designed to help students who are planning to transfer to a four-year college or university to develop critical thinking, reading, writing, and research skills beyond the level of English 101 and English 105; it is a required course within many curricula. Assignments require a total of at least 8,000 words of graded writing. The course focuses on writing argumentative prose and critically evaluating arguments. A majority of the written assignments require some research and documentation, including library research. Designated sections of this course may be taught from a specific cultural perspective and are cross-listed under Black Studies and Chicano Studies in the catalog and class schedule. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

208 Introduction to Literature**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course provides an inquiry into the basic nature of literature and is designed for students with a general interest as well as for those majoring in the field.

Students read and analyze representative literary works in fiction, non-fiction, poetry and drama from various cultures and periods, applying practical critical techniques in essays, reports, and exams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

209 Literary Approaches to Film**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course focuses on literary values, such as plot, conflict, symbolism, theme and character as observed in feature films. It also focuses on cultural values with special reference as to how films define problems, establish a network of varied values, confront moral dilemmas, and explore human emotions. This course satisfies general education requirements in humanities and serves as an elective for English majors. It is designed for students who are interested in literature as well as those interested in the study of film. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210 American Literature I**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is a survey of American literature from its beginning to the late 19th Century including representative works from the Colonial Period (1588-1765), the New Republic (1765-1829). In this class students read and discuss the authors of these periods, addressing relevant social, political, cultural, and

religious issues. The students critically analyze in essays, exams, and research papers the authors, specific works, and other topics as assigned. Classroom activities include lectures and discussions of the principal authors and works. Selected representative readings are required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 14) (CAN ENGL SEQ C = ENGL 210 + 211).

211 American Literature II**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. A survey of American Literature from the late 19th Century to the present which includes representative works from the Age of Realism (1865-1914), the Modernist Period (1914-1945), and the Postmodern Era (1950-present). In this class students read and discuss the authors of these periods, addressing relevant social, political, cultural, and religious issues. The students critically analyze in essays, exams, and research papers the authors, specific works, and other topics as assigned. Classroom activities include lectures and discussions of principal authors and their works. Selected representative readings are required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 16) (CAN ENGL SEQ C = ENGL 210 + 211).

215 English Literature I: 800-1799**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course offers a survey of British literature from the Anglo-Saxon period to the pre-Romantic period (approximately 800 to 1799), including representative works from the Old and Middle English periods, the Renaissance and the Elizabethans, the Cavalier, Metaphysical, and Puritan periods, the Restoration and the Neoclassical periods. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in essays and research papers, authors, specific works, and other topics as assigned. This course satisfies requirements for the major in English as well as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC

Transfer Course List. (CAN ENGL 8) (CAN ENGL SEQ B = ENGL 215 + 216).

216 English Literature II: 1800-Present

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course offers a survey of British literature from the Romantic period to the 20th century (approximately 1800 to the present) including representative works from the pre-Romantic and Romantic periods, the Victorian and later Victorian period and the Modern period. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in essays and research papers, authors, specific works, and other topics as assigned. This course satisfies requirements for the major in English as well as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 10) (CAN ENGL SEQ B = ENGL 215 + 216).

220 Masterpieces of World Literature I: 1500 BCE - 1600 CE

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course offers a survey of world literature in translation, from the ancient world through the European renaissance (approximately 1500 BCE - 1600 CE), including the established classic literature of the Near East, Greece and Rome, India, China, Japan, Africa, the Islamic world, and Europe. Students read and discuss a variety of authors from these regions, and address relevant social, cultural, and religious issues. Students critically analyze, in essays and papers, specific authors, works, themes, and other topics as assigned. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

221 Masterpieces of World Literature II: 1600 - Present

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course offers a survey of world literature in translation, from the close of the European renaissance through the present time, including the literature of Asia, Europe, North America, Central America, South America, Africa and the Islamic world. Students read and discuss a variety of authors from these regions, and address relevant social, religious, and cultural issues. Students critically analyze, in essays and papers, specific authors, works, themes, and other topics as assigned. This course satisfies requirements for the major in English as well as general education and humanities requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

237 Women in Literature

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course introduces the student to images of women in literature and to women writers. Students read from a variety of genres including stories, poetry, novels, and essays, written by women and men from a range of social, cultural, and ethnic backgrounds. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

238 Evaluating Children's Literature

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is a survey of children's literature from folktales to current works. The course compares works from a variety of authors, cultures, and historical

periods while emphasizing current American works. Principles of literary criticism are applied in evaluating the themes, language, and structure of works studied. This class is suitable for students interested in literature as well as for students who are preparing to teach. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Shakespeare

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 51 and English 56 each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course introduces students to William Shakespeare's drama and poetry in a survey of his work, its historical and political context, and its influence on subsequent literature. Students study and analyze representative plays and poems from the perspectives of theme, character, structure, and language, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in essays and other writing assignments, specific works, criticism from his contemporaries to the modern day, interpretations of his works on both stage and screen, and other topics as assigned. This course is designed for students majoring in English and other related majors as well as those with a general interest in the author or the period. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

245 Writing Creative Nonfiction

**3 hours lecture, 3 units
Grade Only**

Prerequisite: English 101 or English 105 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 246A and/or 246B.

This is an intensive course in writing creative nonfiction. Exploration of the principles and methods of creative nonfiction are offered through lecture and the critical analysis of student and master works addressing personal, social, political, and/or cultural issues. Students submit original creative nonfiction for class discussion and learn to use the workshop format

to further their work. Increased writing skills help students not only in preparing for such writing-related careers as publishing, journalism, communications, and education, but also in better understanding literature and learning to use language successfully, which is necessary in many professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

247 Writing Seminar - Poetry

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 101 or English 105 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This introductory course provides instruction in the study and creation of poetry. Students read and critique traditional, contemporary and multicultural poems that provide models for their original work. In addition, students create poetry which is discussed and analyzed by the class. Students learn to identify the basic elements and techniques of poetry, use invention strategies, understand different forms, analyze poems, examine published and unpublished poems as models for writing poetry, use constructive criticism, identify current poetic values, and explore potential markets for publishing poems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

249 Introduction to Creative Writing

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 or W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 249A and 249B.

This is an introductory course in creative writing which focuses on the study of fiction and poetry. Students analyze technique in the works of professional writers and in their own original works. After submitting writing, students participate in informal discussion of their work, which includes helpful criticism from the class and the instructor. Increased writing skills help students prepare for careers in communication, education, writing, advertising, selling, journalism, law, business, and government. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ENGL 6).

253 Fundamentals of Fiction Writing

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 or W6.

Limitation on Enrollment: This course is not open to students with previous credit for English 252A. This is an intensive course in fiction-writing techniques. Students read and evaluate fiction using elements of fiction writing as well as contemporary issues. Students write original fiction and submit for class discussion and learn to use criticism offered by the instructor and peers. Critical thinking abilities are applied as students analyze student and master works addressing personal, social, political, and/or cultural issues. Increased writing skills help students who may be interested in a writing-related career, such as publishing, journalism, communications, and education, but also in better understanding literature, and learning to use language successfully.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Humanities (HUMA)

Faculty	Office	Telephone
Laurel Corona	C-206	(619)388-3597
Jan Lombardi	C-201	(619)388-3587
Elizabeth Meehan	C-224	(619)388-3509

101 Introduction to the Humanities

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This interdisciplinary course develops students' understanding and appreciation of humankind's cultural heritage from the earliest time to approximately 1400. A survey is made of the literature, philosophy, music, painting, architecture, and sculpture of both Western and non-Western civilizations. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List

102 Introduction to the Humanities II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6. This interdisciplinary course is designed for students interested in meeting general education requirements in humanities. The course develops students' understanding and appreciation of humankind's cultural heritage from approximately 1400CE to the present time. A survey is made of the literature, philosophy, music, painting, architecture, and sculpture of both Western and non-Western civilization. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

103 Introduction to the New Testament

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course provides an introduction to the history and culture of the New Testament period (First Century C.E.), methods of critical analysis of Biblical materials, and the content of the New Testament. It also examines the impact of the New Testament on western culture. This course may be of interest to students of history, literature, anthropology or those with a general interest in biblical studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 World Religions

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill levels W5 and R5.

This course is an introduction to the basic elements of the religions of the world, their similarities and differences, and their impact on believers and society. The course includes a study of the historical development, basic doctrines, and important sects of the major religions of the world, as well as a study of scriptural and artistic creations from these traditions. Some analysis of tribal religious beliefs and practices is included. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

201 Mythology**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces students to the major images and themes of the myths of widely separated peoples of the world throughout history. By analyzing various archetypal patterns found in the great civilizations and tribal cultures of the world, students understand both the uniqueness of each culture's world view and the commonality of human mythological conceptions. Literature and the arts are used to demonstrate these cultures' mythic ideas. This course meets GE and CSU requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

202 Mythology: Hero's Journey**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Analysis of the hero's journey, internal and external, as reflected in myths of the world, with consideration of such phenomena as the "shadow," the "double," the "other." Also, exposure to art in which the hero's

journey is thematic. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Foreign Languages

See "Languages" on page 294.

French

See "Languages" on page 294.

Geography

See "Physical and Earth Sciences" on page 336.

Geology

See "Physical and Earth Sciences" on page 336.

German

See "Languages" on page 294.

Health Education

Health Sciences

There is currently no program in Health Sciences. The following courses are offered and may be used as associate degree electives.

Courses

Health Sciences (HEAN)

093 Residential Services Specialist I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Health Sciences 265, *Residential Services Specialist I*.

This course is a study of the theories and skills needed by persons involved in residential care for the developmentally disabled. Course content emphasizes the history and trends in service provision in the United States. This includes current principles of

normalization and assessment procedures as well as an overview of common developmental disabilities. The interdisciplinary team process and basic counseling techniques are included. Associate Degree Credit only and not Transferable.

094 Residential Services Specialist II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: This course is not open to students with credit for Health Sciences 265, *Residential Services Specialist II*.

This course is a study of the theories, knowledge and practical skills needed by persons involved in residential care for the developmentally disabled. Course content emphasizes hands-on behavior management techniques, health and developmental needs, program planning and implementation, and approaches to developing social adaptation and other life skills. Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

History

Associate in Arts Degree:

History

Units

18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

History is the study of human experience from the dawn of time to the present. It examines people, institutions, ideas and events of the past and the present. The primary objectives of the History program are: to meet general education requirements for American Institutions, Humanities and Social Sciences; completion of the Associate in Arts degree; and preparation for transfer to a four-year institution and completion of general education requirements for the student enrolled in a four-year institution.

Program Emphasis

The study of history develops cultural literacy, critical thinking, and other useful skills. San Diego City College offers the two-semester World History survey sequence along with the two-semester American History survey sequence. Completion of these two sequences provides the student with the necessary lower division preparation for a baccalaureate degree in History at San Diego State University.

Faculty

Susan Hasegawa
shasegaw@sdccd.edu

Office

A-1(P)

Telephone

(619) 388-3370

Career Options

Most careers in history require education beyond the associate degree and some require a graduate degree. This is not a comprehensive list but some of the most common career options with history preparation include: archivist, business person, diplomatic corps, historian, journalist, lawyer, librarian, museum curator, park historian, professor, teacher and writer.

Academic Programs

The associate degree in History requires completion of three of the four course sequences in History listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: History

Courses Required for the Major:

Units

Select three of the seven six-unit course sequences or 18 units

HIST 100 & 101, World History, I and II	3,3
HIST 105 & 106, Introduction to Western Civilization, I and II.....	3,3
HIST 109 & 110, History of the United States, I and II	3,3
HIST 115A & 115B, History of the Americas, I and II.....	3,3
HIST 120, Introduction to Asian Civilization & HIST 121, Asian Civilization in Modern Times.....	3,3
HIST 109, History of the United States I & HIST 123, U.S. History from the Asian Pacific American Perspective.....	3, 3
HIST 141 & 142, Women in United States History, I and II	3, 3

Total Units = 18

Recommended electives: History 290, 296.

Transfer Information

Common university majors related to the field of History include:

Art History, History, International Studies, Liberal Studies, Social and Behavioral Studies, World Cultures and History.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

History (HIST)

100 World History I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the growth of civilizations and the inter relationships of peoples of Europe, Asia, Africa and America from the birth of civilization to 1650. Topics in social, intellectual, economic, and political history are covered. This course is of interest to history majors as well as anyone seeking a global historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN HIST 14) (*CAN HIST SEQ C = HIST 100 + 101*).

101 World History II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the comparative history of the world's civilizations in Africa, the Americas, Asia, and Europe from the dawn of the modern era (1600) to the present. Topics in social, intellectual, economic, and political history are covered. This course is of interest to history majors as well as anyone seeking a global historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN HIST 16) (*CAN HIST SEQ C = HIST 100 + 101*).

105 Introduction to Western Civilization I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an historical survey of Western Civilization from the early human communities through early modernism. The course is designed to further students' general education by introducing the ideas, attitudes, and institutions basic to Western Civilization. It may be of interest to history majors as well as any student seeking a broad historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN HIST 2) (*CAN HIST SEQ A = HIST 105 + 106*).

106 Introduction to Western Civilization II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an historical survey of Western Civilization from early modernism to the present. The course is designed to further students' general education by introducing the ideas, attitudes, and institutions basic to Western Civilization. It may be of interest to history majors as well as any student seeking a broad historical perspective. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN HIST 4) (*CAN HIST SEQ A = HIST 105 + 106*).

109 History of the United States I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Black Studies 112A, 140A or History 110A.

This course, which covers the history of the United States from its colonial origins through the period of Reconstruction, provides an overview of the diverse peoples who interacted, settled, and influenced the history of the nation and its developing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. The course is required for history majors and is recommended for transfer students. History 109 taken in conjunction with History 110, 115B, 123, 142, 151; Black Studies

140B; Chicano Studies 141B; or Political Science 102 satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110, Black Studies (BLAS) 140A, 140B and Chicano Studies (CHIC) 141A, 141B combined: maximum credit, one series. (CAN HIST 8) (CAN HIST SEQ B = HIST 109 + 110).

110 History of the United States II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Black Studies 112B, 140B, or History 110B.

This course, which covers the history of the United States from Reconstruction to the present, provides an overview of the diverse peoples who influenced the history of the nation and its maturing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. The course is required for history majors and is recommended for transfer students. History 110 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. History 110 also satisfies the District and CSU requirements in California state and local government for those students who have completed equivalent United States history, Constitution, and American Ideals courses outside the State of California. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110, Black Studies (BLAS) 140A, 140B and Chicano Studies (CHIC) 141A, 141B combined: maximum credit, one series. (CAN HIST 10) (CAN HIST SEQ B = HIST 109 + 110).

115A History of the Americas I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course provides a framework for interpreting the history of the Americas, from 1500 through 1800. This survey examines how diverse peoples migrated or were transported to perform labor among indigenous peoples of varying levels of social organization and

technological sophistication. The course includes treatment of how these peoples interacted and reciprocally influenced each others' cultural forms, political institutions, social relations, and economics. Emphasizing the comparative history of these societies, the course traces the eventual emergence of independence movements setting the stage for establishment of autonomous nation states. The course also traces the simultaneous development and evolution of capitalism in the Western Hemisphere during the period. This course requires students to analyze a variety of source materials, think critically, and write thesis-based essays. This general education course is designed for both history majors and the general transfer student. History 115A taken in conjunction with History 115B, 110, 123, 142, 151; Black Studies 140B; Chicano Studies 141B; or Political Science 102 satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115B History of the Americas II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with grade of "C" or better or equivalent, or Assessment Skill Levels W5 and R5.

This course provides a framework for interpreting the history of the Americas, from the 19th century into the 21st century. This survey examines the independence movements and the development of autonomous nation states throughout the Americas. Emphasizing the comparative history of these societies, the course traces Roman Catholic Church-state relations, the constitutional history of Latin American nations in relation to California, the United States, and Canada, including 20th century constitutional reforms. The course also outlines economic shifts, involving the expansion of agricultural commodity production, global commerce, and industrialization. Finally, the course highlights international relations among nations in the Western Hemisphere, the Cold War, and the impact of modernization theory. This general education course is designed for both history majors and the general transfer student. History 115B taken in conjunction with History 115A, 109, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 Introduction to Asian Civilizations**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the social, cultural, and political evolution of distinct civilizations in East, South, and Southeast Asia from prehistory to the end of the sixteenth century. Emphasis is placed on topics such as the development of indigenous religions/philosophies, the rise and decline of regional kingdoms/dynasties, cultural achievements, and gender roles. This course is intended for transfer students planning to major in history, business, or other social science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121 Asian Civilizations in Modern Times**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the evolution of the distinct cultures, thought, and institutions in East, South, and Southeast Asia from the sixteenth century to the present through critical investigations into the impact of modernization on the political, social, economic, and cultural dimensions of these societies. Emphasis is placed on topics such as the first encounters with Western powers, the evolution of Western imperialism, the rise of nationalist movements and independent nation states, and their evolution and progress to the present. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

123 U.S. History from the Asian Pacific American Perspective**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Black Studies 112 or 140 or History 110 and 110B.

This course is a review of Asian Pacific Americans in the social, political, economic and cultural development of the United States from Reconstruction to the present. The emphasis is on the Chinese, Japanese, Korean, Filipino, Vietnamese, Cambodian, Lao, Hmong, and

Hawaiian experiences. This course presents American history as it relates to the experience of Asian immigrants and Asian Pacific Americans. History 123 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

141 Women in United States History I**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course, which covers the history of the United States from its colonial origins through the period of Reconstruction, provides a special emphasis on the history and role of women, who in their diverse contributions influenced the history of the nation and its developing economic, social, and political institutions. The course requires students to analyze a variety of materials, think critically, and write thesis-based essays. This course may be of interest to students interested in Women's Studies. History 141 taken in conjunction with History 142, 110, 115B, 123, 151; Black Studies 140B; Chicano Studies 141B; or Political Science 102 satisfies the District and CSU American Institutions/California Governments requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

142 Women in United States History II**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course, which covers the history of the United States from Reconstruction to the present, provides an overview of the diverse peoples who influenced the history of the nation and its maturing economic, social and political institutions, with a special emphasis on the history and role of women. This course requires students to analyze a variety of materials, think critically, and write thesis-based essays. This course may be of interest to students interested in Women's Studies. History 142 taken in conjunction with History 141, 109, 115A, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and CSU American Institutions/California Government requirements. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Humanities

See "English" on page 274.

Journalism

See "Communications" on page 176.

Labor Studies

	Units
Certificate of Completion:	
History and Politics of American Labor	6
Labor Law	5
Shop Steward Specialist	8
Certificate of Achievement:	
Labor Studies	18
Associate in Science Degree:	
Labor Studies	24*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The Labor Studies program provides students a sound foundation in the law, history, culture, politics, institutions, and contemporary issues of American work life. Students will gain a comprehensive introduction to the role and contributions of organized labor to American society, a thorough grounding in the rights of employees on the job, and specialized training in the skills necessary to be an effective leader in labor unions or in other contexts for labor-management relations.

Program Emphasis

The Labor Studies program offers a Certificate of Achievement in Labor Studies which provides shop stewards as well as union organizers and officers the skills needed to qualify for and to be effective in their positions. Students can also pursue the Associate of Science degree in Labor Studies.

Faculty	Office	Telephone
Kelly Mayhew		(619) 388-3136

Career Options

The program is designed to train union representatives, members of unions, labor leaders, industry coordinators

and others interested in pursuing a career in labor relations.

Certificate of Completion: History and Politics of American Labor

Courses Required for the Major:	Units
LABR 100, American Labor Movement.....	3
LABR 108, Labor and Politics	3
Total Units = 6	

Certificate of Completion: Labor Law

Courses Required for the Major:	Units
LABR 102, Labor Law	3
LABR 124, California Labor Law	1
LABR 127, Labor Law for the Public Sector.....	1
Total Units = 5	

Certificate of Completion: Shop Steward Specialist

This certificate demonstrates the successful completion of shop steward training, grievance handling, and American Labor Movement course work.

Courses Required for the Major:	Units
LABR 100, American Labor Movement.....	3
LABR 106A, Grievance Handling	3
LABR 122A, Shop Steward, Level I	1
LABR 122B, Shop Steward, Level II	1
Total Units = 8	

Certificate of Achievement: Labor Studies

Courses Required for the Major:	Units
LABR 100, American Labor Movement.....	3
LABR 102, Labor Law	3
LABR 104, Collective Bargaining.....	3
LABR 106A, Grievance Handling	3
Select six units from:	
LABR 106B, 108, 110, 112, 122A, 122B, 123A, 124, 127	6
Total Units = 18	

Associate in Science Degree: Labor Studies

Courses Required for the Major:	Units
LABR 100, American Labor Movement.....	3
LABR 102, Labor Law	3
LABR 104, Collective Bargaining.....	3
LABR 106A, Grievance Handling	3

LABR 108, Labor and Politics	3
LABR 110, Administrative Practices.....	3

Select six units from:

LABR 106B, 112, 122A, 122B, 123A, 124, 127.....	6
Total Units = 24	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of Labor Studies include: Labor Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Labor Studies (LABR)

100 American Labor Movement

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 101.

This class provides an historical overview of the struggles and philosophy of American workers and their unions. Over the course of the semester the students examine the historical roots of unions, define and discuss different varieties of unionism, and analyze how unions function in both the private and public sectors. This survey of American labor history begins with early American class and race conflicts and the fight against slavery, and ends with an analysis of globalization and labor in the 21st century. This course helps students

investigate and seek to understand how class in the United States has intersected with race and gender in the American workplace and American politics. It explores how the American labor movement has suffered from disunity and helped expand the meaning of equality in American society when workers of different backgrounds have stood together to fight for basic rights. This course is intended for anyone interested in the American labor movement, including students who are employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

102 Labor Law

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Labor Studies 105. Labor Law provides an overview of the legal framework and doctrines governing labor-management relations and the workplace rights of minorities and other individual employees. While "Labor Law" generally refers to the National Labor Relations Act or equivalent public sector laws, this class also covers laws that are sometimes referred to as "employment" laws. They include the various discrimination, retaliation, wage, and safety laws that may be enforced by individuals or unions. These laws offer additional ways to facilitate organizing and contract campaigns, as well as grievance handling. Designed to provide practical legal background for the study and practice of labor relations, this course focuses on real problems brought to the class by the students, and it aims to stimulate ways of using the law to build your local unions, as well as to support broader efforts such as organizing temporary workers, coalition work with human rights and environmental groups, and political lobbying campaigns. This course is intended for anyone interested in Labor Law including students who are employees and/or union members, and individuals who are in leadership roles or are preparing for leadership positions in the workplace or in unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Collective Bargaining

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course covers major collective bargaining issues including the right to organize, employer/employee rights and the union, the structure of bargaining, bargaining strategies, the organizing component for setting the "climate" for bargaining, negotiating written agreements, public sector bargaining, impasse and arbitration procedures and mock negotiations. This course is intended for workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106A Grievance Handling

3 hours lecture, 3 units

Grade Only

Advisory: Labor Studies 104 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 106.

A practical, problem-solving approach to grievance handling. Investigating, preparing and presenting cases using role-plays. Includes public and private sector procedures in handling grievances. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106B Arbitration Procedure

3 hours lecture, 3 units

Grade Only

Advisory: Labor Studies 106A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Labor Studies 106.

A continuation of the grievance process with emphasis on the arbitration process. A practical, problem-solving approach in preparing and presenting cases. Includes mock arbitration and the preparing of pre and post briefs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Labor and Politics

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Labor Studies 135.

This course provides a "how-to" approach to labor's involvement in political campaigns and elections. It covers the requirements under Political Action Committees (PACs), and the impact of U.S. Labor policies on foreign national employment and politics. It covers the establishment of legislative priorities and discusses the development of alternative political strategies for labor. This course is intended for anyone interested in the political strategy and tactics of the labor movement, including students who are employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Administrative Practices

**3 hours lecture, 3 units
Grade Only**

Advisory: Labor Studies 108 with a grade of "C" or better, or equivalent.

Designed to present the concepts of business organization and management for a labor organization including finance, operation, compliance with federal government requirements, (e.g., LM-2 and LM-3) internal organization and the personnel practices of the labor organization as an employer and its role with their unionized employees. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

112 California Workers Compensation

**3 hours lecture, 3 units
Grade Only**

Advisory: Labor Studies 110 with a grade of "C" or better, or equivalent.

An introduction to the basic California Workers' Compensation law: the rights of the employee, including the right to obtain medical treatment and be compensated for any disability as a result of the injury, and the role of an attorney in a Workers' Compensation case. (Does not include Longshoreman or Federal Workers Compensation Laws.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122A Shop Steward, Level I

**1 hour lecture, 1 unit
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This hands-on course covers the rights and responsibilities of shop stewards. It emphasizes

development of communication and informal problem-solving skills, investigation and preparation of grievances, and interpreting and explaining the contract for members. The class addresses the current or past concerns and issues that students deal with in their workplace. This course is designed for shop stewards, union members, and employees who want to learn basic workplace rights and problem-solving skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122B Shop Steward, Level II

**1 hour lecture, 1 unit
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

The course covers skills and knowledge needed for more advanced shop steward responsibilities, such as recruiting new members, providing new member orientations, and educating members on political and workplace issues. It focuses on organizing members to address workplace issues as a group, helping with contract negotiations, and developing the communication and interpersonal skills to deal with difficult individuals. This course is designed for shop stewards, union members, and employees who want to have a leadership role in their union or place of employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

123A Occupational Safety and Health

**1.5 hours lecture, 1.5 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This hands-on course studies the relationship between work and health through a variety of perspectives, beginning with the history of workplace injury, illness and death in the United States. Students learn the Occupational Safety and Health legislation and its implementation at the federal and state level as well as employer and employee rights and responsibilities; the elements of a successful injury and illness prevention program in the workplace; and how to identify and evaluate hazards and control measures. Students apply the topics covered in the course to problem-solving based on workplace experience and case studies. This course is intended for students who are employees and/or union members interested in improving workplace health and safety. (This class may be offered in English or Spanish.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 California Labor Law**1 hour lecture, 1 unit****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course provides a basic knowledge of the California Labor Code and Wage Orders and the Industrial Welfare Commission. Examples of the uses of Labor Code and Employment Laws are studied. Students learn to apply their knowledge of the laws--how they are violated and how they are enforced--to case studies as well as to their current or past workplace experiences. This course is designed for students who are employees and/or union members, as well as workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 Labor Law for the Public Sector**1 hour lecture, 1 unit****Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course covers legal issues affecting public employee relations on the federal, state, and local levels, including development of public sector unionism, recent collective bargaining legislation, and dispute resolution in the public sector. This course is designed for students who are public sector employees and/or union members, and workers who are in leadership roles or are preparing for leadership positions in their workplace or unions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Languages

Arabic, American Sign Language, French, German, Italian, Spanish

Units**Associate in Arts Degree:**

French	26*
German	21*
Italian	21*
Spanish	26*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The study of languages provides communication skills, provides exposure to the richness of cultural variety, increases transfer options to universities with language requirements, opens new career opportunities, enriches global travel, and provides personal enrichment. The program is designed to prepare students for transfer to a baccalaureate institution and for proficiency in a language in a variety of settings.

Program Emphasis

The Language program provides transfer level courses in Arabic, French, German, Italian, Spanish and Russian. Students develop skills of understanding, speaking, reading and writing, culture and increase familiarity with basic features of the English language. They also have opportunities to become acquainted with the literature, culture, history and current events of other countries through films, videotapes, field trips and campus and community international events.

Faculty	Office	Telephone
Juan Bernal	A1-L	(619) 388-3369
Jaime Estrada-Olalde	A1-K	(619) 388-3785
Philippe Patto	A1-K	(619) 388-3591
Maria Clara Romero-Huerta	A1-M	(619) 388-3397
Rosalinda Sandoval	A1-B	(619) 388-3295

Career Options

Knowledge of another language is required or highly desirable for consular and junior foreign service, import, export, and international business and travel, health and missionary fields, overseas teaching, translating and interpreting, and travel and tourism industries. Learning another language is an asset in broadening communication skills and in the travel and tourism industry.

Academic Programs

The associate degree in French, German, Italian, or Spanish requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Languages French

Courses Required for the Major:	Units
FREN 101, First Course in French	5
FREN 102, Second Course in French.....	5
FREN 201, Third Course in French.....	5
FREN 202, Fourth Course in French.....	5
FREN 210, The Grammar of Spoken French I.....	3
FREN 211, The Grammar of Spoken French II	3
Total Units = 26	

Associate in Arts Degree: Languages German

Courses Required for the Major:	Units
GERM 101, First Course in German.....	5
GERM 102, Second Course in German.....	5
GERM 201, Third Course in German.....	5
GERM 210, The Grammar of Spoken German I.....	3
GERM 211, The Grammar of Spoken German II.....	3
Total Units = 21	

Associate in Arts Degree: Languages Italian

Courses Required for the Major:	Units
ITAL 101, First Course in Italian	5
ITAL 102, Second Course in Italian	5
ITAL 201, Third Course in Italian	5
ITAL 210, The Grammar of Spoken Italian I	3
ITAL 211, The Grammar of Spoken Italian II	3
Total Units = 21	

Associate in Arts Degree: Languages Spanish

Courses Required for the Major:	Units
SPAN 101, First Course in Spanish	5
SPAN 102, Second Course in Spanish.....	5
SPAN 201, Third Course in Spanish.....	5
SPAN 202, Fourth Course in Spanish.....	5
SPAN 210, Conversation & Composition Spanish I	3
SPAN 211, Conversation & Composition Spanish II ...	3
Total Units = 26	

Recommended electives: American Sign Language 115, 116, 215, 216; Arabic 101, 102, 296; French 280, 290, 296; German 290, 296; Italian 296; Spanish 290, 296.

Courses Offered in Support of Other Majors:
Spanish 85.

Transfer Information

Common university majors related to the field of Languages include:

Arabic, French, German, Italian, Language Studies, Literature, Modern Languages, Spanish, Translation and Interpretation.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

American Sign Language/ Interpreting (AMSL)

115 American Sign Language Level I 4 hours lecture, 4 units Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 100.

This is an entry-level course designed to introduce students to American Sign Language and fingerspelling as it is used within Deaf Culture. Students are taught to use American Sign Language by signing, fingerspelling, using facial grammar at the novice level. Emphasis is on the development of ASL and receptive skills. The course is designed for students who want ASL to explore the basic language structure of ASL and Deaf Culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

116 American Sign Language Level II 4 hours lecture, 4 units Grade Only

Prerequisite: American Sign Language/Interpreting 115; or American Sign Language/Interpreting 100 and American Sign Language/Interpreting 107 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 101.

This course is a continuation of the study of American Sign Language (ASL) at the beginning intermediate level. Emphasis is on the development of ASL vocabulary and receptive skills. Instruction includes a natural approach to teaching a second language by exposing students to authentic conversations in the classroom. This course builds students' receptive and expressive skills in ASL and fingerspelling as well as their knowledge of Deaf culture. It is designed for the student or professional interested in working and interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 American Sign Language Level III 4 hours lecture, 4 units Grade Only

Prerequisite: American Sign Language/Interpreting 116; or American Sign Language/Interpreting 101 and American Sign Language/Interpreting 107 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 200.

This is the third course in the study of American Sign Language (ASL) with an emphasis on ASL syntax, facial grammar, vocabulary, and fingerspelling enabling students to participate in more complex conversations with Deaf community members. Instruction includes a natural approach to teaching a second language by engaging students in authentic conversations within the classroom environment. This course enhances students' receptive and expressive skills at an advanced intermediate level in ASL. It also further develops their knowledge and understanding of the Deaf community and its art and history. It is designed for the student or professional interested in working and/or interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

216 American Sign Language Level IV 4 hours lecture, 4 units Grade Only

Prerequisite: American Sign Language/Interpreting 215; or American Sign Language/Interpreting 200 and American Sign Language/Interpreting 107 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for American Sign Language/Interpreting 201.

This course is the fourth course in the study of American Sign Language (ASL) with an emphasis on advanced fingerspelling, ASL structure and vocabulary. Instruction includes a natural approach to teaching a second language by exposing students to authentic conversations in the classroom. This course continues to build students' receptive and expressive skills in American Sign Language as well as their knowledge of Deaf culture including an introduction to the influences of other sign language systems. It is designed for the student or professional interested in working or interacting with Deaf people. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Arabic (ARAB)

101 First Course in Arabic

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course is an introduction to the sound and writing system of the Arabic language. The course also provides students with the basic structural and lexical knowledge to enable them to communicate orally and in writing in Arabic at a beginning level. Emphasis is placed on developing the students' ability to perform language functions in real-life situations through structured activities and grammatical exercises and on providing students with an overview of Arabic culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102 Second Course in Arabic

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Arabic 101 with a grade of "C" or better, or equivalent.

This interactive course builds upon the structural and lexical base provided in Arabic 101 to move students from a beginning to a beginning-intermediate communication level through the introduction of a variety of noun and verb forms including the present and past tenses. Emphasis is placed on developing the student's ability to perform language functions in real-life situations through structured activities and grammatical exercises and on providing students with an overview of Arabic history, customs and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

105 Elementary Spoken Egyptian Arabic

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course focuses on Spoken Egyptian Arabic, the spoken language of Cairo. It is the most understood Arabic dialect of the Arab World. Emphasis is placed on oral comprehension, fluency and writing skills through verbal and written communication based on everyday situations, current events and culture. An introduction to basic grammar and syntax of Egyptian colloquial Arabic is included. This course is intended for transfer students with an Arabic major or those who want to

learn Spoken Egyptian Arabic. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

French (FREN)

101 First Course in French

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with credit for French 100.

This is an entry-level course designed to introduce students to the French language and cultures of the French-speaking world. In this interactive course, students use the language by speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in French. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN FREN 2) (CAN FREN SEQ A = FREN 101 + 102).

102 Second Course in French

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: French 101 or two years of high school French, with a grade of "C" or better, or equivalent.

This course is a continuation of French 101 and is intended for students interested in further study of the French language and cultures of the French-speaking world. In this interactive course, students use listening, reading, speaking and writing at a more complex level than in the first course. The students further develop their receptive and productive competencies to the low or mid-intermediate level. Additional language structures and vocabulary for communication are examined and explored in French. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN FREN 4) (CAN FREN SEQ A = FREN 101 + 102).

201 Third Course In French

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: French 102 or three years of high school French with a grade of "C" or better, or equivalent.

This is an intermediate course in French. Language structures and vocabulary for communication are examined and explored through speaking, listening, reading and writing at the intermediate level. Students explore in more depth than in previous courses the

history and the culture of the French-speaking world. This course is appropriate for students preparing for a major in French as well as for those who wish to continue their studies of the French language and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN FREN 8) (CAN FREN SEQ B = FREN 201 + 202).

202 Fourth Course in French

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: French 201, or four years of high school French, with a grade of "C" or better, or equivalent. This is an advanced-intermediate course and is the fourth course in the French language sequence. In this interactive course, language structures and vocabulary for communication are examined and studied through speaking, listening, reading and writing at the high-intermediate level. Students continue to explore the history and the culture of the French-speaking world. Readings of literary and culturally relevant authentic materials are examined in depth. This course is designed for students preparing for a major in French as well as for those who have a strong interest in the French language and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN FREN 10) (CAN FREN SEQ B = FREN 201 + 202).

210 The Grammar of Spoken French I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: French 102 with a grade of "C" or better, or equivalent, or successful completion of three years of high school French.

Advisory: Concurrent enrollment in French 201. This course further develops oral comprehension and fluency as well as written communication at a mid-intermediate level in French through culturally relevant materials. Students develop spoken and written vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast the cultures of the French speaking world with U.S. culture both orally and in writing. Writing strategies are emphasized and literature is introduced. This course is intended for students who want to enhance their skills in the French language. Students who intend to major or minor in French are advised to take French 210 concurrently with French 201, if possible. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 The Grammar of Spoken French II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: French 210 with a grade of "C" or better, or equivalent.

This course develops oral comprehension and fluency as well as written proficiency in French at an advanced-intermediate level through reading, analyzing, discussing, and reporting on culturally relevant materials. Students develop oral and reading vocabulary skills, study the cultures of the French-speaking world, and further develop the reading strategies introduced in French 210 through reading literature. This course is intended for students who want to further enhance their skills in the French language. Students who plan to major or minor in French are advised to take French 211 concurrently with French 202. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

280 French Reading Seminar

1.5 hours lecture, 1.5 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Guided reading in French literature adapted to individual interests and needs: novels, short stories, poetry, newspapers and magazines. Discussed in French by students during class. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

German (GERM)

101 First Course in German

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with previous credit for German 100. This is an introductory course designed to teach students to understand, speak, read and write German, and become familiar with recent German culture and history. Emphasis is placed on learning the fundamentals of grammar, speaking in simple sentences

using correct pronunciation, responding to questions regarding everyday life, and reading short selections about everyday activities. Fundamentals of oral and written grammar and a correct reading of simple German are practiced. This course is appropriate for students who are preparing to major in German as well as those who are interested in developing proficiency in the language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GERM 2) (CAN GERM SEQ A = GERM 101 + 102).

102 Second Course in German

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: German 101 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for German 100. This course is a continuation of German 101 and is designed to teach students to speak, read and write German at a low-intermediate level and enhance students' familiarity with recent German culture and history. Emphasis is placed on improving students' knowledge of fundamental grammar, reading more complex texts and speaking with moderate proficiency. This course is appropriate for students who plan to major in German as well as for those who are interested in developing proficiency with the language. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GERM 4) (CAN GERM SEQ A = GERM 101 + 102).

201 Third Course in German

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: German 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for German 200. This course is a continuation of the basic fundamentals of German pronunciation, grammar, composition and reading covered in German 102. Emphasis is placed on further developing listening, speaking, reading and writing skills through course content based on everyday life as well as German history and culture at the advanced-beginning level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GERM 8).

210 German Conversation and Composition I

3 hours lecture, 3 units

Grade Only

Prerequisite: German 201 with a grade of "C" or better, or equivalent.

This course develops oral comprehension, fluency and writing skills at an intermediate level in German through verbal and written communication based on everyday situations, current events and culture. Emphasis is placed on increased vocabulary through class discussions, prepared talks and short compositions in German. This course is intended for students who want to further enhance their skills in German. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 German Conversation and Composition II

3 hours lecture, 3 units

Grade Only

Prerequisite: German 210 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension, fluency and writing skills at an advanced-intermediate level in German through verbal and written communication based on culturally relevant material. Emphasis is placed on increased vocabulary through written and oral dramatizations, descriptions and interpretations of everyday life situations and of German, Swiss-German and Austrian culture. This course is intended for students who want to further enhance their skills in German. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Italian (ITAL)

101 First Course in Italian

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with credit for Italian 100.

This is the first course in the sequence of study of the Italian language and culture. In this interactive course, students use Italian in speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in Italian. Students with two years of high school Italian are eligible to enroll in Italian 101. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC

Transfer Course List. (CAN ITAL 2) (CAN ITAL SEQ A = ITAL 101 + 102).

102 Second Course in Italian

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Italian 101 with a grade of "C" or better, or equivalent. Students with two years of high school Italian are eligible to enroll in this course.

Advisory: concurrent enrollment in Italian 296

Limitation on Enrollment: This course is not open to students with credit for Italian 100.

This is a continuation of Italian 101. In this interactive course, students use listening, reading, speaking and writing at a more complex level. The students further develop their receptive and productive language competencies at the low- to mid- intermediate level. Additional language structures and vocabulary for communication are examined and explored in Italian. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ITAL 4) (CAN ITAL SEQ A = ITAL 101 + 102).

201 Third Course in Italian

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Italian 102 with a grade of "C" or better, or equivalent, or three years of high school Italian with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in Italian 296.

This is an intermediate course in Italian. In this interactive course, students use the language through speaking, listening, reading and writing at the intermediate level. More complex language structures and vocabulary for communication are examined and explored. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ITAL 8).

210 The Grammar of Spoken Italian I

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Italian 210 is designed to give students abundant practice in developing oral and written fluency in the language. Topics providing basis for discussion and prepared talks will include everyday life situations, current event, and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 The Grammar of Spoken Italian II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Italian 211 is a continuation of Italian 210 at a more advanced level. Topics providing basis for discussion and prepared talks will include everyday life situations, current events, and culture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For intermediate students who wish to work on special projects. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Russian (RUSS)

101 First Course in Russian

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This is an entry level course designed to introduce students to the Russian language and cultures of the Russian-speaking world. In this interactive course, students learn and use the language by speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in Russian. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

Spanish (SPAN)

085 Occupational Spanish

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

An intensive vocationally oriented course designed to give rudimentary skills in hearing, speaking, reading and writing basic Spanish. Practice in the vocabulary, nomenclature and functional grammar typical of actual

job situations. (FT) Credit does not apply to the associate degree.

086A Spanish for Law Enforcement Officers

1 hour lecture, 1 unit

Letter Grade or Credit/No Credit Option

Advisory: Spanish 201 with a grade of "C" or better, or equivalent. Students are recommended to have some previous knowledge of the Spanish language before enrolling in Spanish 086A.

This course is open to any student that may or may not be pursuing a career in law enforcement. It is a practical study of Spanish for students employed in the field of law enforcement, especially those enrolled in the San Diego Police Department Language Certificate Program. Emphasis is placed on developing Spanish language skills and cultural understanding through activities and role play related to application in the field of law enforcement. In addition to students enrolled in the San Diego Police Department Language Certificate Program, this course is open to those working in other areas of law enforcement, such as the County Sheriff's Department and the Border Patrol. (FT) Associate Degree Credit only and not Transferable.

101 First Course in Spanish

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4.

Limitation on Enrollment: This course is not open to students with credit for or concurrent enrollment in Spanish 100.

This is an entry-level course designed to introduce students to the Spanish language and cultures of the Spanish-speaking world. In this interactive course, students learn and use the language by speaking, listening, reading, and writing at the novice level. Basic language structures and vocabulary for communication are examined and explored in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN SPAN 2) (CAN SPAN SEQ A = SPAN 101 + 102).

102 Second Course in Spanish

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 101 with a grade of "C" or better, or equivalent, or two years of high school Spanish with a grade of "C" or better, or equivalent.

Advisory: English 43 with a grade of "C" or better, or equivalent, or Assessment Skill Level W4; and concurrent enrollment in Spanish 296.

Limitation on Enrollment: This course is not open to students with credit for or concurrent enrollment in Spanish 100.

This is a continuation of Spanish 101. In this interactive course, students use listening, reading, speaking and writing at a more complex level. Students further develop their receptive and productive competencies to the intermediate low or mid level. Additional language structures and vocabulary for communication are examined and explored in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN SPAN 4) (CAN SPAN SEQ A = SPAN 101 + 102).

201 Third Course in Spanish

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent, or three years of high school Spanish. This course is an interactive study of Spanish at the intermediate level with increased emphasis on reading and writing while listening and speaking skills continue to develop. The course material emphasizes formal study of the language structure and further development of vocabulary and functional competence. The course also provides for increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. The content is expanded beyond "survival" needs in the immediate environment and deals in greater detail in areas such as the arts, the environment, social interactions, careers and professions and general feelings. This course is intended for students who are planning to major in Spanish as well as those who are interested in studying the language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Spanish (SPAN) 201, 202 and Chicano Studies (CHIC) 203, 204 combined: maximum credit, one series. (CAN SPAN 8) (CAN SPAN SEQ B = SPAN 201 + 202).

202 Fourth Course in Spanish

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Spanish 200.

This course is offered as an advanced intermediate level course. It reviews and furthers grammatical features in Spanish through oral and written communication within a cultural background. Readings of literary and/or culturally relevant authentic materials are examined

in depth. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Spanish (SPAN) 201, 202 and Chicano Studies (CHIC) 203, 204 combined: maximum credit, one series. (CAN SPAN 10) (CAN SPAN SEQ B = SPAN 201 + 202).

210 Conversation and Composition Spanish I
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension and fluency as well as written communication at a mid-intermediate level in Spanish through culturally relevant materials. Students increase vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast Latin American and Spanish cultures with U.S. culture both orally and in writing. Writing strategies are emphasized and literature is introduced. This course is intended for students who want to enhance their skills in the Spanish language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

211 Conversation and Composition Spanish II
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 210 with a grade of "C" or better, or equivalent.

This course further develops oral comprehension and fluency as well as written communication at an advanced intermediate level in Spanish through culturally relevant materials. Students further increase vocabulary, dramatize everyday topics of conversation, interpret and describe materials, and compare and contrast Latin American and Spanish cultures with U.S. culture, both orally and in writing. Pre-reading strategies introduced in Spanish 210 are used as a basis upon which to build course emphasis in reading. More literature is introduced. This course is intended for students who want to further enhance their skills in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215 Spanish for Spanish Speakers I
5 hours lecture, 5 units
Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 102 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Spanish 201. This course is designed for students who are fluent in spoken, informal Spanish and who need to improve their writing, reading, and grammar skills. Emphasis is on the mastery of formal, written communication skills in Spanish at the intermediate level, and the study of Hispanic and Chicano culture through reading relevant, authentic materials. The course focuses on language challenges particular to Spanish speakers such as orthography, the inappropriate mix of English and Spanish in certain contexts, and contrasts between standard Spanish and regional variations. This course is conducted entirely in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

216 Spanish for Spanish Speakers II
5 hours lecture, 5 units
Letter Grade or Credit/No Credit Option

Prerequisite: Spanish 215 or Spanish 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Spanish 202, or to Spanish speakers who have received the equivalent of a high school degree in a Spanish speaking country. This course is the continuation of Spanish 215. It is designed for students who are fluent in spoken, informal Spanish and who need to improve their writing, reading, and grammar skills. It furthers the mastery of formal, written communication in Spanish at the intermediate-advanced level, while integrating instruction in Hispanic and Chicano culture through increased practice in intermediate-advanced level readings, relevant, and authentic materials. The course focuses on language challenges that Spanish speakers still encounter at intermediate-advanced level, such as orthography, the inappropriate mix of English and Spanish in specific contexts, and standard Spanish as contrasted with regional variations. This course is conducted entirely in Spanish. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study
Hours by Arrangement, 1-3 units
Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For intermediate students who wish to work on special projects. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Spanish

1.5 - 6 hours lab, .5 - 2 units
Credit/No Credit Only

Limitation on Enrollment: Concurrent enrollment in a designated Spanish course is required. The instructor of the related course will supply Add Code to the student, which permits registration in the course.

This is a supplementary course designed to reinforce student achievement of the learning objectives and is offered concurrently with a designated Spanish course. Learning activities may employ a variety of self-paced multimedia systems or laboratory or field research arrangements to assist students in reaching the specific learning objectives in the concurrent Spanish course. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Legal Assistant (Paralegal)

	Units
Certificate of Achievement: Legal Assistant	27-31
Associate in Science Degree: Legal Assistant	27-31*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

The City College Paralegal (Legal Assistant) program provides professional training focusing on occupational competency. Paralegals perform substantive and procedural legal work as authorized by law, which work, in the absence of the paralegal, would be performed by an attorney. Paralegals have knowledge of the law gained through education and work experience which qualifies them to perform legal work. Paralegals adhere to recognized ethical standards and rules of professional responsibility. This is not a pre-law program. It does not prepare the student to become an attorney.

Program Emphasis

The Paralegal Studies at City College offers two programs:

- "An Associate's in Science degree in Paralegal Studies
- "A Certificate of Achievement in Paralegal Studies

The associate in science degree program in Paralegal Studies combines a liberal arts foundation with a career concentration in the paralegal area. Students have an opportunity to explore the field of law and to gain knowledge and develop essential skills to perform a wide range of supportive legal functions. The Certificate of Achievement option is available to students entering the program who have completed all general education requirements by proven coursework under an Associates

or Bachelor's degree. All paralegal classes and the required general education courses for the degree option are available in the evening.

Residency Requirements

The City College Paralegal Program is selective in accepting units transferred from other colleges. If the transfer institution meets California accreditation standards students may be eligible to transfer up to 12 units toward the paralegal major.

Joint City/Miramar Program Option

City College's paralegal courses can be transferred to Miramar College's American Bar Association (ABA) approved paralegal program. Students may take up to 15 units of Core, Specialty and Law Related classes offered in the major at City College for transfer into the Miramar's Program. *Students must complete 18 units of the major on Miramar's campus to qualify for ABA approval upon graduation.* Legal courses taken more than 5 years ago may not meet the current curriculum standards.

For more information contact the Program Director at:

P. Darrel Harrison Program Director
dharriso@sdccd.net (619) 388 7892

Legal Assistant Core Curriculum Courses offered at City College

Courses Required for the Major:	Units
LEGL 105, Legal Research	3
LEGL 110, Legal Writing & Communications.....	3
LEGL 115, Civil Litigation I.....	3
LEGL 120, Civil Litigation II-Torts.....	3
Total Units =	12

**Associate in Science Degree:
Legal Assistant (Paralegal)
Joint Program**

Courses Required for the Major:	Units
Core Curriculum	12

Courses to be completed at Miramar College:

Select nine units from the following legal specialty courses:
LEGL 140, 145, 150, 160, 165, 170, 175, 180..... 9

Select six to ten units from the following law-related courses:

- Administration of Justice 102, 160, 230;
 - Business 140;
 - Real Estate 105;
 - Labor Studies 112*;
 - Computer Business Technology 221, 222;
 - Accounting 116A, 1206-10
- Total Units = 27-31**

*Offered at City College only.

For graduation requirements see **Requirements for the Associate Degree** on page 64.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Elective: Legal Assistant 210, 296.

**Certificate of Achievement:
Legal Assistant (Paralegal)**

This option is only available to students entering the program who have completed all general education core requirements through coursework received by either an Associates in Arts degree or a Bachelor's degree. The Certificate of Achievement requires completion of the core courses (12 units), legal specialty courses (9 units) and law related courses (6-10 units).

Courses

Legal Assistant (LEGL)

100A Introduction to Paralegalism
1 hour lecture, 1 unit
Grade Only

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 100 or Administration of Justice 105 or Business 180. Students entering the legal assistant program learn about the paralegal's role in the work place and legal system. Topics include the following: introduction to the professional associations, history of the profession, regulation and licensing of paralegals, legal ethics, an overview of the court structure, legal terminology, legal analysis, and an introduction to the legal specialties offered in the program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

100B Legal Procedures**2 hours lecture, 2 units
Grade Only**

Advisory: Legal Assistant 100A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 100 or Administration of Justice 105 or Business 180.

This course provides an overview of various legal specialties offered under the legal assistant program and the job functions performed in them. Topics include an introduction to the litigation process, bankruptcy, family law, contract law, corporate law, estates, trusts and wills, federal court practices and procedures, legal communications, and legal research. Student's also learn specialized legal terminology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Legal Research**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 107 or Business 181.

This core course introduces students to the basics of legal research. Students receive an overview of the types of research methods used, the primary and secondary sources available, an understanding of official and unofficial opinions, a review of binding and persuasive authority, the Shepards system of validating cases and statutes, use of internet research, and an introduction to Lexis-Nexis, an online legal research system. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Legal Writing & Communications**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 108 or Business 182.

This core course covers legal writing and oral communications. Students receive a thorough examination of case analysis, legal reasoning, brief writing, legal memoranda, reports, and correspondence. They also develop interpersonal skills and learn how to interface with clients. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115 Civil Litigation I**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 109 or Business 183.

This core class introduces paralegal students to the civil litigation process. Students learn, analyze, and examine the basic principles of civil procedures as applicable to jurisdiction, venue, and preparation of pleadings in an action by both plaintiffs and defendants in the California court system. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Civil Litigation II - Torts**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 115 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 110 or Business 184.

This core course introduces students to the broad area of civil wrongs and their appropriate remedies. Students also learn about tort law principles in the traditional areas of intentional torts, negligence, absolute liability, product liability, nuisance, and commonly employed defenses. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

140 Law Office Management**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 111 or Business 185.

This course introduces a legal specialty elective in the Legal Assistant program. Students study systems and procedures for administration and management of a law office. Course emphasizes file management, personnel issues, law library maintenance, computer systems, ordering supplies, financial analysis and billing, risk management, and legal ethics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Federal Court Practices and Procedures**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 112 or Business 186.

Students learn about federal court practices including criminal, civil, bankruptcy, and appellate procedures. The course emphasizes rules of practice to help students develop the skills legal assistants utilize in law offices. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 Criminal Litigation and Procedure**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with credit for Administration of Justice 113 or Business 187.

The criminal court system, criminal investigation and prosecution, discovery and investigation, pretrial motions, trial preparation and procedures, and post-trial motions and relief. This course will provide students with an understanding of criminal litigation practice and procedure. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

155 Employment Law**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

This course provides an overview of the legal relationship between employer and employee. It also provides a basic understanding of employment-related laws and the impact those laws have on employers/employees. Students learn about both the federal and state regulatory environment as it applies to employment law. Subjects include pre-employment concerns, legal aspects of the employer/employee relationship, discrimination issues and actions, terminations, and ethical issues in employment law. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

160 Bankruptcy Law**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Business 265: Bankruptcy Law.

This course is a specialty elective in the Legal Assistant program that focuses on bankruptcy law and procedures. It covers commencement of a case, preparing of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, and debtors' and creditors' rights and obligations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Family Law**3 hours lecture, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Business 265, Family Law.

This course presents a legal specialty option in the Legal Assistant program. The family law course provides legal assistants exposure to domestic relations law and its application to family situations. The course encompasses formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, and domestic violence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170 Corporate Law**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Business 265: Corporate Law. This course introduces students to the various forms of business enterprises, including sole proprietorships, partnerships, and corporations. The course focuses on the legal steps and forms needed to create, maintain, and dissolve each type of business with an emphasis on corporations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175 Estates, Trusts, and Wills**3 hours lecture, 3 units
Grade Only**

Prerequisite: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Business 265: Estates, Trusts, and Wills.

This course identifies responsibilities and duties that paralegals perform under estate attorney supervision. Students review estate administration legal principles and terminology. They also study the procedural steps required to complete the administration, including current federal and state tax consequences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Contract Law**3 hours lecture, 3 units
Grade Only**

This course in contracts is designed to serve as a specialty requirement in the legal assistant program. This specialty prepares students with the knowledge and skills for drafting and interpreting different types of contracts including an overview of the elements of a contract, performance and breach issues, defenses to formation and enforcement, contract remedies, and third party contracts. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Elder Law**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 or Legal Assistant 110 with a grade of "C" or better, or equivalent.

This specialty elective in the Legal Assistant program focuses on legal topics that affect older people. These topics include financial and estate planning, health care, personal planning and protection, and consumer protection. This course benefits students seeking employment in law firms handling elder law and senior care housing facilities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210 Immigration Law**3 hours lecture, 3 units
Grade Only**

Advisory: Legal Assistant 105 with a grade of "C" or better, or equivalent.

This legal specialty course is designed as an elective in the paralegal program. It also serves as a required class for students seeking an emphasis in Immigration Law. It provides an overview of the laws of immigration and Naturalization involving a history of immigrant migration, the evolution of this country's policies toward aliens and the interplay of the three administrative agencies which administer those laws: Justice Department, Labor Department and State Department. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Liberal Arts

	Units
Certificate of Completion:	
Honors Global Competencies Certificate	15-17
Associate in Arts Degree:	
Option I CSU Transfer Pattern	39-40*
Option II UCSD Transfer Admission Guarantee	34-38*
Option III Intersegmental General Education Transfer Curriculum (IGETC)	37-40*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

This degree is designed to develop a broad knowledge base and academic skills in a variety of subject areas. This flexible major is intended for students who wish to earn a general associate degree and may also be appropriate for transfer students. Those planning to transfer to a four-year institution should consult a counselor prior to beginning courses for this degree.

Caution: Because admission and major preparation requirements vary at each UC, CSU, and private institution, it is strongly advised that students whom, intend to transfer meet with a counselor to determine the specific admissions and major preparation requirements of the selected transfer institution. The Liberal Arts degree is awarded in recognition of academic achievement at the community college. With additional coursework, it may also be appropriate for students who intend to transfer to a four-year institution.

Associate in Arts Degree: Liberal Arts

Option I

Courses Required for the Major: **Units**
The student will select courses that conform to the CSU General Education area requirements. Refer to page 86 of this catalog.

Total Units = 39-40

Associate in Arts Degree: Liberal Arts

Option II

Courses Required for the Major: **Units**
The student will select the core general education courses that conform to the SDCCD-UCSD Transfer Admission Guarantee (TAG) agreement. **This option is appropriate only for those students who have signed a UCSD TAG agreement. Only completion of the requirements listed on a signed UCSD TAG agreement will guarantee transfer to UCSD.** See a counselor or the Transfer Center for more information on the UCSD TAG program.

The core requirements for general education are one year of a transferable sequence in the following areas: (a) writing, (b) the humanities, (c) the social sciences, (d) foreign language, and (e) mathematics or a natural science. For more information, see a counselor.

Total Units = 34-38

Associate in Arts Degree: Liberal Arts

Option III

Courses Required for the Major: **Units**
The student will select courses that conform to the Intersegmental General Education Transfer Curriculum (IGETC) area requirements. For specific information, see a counselor.

Total Units = 37-40

Honors Global Competencies Certificate

Description

The Honors Global Competencies Certificate provides an interdisciplinary and systemic approach in order to prepare students for the highly diverse, technologically-rich, and multilingual global society in which we live. The Certificate offers students the

opportunity to gain a global perspective through completion of coursework in intercultural competencies, communication skills, technology skills, and coping skills. This certificate helps students to transfer to four-year institutions in concert with the Honors designation. It prepares students for study and work in the world as a whole in professional fields such as international studies, intercultural studies, language studies, international business, international law, political science, comparative literature, environmental studies, history, technology, social sciences, humanities, teaching, and more.

Program Emphasis

The Honors Global Competencies certificate has an international emphasis.

Career Options

The Honors Global Competencies certificate might lead to careers in the following areas: International relations, international business, politics, international law, technology professions, teaching, translating, travel and tourism, and intercultural communications, among others.

**Certificate of Completion:
Honors Global Competencies
Certificate***

The Honors Global Competencies Certificate offers you the opportunity to gain a global perspective through completion of coursework in intercultural competencies, communication skills, technology skills, and coping skills.

Courses Required for the Major	Units
ENGL 205, Critical Thinking and Intermediate Composition.....	3

Select 3-5 units from the following introductory or higher level foreign languages:

ARAB 101, First Course in Arabic	5
FREN 101, First Course in French	5
GERM 101, First Course in German.....	5
ITAL 101, First Course in Italian	5
JAPN 101, First Course in Japanese.....	5
RUSS 101, First Course in Russian	5
SPAN 101, First Course in Spanish.....	5
TAGA 101, First Course in Tagalog	5
VIET 101, First Course in Vietnamese.....	5

Select 6 units from the following:

ANTH 102, Introduction to Physical Anthropology	3
ANTH 103, Introduction to Cultural Anthropology.....	3
ARTF 110, Art History: Prehistoric to Gothic.....	3

ARTF 111, Art History: Renaissance to Modern	3
BIOL 101, Issues in Environmental Biology	4
ECON 120, Principles of Economics I	3
ENGL 101, Reading and Composition	3
ENGL 105, Composition and Literature.....	3
ENGL 220, Masterpieces of World Literature I: 1500 BCE - 1600 CE.....	3
ENGL 221, Masterpieces of World Literature II: 1600 - Present	3
HUMA 101, Introduction to the Humanities I	3
HUMA 102, Introduction to the Humanities II	3
HIST 100, World History I.....	3
HIST 101, World History II	3
MUSI 101, History I: Middle Ages to Mid 18th Century.....	3
MUSI 102, Music History II: Mid 18th - Early 20th Century.....	3
MUSI 109, World Music	3
SPEE 180, Intercultural Communication	3
PHIL 106, Asian Philosophy.....	3
PHIL 125, Philosophy of Women.....	3
POLI 101, Introduction to Political Science	3
POLI 103, Comparative Politics.....	3
POLI 140, Contemporary International Politics.....	3
Select 3 units from the following:	
CHIL 101, Human Growth and Development.....	3
CISC 181, Principles of Information Systems.....	4
GEOG 102, Cultural Geography.....	3
HEAL 101, Health and Life-Style.....	3
PSYC 101, General Psychology	3
Total Units = 15-17	

This certificate will be offered through the Honors Programs at City, Mesa, and Miramar Colleges. All coursework except for foreign language must be done as an honors class or as an honors contract.

*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Transfer Information

Common university majors related to the field of Liberal Arts include:

Liberal Studies, Teacher Education.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This

degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Library Science

There is currently no program in Library Science. The following course is offered and may be used as an associate degree elective.

Courses

Library Science (LIBS)

101 Information Literacy and Research Skills

1 hour lecture, 1 unit

Letter Grade or Credit/No Credit Option

Advisory: English 51 or English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 or R5.

This course is an overview of information resources and the skills required to use them effectively. Through lectures, hands-on assignments, and other methods, students learn how to use library resources such as electronic indexes and databases, online services, and the Internet as well as develop strategies for conducting research. This course is intended for students who wish to acquire skills that enable them to find information for academic research, career demands, and/or lifelong learning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Machine and Manufacturing Technology

"Engineering Technology" on page 237

Mathematics

	Units
Associate in Arts Degree:	
Mathematics	22-23*
Applied Mathematics	31*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Mathematics is the study of numbers, structures, and associated relationships using rigorously defined literal, numerical and operational symbols. Given certain conditions about systems of numbers or other structures mathematicians derive conclusions based on logical arguments. Basic mathematical skills enable a person to solve numerical problems encountered in daily life, and more advanced skills have numerous applications in the physical, social and life sciences.

Program Emphasis

The mathematics curriculum includes courses that range from basic skills through differential equations. The basic skills and associate degree level courses provide students with the mathematical preparation necessary for study in other disciplines, as well as for degree and transfer requirements. Successful completion of a mathematics degree will develop competence in mathematics through differential and integral calculus, providing an adequate background for employment in many technological and scientific areas. Furthermore, it provides a firm foundation for students planning to study mathematics, engineering, economics, computer science, physical, or life sciences.

Faculty	Office	Telephone
Misael Camarena	M-108	(619) 388-3637
Brenda Gaipa	M-207	(619)388-3185
Theresa Gallo	M-109	(619) 388-3350
Carlos de la Lama	M-211	(619) 388-3362
Jan Hong	M-110	(619) 388-3351

David Kater	M-106	(619) 388-3252
Miriam Keeseey	SDSU	(619) 594-2696
Jenny Kimm	M-109	(619) 388-4053
Karon Klipple	M-109	(619) 388-3638
Hoat Le	M-110	(619) 388-3639
Kirsten Lollis	M-108	(619) 388-3251
Jim Mahler	M-111	(619) 388-3640
Nick Slinglend		
Manfred C. Smith	M-208	(619) 388-3352
Yu-Hua A. Sun	M-107	(619) 388-3646
Carolyn R. Thomas	M-211	(619) 388-3363
Mathematics Center	T-208	(619) 388-3580

Career Options

Most of these occupations require education beyond the associate degree, and some may require a graduate degree. The following list is not intended as a comprehensive list of career options in mathematics: actuary, appraiser, assessor, auditor, biometrician, budget analyst, controller, computer analyst, computer programmer, demographer, econometrician, engineering analyst, epidemiologist, financial analyst, investment analyst, management scientist, operations researcher, research mathematician, statistician, surveyor, systems analyst, teacher, technical writer, and urban planner.

Academic Programs

The associate degree in Mathematics requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Mathematics

Courses Required for the Major:	Units
MATH 150, Calculus & Analytical Geometry I	5
MATH 151, Calculus & Analytical Geometry II	4
MATH 245, Discrete Mathematics	3
MATH 252, Calculus & Analytical Geometry III	4
MATH 254, Introduction to Linear Algebra.....	3

Select three to four units from:

MATH 107, 107L, Introduction to Scientific Programming and Lab,	
MATH 119, Elementary Statistics	
MATH 255, Differential Equations (for University of California transfer)	
PHIL 101, Symbolic Logic.....	3-4

Total Units = 22-23

Recommended electives: Mathematics 104, 108, 108L, 116, 118, 121, 122, 141, 150L, 210A,B, 237, 237L, 255.

Courses offered in Support of Other Majors:
 Mathematics 90, 91, 95, 96.

Associate in Arts Degree: Mathematics

Applied Mathematics

Courses Required for the Major:	Units
MATH 107, 107L, Introduction to Scientific Programming & Lab	3,1
MATH 108, 108L, Intermediate Scientific Programming & Lab	3,1
MATH 150, Calculus & Analytical Geometry I.....	5
MATH 151, Calculus & Analytical Geometry II	4
MATH 237, 237L, Machine & Assembly Language & Lab.....	3,1
MATH 245, Discrete Mathematics	3
MATH 252, Calculus & Analytical Geometry III	4
MATH 254, Introduction to Linear Algebra.....	3
Total Units = 31	

Recommended electives: Mathematics 104, 116, 118, 119, 121, 122, 141, 150L, 210A,B, 255, 290, 296.

Transfer Information

Common university majors related to the field of Mathematics include:

Applied Mathematics, Cognitive Science, Liberal Studies, Mathematics, Statistics.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Mathematics (MATH)

Basic Skills Courses

All courses at this level are offered for college credit. Credit for these courses will not apply toward the associate degree but will count toward the

determination of a student's workload and eligibility for financial aid.

O15A Prealgebra Refresher

**3 hours lab, 1 unit
 Credit/No Credit Only**

This course is intended for those students who have completed the math assessment with a level of M20 (prealgebra) and wish to improve their placement level; those students who have successfully completed Mathematics 35 but need more review; or students who unsuccessfully attempted Mathematics 95 and need review of prealgebra skills. The course will consist of lecture classes and/or independent study using a computer program to refresh those concepts identified as needed for each student. Successful completion of this course may serve as a basic for a petition to challenge Mathematics 35. This course will not replace a failing grade in Mathematics 35. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

O15B Elementary Algebra Refresher

**3 hours lab, 1 unit
 Credit/No Credit Only**

This course is intended for those students who have completed the math assessment with a level of M30 (beginning algebra) and wish to improve their placement level; students who have successfully completed Mathematics 15A; students who have successfully completed Mathematics 95 but need more review; or students who unsuccessfully attempted Mathematics 96 and need review of beginning algebra skills. The course will consist of lecture classes and/or independent study using a computer program to refresh those concepts identified as needed for each student. Successful completion of this course may serve as a basis for a petition to challenge Mathematics 95. This course will not replace a failing grade in Mathematics 95. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

O15C Intermediate Algebra Refresher

**3 hours lab, 1 unit
 Credit/No Credit Only**

This course is intended for those students who have completed the math assessment with a level of M40 (intermediate algebra) and wish to improve their placement level; students who have successfully completed Mathematics 15B; students who have successfully completed Mathematics 96 but need more review; or students who unsuccessfully attempted Mathematics 104, 116, 141or 210A and need review of intermediate algebra skills. The course will consist of

lecture classes and/or independent study using a computer program to refresh those concepts identified as needed for each student. Successful completion of this course may serve as a basis for a petition to challenge Mathematics 96. This course will not replace a failing grade in Mathematics 96. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

015D Geometry Refresher

**3 hours lab, 1 unit
Credit/No Credit Only**

This course is intended for those students who have completed a high school geometry course or for those students who have completed Math 96 and need to review geometric principles prior to taking Math 210B or trigonometry. The course will consist of independent study using a computer program to refresh those concepts identified as needed for each student. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

15E Trigonometry Refresher

**3 hours lab, 1 unit
Credit/No Credit Only**

This course is intended for those students who have completed the math assessment with a level of M50 who need to review their trigonometry knowledge prior to taking precalculus or calculus. Students begin at the level of their original placement and, working at their own pace, may improve their placement up to M60 (precalculus level). This course consists of independent study using a computer program to refresh those concepts identified as needed for each student. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

032 Fundamentals of Mathematics

**5 hours lecture, 5 units
Grade Only**

Fundamentals of Mathematics serves as an introduction to fundamental concepts of arithmetic. This course covers the arithmetic operations of addition, subtraction, multiplication, division and exponentiation on whole numbers, fractions, decimals and percents; ratios and proportions, an introduction to the different systems of measurement, and applications of these topics. This course is intended for preparation for Prealgebra (Math 35). (FT) This course does not apply to the Associate Degree.

035 Prealgebra

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: Mathematics 32 with a grade of "C" or better, or equivalent, or Assessment Skill Level M20. This course introduces students to the fundamentals of arithmetic operations, their applications, and an introduction to some elementary topics in beginning algebra. The course covers arithmetic operations on integer, rational, and decimal number fractional, percent and decimal notation, introduction to algebraic expressions, solving equations and graphing, ratios and proportions, perfect squares and their square roots, elementary topics in geometry, systems of measurement, and monomial arithmetic. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

Associate Degree Credit Courses

090 Fundamentals of Mathematics

**3 hours lecture, 3 units
Credit/No Credit Only**

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 54 or 95. This course is intended for students who have not passed the California State University Entry-Level Mathematics Examination (ELM). This course reviews arithmetic and geometric concepts, and covers topics in elementary algebra including operations with polynomials, factoring, rational expressions, expressions involving radicals, solving non-linear equations, graphing linear equations, and solving linear systems of equations in two variables. Associate Degree Credit only and not Transferable.

091 Algebra for Math Placement

**3 hours lecture, 3 units
Credit/No Credit Only**

Advisory: Mathematics 90 with a grade of "C" or better, or equivalent.
Limitation on Enrollment: The course is not open to students with previous credit for Mathematics 96 or Mathematics 100. This course is a continuation of Mathematics 90 and is intended for those students who have not passed the California State University Entry-Level Mathematics Examination (ELM). This course is designed to prepare students for college algebra and consists of a review of intermediate algebra concepts. Topics for the class include set and function notation, simplifications and solutions to equations involving rational and radical expressions, quadratic equations and functions, complex numbers, exponential and logarithmic

functions and applications. Associate Degree Credit only and not Transferable.

095 Elementary Algebra and Geometry

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 35 with a grade of "C" or better, or equivalent, or Assessment Skill level M30.

Advisory: Completion of or concurrent enrollment in: English 43 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W4 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 54 or 54A & 54B.

Elementary algebra and geometry serves as the foundation for the other math courses and is the first of a two-course integrated sequence in algebra and geometry intended to prepare students for transfer level mathematics. This course covers the real number system; writing, simplifying, solving and graphing of linear equations in one variable; solving linear inequalities in one variable; solving systems of linear equations in two variables; algebraic operations with polynomial expressions and factoring; functions; operations involving rational expressions and related equations; and geometric properties of lines, angles, and triangles. This course is the prerequisite for Math 96 and also satisfies the communication and analytical thinking G.E. requirement for an AA degree. (FT) Associate Degree Credit only and not Transferable.

096 Intermediate Algebra and Geometry

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

Advisory: English 43 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R5.

Intermediate Algebra and Geometry is the second of a two-semester integrated sequence in algebra and geometry. This course covers systems of equations and inequalities; radical and quadratic equations; quadratic functions and their graphs; complex numbers; nonlinear inequalities; exponentials and logarithmic functions; conic sections; sequences and series; and solid geometry. The course will also include application problems involving the topics covered. This course is the prerequisite for numerous collegiate level/transfer level mathematics courses. (FT) Associate Degree Credit only and not Transferable.

Transfer Level Courses

104 Trigonometry

3 hours lecture, 3 units

Grade Only

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

This course is a study of the numerical, analytical, and geometric properties of right and oblique triangles, of trigonometric and inverse trigonometric functions, and their applications. The course content includes right angle trigonometry, radian measure, circular functions, graphs of circular functions and their inverses, trigonometric identities, equations involving trigonometric and inverse trigonometric functions, an introduction of the complex plane, vectors and their operations, and the trigonometric form of complex numbers. This course is designed as a preparation for calculus and it is intended for the transfer student planning to major in mathematics, engineering, economics, or disciplines included in the physical or life sciences. This course meets CSU general education requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN MATH 8).

107 Introduction to Scientific Programming

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Mathematics 107L.

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course is an introduction to mathematical and scientific problem-solving on a computer; focusing on designing algorithms of a high level programming language. Extensive programming is required. Students are expected to plan and write programming projects with documentation. This course is recommended for students transferring to majors in Computer Science and/or mathematics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107L Introduction to Scientific Programming Lab

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Corequisite: Mathematics 107.

This is a lab course to be taken concurrently with Mathematics 107. Extensive programming is required. Students are expected to plan and write programming projects with documentation. This course is

recommended for students transferring to majors in Computer Science and/or mathematics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Intermediate Scientific Programming
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 107 with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in Mathematics 108L. This course provides further training in program design and development, especially with regard to large projects. Advanced techniques in programming are studied along with basic data structures and algorithms. Problem-solving techniques in the fields of engineering, mathematics, and the sciences are covered. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108L Intermediate Scientific Programming Lab
3 hours lab, 1 unit
Letter Grade or Credit/No Credit Option

Corequisite: Mathematics 108.

This is a lab course open only to those concurrently enrolled in Mathematics 108. Extensive programming is required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

116 College and Matrix Algebra
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This course is designed to strengthen the algebra skills of students seeking Business or Natural Science degrees who are required to take an applied calculus course. Topics in the course include the theory of functions; graphing functions; exponential and logarithmic functions; solving equations involving algebraic, exponential and logarithmic functions; solving systems of linear equations; matrix algebra; linear programming; modeling; and applications problems. Analytical reading and problem solving skills are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 116 and 141 combined: maximum credit, one course. (CAN MATH 10).

118 A Survey of Modern Mathematics
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. *Advisory:* English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6. This course covers topics in probability, statistics, logical reasoning, quantitative literacy, the history of mathematics, and applications of mathematics to the real world. This is a general education course designed for students who do not intend to prepare for a career in science or business. Analytical reading and problem solving are required for success in this course. Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN MATH 2).

119 Elementary Statistics
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50. This course covers descriptive and inferential statistics. The descriptive portion analyzes data through graphs, measures of central tendency and spread. Other statistical practices utilize basic probability, binomial and normal distributions, estimation of population parameters, hypothesis testing, linear regression and correlation. Analytical reading and problem solving are required for success in this course. This course meets district G.E. requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 119, Biology (BIOL) 200 and Psychology (PSYC) 258 combined: maximum credit, one course. (CAN STAT 2).

121 Basic Techniques of Applied Calculus I
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent. This is a course designed for students intending to major in business, natural science or social science. It does not fulfill a mathematics requirement for students majoring in mathematics, chemistry, physics or engineering. This course combines the study of algebra, analytic geometry, and calculus using numerical, graphical, and analytical methods to analyze calculus problems encountered in real world applications. Topics include limits, derivatives, and integrals of algebraic, exponential and logarithmic functions. Also covered are functions of several variables, partial derivatives, and optimization of multivariable functions. Applications of

calculus include curve sketching, optimization, and areas under curves. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 121 and 150 combined: maximum credit, one course. (CAN MATH 30) (*CAN MATH SEQ D = MATH 121 + 122*).

122 Basic Techniques of Calculus II

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 121 with a grade of "C" or better, or equivalent.

In this continuation of Mathematics 121, students intending to major in business, natural science, or social science learn about integration, multivariable functions, differential equations, series, and formatting trigonometric functions. This course does not fulfill a mathematics requirement for students intending to major in mathematics, chemistry, physics, or engineering. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 122 and 151 combined: maximum credit, one course. (CAN MATH 32). (*CAN MATH SEQ D = MATH 121 + 122*).

141 Precalculus

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 104 with a grade of "C" or better, or equivalent.

This course is a study of numerical, analytical, and graphical properties of functions. The course content includes polynomial, rational, irrational, exponential, logarithmic, and trigonometric functions. Additional topics include: inverse functions, complex numbers, polar coordinates, matrices, conic sections, sequences, series and the binomial theorem. This course is designed as a preparation for calculus and is intended for the transfer student planning to major in mathematics, engineering, economics, or disciplines included in the physical or life sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 116 and 141 combined: maximum credit, one course. (CAN MATH 16).

150 Calculus with Analytic Geometry I

5 hours lecture, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 141 with a grade of "C" or better, or equivalent.

This course is a primary introduction to university level calculus. The topics of study include analytic geometry, limits, differentiation and integration of algebraic and transcendental functions. Emphasis is placed on calculus applications. Analytical reading and problem solving are required for success in this course. This course is intended for the transfer student planning to major in mathematics, computer science, physics, chemistry, engineering, or economics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 121 and 150 combined: maximum credit, one course. (CAN MATH 18) (*CAN MATH SEQ B = MATH 150 + 151*) (*CAN MATH SEQ C = MATH 150 + 151 + 252*).

150L Calculus I Laboratory

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 141 with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 150.

This course is a workshop, project-oriented course dealing with exploration and development of the calculus topics introduced in Calculus and Analytic Geometry I. This course directly supports the calculus lectures by having hands-on, collaborative assignments where technology is strongly incorporated throughout all the in-class assignments. Students work individually and in small groups on explorations and applications thus extending the material presented in Mathematics 150. Topics including geometric, analytic and numeric applications of limits, derivatives and integrals as well as calculus applications found in the physical and life sciences. This course is intended for all students currently enrolled in Mathematics 150. Instructor monitors and facilitates group and individual presentations and projects. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Calculus with Analytic Geometry II

4 hours lecture, 4 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 150 with a grade of "C" or better, or equivalent.

This is a continuation of Mathematics 150. This course covers more advanced topics in analytic geometry, differentiation and integration of algebraic and transcendental functions, infinite series, Taylor series, and parametric equations. This course also covers a general introduction to the theory and applications of power series, techniques of integration, and functions in polar coordinates, at it serves as a basis for multivariable calculus and differential equations, as

well as most upper division courses in mathematics and engineering. It is intended for the transfer student planning to major in mathematics, computer science, physics, chemistry, engineering and economics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 122 and 151 combined: maximum credit, one course. (CAN MATH 20) (CAN MATH SEQ B = MATH 150 + 151) (CAN MATH SEQ C = MATH 150 + 151 + 252).

181 Mecomtronics College Algebra and Trigonometry I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.
Advisory: This course is intended for students enrolled in the first semester Engineering Technology/Mecomtronics program.

This course is the first semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to apply the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the program's technology and science courses. Topics include the algebra of functions, graphing algebraic functions, exponential and logarithmic functions, linear systems of equations, matrices and matrix operations, trigonometric functions and their graphs, trigonometric identities, complex numbers, vector algebra, descriptive statistics, an introduction to series and summation notation, an introduction to Boolean algebra and symbolic logic, and the use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

182 Mecomtronics College Algebra and Trigonometry II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 181 with a grade of "C" or better, or equivalent.
Advisory: This course is intended for students enrolled in the second semester Engineering Technology/Mecomtronics program.

This course is the second semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to implement the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the Mecomtronics technology and science courses. Topics covered are a

continuation of those introduced in Mathematics 181. Topics include applications of exponential and logarithmic functions, graphs of trigonometric functions, inverse trigonometric functions, Riemann sums, polynomial approximations of special transcendental functions, vector algebra, spherical and cylindrical coordinates, conic sections, the binomial theorem, an introduction to Boolean algebra and symbolic logic, and the use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

183 Mecomtronics Calculus I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 182 with a grade of "C" or better, or equivalent.
Advisory: This course is intended for students enrolled in the third semester Engineering Technology/Mecomtronics program.

This course is the third semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to implement the mathematical problem solving techniques developed in this course in the real world situations presented and discussed in the Engineering Technology/Mecomtronics program's technology and science courses. Topics include limits, continuity, differentiation of algebraic and transcendental functions, an introduction to multivariable functions and their partial derivatives, Riemann sums, integration by substitution and by parts, separable and linear first order differential equations, applications in technology and physics, and the use of the graphing calculator to solve application problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

184 Mecomtronics Calculus II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 183 with a grade of "C" or better, or equivalent.
Advisory: This course is intended for students enrolled in the fourth semester Engineering Technology/Mecomtronics program.

This course is the fourth semester of a four-semester sequence in applied college algebra and trigonometry, and applied technical calculus. Students are expected to apply analytical reading and mathematical problem solving techniques developed in this course in real world situations presented and discussed in the Engineering Technology/Mecomtronics program's

technology and science courses. Topics include Taylor series, Fourier series, techniques of multivariable calculus including partial derivatives, multiple integrals, line and surface integrals, applications in physics and technology of vector calculus theorems, first and second order differential equations, variation of parameters, and Laplace transforms. A strong emphasis is placed on calculus applications in the engineering technology field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

210A Concepts of Elementary School Mathematics I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is a study of the mathematical concepts needed for teaching elementary school mathematics with emphasis on number and function. This course promotes an appreciation of the importance of logical thinking and applications of mathematics in problem solving and critical thinking. It studies the basic computational skills, but also requires the understanding and explanation of the basic mathematical concepts and the connections between them. It is designed especially for students preparing for credentials in elementary education. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer Course List: Mathematics (MATH) 210A and 210B combined: maximum credit, one course. (CAN MATH 4).

210B Concepts of Elementary School Mathematics II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Mathematics 210A with a grade of "C" or better, or equivalent.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6/W6 or English 105 with a grade of "C" or better, or equivalent. This course is the second course in a one-year sequence in the study of the mathematical concepts needed for teaching elementary school mathematics with emphasis on geometry, transformational geometry, and measurement. This course also promotes an appreciation of the importance of logical thinking and

applications of mathematics in problem solving and critical thinking. It studies the understanding and explanation of the basic mathematical concepts and the connections between them. It is designed especially for students preparing for credentials in elementary education. Analytical reading and problem solving are required for success in this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Mathematics (MATH) 210A and 210B combined: maximum credit, one course.

212 Children's Mathematical Thinking

**1 hour lecture, 1 unit
Grade Only**

Advisory: Concurrent enrollment in Mathematics 210A. This course focuses on children's mathematical thinking and includes an in-depth study of place-value, fractions and how children solve mathematical problems. Students observe children and evaluate the problem strategies that are used. For students in San Diego State University's Liberal Studies Blended Teacher Education Program, this course is required and must be taken concurrently with Mathematics 210A. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

237 Machine and Assembly Language

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Mathematics 108 with a grade of "C" or better, or equivalent.
Corequisite: Mathematics 237L.
Limitation on Enrollment: This course is not open to students with credit for Mathematics 137. This course covers general concepts of machine and assembly languages, including data representation, looping and addressing techniques, subroutine linkage, and use of system and programmer-defined macros. Problem-solving techniques in the fields of engineering, mathematics, and the sciences are covered. This course is designed for computer science and mathematics majors who are intending to transfer to a four-year university. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CSCI 10, when taken with MATH 237L).

237L Assembly Language Lab

**3 hours lab, 1 unit
Letter Grade or Credit/No Credit Option**

Corequisite: Mathematics 237.
Limitation on Enrollment: This course is not open to students with credit for Mathematics 137L.

This is a lab course to be taken concurrently with Mathematics 237. Practice is provided in applying programming techniques and problem solving skills using assembly language. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CSCI 10, when taken with MATH 237).

245 Discrete Mathematics

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 122 or 151 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level W6 and R6.

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, number theory, and combinatorics. The topics covered include propositional and predicate logic, methods of proof, set theory, Boolean algebra, number theory, equivalence and order relations, counting techniques, and recursion. This course forms a basis for upper division courses in mathematics and computer science and it is intended for the transfer student planning to major in these disciplines.

Associate Degree Credit & transfer to CSU and/or Private colleges and universities. UC Transfer Course List. (CAN CSCI 26).

252 Calculus with Analytic Geometry III

4 hours lecture, 4 units

Grade Only

Prerequisite: Mathematics 151 with a grade of "C" or better, or equivalent.

The content of this course includes the algebra and geometry of 2 and 3 dimensional Euclidean vectors, limits, continuity, partial differentiation, extremes of vector-valued and multivariable functions, higher order derivatives, the chain rule, Lagrange's theorem, multiple integrals, integrals over paths and surfaces, and integral theorems of vector analysis. This course is intended as a general introduction to the theory and applications of multivariable calculus. It is essential for most upper division courses in mathematics and forms part of the foundation for engineering and physics. It is intended for the transfer student planning to major in mathematics, physics, engineering, computer science, physical chemistry, operational research, or economics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course

List. (CAN MATH 22) (CAN MATH SEQ C = MATH 150 + 151 + 252).

254 Introduction to Linear Algebra

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 151 with a grade of "C" or better, or equivalent.

This course serves as an introduction to the theory and applications of elementary linear algebra, and is the basis for most upper division courses in mathematics. The topics covered in this course include matrix algebra, Gaussian Elimination, systems of equations, determinants, Euclidean and general vector spaces, linear transformations, orthogonality and inner product spaces, bases of vector spaces, the change of basis theorem, eigenvalues and eigenvectors, the rank and nullity of matrices and of linear transformations. This course is intended for the transfer student planning to major in mathematics, physics, engineering, computer science, operational research, economics, or other sciences. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN MATH 26).

255 Differential Equations

3 hours lecture, 3 units

Grade Only

Prerequisite: Mathematics 252 and 254, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Mathematics 253.

This course covers first order and higher order equations and their applications. Topics include linear first order and higher order equations, homogeneous and nonhomogeneous equations with constant or variable coefficients, and systems of ordinary differential equations. Methods used to solve equations include substitution methods, integrating factors, reduction of order, variation of parameters, power series solutions, and Laplace Transforms. This course is intended as an introduction to the theory and applications of differential equations and is the basis for many upper division courses in engineering, physics, and mathematics. It is intended for the transfer student planning to major in mathematics, engineering, operational research, physics, or other physical science. This course meets CSU general education requirements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN MATH 24).

290 Independent Study

Hours by Arrangement, 1-3 units
Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

This course is for advanced students who wish to pursue special investigations. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Music

See "Visual and Performing Arts" on page 394.

Multimedia

See "Communications" on page 176.

Courses**Military Electronics Technology (MLET)****050 Basic Direct Current**

3 hours lab, 1 unit
Grade Only

This is a course on the basics of direct current (DC), including basic and complex circuit analysis. Emphasis is placed on the practical application of concepts in DC to calculate and measure voltage, current and resistance and to troubleshoot series, parallel, series-parallel, branch and bridge circuits. This course is equivalent to Modules 1 through 5 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: ET, FC, STG, IC, GM, TM, MN, GSE, EM, AE, ATI, ATC, MV, AO, AS, CTM, CTT, STS, FT, ETSS, MT, CE, PETT. Associate Degree Credit only and not Transferable.

051 Working With Direct Current

3 hours lecture, 3 units
Grade Only

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on direct current (DC) electronics designed to develop a practical familiarity with the concepts of conductance, voltage, resistance, current, capacitance, and inductance. Emphasis is placed on a common sense approach to using the measurement equipment and math skills used in the study of direct current. Associate Degree Credit only and not Transferable.

052A Basic Alternating Current I

3 hours lab, 1 unit
Grade Only

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of alternating current (AC), power, capacitance, and inductance. Emphasis is placed on providing students with a solid understanding of AC test equipment and steady-state circuit analysis. This course is equivalent to Modules 6 through 9 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: IC, GM, TM, MN, GSE, EM, AE, ATI, ATO, MV, CTM, CTT, STS, FT and MT. Associate Degree Credit only and not Transferable.

052B Basic Alternating Current II

3 hours lab, 1 unit
Grade Only

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of alternating current (AC), power, capacitance, and inductance. Emphasis is placed on providing students with a solid understanding of the fundamentals of transient and resonant AC circuit analysis, transformers, relays and switches. This course is equivalent to Modules 10 through 13 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: ET, FC, STG, CTM, MT, PETT. (FT) Associate Degree Credit only and not Transferable.

053A Working With Non Resonant Alternating Current

2.5 hours lecture, 2.5 units
Grade Only

Prerequisite: Military Electronics Technology 52A with a grade of "C" or better, or equivalent.

This is a course on non resonant alternating current (AC) electronics designed to develop a practical familiarity with the concepts of impedance, AC voltage, current, and power, and includes basic filter circuits. This course emphasizes a common sense approach to using the measurement equipment and math skills used

in the study of non-resonant alternating current. Associate Degree Credit only and not Transferable.

053B Working with Resonant Alternating Current

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Military Electronics Technology 52B with a grade of "C" or better, or equivalent.

This is a course on resonant alternating current (AC) electronics designed to develop a practical familiarity with the concepts of bandwidth, Quality factor (Q), center frequency, and resonance, and includes basic filter circuits. This course emphasizes a common sense approach to using the measurement equipment and math skills used in the study of resonant alternating current. Associate Degree Credit only and not Transferable.

054A Basic Analog Circuits I

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of analog circuits, including diodes and diode circuits, transistor circuits, and power supplies. Emphasis is placed on identifying normally operating circuits and troubleshooting circuit faults. This course is equivalent to Modules 14 through 16 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: ET, FC, STG, IC, MN, GSE, CTM, CTT, PETT. Associate Degree Credit only and not Transferable.

054B Basic Analog Circuits II

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of analog circuits, including transistor circuits, oscillators and pulse circuits, trigger device circuits, operational amplifiers, and radio frequency (RF) electronics. Emphasis is placed on identifying normally operating circuits and troubleshooting common faults. This course is equivalent to Modules 17 through 22 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: ET, FC, STG, and IC. Associate Degree Credit only and not Transferable.

055A Working With Basic Analog Circuits I

**3.5 hours lecture, 3.5 units
Grade Only**

Prerequisite: Military Electronics Technology 54A with a grade of "C" or better, or equivalent.

This is a course on the basics of diode and Bipolar Junction Transistor (BJT) circuits and power supplies designed to develop a familiarity with their operation. Emphasis is placed on a practical approach to using the measurement equipment and math tools employed in the study of electronic devices. Associate Degree Credit only and not Transferable.

055B Working With Basic Analog Circuits II

**3.5 hours lecture, 3.5 units
Grade Only**

Prerequisite: Military Electronics Technology 54B with a grade of "C" or better, or equivalent.

This is a course on the basics of Field Effect Transistors (FETs), Thyristors, Multivibrators, Operational Amplifiers, and Optical Semiconductor Devices. The course is designed to develop an understanding and familiarity with their operation. Emphasis is placed on a practical approach to using the measurement equipment and math tools employed in the study of electronic devices. Associate Degree Credit only and not Transferable.

056A Basic Digital Electronics I

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics. Emphasis is placed on providing students with an overview of the development of digital electronics, digital and combinational logic functions, a variety of flip-flop, conversion and data circuits. This course is equivalent to Modules 23 through 27 of Naval Course Apprentice Technical Training (ATT) and is designed for the following ratings: ET, FC, STG, IC, MN, CTM, CTT, STS, FT, ETSS and PETT. Associate Degree Credit only and not Transferable.

056B Basic Digital Electronics II

**1.5 hours lab, .5 unit
Grade Only**

Prerequisite: Military Electronics Technology 50 with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics. Emphasis is placed on providing students with an overview of arithmetic counting and microprocessor operation. This course is equivalent to Modules 28 through 30 of Naval Course Apprentice Technical

Training (ATT) and is designed for the following ratings: ET, FC and MN. Associate Degree Credit only and not Transferable.

057A Working With Digital Electronics

3 hours lecture, 3 units
Grade Only

Prerequisite: Military Electronics Technology 56A with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics designed to develop a practical familiarity with digital combinational logic circuits including flip-flops, and data conversion circuits. Emphasis is placed on a common sense approach to developing and testing practical digital circuits. Associate Degree Credit only and not Transferable.

057B Working With Digital Electronics II

2.5 hours lecture, 2.5 units
Grade Only

Prerequisite: Military Electronics Technology 56B with a grade of "C" or better, or equivalent.

This is a course on the basics of digital electronics designed to develop a practical familiarity with data control, arithmetic logic circuits, counter applications, data multiplexing and basic microprocessor operation. Emphasis is placed on a common sense approach to developing and testing practical digital circuits. Associate Degree Credit only and not Transferable.

Nursing Education

	Units
Associate in Science Degree in Nursing:	
Registered Nurse Program (Generic)	72*
Licensed Vocational Nurse to Registered Nurse	71*
Registered Nurse Program LVN - Thirty Unit Option	29*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Nursing is a profession which provides health care to individuals of all ages. Nursing encompasses many activities including health promotion, health maintenance, health care during illness and injury and rehabilitation. Nurses apply knowledge from the biological, physical, behavioral and nursing sciences to care for clients in varied settings. The purpose of the San Diego City College Nursing program is to provide an educational opportunity for qualified individuals interested in a career in nursing. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). *Admission to the program is by special application. Informational packets and applications for the program are available from the Nursing Admissions Advisor. Prospective students are responsible for obtaining these materials in order to acquaint themselves with the admission procedure.* The San Diego City College Nursing Education program is fully accredited by the California Board of Registered Nursing (BRN) and the National League for Nursing Accrediting Commission (NLNAC). Inquiries regarding accreditation may be made by contacting the BRN at 400 R Street, Suite 4030, Sacramento, CA 94244, (916) 322-3350 or NLNAC at 61 Broadway, 33rd Floor, New York, NY 10006, (800) 669-1656.

Directed Clinical Practice Requirement

Students accepted into this program will be required to successfully complete Directed Clinical Practice/clinically-based courses held in health care facilities. These facilities require background checks and urine drug screening as a condition of placement.

Refusal to submit to a background check, or failure to meet clearance criteria established by the health care facility, may prevent placement in the Directed Clinical Practice/clinically-based course and thus, it may not be possible to successfully progress or complete the program.

Health care facilities also require adherence to strict standards of conduct. Facilities may refuse educational access to any person who does not adhere to the facility's standards of safety, health and ethical behavior. This may be cause for removal from the program.

Faculty/Staff	Office	Telephone
Nursing Admissions		
Advisor A-112		(619) 388-3471
Associate Dean & Director Registered Nurse Program		
Debbie Berg	T-322	(619) 388-3439
Director Vocational Nursing Program		
Catherine Shafer	T-318	(619) 388-3894
Department Clerk		
Hilda Rodriguez	T-324	(619) 388-3441
Faculty		
Demetrieves Armstrong	T-317	(619)388-3762
Raelene Brooks	T-325	(619) 388-3896
Dinnah Didulo		
-Masangkay	T-317	(619) 388-3897
Kris Hale	T-323	(619) 388-3340
Catherine Howell	T-320	(619) 388-3882
Pam Kersey-McCandless	T-323	(619) 388-3894
Linda Ocen-Odoge	T-321	(619) 388-3886
Dee Oliveri	T-320	(619) 388-3884
Rhona Porch	T-321	(619)388-3811

Career Options

Some careers in nursing require education beyond the associate degree. The Registered Nurse cares for clients of all ages in a variety of clinical areas. Registered Nurses may be employed at the entry level in a variety of settings such as hospitals, skilled nursing facilities, clinics and home health agencies.

Academic Programs

The Associate in Science degree in Nursing requires completion of the nursing courses. Additional general

education and graduation requirements for the associate degree are listed on page 64 in the catalog.

Associate in Science Degree: Nursing Education

Registered Nurse Program (Generic)

Program Prerequisites

Prerequisites in this program will be enforced. All program prerequisites must be completed with a grade of "C" or better. In addition, the combined grade-point average for prerequisites must be 2.5 or higher.

Prerequisites	Units
**BIOL 205, General Microbiology.....	5
BIOL 230, Human Anatomy	4
**BIOL 235, Human Physiology	4

**Must be completed within a seven-year period preceding qualifying date of eligibility. Eligibility refers to the date completed application materials including official transcripts are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Sample Curriculum Plan

Courses Required for the Major:	Units
Semester I:	
NRSE 101, Interactions in Nursing	1
NRSE 102, Fundamental Nursing Concepts & Skills I	4.5
NRSE 103, Fundamental Nursing Concepts & Skills II	4.5
NRSE 104, Pharmacology for Nursing Practice	1
* ENGL 101, Reading & Composition or equivalent ...	3
*Physical Education activity course.....	1
Semester II:	
NRSE 105, Adult Health Nursing I.....	5
NRSE 107, Adult Health Nursing II.....	5
*SOCO 101, Principles of Sociology OR	
*SOCO 110, Contemporary Social Problems or equivalent	3
*PSYC 101, General Psychology	3
Semester III:	
NRSE 202, Adult Health Nursing III	4.5
NRSE 203, Psychosocial & Gerontological Nursing...4.5	
*SPEE 103, Oral Communication OR	
*SPEE 135, Interpersonal Communication	3
*Humanities	3

Semester IV:

NRSE 204, Family Health Nursing.....	5
NRSE 205, Transition to the Registered Nurse Role ...	4
*American Institutions	3
*Physical Education activity course.....	1
Total Program Units = 72	

*It is strongly recommended that part or all of the general education requirements be completed prior to admission to the nursing education program or during summer sessions.

Associate in Science Degree: Nursing Education

Licensed Vocational Nurse to Registered Nurse (Advanced Placement)

Program Prerequisites

All program prerequisites must be completed with a grade of "C" or better. In addition, the combined grade-point average for prerequisites must be 2.5 or higher. A copy of a current and active California Vocational Nursing License must also be submitted with application materials.

Prerequisites	Units
**BIOL 205, General Microbiology.....	5
BIOL 230, Human Anatomy	4
**BIOL 235, Human Physiology.....	4

**Must be completed within a seven-year period preceding the qualifying date of eligibility. Eligibility refers to the date completed application materials including official transcripts are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Sample Curriculum Plan

Courses Required for the Major:	Units
Summer Session (or when offered):	
NRSE 201, Transition to Associate Degree Nursing	2
*ENGL 101, Reading & Composition or equivalent	3
Semester I:	
NRSE 202, Adult Health Nursing III.....	4.5
NRSE 203, Psychosocial & Gerontological Nursing...	4.5
*PSYC 101, General Psychology	3
*Humanities.....	3
Semester II:	
NRSE 204, Family Health Nursing.....	5
NRSE 205, Transition to the Registered Nurse Role ...	4

*SPEE 103, Oral Communication OR	
*SPEE 135, Interpersonal Communication	3
*SOCO 101, Principles of Sociology OR	
*SOCO 110, Contemporary Social Problems OR	
equivalent	3
Additional courses required for the associate degree:	
*American Institutions	6
*Physical Education activity courses	2
Credit for previous Vocational Nursing Education is given as earned credit upon completion of Associate Degree requirements.....	
	15
Total Program Units = 71	

Recommended electives: Nursing Education 108, 206, 290, 296.

*It is strongly recommended that part or all general education requirements be completed prior to admission to the nursing education program.

Nursing Education Registered Nurse Program, LVN Thirty-Unit Option

Program Prerequisites

All program prerequisites must be completed with a grade of "C" or better. A copy of a current and active California Vocational Nursing License must also be submitted with application materials.

Prerequisites	Units
**BIOL 205, General Microbiology.....	5
**BIOL 235, Human Physiology.....	4

**Must be completed within a seven-year period preceding the qualifying date of eligibility. Eligibility refers to the date completed application materials including official transcripts are filed with the Nursing Admissions Advisor. Students may also be required to complete Biology 107 and Chemistry 100 and 100L. Refer to Biology course descriptions for specific information.

Sample Curriculum Plan

Courses Required for the Major:	Units
Spring Session (or when offered):	
NRSE 201, Transition to Associate Degree Nursing	2
Semester I:	
NRSE 202, Adult Health Nursing III	4.5
NRSE 203, Psychosocial & Gerontological Nursing...	4.5
Semester II:	
NRSE 204, Family Health Nursing	5
NRSE 205, Transition to the Registered Nurse Role ...	4
Total Units = 29	

Note: Other states may not recognize the LVN Thirty-Unit Option as a method to satisfy the requirements for licensure as a Registered Nurse. Interested candidates are urged to contact the respective Boards of Nursing for additional information.

Transfer Information

Common university majors related to the field of Nursing include: Nursing.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Nursing Education (NRSE)

The hours listed in the catalog are based on an 18 week session. Nursing courses are scheduled in 9 week blocks, doubling lecture and lab hours listed.

101 Interactions in Nursing

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. Emphasis is placed on assisting the learner to develop and implement interpersonal communication skills within personal, professional and therapeutic relationships. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

102 Fundamental Nursing Concepts and Skills I 2.5 hours lecture, 6 hours lab, 4.5 units Grade Only

Prerequisite: Biology 205, 230, and 235, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Nursing Education 101 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

The course is intended for first year students pursuing an Associate of Science Degree in Nursing. This course introduces the learner to the philosophy and conceptual framework of the nursing program and roles of the associate degree nurse. Emphasis is on meeting the client's basic needs throughout the life cycle, utilizing the steps of the nursing process. Basic skills of client care are practiced in the college laboratory with supervised clinical experiences in acute care, long-term care, or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Fundamental Nursing Concepts and Skills II 5 hours lecture, 12 hours lab, 4.5 units Grade Only

Prerequisite: Nursing Education 102 with a grade of "C" or better or equivalent.

Corequisite: Nursing Education 104; and completion of or concurrent enrollment in Nursing Education 101 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course focuses on the development of physical assessment skills and fundamental principles of nursing care of clients throughout the life cycle. Basic skills of client assessment and care are practiced in the college laboratory with supervised clinical experiences in acute care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

104 Pharmacology for Nursing Practice 1 hour lecture, 1 unit Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. Emphasis is placed on introduction to basic concepts of pharmacology. Legal, ethical, psychological, cultural

and age-specific aspects of drug therapy will be presented. A nursing process approach to the principles of medication administration and dosage calculation will be included. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Adult Health Nursing I

**2.5 hours lecture, 7.5 hours lab, 5 units
Grade Only**

Prerequisite: Nursing Education 101, 103, and 104, each with a grade of "C" or better, or equivalent

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. Emphasis is placed on the need for nutrition, elimination, activity/rest/sleep, and neurological integrity in the adult client, utilizing the nursing process to achieve and maintain maximum functioning. Advanced nursing care skills are practiced in the college laboratory with supervised clinical experiences in acute care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Adult Health Nursing II

**2.5 hours lecture, 7.5 hours lab, 5 units
Grade Only**

Prerequisite: Nursing Education 101, 103, and 104, each with a grade of "C" or better, or equivalent

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. Emphasis is placed on the need for oxygenation, circulation and regulation in the adult client, utilizing the nursing process to achieve and maintain maximum functioning. Advanced nursing care skills are practiced in the college laboratory with supervised clinical experiences in acute care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

108 Nursing Skills Laboratory I

**.5 hour lecture, 1.5 hours lab, 1 unit
Credit/No Credit Only**

Corequisite: English 56 or Assessment Skill Level R5.

Current enrollment in the Nursing Education program.

This course is intended for first year students pursuing an Associate of Science Degree in Nursing. It provides students an additional opportunity for practice and mastery of designated psychomotor skills. There is a

review of related theoretical concepts and supervised practice of basic client care skills that are concurrently presented in the regular program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130A End of Life Care - Caring Connections

**.5 hour lecture, .5 unit
Credit/No Credit Only**

This course focuses on caring behaviors at the end of life that facilitate communication, development of a common understanding and a plan consistent with the patient's and family's values, attitudes, and goals. Common reactions to a terminal diagnosis and barriers to a common understanding are further identified. Interventions seek to alleviate suffering, and facilitate control and effective coping. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130B End of Life Care - Comfort

**.5 hours lecture,.5 units
Credit/No Credit Only**

This course focuses on providing comfort at end of life. It includes the physiology of pain, pain assessment, and pain management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Transition to Associate Degree Nursing

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Prerequisite: BIOL 205, 230 and 235, each with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended to facilitate the transition of advanced placement students (Licensed Vocational Nurses) into the Associate of Science Degree in Nursing. Emphasis is placed on concepts related to program philosophy, conceptual framework, cultural sensitivity, growth and development, nursing process, and role expectations. Advanced assessment skills are practiced in the on campus laboratory. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

202 Adult Health Nursing III

**2 hours lecture, 7.5 hours lab, 4.5 units
Grade Only**

Prerequisite: Nursing Education 105, 107, and 201.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for second year students pursuing an Associate of Science Degree in Nursing. Emphasis is placed on the need for oxygenation, circulation, regulation and safety in the adult client, utilizing the nursing process to achieve and maintain maximum functioning. Clinical experiences may include acute care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

203 Psychosocial and Gerontological Nursing
2 hours lecture, 7.5 hours lab, 4.5 units
Grade Only

Prerequisite: Nursing Education 105, 107, and 201.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for second year students pursuing an Associate of Science Degree in Nursing. It has two distinct components. The emphasis of the psychosocial component is on the effect of psychophysiologic problems on the client's ability to meet the need for love, belonging and self-esteem. The emphasis of the gerontological component is on the physiological and psychosocial changes of the older adult. The nursing process is utilized to achieve and maintain maximum functioning of the client throughout the life cycle. Clinical experiences may include acute care, chronic care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

204 Family Health Nursing
2 hours lecture, 9 hours lab, 5 units
Grade Only

Prerequisite: Nursing Education 202 and 203.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for second year students pursuing an Associate of Science Degree in Nursing. Emphasis is on the needs of the childbearing family and the well/ill child, utilizing the nursing process to assist the family to achieve and maintain maximum functioning. Clinical experiences may include acute care, long-term care or community settings. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Transition to the Registered Nurse Role
1.5 hours lecture, 7.5 hours lab, 4 units
Grade Only

Prerequisite: Nursing Education 202 and 203.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is intended for second year students pursuing an Associate of Science Degree in Nursing. The course focuses on the transition from student to staff nurse, emphasizing the responsibilities of planning, organizing, directing, and coordinating client care. The course includes the principles of leadership, delegation, time management, decision-making, collegial communication, group dynamics, conflict resolution and change. The clinical preceptorship experience requires the application of all previously learned concepts and skills. Acute care, long-term care or community settings will be utilized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Nursing Skills Laboratory II
.5 hour lecture, 1.5 hours lab, 1 unit
Credit/No Credit Only

Corequisite: English 56 or Assessment Skill Level R5.

Current enrollment in the Nursing Education program. This course is intended for first year students pursuing an Associate of Science Degree in Nursing. It provides students an additional opportunity for practice and mastery of designated psychomotor skills. There is a review of related theoretical concepts and supervised practice of advanced client care skills that are concurrently presented in the regular program. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Occupational Work Experience in Nursing Education

Hours by Arrangement, 1 - 4 units
Credit/No Credit Only

Prerequisite: Nursing 101, 102, 103, 104, 105, and 107, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units during the semester, including work experience.

A work-experience course authorized by the Board of Registered Nursing whereby a student is employed by or volunteers at a clinical site with which the Nursing Education Program has a current affiliation agreement. The clinical site supports the objectives of the course and provides direct supervision of students through RN mentors and preceptors. The student applies previously learned nursing theory and clinical skills to the performance of client care. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate

Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

**Hours by Arrangement, 1-3 Units
Credit/No Credit Only**

Limitation on Enrollment: Must obtain an Add Code from Program Director for registration.

This course provides students with an opportunity for additional research and academic or clinical experience in a particular area of nursing. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Vocational Nursing

040 Healthcare Essentials

**5.5 hours lecture, 5.5 units
Credit/No Credit Only**

This course is designed for students interested in entering a nursing or other health career program. Topics include strategies for success, interpersonal dynamics, medical terminology, safety issues, computer literacy, body structure and function, growth and development, ethical and legal responsibilities, and employment readiness. (FT) Not Applicable to Associate Degree and not a basic skills course.

041 Fundamentals of Vocational Nursing

**9.5 hours lecture, 9.5 units
Grade Only**

Prerequisite: Vocational Nursing 40 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 42 with a grade of "C" or better, or equivalent.

The Fundamentals of Vocational Nursing course is the introductory theory course in the ROP Vocational Nursing program. It provides a solid foundation for the nursing student to learn the background, basic skills, legal aspects, ethics, and processes of nursing. (FT) Associate Degree Credit only and not Transferable

042 Introductory Pharmacology for Vocational Nurses

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 40 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 41 with a grade of "C" or better, or equivalent.

The Introduction to Pharmacology course is the first of two pharmacology courses in the ROP Vocational Nursing program. It provides a solid foundation for the nursing student including a basic understanding of the nurse's role in medication administration and the uses of medications to treat and prevent illnesses. Drug actions, interactions, side effects, therapeutic monitoring, and adverse reactions are discussed and related to pathophysiology. (FT) Associate Degree Credit only and not Transferable.

043 Nutrition for Vocational Nurses**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 42 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 45 with a grade of "C" or better, or equivalent.

The Nutrition for Vocational Nurses course provides an introductory study of nutrition in health care to the ROP Vocational Nursing student. Nutrition is considered a vital component of the care of the whole person. The nursing student needs to have a basic understanding of the importance of nutrition to be able to assist and teach clients about making good choices according to their healthcare needs. The course is designed for the student progressing through the Vocational Nursing program. (FT) Not Applicable to Associate Degree and not a basic skills course.

045 Medical Surgical Vocational Nursing I**5.5 hours lecture, 16 hours lab, 10.5 units
Grade Only**

Prerequisite: Vocational Nursing 42 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 43 with a grade of "C" or better, or equivalent.

The Medical Surgical Vocational Nursing course is the first of two courses in the Vocational Nursing program covering nursing care of medical/surgical patients. The course includes a clinical component and focuses on each body system with related disorders, the pathophysiology, assessment findings, medical, surgical and nursing management of these specific disorders. The course covers related nutritional, pharmacological, growth and development, and psychosocial issues as appropriate. In addition, the special needs of older adults are explored. The course is designed to build upon knowledge and skills set obtained in prerequisite courses that comprise the Vocational Nursing program. (FT) Not Applicable to Associate Degree and not a basic skills course.

046 Maternal/Child and Mental Health Vocational Nursing**7 hours lecture, 16 hours lab, 12 units
Grade Only**

Prerequisite: Vocational Nursing 45 with a grade of "C" or better, or equivalent.

The Maternal/Child and Mental Health Vocational Nursing course enables the student to participate in the nursing care of the maternity client, newborn and family throughout pregnancy, labor, delivery, pediatric

and the postpartum period in both normal and high-risk circumstances. It also provides a solid foundation in mental health nursing. The clinical component provides practical applications of the course objectives. The course is designed for the student progressing through the Vocational Nursing program. (FT) Not Applicable to Associate Degree and not a basic skills course.

047 Medical Surgical Vocational Nursing II**3.5 hours lecture, 4 hours lab, 4.5 units
Grade Only**

Prerequisite: Vocational Nursing 46 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 48 and 49, each with a grade of "C" or better, or equivalent.

The Advanced Medical Surgical Vocational Nursing course is the second of two medical/surgical courses in the Vocational Nursing program. This course builds on the skills and knowledge base developed during Medical/Surgical Vocational Nursing I and continues to cover nursing care of medical surgical patients. The course focuses on body systems with related disorders, and the pathophysiology, assessment findings, medical, surgical and nursing management of these specific disorders. The course covers related nutritional, pharmacological, growth and development, and psychosocial issues as appropriate. In addition, the special needs of young and middle adults are also explored. This course is designed for the student in the last portion of the Vocational Nursing Program. (FT) Not Applicable to Associate Degree and not a basic skills course.

048 Advanced Pharmacology for Vocational Nurses**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 46 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 47 and 49, each with a grade of "C" or better, or equivalent.

The Advanced Pharmacology for Vocational Nurses course is the second of two pharmacology courses in the Vocational Nursing program. It builds on the basic pharmacology course to enable the nursing student to develop a broader understanding of the nurse's role in medication administration and how medications are used to treat and prevent illnesses. Drug actions, interactions, side effects, therapeutic monitoring, and adverse reactions are discussed and related to pathophysiology. Drug categories not studied in the introductory course are explored to complete the study

of pharmacology in healthcare. The course is designed for the student progressing through the Vocational Nursing Program with a base knowledge obtained in prerequisite courses. (FT) Not Applicable to Associate Degree and not a basic skills course.

049 Vocational Nursing Leadership

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Vocational Nursing 46 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Vocational Nursing 47 and 48, each with a grade of "C" or better, or equivalent.

This Vocational Nursing Leadership course prepares the student for professional practice and leadership as a licensed vocational nurse. It builds on the foundations of basic and advanced medical surgical nursing and provides an opportunity to learn the critical path to leadership development in the transition from nursing student to nursing leader. Students explore such areas as paradigm thinking, theoretical frameworks for management, searching for the perfect job, mentoring, the application process, becoming a change agent, conflict resolution, employee motivation, team building, assignments, coaching, and performance analysis within the context of the 21st Century healthcare system. The course is designed for the student in the final portion of the Vocational Nursing program. (FT) Not Applicable to Associate Degree and not a basic skills course.

Office Information Systems

See "Computer Business Technology" on page 191.

Personal Growth

Description

The Personal Growth program is designed for the first-time student at San Diego City College. The primary focus of the program is to help students develop critical thinking skills in relation to career, academic and life-planning goals.

Program Emphasis

Students are exposed to a variety of career assessment instruments which lead to greater self-understanding in relation to the decision making process in career and educational planning. Students become well versed in learning styles and theories, multicultural issues, and academic, community and campus resources.

Faculty

Rodrigo Reyes
John Rivera

Office

Telephone

(619)388-4910
(619)388-3176

Courses

Personal Growth (PERG)

025 Student Government

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: This course is not open to students with credit for Speech Communications 126A, B, or C.

The fundamentals of Student Government with emphasis on technique or democratic action among groups. Actual practice in various phases of Student Government will be provided. (FT) Associate Degree Credit only and not Transferable.

030 Career Planning

**1-3 hours lecture, 1-3 units
Letter Grade or Credit/No Credit Option**

This course is designed to assist students in making career choices. Topics include self-concept, values, interests, skills assessment, understanding the data/people/things orientation of work, job satisfiers,

exploration of career information, and the decision-making process. (FT) Associate Degree Credit only and not Transferable.

032 Academic and Financial Planning

**.44 - .5 hours lecture, 0 units
Credit/No Credit Only**

Limitation on Enrollment: This course is open only to students who have completed the Mathematics and English Assessment Skill Level tests.

This course is designed to familiarize students with financial aid resources available to help them meet educational expenses. These resources include college and financial aid satisfactory academic progress policies; federal/state regulations for determining and maintaining eligibility for financial aid; student rights and responsibilities in receiving aid; strategies on becoming responsible consumers; money management; and accessing outside student aid resources. Emphasis is placed on effective use of all available on-campus resources and the development and implementation of a Student Educational Plan to meet educational objectives. (FT) Credit does not apply to the associate degree.

120 College Success and Lifelong Learning

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Personal Growth 127. This course teaches success strategies to enhance academic and lifelong learning skills. Students explore topics such as motivation and attitudes, values, goal setting, decision-making processes, critical and creative thinking, personal health topics, interpersonal communication, developmental psychology, and learning and personality theories, as well as other techniques for maximizing their abilities to succeed as lifelong learners. Students apply these topics as they relate to their self-development as integrated physiological and psychological entities and acquire strategies to effectively deal with issues in their personal lives and educational and career plans. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

127 College Success Skills

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and completion of or concurrent enrollment in English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course examines the techniques used to enhance academic skills in order to achieve subject matter mastery and develop strategies for success in a diverse society. Critical thinking skills are interwoven throughout the course by exploring areas such as motivation and attitudes, stress management, creativity, interpersonal communication, and personal health. Topics from developmental psychology, learning theory and personality theory are presented as a foundation for this course. The course is designed for new or re-entry students and others who can benefit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140 Life Skills and Personal Adjustment

1-3 hours lecture, 1-3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Students learn and apply personal achievement principles, coping strategies, and life skills that develop each area of emotional, social, educational, and professional life. Emphasis is on gaining mastery in self-esteem and compassion, self-discipline, self-responsibility, self-assertion, and living a consciously balanced life in pursuit of defined educational, career, and life goals. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Philosophy

	Units
Associate in Arts Degree:	
Philosophy	18*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

The first objective of the philosophy program is to teach students how to think critically emphasizing analytic reasoning. In addition, students are prepared for university-level philosophy courses. The study of philosophy acquaints students with the nature of philosophical activity and helps them increase critical thinking skills about fundamental philosophic concerns such as the nature of correct reasoning, the scope and limits of human knowledge, characteristics of reality and questions of value and obligation. Philosophy relates to many other academic disciplines and stresses systematic and abstract thought.

Program Emphasis

The Philosophy curriculum meets general education Humanities requirements for both the associate degree and universities and prepares for transfer to university majors.

Faculty	Office	Telephone
Catherine Harlow	C-216	(619) 388-3013
William Stewart	T-309A	(619) 388-3602

Career Options

Most careers in this list require education beyond the associate degree. A sample list of careers in which background knowledge of philosophy is appropriate

include: education, human service vocations, law, management, medicine, publishing, scientific research, teaching, and theology.

Academic Programs

The associate degree in philosophy requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. The associate degree requires a minimum of 60 units.

Associate in Arts Degree: Philosophy

Courses Required for the Major:	Units
PHIL 100, Logic and Critical Thinking.....	3
PHIL 101, Symbolic Logic.....	3
Select one of the two-semester sequences:	
PHIL 102A & 102B, Introduction to Philosophy, Reality & Knowledge & Values OR	
PHIL 104A (Mesa) & 104B (Mesa), History of Western Philosophy.....	6
Select six units from:	
Philosophy 102A, 102B, 104A, 104B, 106, 107, 110, 111, 125, 290, 296	6
Total Units = 18	

Recommended electives: Humanities 106, Philosophy 205.

Transfer Information

Common university majors related to the field of Philosophy include:

Human Communication, Liberal Studies, Philosophy, Religious Studies.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Philosophy (PHIL)

100 Logic and Critical Thinking

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course explores the relationship of communications and critical thinking with a focus on good reasoning and the impediments to its mastery. This course emphasizes the development of skills in logical processes including familiarity with the more common fallacies. This course is designed for students learning to apply principles of critical thinking to the practical problems of everyday life. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PHIL 6).

101 Symbolic Logic

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50; and Philosophy 100 with a grade of "C" or better, or equivalent.
Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course studies the elements of symbolic logic, sentential calculus and quantification theory, identity, definite descriptions, natural deduction and structure of language. This course may be of interest to students pursuing studies in computer science. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

102A Introduction to Philosophy: Reality and Knowledge

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course provides an introductory study of the aims, methods, types and problems of philosophy and philosophical inquiry. Discussions and readings relating to the nature of reality and problems of knowledge are emphasized. Materials for this survey of philosophical

activity, orientations and views of philosophers may be drawn from classical and contemporary thinkers. Students are encouraged to articulate, analyze and evaluate their own beliefs/positions in the context of meaningful philosophical inquiry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PHIL 2).

102B Introduction to Philosophy: Values

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course provides an introductory study of the aims, methods, types and problems of philosophy and philosophical inquiry focusing on values and their place in an individual's daily life. Materials for this survey of philosophical activity, orientations and views of philosophers may be drawn from classical and contemporary thinkers. Students are encouraged to articulate, analyze and evaluate their own beliefs/positions in the context of meaningful philosophical inquiry regarding value theory. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PHIL 4).

104A History of Western Philosophy

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course explores the issues and problems associated with philosophy and philosophical activity as they are illustrated in the history of Western philosophy. Studies in this course focus on representative thinkers of the Classical and/or Medieval periods, their cultural milieu, and their attempts to resolve perennial philosophical issues and problems. This course may be of interest to students pursuing studies in History and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PHIL 8) (CAN PHIL SEQ A = PHIL 104A + 104B).

104B History of Western Philosophy

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent.

This course explores the problems associated with philosophy and philosophical activity as they are illustrated in the history of Western philosophy from the Renaissance period through the 19th Century. Studies in this course focus on representative thinkers of the Renaissance and/or Modern periods, their cultural milieu, and their attempts to resolve perennial philosophical issues and problems. This course may be of interest to students pursuing studies in History and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN PHIL 10) (CAN PHIL SEQ A = PHIL 104A + 104B).

106 Asian Philosophy

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course explores the aims, methods, issues and problems exemplified in Asian philosophy and philosophical activity. Studies in this course survey significant inquiries, orientations and perspectives exemplified in Asian philosophy as well as Asian perspectives on perennial questions relating to the nature of the universe, the status and meaning of mankind, and the qualities characterizing the good life. Students are encouraged to engage in independent research, analysis and formulation. This course may be of special interest to students pursuing Pacific Rim or International Studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

107 Reflections on Human Nature

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course explores the issues and problems exemplified in process of meaningful philosophical activity relating to the topic of human nature. Studies in this course survey representative theories and philosophical reflections relating to the notions of human nature, the individual person, and human characteristics in general. Material for this survey may be drawn from classical and contemporary thinkers, scientific and religious orientations. Students are encouraged to engage in independent research, analysis and formulation. This course may interest students pursuing studies in behavioral and/or social sciences. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Course List.

108 Perspectives on Human Nature and Society

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course explores the topics of human nature and human societal configurations. Material for study may be selected from classical and contemporary thinkers. Studies in this course survey representative theories and philosophical reflections that explore the relation between theories regarding human nature and the nature of society, the state, and government with an emphasis on experiential elements of meaningful human existence and notions of ideal society. This course may be of particular interest to students pursuing studies in behavioral, social or political science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

111 Philosophy in Literature

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is designed to provide an introduction to the aims, methods, issues and problems associated with philosophy and philosophical activity. In this course students read and analyze selected classical and/or contemporary literature which portrays or dramatizes perennial philosophical questions, issues and themes relating to such topics as the nature of reality, the notion of the self, the issue of choice and determinism, the problem of good and evil, and characteristics of the good life. This offering may be of interest to students pursuing studies in literature or in the behavioral and/or social sciences. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

125 Philosophy of Women

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This general education course is of interest to students wishing to explore the philosophical study of questions relating to women. It provides an introductory study of

concepts of womanhood and feminism as they have found expression in mythic, classic, medieval and major modern philosophical traditions. Images, roles, and beliefs about women are explored with respect to their historical and global impact and philosophical relevance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

126 Introduction to Philosophy of Contemporary Gender Issues

3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This lower division course provides an introduction to the concepts of gender and gender relations for the student interested in the development of contemporary gender issues as they relate to philosophy. The images, roles, and beliefs about gender and gender relations as they vary across cultures will be explored with respect to their impact in our everyday lives and the larger societies within which we live. This course may be of special interest to students going into gender studies and women's studies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

205 Critical Thinking and Writing in Philosophy

3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This critical thinking and writing seminar in Philosophy is designed to enhance the student's critical thinking, writing, and research skills in preparation for upper division academic activity. Issues addressed in this class may involve various areas of human experience and aspiration: metaphysical, cosmological, scientific, political, ethical, aesthetic, and religious. Together with the application of basic principles of deduction and induction, special attention is given to identifying and avoiding fallacies in reasoning and to techniques and aids to research, reasoning, and writing. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Philosophy

1.5 - 6 hours lab, .5 - 2 units
Credit/No Credit Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: Enrollment in an approved related course; Must obtain an Add Code from instructor for registration.

This course employs self-paced multimedia systems to assist students to reach specific learning objectives, and is intended to be supplementary to designated courses. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Photography

See "Visual and Performing Arts" on page 394.

Physical and Earth Sciences

Astronomy, Chemistry, Geography,
Geology, Physics

	Units
Associate in Science Degree:	
Astronomy	32*
Chemistry	48*
Geography	21*
Geology	33-38*
Physics	38*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Earth and physical sciences, including astronomy, chemistry, geography, geology, and physics are disciplines classified as natural sciences. They generally involve nonliving materials and the principles of fundamental relationships and laws in the universe.

Program Emphasis

These programs are designed to prepare students with basic concepts in astronomy, chemistry, geography, geology and physics which provide the foundation for upper division study in a baccalaureate institution and also satisfy general education requirements.

Faculty	Office	Telephone
Theresa Bolanos	M-208	(619) 388-3642
James Covalt	M-208	(619) 388-3355
Nancy Crispen	M-207	(619) 388-3612
Ram Gurumurthy	M-210	(619) 388-3641
Poovan Murugesan	M-210	(619) 388-3360
Gerardo Scappaticci	M-209	(619) 388-3356
Peter Selkin	M-209	(619) 388-3643

Career Options

Most careers in earth and physical sciences fields require education beyond the associate degree and many require a graduate degree. A brief list of career options in the physical sciences includes: astronomer, biophysicist, biochemist, chemist, earth scientist, environmentalist, geographer, geologist, geophysicist,

meteorologist, oceanographer, paleontologist, physicist and physical science instructor.

Academic Programs

The associate degrees in Physical and Earth Sciences, Astronomy, Chemistry, Geography, Geology and Physics, require completion of the courses listed for each degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Transfer Information

Common university majors related to the field of Physical and Earth Studies include:

Astronomy, Biochemistry, Chemical Engineering, Chemical Physics, Chemistry, Earth Studies and Sciences, Environmental Chemistry, Geographic Information Systems, Geography, Geology, Hydrologic Science, Meteorology and Oceanography, Physical Sciences, Physics.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Associate in Science Degree: Physical and Earth Sciences

Astronomy

Courses Required for the Major:	Units
ASTR 101, 109 Descriptive Astronomy AND	
Practice in Observing	3,1
MATH 150, Calculus I.....	5
MATH 151, Calculus II	4
MATH 252, Calculus III	4
PHYS 195 Mechanics,	5
PHYS 196, Electricity & Magnetism	5
PHYS 197, Waves, Optics & Modern Physics	5
Total Units = 32	

Recommended electives: Chemistry 200, 200L

Associate in Science Degree: Physical and Earth Sciences

Chemistry

Courses Required for the Major:	Units
CHEM 200, 200L, General Chemistry I, Lecture & Laboratory	3,2
CHEM 201, 201L, General Chemistry II, Lecture & Laboratory	3,2
CHEM 231, 231L, Organic Chemistry, Lecture & Laboratory	3,2
CHEM 251, Analytical Chemistry	5
MATH 150, Calculus I	5
MATH 151, Calculus II	4
MATH 252, Calculus III	4
PHYS 195, Mechanics	5
PHYS 196, Electricity and Magnetism	5
PHYS 197, Waves, Optics, and Modern Physics	5
Total Units = 48	

Recommended electives: Chemistry 233, 233L, 290, 296; Physics 125, 126.

Associate in Science Degree: Physical and Earth Sciences

Geography

Courses Required for the Major:	Units
GEOG 101 & 101L, Physical Geography, Lecture & Laboratory	3,1
GEOG 102, Cultural Geography	3
ECON 120, Principles of Economics I	3
ECON 121, Principles of Economics II	3
Select eight units from:	
BIOL 107; CHEM 100, 100L, 200, 200L; MATH 107, 107L, 119, 121, 150; POLI 102; PSYC 258	8
Total Units = 21	

Recommended electives: Geography 290, 296;
Physical Science 100, 101.

Associate in Science Degree: Physical and Earth Sciences

Geology

Courses Required for the Major:	Units
GEOL 100, 101, General Geology, Lecture & Laboratory	3,1
BIOL 105 & 106 or 107, Biology, Lecture & Laboratory	3,1 or 4
CHEM 200, 200L, General Chemistry I, Lecture & Laboratory	3,2

CHEM 201, 201L, General Chemistry II, Lecture & Laboratory	3,2
MATH 150, Calculus I	5
PHYS 121A, 180A, & PHYS 121B, 180B General Physics I, II, Lecture, Lab & Problem Solving for General Physics, OR PHYS 195, Mechanics, AND PHYS 196, Electricity & Magnetism AND PHYS 197, Waves, Optics & Modern Physics	10 or 15
Total Units = 33 - 38	

Recommended electives: Geology 290; Mathematics 107, 107L, 151, 252; a foreign language; and a course in mechanical drawing.

Associate in Science Degree: Physical and Earth Science

Physics

Courses Required for the Major:	Units
CHEM 200, 200L, General Chemistry I, Lecture & Laboratory	3,2
CHEM 201, 201L, General Chemistry II, Lecture & Laboratory	3,2
MATH 150, Calculus I	5
MATH 151, Calculus II	4
MATH 252, Calculus III	4
PHYS 195, Mechanics	5
PHYS 196, Electricity and Magnetism	5
PHYS 197, Waves, Optics, and Modern Physics	5
Total Units = 38	

Recommended electives: Physics 125, 126, 290.
Astronomy 101 and 109.

Courses

Astronomy (ASTR)

101 Descriptive Astronomy

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

This course is an introductory survey of contemporary astronomy. Topics covered include the solar system, stars and stellar evolution, the Milky Way galaxy and cosmology. This course is designed for students planning to take advanced courses in the Physical and Earth Sciences and for transfer students planning to major in astronomy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

109 Practice in Observing**3 hours lab, 1 unit****Letter Grade or Credit/No Credit Option**

Corequisite: Completion of or concurrent enrollment in Astronomy 101 with a grade of "C" or better, or equivalent.

This laboratory course, emphasizing field experience, includes constellation study, interpretation of celestial cycles, and descriptive observations (with and without telescopes) of a wide variety of astronomical objects and events. The course is designed to supplement Astronomy 101 as a general-education laboratory course in the natural science area. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Chemistry (CHEM)**100 Fundamentals of Chemistry****3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Corequisite: Chemistry 100L

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in CHEM 200.

This course is an introductory study of the language and tools of chemistry. Basic concepts of the structure, properties, interactions and changes of matter and energy are studied, both qualitatively and quantitatively. Applications to everyday experiences are considered. This course is taken by students majoring in nursing or allied health sciences and provides a foundation for further coursework in chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after Chemistry 200. (CAN CHEM 6, when taken with CHEM 100L). (CAN CHEM SEQ B = CHEM 100 + 100L + 130 + 130L).

100L Fundamentals of Chemistry Laboratory**3 hours lab, 1 unit****Letter Grade or Credit/No Credit Option**

Corequisite: Chemistry 100.

Advisory: English 51 and English 56 and Math 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

This laboratory course is designed to illustrate the principles of inorganic and physical chemistry as presented in Chemistry 100 and to familiarize students with common laboratory equipment and data collection methods. Along with Chemistry 100, this course is taken by students majoring in nursing or allied health sciences and provides a foundation for further lab work in chemistry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after Chemistry 200. (CAN CHEM 6, when taken with CHEM 100) (CAN CHEM SEQ B = CHEM 100 + 100L + 130 + 130L).

130 Introduction to Organic and Biological Chemistry**3 hours lecture, 3 units****Letter Grade or Credit/No Credit Option**

Prerequisite: Chemistry 100 and Chemistry 100L, each with a grade of "C" or better, or equivalent.

Corequisite: Chemistry 130L.

Chemistry 130 is a one-semester course that introduces the basic physical, chemical and structural features of organic and biological compounds. Topics such as bonding, saturated and unsaturated hydrocarbons, the chemistry of organic functional groups, and the properties of important biological compounds such as carbohydrates, fats, and proteins are covered. The importance of these compounds in our daily lives is emphasized. The course is designed for nursing, nutrition, and allied health majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab). (CAN CHEM 8, when taken with CHEM 130L) (CAN CHEM, SEQ B = CHEM 100 + 100L + 130 + 130L).

130L Introduction to Organic and Biological Chemistry Laboratory**3 hours lab, 1 unit****Letter Grade or Credit/No Credit Option**

Prerequisite: Chemistry 100 and Chemistry 100L, each with a grade of "C" or better, or equivalent.

Corequisite: Chemistry 130.

This is a one-semester laboratory course that illustrates the principles presented in Chemistry 130. Students are introduced to common organic chemistry laboratory equipment, fundamental organic and biochemical reactions, tests and techniques. Techniques covered include chromatography, recrystallization, and distillation. Tests and reactions of common organic functional groups, carbohydrates, fats, and amino acids are covered. Synthesis of a medicinal compound such as aspirin or a nitrogen-based analgesic is also covered. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab). (CAN CHEM 8, when taken with CHEM 130) (CAN CHEM SEQ B = CHEM 100 + 100L + 130 + 130L).

152 Introduction to General Chemistry

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Chemistry 152L.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Chemistry 151. This is a one-semester preparatory course in chemistry consisting of an intensive study of some of the principles of inorganic and physical chemistry that are needed before taking Chemistry 200. Topics include but are not limited to atomic structure, chemical nomenclature, periodicity, chemical equations, stoichiometry, solutions, intermolecular forces, and gas laws. The course emphasizes problem solving and chemical calculations. It is intended for those students majoring in one of the natural sciences, engineering, or related curricula who do not meet the entrance requirements of Chemistry 200. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for Chemistry 100, 100L or 152, 152L if taken after Chemistry 200.

152L Introduction to General Chemistry Laboratory

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Completion of or concurrent enrollment in Chemistry 152 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Chemistry 151L. Chemistry 152L is a one-semester laboratory course intended as the companion course for Chemistry 152. Topics include chemical measurement, significant figures, laboratory safety, laboratory techniques, chemical reactions and stoichiometry. An emphasis is placed on problem solving, data analysis and chemical calculations. It is intended for those students majoring in one of the natural sciences, engineering or related curricula who do not meet entrance requirements of Chemistry 200. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L or 152, 152L if taken after Chemistry 200.

200 General Chemistry I - Lecture

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 152 and 152L (formerly Chemistry 151), each with a grade of "C" or better, or equivalent; and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Chemistry 200L.

This is the first course in a two-course sequence in general chemistry and is intended for students majoring in science or satisfying prerequisites for professional schools. The course covers the principles and laws of inorganic chemistry with emphasis on quantitative mathematical problem solving. Topics include chemical equations, stoichiometry, atomic theory and its relationship to periodicity of the elements, bonding theories, molecular geometry, solution chemistry, liquids, solids, and the gas laws. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CHEM 2, when taken with CHEM 200L) (CAN CHEM SEQ A = CHEM 200 + 200L + 201 + 201L).

200L General Chemistry I - Laboratory

6 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Corequisite: Chemistry 200.

This is the first semester laboratory course in a two-course sequence in general chemistry. It is intended for students majoring in science or satisfying prerequisites

for professional schools. The course illustrates the fundamental principles and laws of chemical behavior and the properties of matter in terms of laboratory experiments, with emphasis on quantitative, mathematical problem-solving. Topics include techniques of data analysis, chemical formulae and nomenclature, chemical equations and stoichiometry, atomic theory and its relationship to the periodic properties of the elements, theories of chemical bonding, molecular geometry, states of matter, solution chemistry, and gaseous behavior. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CHEM 2, when taken with CHEM 200) (CAN CHEM SEQ A = CHEM 200 + 200L + 201 + 201L).

201 General Chemistry II Lecture

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 200 and Chemistry 200L, each with a grade of "C" or better, or equivalent.

Corequisite: Chemistry 201L.

This is the second course in a two-course sequence in general chemistry and is intended for students majoring in science or satisfying prerequisites for professional schools. The course covers the principles and laws of physical and inorganic chemistry with emphasis on quantitative, mathematical problem solving. Topics include chemical kinetics, chemical equilibrium, acid-base theory, thermochemistry, thermodynamics, electrochemistry, coordination chemistry, and nuclear chemistry. The course also includes an introduction to organic and biochemistry. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CHEM 4, when taken with CHEM 201L) (CAN CHEM SEQ A = CHEM 200 + 200L + 201 + 201L).

201L General Chemistry II Laboratory

6 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Corequisite: Chemistry 201.

This is the second semester laboratory course in a two-course sequence in general chemistry and is intended for students majoring in science or satisfying prerequisites for professional schools. The course illustrates the fundamental principles of physical and inorganic chemistry with some organic chemistry in terms of laboratory experiments. Topics include techniques of data analysis, chemical kinetics, chemical equilibrium, acids, bases, and salts, thermochemistry, electrochemistry, coordination chemistry and organic chemistry. Wherever appropriate and whenever possible, computer skills are introduced and applied to data

analysis, laboratory simulations, and computer interfacing with laboratory equipment. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CHEM 4, when taken with CHEM 201) (CAN CHEM SEQ A = CHEM 200 + 200L + 201 + 201L).

231 Organic Chemistry I - Lecture

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 201 and Chemistry 201L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 231L with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is the first semester of a one-year course in Organic Chemistry. Major themes include, but are not limited to, bonding and molecular structure, nomenclature, reaction mechanisms, synthesis, and an introduction to conjugated and aromatic carbon based compounds. An emphasis is placed on the reactions of aliphatic compounds such as alkanes, cycloalkanes, alkenes, alkynes, and alkyl halides. The organic chemistry literature, and spectral interpretation using techniques such as infrared and nuclear magnetic spectroscopies, are introduced to support the above topics. This course is designed for undergraduates pursuing a degree in the chemical sciences, training in chemical technology, and other transfer students who need organic chemistry as part of the formal preparation for their major; for example, molecular biology, premedical, pre dental, and pharmacy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

231L Organic Chemistry I - Laboratory

6 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 201 and Chemistry 201L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 231 with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This is a laboratory course designed to illustrate the principles presented in Chemistry 231. The emphasis is on the determination of physical properties and the

separation, purification and identification of organic compounds. The course acquaints students with the equipment, glassware, techniques and safe practices specific to the organic chemistry laboratory. Techniques such as measurements of physical constants, recrystallization, extraction, distillation and chromatography are used in the synthesis and/or characterization of selected classes of organic compounds. These classes include, but are not limited to, alkanes, alkenes, alkynes, alkyl halides, and alcohols. The organic chemistry literature, and spectral interpretation using techniques such as infrared and nuclear spectroscopies, are introduced to support the above topics. This course is designed for undergraduates pursuing a degree in the chemical sciences, training in chemical technology, and those students who need organic chemistry as part of the formal preparation for their major; for example, molecular biology, premedical, pre dental, and pharmacy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with lab).

233 Organic Chemistry II - Lecture

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 231 and Chemistry 231L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 233L with a grade of "C" or better, or equivalent.

This course is the second semester of a one-year sequence in Organic Chemistry. It is designed for students pursuing a baccalaureate degree in the chemical sciences or in majors such as premedical, pre dental or pharmacy; and for students training for careers in some chemical technology fields. The topics covered include, but are not limited to, molecular structure, nomenclature, reaction mechanisms, and synthesis. An emphasis is placed on the reactions of selected classes of organic compounds, such as alcohols, ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines, benzenoid and heterocyclic aromatics and their derivatives, carbohydrates, lipids, amino acids and peptides, and nucleic acids. The study of these molecules provides a backdrop for exploring the factors that govern particular transformations within a synthetic sequence. The use of print and electronic media and the interpretation of spectroscopic information (such as infrared, nuclear magnetic resonance, and ultraviolet-visible spectroscopies, and mass spectrometry) for the

analysis and differentiation of molecular structures is continued. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

233L Organic Chemistry II - Laboratory

6 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 231 and Chemistry 231L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 233 with a grade of "C" or better, or equivalent.

This course is the second semester of a one-year sequence in Organic Chemistry Laboratory and is designed to illustrate the principles presented in Chemistry 233. It is intended for students pursuing a baccalaureate degree in the chemical sciences or in majors such as premedical, pre dental or pharmacy; and for students training for careers in some chemical technology fields. The emphasis is on synthesis, purification and/or characterization of selected classes of organic compounds, including but not limited to aromatics, alcohols, aldehydes and ketones, carboxylic acids, amines, and simple examples of bio-organic molecules. Additional emphasis is placed on multi-step synthetic pathways and product identification using selected methods of qualitative organic analysis such as wet chemical and advanced spectroscopic techniques. Variation of scale from micro- to macro-quantities, and more advanced separation and analytical techniques, distinguish the level of this course from Organic Chemistry I Laboratory. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

251 Analytical Chemistry

3 hours lecture, 6 hours lab, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Chemistry 201 and Chemistry 201L and Mathematics 150, each with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This is a course in quantitative analysis. Major topics include theory and practice of gravimetric and volumetric methods of chemical analysis and introduction to instrumental methods of analysis with a focus on precision and accuracy of experimental data. The target audience for Chemistry 251 is students majoring in chemistry or biochemistry and others who need the course for career advancement. It is

recommended that students who plan to enroll in this course do so the semester following completion of Chemistry 201. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN CHEM 12).

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Geography (GEOG)

101 Physical Geography

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course examines the major world patterns of the physical environment. The course covers the fundamental information and processes dealing with the earth's landforms, atmosphere, natural vegetation, water, and soils, along with the appropriate use of maps and charts. This course is of interest to anyone seeking an understanding of the earth's physical processes and mechanisms. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GEOG 2) (CAN GEOG 6, when taken with GEOG 101L).

101L Physical Geography Laboratory

**3 hours lab, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in Geography 101 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M20.

This course requires practical observations and applications of the geographic grid, atlases and topographic maps, weather and climate, natural vegetation and soils, and landforms. Exercises are

designed to supplement Physical Geography 101. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GEOG 6, when taken with GEOG 101).

102 Cultural Geography

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is an introduction to thematic cultural geography. The elements covered include population, race, language, religion, settlement patterns, political organization, economic activities, industry, and the regional distribution of these elements. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GEOG 4).

104 World Regional Geography

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course provides a critical survey of the physical, political, and economic characteristics of the major geographical regions of the world. The regions examined are Europe, North America, Latin American, Africa, Asia, Australia, and the Pacific Rim. Analysis of concepts such as spatial distribution of particular phenomena, factors that change regions, and human and environment interactions are explored. This course is designed to serve as an elective in the social sciences as part of a general education requirement for transfer students. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Geology (GEOL)

100 General Geology

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This course investigates the physical characteristics of the earth as a whole, and the past, present, and future evolutionary processes affecting it. Primary topics include earth materials, geologic time, uniformitarianism, the fossil record, and plate tectonics. The course is designed for those students with a general interest in geology or earth science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GEOL 6) (CAN GEOL 2, when taken with GEOL 101).

101 General Geology Laboratory

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Corequisite: Completion of or concurrent enrollment in Geology 100 with a grade of "C" or better, or equivalent.

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

This laboratory course covers mineral and rock identification, landforms, topographic/geologic map interpretation, and geologic structures. The course is designed to supplement Geology 100 with laboratory experience. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GEOL 2, when taken with GEOL 100).

104 Earth Science

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course investigates Earth's major physical systems, including the lithosphere, hydrosphere, and atmosphere, as well as Earth's place in the solar system. As such, this course provides a brief synthesis of pertinent topics in geology, physical geography, oceanography, meteorology, and astronomy. It is intended for those with a general interest in the Earth sciences and those wishing to satisfy requirements for a California Multiple Subject Teaching Credential. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Advisory: Geology 100 and Geology 101, each with a grade of "C" or better, or equivalent; and English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

For students who wish to study special problems. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Geographic Information Systems (GISG)

104 Geographic Information Science and Spatial Reasoning

2.5 hours lecture, 1.5 hours lab, 3 units

Grade Only

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

This is a survey course designed to provide an introductory overview of geographic information systems (GIS), cartography, remote sensing, spatial analysis, and global positioning systems (GPS). Students will learn how these critical technologies are used in addressing human and environmental problems. The lectures and lab exercises will provide an introductory knowledge of GIS including map interpretation, georeferencing, and spatial data management. Topics will include how to use spatial data to visualize information and identify spatial patterns. Topics include basic GIS concepts such as query and map overlay. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Physical Science (PHYN)

100 Survey of Physical Science

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 42 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R4 and M20; and concurrent enrollment in Physical Science 101 with a grade of "C" or better, or equivalent.

This course is an introductory survey of the fundamental concepts of astronomy, geology, chemistry and physics and the interrelationships among these disciplines. Emphasis is placed on the ways in which the physical sciences affect life on the planet and the role discipline plays in addressing issues and problems related to energy, ecology and environmental sustainability. This course is recommended for students planning to major in geography and/or planning to transfer to a four-year institution. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit if taken after a college level course in Chemistry or Physics.

101 Survey of Physical Science Laboratory

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Corequisite: Completion of or concurrent enrollment in Physical Science 100 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M40.

This course introduces students to the science laboratory and is designed to demonstrate the fundamental concepts of astronomy, geology, chemistry and/or physics as presented in Physical Science 100. Emphasis is placed on the application of the scientific method and collaborative learning. This course is recommended for students planning to major in geography and/or planning to transfer to a four-year institution. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit if taken after a college level course in Chemistry or Physics.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296),

Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Physics (PHYS)

100 Introductory Physics

3 hours lecture, 3 hours lab, 4 units

Letter Grade or Credit/No Credit Option

Advisory: Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

This course is designed for transfer-level students or for those wanting to acquire basic knowledge in physics with a minimum preparation in mathematics. A comprehensive coverage of subject matter in physics is presented, including mechanics, wave motions, thermodynamics, optics, electromagnetism, atomic and nuclear physics. Emphasis is on the conceptual aspects, including explanation of natural phenomena. The learning of concepts is reinforced through laboratory work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121A General Physics Lab

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Corequisite: Completion of or concurrent enrollment in Physics 180A with a grade of "C" or better, or equivalent.

This laboratory course is designed to accompany Physics 180A. Emphasis is placed on illustrating the properties of matter, mechanics, heat and sound through laboratory experiments (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

(CAN PHYS 2, when taken with PHYS 120A) (CAN PHYS SEQ A = PHYS 120A + 121A + 120B + 121B).

121B General Physics Lab

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Physics 180B with a grade of "C" or better, or equivalent.

This laboratory course is designed to accompany Physics 180B. Emphasis is placed on illustrating the principles of electricity, magnetism, light and modern physics through laboratory experiments. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.
(CAN PHYS 4, when taken with PHYS 120B) (CAN PHYS SEQ A = PHYS 120A + 121A + 120B + 121B).

125 General Physics

4 hours lecture, 3 hours lab, 5 units
Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 104 or Mathematics 116, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120A, 121A, 124A, 125A, or 195.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of matter, mechanics, heat and sound. This course is intended for students taking liberal arts and/or pre-professional courses that do not require physics with calculus. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

126 General Physics II

4 hours lecture, 3 hours lab, 5 units
Letter Grade or Credit/No Credit Option

Prerequisite: Physics 125 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120B, 121B, 124B, 125B, 195B or 196.

This second course in a two-part introductory survey explores the concepts and principles of physics. Topics include electricity, magnetism, light, and modern physics. This course is intended for students taking liberal arts and/or pre-professional courses that do not require physics with calculus. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum

credit, one series. Deduct credit for duplication of topics.

180A General Physics I

4 hours lecture, 4 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Mathematics 121 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120A and Physics 125A, or credit or concurrent enrollment in Physics 124A.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of matter, mechanics, heat and sound in order to make calculations and solve fundamental physics problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

180B General Physics II

4 hours lecture, 4 units

Letter Grade or Credit/No Credit Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120B and Physics 125B, or credit or concurrent enrollment in Physics 124B.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of electricity, magnetism, light and modern physics in order to make calculations and solve fundamental physics problems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

195 Mechanics

4 hours lecture, 3 hours lab, 5 units

Letter Grade or Credit/No Credit Option

Prerequisite: Mathematics 150 with a grade of "C" or better, or equivalent.

Corequisite: Mathematics 151 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195A and Physics 196A.

The Physics 195, 196, 197 sequence is designed to give a foundation in calculus-based physics for engineering and science majors. Physics 195 deals primarily with the description of motion, Newton's Laws, energy, momentum, rotation, gravity, oscillatory motion, and thermodynamics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

196 Electricity and Magnetism **4 hours lecture, 3 hours lab, 5 units** **Grade Only**

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195B and 196B.

This is the second of a three-semester calculus-based general physics sequence, intended to satisfy the transfer requirements of students planning to major in the physical sciences and in engineering. The topics of study include the basic principles and applications of electrostatics, magnetostatics, time-varying electric and magnetic phenomena, direct and alternating current circuits, elementary electronics and electromagnetic waves. Emphasis is placed on the mathematical analysis of physical problems. Laboratory work on various aspects of electric and magnetic phenomena emphasizing direct current and alternating current circuits is included. (FT) Associate Degree Credit

& transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

197 Waves, Optics and Modern Physics **4 hours lecture, 3 hours lab, 5 units** **Letter Grade or Credit/No Credit Option**

Prerequisite: Physics 195 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in Physics 196 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 195C and Physics 196C.

Physics 197 is the third semester of a three semester calculus-based course designed for prospective scientists and engineers. Topics include the fundamental principles of physics of waves, the behavior of light, and an introduction to relativity, quantum physics and the atomic and nuclear properties of matter. PHYS 196 and 197 may be taken concurrently only if PHYS 195 was completed with a grade of "B" or better or with approval of the department. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physics (PHYS) 120A, B or 121A, B or 124A, B or 125, 126 or 180A, B or 195, 196, 197 or 195A, B, C combined: maximum credit, one series. Deduct credit for duplication of topics.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Physical Education

Health Education, Physical Education

	Units
Certificate of Achievement: Fitness Specialist	18
Associate in Arts Degree: Transfer Option	18*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Description

Physical Education/Exercise Science is a discipline which focuses on the process through which individuals develop optimal physical, mental and social skills through regular physical activity. Exposure to varieties of movement experiences nurtures the development of active lifestyles necessary to achieve wellness objectives which improve the quality of life.

Program Emphasis

The Physical Education/Exercise Science department offers a diverse curriculum which includes lower division theory courses designed for those who want to complete their Associate in Arts degree in the discipline and transfer to an institution of higher learning. An additional component includes a basic instruction program which provides students a wide variety of movement experiences for the development of physical activity skills and knowledge necessary for lifetime wellness. A third program focuses on a Certificate program for fitness specialist. Finally, an intercollegiate program, offers performance-oriented students opportunities for competition.

Faculty	Office	Telephone
Dede Bodnar	P3-106	(619) 388-3544
Christopher Brown	P-6	(619) 388-3705
Mitch Charlens	P3-106	(619) 388-3703
James Colbert	P-5C	(619) 388-3706
Paul Greer	P2-02	(619) 388-3704
Paulette Hopkins	P-4A	(619) 388-3140

Cassandra Macias	P3-203	(619) 388-3969
Kathy McGinnis	P3-204	(619) 388-3128
Andrea Milburn	P4-B	(619) 388-3121
Jake Molina	P2-02	(619) 388-3970
LeeAnn Taylor	P-3B	(619) 388-3890
Ellen Turkel	P3-202A	(619) 388-3127

Career Options

Career options in physical education include: athletic administrator; athletic trainer; coach; health/sport club manager; health and safety director; personal trainer, public, private or nonprofit organization recreation director; resort activities director; sports journalist and teacher. Students earning the Associate in Arts degree in Physical Education may find employment at assistant level positions in the K-12 school system, the fitness industry or recreational settings.

Academic Program

Associate in Arts Degree: Physical Education

Transfer Option

Courses Required for the Major:	Units
PHYE 166, Weight Training	1
PHYE 241, Introduction to Exercise Science/ Physical Education	2

Select four units from:

Physical Education 103-167 (See catalog for course titles and descriptions)	4
BIOL 107, General Biology, Lecture & Lab	4
BIOL 230, Human Anatomy.....	4
SOCO 101, Principles of Sociology.....	3

Total Units = 18

Recommended electives: Physical Education 240, 243 or any activity course; Psychology 101, 258.

Transfer Information

Common university majors related to the field of Physical Education include:

Athletic Administration, Athletic Training, Exercise Science, Health Administration, Health Education, Health Sciences, Kinesiology, Physical Education, Pre-Physical Therapy, Recreation, Sports Management.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn

an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Fitness Specialist

Certificate Program Description

Students in this program will be trained to be group exercise leaders and personal trainers. Students will learn the principles of exercise and physical conditioning, techniques of leading individual and group exercise classes, appropriate methods to establishing healthy behavior and the designing of personalized exercise prescriptions. They will be able to develop safe, effective exercise plans for a variety of clients.

Program Emphasis

The Fitness Specialist certificate program trains students for positions, entry-level or higher, in the growing fitness industry.

Career Options

Graduates will be qualified to be exercise testing technicians, fitness instructors, strength training instructors, aerobic instructors, and personal fitness trainers.

The fitness industry continued to experience growth and has an ongoing need for trained instructors and trainers in health clubs, fitness centers, and sports medicine clinics.

Please note that students enrolled in an occupational program must earn a grade of "C" or better in courses required for the major.

Certificate of Achievement: Physical Education Fitness Specialist

Courses Required for the Major:	Units
PHYE 242, Care and Prevention of Injuries	2
PHYE 280, Applied Exercise Physiology.....	2
PHYE 281, Applied Kinesiology.....	2
PHYE 282, Techniques of Weight Training.....	2
PHYE 283, Exercise and Fitness Assessment.....	2
PHYE 284, Fitness and Sports Nutrition	2
PHYE 285, Exercise for Special Populations	2
PHYE 286, Techniques of Exercise Leadership	2
PHYE 287, Fitness Specialist Internship.....	2
Total Units =	18

This program prepares candidates for American College of Sports Medicine (ACSM) or American Council of Exercise (ACE) certification exams.

Physical Education Classes/Intercollegiate Sports Disclaimer

Participation in all sports and physical education activities involves certain inherent risks. Risks may include, but are not limited to, neck and spinal injuries that may result in paralysis or brain injury, injury to bones, joints, ligaments, muscles, tendons and other aspects of the muscular skeleton system, and serious injury, or impairment, to other aspects of the body and general health, including death. The San Diego Community College District, its officers, agents and employees are not responsible for the inherent risks associated with participation in physical education classes/intercollegiate sports.

Students are strongly advised to consult a physician prior to participating in any physical education activity.

Courses

Health Education (HEAL)

101 Health and Life-Style

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course studies aspects of mental, emotional, and physical health. Emphasis is placed on knowledge for development of attitude, understanding, and practice of a preventive life style for healthy living and optimal wellness. Specific instructional areas include chronic

diseases, physical activity, nutrition, weight management, birth control methods, human sexuality, alcohol, tobacco, and illicit chemical use, stress, and factors that contribute to wellness and longevity. Experience in personal health assessment and the changing of health behaviors is stressed. Satisfies State of California Health Education requirement for teaching credential. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Physical Education (PHYE)

Physical Education classes are offered at the beginning, intermediate and advanced levels.

Aquatic Activities

A program which offers the student a choice from a variety of courses. Instruction and conditioning in all aspects of aquatics to provide a carry-over value for leisure life.

155 Swimming

2-3 hours lab, .5 -1 unit

This course emphasizes instruction and practice in the fundamental to advanced swimming strokes including water safety skills. Stroke analysis, conditioning and endurance are stressed in the progression of classes. Beginning and intermediate levels are available. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

156 Water Exercise

2-3 hours lab, .5 -1 unit

Instruction in the development of the fundamental elements of fitness through the application of water resistance and buoyancy. Progressive instruction includes the development of increasingly more strenuous exercises for cardiorespiratory fitness, muscular strength, endurance and flexibility. Associate

Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

181A Adapted Swimming

2-3 hours lab, .5 -1 unit

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: A physician's medical release form is required. This course is not open to students with credit for Physical Education 181, 181C, or 181D. This course is designed for students with disabilities to learn how to swim through modified swimming strokes based on their abilities. Emphasis is placed on practice in the fundamental swimming strokes, including water safety skills. Stroke analysis, conditioning and endurance is stressed in the progression of the class. This course meets the SDCCD graduation requirements. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

Dance

Dance courses may be used to fulfill the Physical Education graduation requirement. See page 67 in the Academic Requirements section of this catalog.

103 Aerobic Dance

2 -3 hours lab, .5 -1 unit

Letter Grade or Credit/No Credit Option

Aerobic Dance is a rigorous exercise course designed to increase both the fitness level of participating students and their understanding of what constitutes a safe and effective exercise program. Instruction includes a balanced exercise program of aerobics, toning, stretching, and relaxation along with discussion of related health topics. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

Individual Activities

A basic program which offers the student a choice of vigorous, competitive activity in individual sports and activities designed to provide carry-over value for leisure life. Instruction is in fundamental skills knowledge of rules and strategy, with emphasis on physical fitness.

047 Physical Activities for Youth**3 hours lab, 1 unit
Credit/No Credit Only**

This course is the physical activity component for youth participating in the National Youth Sports Program. Students are introduced to a variety of physical activities, which provide the student with skills necessary to practice an active lifestyle. This course offers opportunities to engage in physical activities for health benefits, to study simple physical skill mechanics for efficiency of movement, to learn about the rules and regulations of physical activities for safety and participation strategies, and to recognize the health implications of an active lifestyle. Credit does not apply to the associate degree.

104 Step Aerobics**3 hours lab, 1 unit
Letter Grade or Credit/No Credit Option**

Step Aerobics is a rigorous exercise course designed to increase both the fitness levels of participating students and their understanding of what constitutes a safe and effective exercise program. Instruction includes a balanced exercise program of step aerobics, toning, stretching, and relaxation along with discussion of related health topics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

108 Badminton**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

Instruction and practice in the fundamentals of the grip, strokes, footwork, court coverage and rules of play. Singles and doubles strategy, offensive and defensive positioning and tournament play will be progressively incorporated at intermediate and advanced levels. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

115 Bowling**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

This course is designed to develop skills necessary to improve student performance of the fundamentals of the stance, point of origin, approach, back swing, release and follow through, rules, scoring and etiquette in the game of bowling. Progressive instruction emphasizes individual skill development, spot bowling and participation in a league bowling situation. This course may be taken four times for credit. Associate

Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

123 Fitness Activities**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

This course includes instruction in the skills necessary to improve aerobic fitness and cardiovascular health. Through fitness topics covered, students will develop an individual fitness program. Aerobic exercise focuses primarily jogging, progressing to running for the development of comprehensive fitness. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

126 Golf**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

This course provides golf instruction and practice in the fundamentals of grip, stance, alignment, backswing, and downswing. Topics also include stretching and principles of warm-up, golf club selection and use, player guidelines, scoring, game etiquette, and safety procedures. The course emphasizes the "one basic golf swing" theory and includes extensive practice and play at local courses. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

132 Individual Conditioning**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

This course provides individually programmed instruction in the fundamental skills and techniques of weight training and aerobic activity. The positive impact of physical education on health and wellness is explored and emphasized. Through progressive inquiry and practice, students demonstrate more advanced levels of weight training and comprehensive aerobic development. This course is of particular interest to students wishing to enter the fields of sports medicine and athletics, as well as to students seeking to improve overall fitness. Students must demonstrate increased proficiency and skill attainment with each repetition. This course may be taken four times for credit. When this course is offered for three hours per week, the additional time is utilized for the practice of weight training skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

133 Cardio Kickboxing**2 - 3 hours lab, .5 - 1 unit****Letter Grade or Credit/No Credit Option**

This course is an introduction to cardiorespiratory fitness combined with basic kickboxing techniques, practices and principles. Instruction includes upper body punching functions, kick techniques and combination series of both upper body and lower body kickboxing routines. The benefits of kickboxing include increased strength, flexibility, and balance as well as stress reduction. The class will have a pre-designed format along with choreographed music. Cardio Kickboxing is a unique form of non-contact cardiovascular exercise. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. See a counselor.

142 Racquetball**2 - 3 hours lab, .5 - 1 unit****Letter Grade or Credit/No Credit Option**

Instruction and practice in the fundamental skills of grip, strokes, footwork, court coverage and rules of play. Singles and doubles strategy, offensive and defensive positioning and tournament play will be progressively incorporated at the intermediate and advanced levels. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

150 Lifelong Fitness Behaviors**1 hour lecture, 1 unit
Grade Only**

This is a lecture course designed for students with limited knowledge or experience with physical fitness. Weekly lecture sessions will address the relationship between exercise and wellness. Lecture topics will include the value of exercise, health related physical fitness, nutrition, weight control, stress management, behavior modification, and hypokinetic disease prevention. Students will learn how to self-manage fitness behavior modifications. This class must be taken concurrently with Physical Education 153. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

153 Lifelong Fitness Lab**2 - 3 hours lab, .5 - 1 unit
Credit/No Credit Only**

This course is designed to provide students with the knowledge and practice to develop the attitudes and habits required for attaining and maintaining appropriate, individual physical fitness levels. Emphasis

is placed on developing and maintaining cardiovascular efficiency as well as muscular strength, endurance and flexibility through circuit and/or strength training. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

157 Fitness Applications**2 - 3 hours lab, .5 - 1 unit
Credit/No Credit Only**

Advisory: Completion of or concurrent enrollment in Physical Education 153 with a grade of "C" or better, or equivalent.

This course is designed to provide students with the opportunity to increase their fitness levels by use of a longer and more demanding aerobic circuit. Each student is assessed in the areas of cardiovascular efficiency, flexibility, muscular endurance and body composition. An individualized fitness program is prescribed utilizing goals established jointly by the student and instructor. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

159 Tennis**2 - 3 hours lab, .5 - 1 unit
Grade Only**

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play tennis at the beginning, intermediate or advanced recreational level and is intended for novices and students currently playing at any of these levels. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for stroke development drills and application of strategies in playing situations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

166 Weight Training**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

This course is an introduction to progressive resistance training. It is designed for the student interested in developing strength, muscle endurance, and muscle tone. Instruction includes learning proper methods of weight training, various types of weight training programs, and safety factors. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

168 Yoga

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to basic yoga practices and principles. Instruction includes yoga postures, guided relaxations, and breathing practices. The benefits of yoga include increased flexibility, strength, balance, and body awareness as well as stress reduction. This course is designed for students interested in health and longevity. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours per week, the additional time is utilized for the practice of postures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a Counselor.

182 Adapted Weight Training

**2 - 3 hours lab, .5 - 1 unit
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: A physician's medical release form is required.

This course is designed for students with disabilities as an introduction to progressive resistance training. Emphasis is placed on developing cardiorespiratory and muscle endurance, muscle strength and flexibility and a healthy body composition through individualized safe and beneficial exercise programming. The course includes exercises that focus on relaxation, joint mobility, body maintenance, and activities for daily living. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

184 Adapted Physical Fitness

**2-3 hours lab, .5 -1 unit
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: A physician's medical release form is required.

This course is designed for students with disabilities to provide opportunities for exercise and activities to improve cardiorespiratory endurance, flexibility, muscular endurance, strength, stress management and coordination. Activities can include walking, dance, rhythm activities, wheelchair pushing, jogging, relaxation training and exercises for joint mobility. This course may be repeated three times. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

232 Martial Arts

**3 hours lab, 1 unit
Grade Only**

This course is designed for students with an interest in martial arts. It is geared toward the International Okanawan Goju-Ryu Karate-Do Federation (IOGKF) and the Tae Kwon Do Federation, with phrases and terms from other styles for general informational usage. Emphasis is placed on the fundamentals of martial arts including martial arts safety skills and etiquette, punches, blocks, strikes, kicks, stances, vital points, tournament terminology, numbers and Kata and Forms. Kick/strike analysis, flexibility, conditioning and endurance are stressed in the progression of the class. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

233 Kickboxing

**2-3 hours lab, .5 - 1 unit
Grade Only**

This course is designed for students to learn kickboxing. This course includes solo training, partner training, equipment training, and controlled sparring as practiced by the Kali/Jeet Kune Do family, including JKD kickboxing, the arts of Muay Thai training, Savate, and Panantukan styles of kickboxing. Emphasis is placed on practice in the fundamentals of kickboxing, including kickboxing safety skills and etiquette. Kick/strike analysis, balance, flexibility, conditioning, muscular strengths and endurance are stressed in the progression of the class. This course meets the SDCCD graduation requirements. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

Intercollegiate Athletics**200 Intercollegiate Badminton I**

**10 hours lab, 2 units
Grade Only**

Advisory: Physical Education 108 with a grade of "C" or better, or equivalent, or previous competitive badminton experience.

This is a course for students competing in their first intercollegiate badminton season. The course is offered in the spring semester and may be taken two times for

credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

201 Intercollegiate Badminton II

**10 hours lab, 2 units
Grade Only**

Advisory: Physical Education 200 with a grade of "C" or better, or equivalent.

This is a course for students competing in their second intercollegiate badminton season. The course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

202 Intercollegiate Baseball I

**Spring, 10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Intercollegiate varsity baseball competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

203 Intercollegiate Baseball II

**Spring, 10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Intercollegiate varsity baseball. Second season of competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

204 Intercollegiate Basketball I

**Spring/Fall
5 - 7.5 hours lab, 1 - 1.5 units
10 hours, 2 units
Letter Grade or Credit/No Credit Option**

This course is intended for the first season of intercollegiate competition. Basketball skills and game strategies are at a more advanced level of participation than those of the Basketball 112 class. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

205 Intercollegiate Basketball II

**5-10 hours lab, 1-2 units
Letter Grade or Credit/No Credit Option**

This course is intended for the second season of intercollegiate competition. Basketball skills and game strategies are at the advanced levels of participation. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC transfer limitations. See a counselor.

206 Intercollegiate Cross-Country I

**Fall, 10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Intercollegiate varsity cross-country competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

207 Intercollegiate Cross-Country II

**10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Intercollegiate varsity cross-country competition. Second season of competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

214 Intercollegiate Soccer I

**10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Advisory: Physical Education 149 with a grade of "C" or better, or equivalent, or previous competitive soccer experience.

This is the first course of intercollegiate soccer competition. This course is offered separately for men and women. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

215 Intercollegiate Soccer II

**Fall, 10 hours, 2 units
Letter Grade or Credit/No Credit Option**

Advisory: Physical Education 149 with a grade of "C" or better, or equivalent, or previous competitive soccer experience; and concurrent enrollment in Physical Education 257B is highly recommended.

This is the second course of intercollegiate soccer competition. This course is offered separately for men and women in the fall semester. This course may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

216 Intercollegiate Softball I

**Spring 10 hours, 2 units
Letter Grade or Credit/No Credit Option**

This is a course in which students competing in their first intercollegiate softball season learn and practice the techniques and strategies necessary for successful participation. Those topics covered are fundamental through advanced skills and offensive and defensive

strategies. This course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

217 Intercollegiate Softball II

Spring, 10 hours, 2 units
Letter Grade or Credit/No Credit Option

This is a course in which students competing in their second intercollegiate softball competition learn and practice the techniques and strategies necessary for successful participation. Those topics covered are fundamental through advanced softball skills and offensive and defensive strategies. This course is offered in the spring semester and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

220 Intercollegiate Tennis I

Spring, 10 hours lab, 2 units
Letter Grade or Credit/No Credit Option

This is a course for students competing in their first intercollegiate tennis season. This course is offered in the spring semester for men and women and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

221 Intercollegiate Tennis II

Spring, 10 hours lab, 2 units
Letter Grade or Credit/No Credit Option

This is a course for students competing in their second semester of intercollegiate tennis season. This course is offered in the spring semester for men and women and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

222 Intercollegiate Track and Field I

Spring, 10 hours, 2 units
Letter Grade or Credit/No Credit Option

Intercollegiate varsity track and field competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

223 Intercollegiate Track and Field II

Spring, 10 hours, 2 units
Letter Grade or Credit/No Credit Option

Intercollegiate varsity track and field competition. Second season of competition. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

224 Intercollegiate Volleyball I

Fall, Spring, 10 hours lab, 2 units
Letter Grade or Credit/No Credit Option

Advisory: Physical Education 161 with a grade of "C" or better, or equivalent, or previous competitive volleyball experience.

This is the first course in intercollegiate volleyball competition. This course is offered in the fall semester for women and the spring semester for men and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

225 Intercollegiate Volleyball II

Fall, Spring, 10 hours lab, 2 units
Letter Grade or Credit/No Credit Option

Advisory: Physical Education 224 with a grade of "C" or better, or equivalent.

This is the second course in intercollegiate volleyball competition. This course is offered in the fall semester for women and the spring semester for men and may be taken two times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

Team Sports

111 Baseball

2 - 3 hours lab, .5 unit - 1 unit
Letter Grade or Credit/No Credit Option

Instruction to develop the fundamental skills of throwing, catching, running, hitting, rules of play and strategy. Intermediate and advanced levels emphasize both individual and team skill development and strategies involved in competitive game situations. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

112 Basketball

2 - 3 hours lab, .5 unit - 1 unit
Letter Grade or Credit/No Credit Option

This course offers basic instruction in the fundamental skills of basketball and team offense and defense. Instruction includes terminology, rules and strategy of

the game. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer limitations. See a counselor.

149 Soccer

2 - 3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

This course emphasizes progressive instruction and practice of basic fundamentals through advanced soccer skills. The topics covered include soccer techniques and skills, offensive and defensive strategies, rules, and officiating. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

151 Softball

2 - 3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

This course provides instruction in the fundamental skills of throwing, catching, running, hitting, and rules of play of softball as well as individual and team skill development and strategies involved in competitive game situations. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

161 Volleyball

2 - 3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play volleyball at the recreation level. This course may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer limitations. See a counselor.

165 Pre-season Volleyball Conditioning for Elite Athletic Performance

2 - 3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

This course provides individually programmed coaching in the fundamental skills of volleyball specific training and aerobic conditioning. Through progressive inquiry and practice, students demonstrate more advanced levels of athletic performance. This course is of particular interest to students who want to improve their athletic performance through comprehensive sport specific strength and conditioning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges

and universities. UC Transfer Course List. See a counselor.

Physical Education Theory Classes

240 Physical Education in the Elementary Schools

3 hours lecture, 1 hour lab, 3 units

Letter Grade or Credit/No Credit Option

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course includes a brief study of the growth, development and characteristics of the elementary school child. The elements of written lesson plans, units, evaluations and various forms of testing are covered. The teaching of fundamental skills, rhythms, dance and games based on sound physiological principles for this age group is emphasized. The positive impact of physical education on health and wellness in addition to academic achievement is explored. Actual teaching situations are experienced in the lab sessions. This course is designed to fulfill lower division preparation for the major for students interested in elementary education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

241 Introduction to Exercise Science/Physical Education

2 hours lecture, 2 units

Grade Only

Advisory: English 51 and English 56, each with grades of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is the introductory course for students majoring in Physical Education and is required for the Associate in Arts degree in Physical Education. It provides the student an opportunity to study the history, basic philosophy, basic principles, and professional career options of exercise science. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN KINE/PE 2).

242 Care and Prevention of Injuries

Fall, Spring, 2 hours lecture, 1 hour lab, 2 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Prevention and care of common athletic injuries is discussed. This course covers the theory and practice of

emergency field care and basic athletic first aid. Bandaging and/or taping techniques are included. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN KINE/PE 4).

243 Fitness for Life Concepts

**2 hours lecture, 2 hours lab, 3 units
Grade Only**

This course will provide students with the necessary knowledge to make educated decisions about lifetime fitness and wellness activities. Students will learn concepts in cardiovascular fitness, strength training, flexibility, weight control and dietary habits. Through lecture/laboratory presentations, and Health Services directed sessions, students will apply learned concepts to the design of individualized fitness and nutritional programs. For optimal benefits, it is recommended that students register concurrently with a physical education activity class to implement their personal fitness plan. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

248A Professional Activities/ Tennis

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Corequisite: Physical Education 220.

This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate tennis season. Topics covered include mechanical analysis of fundamental through advanced tennis skills, offensive and defensive strategies, statistics, and rules. This course is offered separately for men and women who are interested in competing at the intercollegiate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

249A Professional Activities/Badminton

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Corequisite: Physical Education 200.

This is a course in which students competing in their first intercollegiate badminton season learn the theoretical concepts necessary for successful participation. Topics covered include mechanical analysis of fundamentals through advanced badminton skills, offensive/defensive strategies, statistics, rules and officiating. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

251A Professional Activities/Basketball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Fall, This lecture/lab course includes discussion of rules, game strategies, history, and game preparation. The physiological requirements for the intercollegiate athlete and importance of nutritional components for optimal performance are emphasized. This course benefits students who are enrolled in PHYE 204, Intercollegiate Basketball I. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 251A combined with: 251B, 252A,B, 253A,B, 255A,B or 257A,B; maximum credit, eight units.

251B Professional Activities/Basketball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Fall, This lecture/lab course includes activities and discussion of advanced team strategies, efficient basketball conditioning techniques, goals for game preparation and leadership qualities for basketball. Concepts for team building and social skills necessary for success at the intercollegiate level are also emphasized. This course benefits students who are enrolled in PHYE 205, Intercollegiate Basketball II. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 251B combined with: 251A, 252A,B, 253A,B, 255A,B or 257A,B; maximum credit, eight units.

252A Professional Activities/Baseball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Competency development with emphasis on skills, strategy, tactics, rules, officiating, facilities film review, and organizational procedures as it relates to school or college baseball. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 252A combined with: 251A,B, 252B, 253A,B, 255A,B or 257A,B; maximum credit, eight units.

252B Professional Activities/Baseball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Sophomore athletic eligibility status required. A continuation of Physical Education 252A with emphasis on advanced skills, strategy, tactics, rules officiating, and organizational procedures in baseball. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 252B combined with:

251A,B, 252A, 253A,B, 255A,B or 257A,B: maximum credit, eight units.

253A Professional Activities/Softball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Corequisite: Physical Education 216.

This is a course which explores a variety of softball strategies and tactics focusing on the development of offensive and defensive strategies, rules, officiating, video review, and mechanical analysis of fundamentals through intermediate softball skills. The course is open to those interested in participating in the sport of softball at an intermediate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 253A combined with: 251A,B, 252A,B, 253B, 255A,B, 257A,B: maximum credit, eight units.

253B Professional Activities/Softball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Corequisite: Physical Education 217.

This course develops both mental and physical competency with emphasis on advanced skill, tactics, rules, both offensive and defensive strategies, officiating, facilities, video review, organizational procedures and physiological aspects of the game as they relate to college softball. The course is open to students interested in the sport of softball at the advanced level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 253B combined with: 251A,B, 252A,B, 253A, 255A,B, 257A,B: maximum credit, eight units.

255A Professional Activities/Volleyball I

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Advisory: Concurrent enrollment in Physical Education 224 or Physical Education 225.

Fall, Spring, This is a course in which students competing in their first intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include mechanical analysis of fundamentals through advanced volleyball skills, offensive/defensive strategies, statistics, rules and officiating. The course is offered in the fall semester for women and the spring semester for men. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 255A combined

with: 251A,B, 252A,B, 253A,B, 255B, or 257A,B: maximum credit, eight units.

255B Professional Activities/Volleyball II

**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Advisory: Physical Education 255A with a grade of "C" or better, or equivalent; and concurrent enrollment in Physical Education 224.

Fall, Spring, This is a course on which students competing in their second intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include officiating, statistics, concepts for team building, goals for game preparation, leadership and social skills for success at the intercollegiate level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 255B combined with: 251A,B, 252A,B, 253A,B, 255A, or 257A,B: maximum credit, eight units.

257A Professional Activities/Soccer I

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Fall, This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate soccer season. Topics covered include mechanical analysis of fundamental through advanced soccer skills, offensive and defensive strategies, statistics, rules, and officiating. This course is offered separately for men and women. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 257A combined with: 251A,B, 252A,B, 253A,B, 255A,B, or 257B: maximum credit, eight units.

257B Professional Activities/Soccer II

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Fall, This is a lecture/lab course including activities and discussion of advanced team strategies, efficient conditioning techniques, goals for game preparation, and leadership qualities. Concepts for team building and social skills necessary for success at the intercollegiate level are emphasized. This course is offered separately for men and women in the fall semester. This course benefits students who are enrolled in PHYE 215, Intercollegiate Soccer II. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: Physical Education (PHYE) 257B combined with:

251A,B, 252A,B, 253A,B, 255A,B, or 257A: maximum credit, eight units.

258A Professional Activities/Cross Country I
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

This course introduces students to the development of skills for cross country running as well as biomechanics, exercise physiology, workout design, scouting, and procedures for administrating a college cross country meet. The course is designed for students who are participating in this sport and for those who may be interested in coaching cross country teams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

258B Professional Activities/Cross Country II
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Prerequisite: Physical Education 258A with a grade of "C" or better, or equivalent.

This course covers the development of advanced skills in cross country running, including techniques of biomechanics, exercise physiology, workout design, and scouting. The course also focuses on procedures for administering college cross country meets and coaching techniques. The course is designed for second-year students who are participating in this sport and for those who are interested in coaching cross-country teams. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Physical Education

1.5 - 6 hours lab, .5 - 2 units
Credit/No Credit Only

Limitation on Enrollment: Enrollment in an approved related course. Concurrent enrollment in an approved course of the same discipline is required.

This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of the instructor of the designated course. Learning activities may employ a variety of self-paced multimedia learning systems, language labs, print and electronic resources, laboratory, or field research arrangements, to assist student in reaching specific learning objectives. This open entry/open exit course is offered concurrently with designated courses. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised

Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Fitness Specialist Courses

280 Applied Exercise Physiology
2 hours lecture, 2 units
Grade Only

Advisory: Mathematics 95 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.

This course is part of the Fitness Specialist Certification Program. This course is designed for the student in the Fitness Specialist Certificate Program to study how the body functions under conditions of exercise stress and how fitness behaviors affect health and wellness. Emphasis is placed on muscular, cardiorespiratory, and other physiological processes that occur as a result of exercise conditioning, and the effect of disease. (FT) Associate Degree Credit only and not Transferable.

281 Applied Kinesiology
2 hours lecture, 2 units
Grade only

This course is designed for the student in the Fitness Specialist Certificate Program to study movement as it relates to exercise under both normal and injury conditions. Students learn the practical implications of bones, joints, nerves, and muscle actions. Emphasis is placed on applying body alignment, range of motion, stabilization, and acceleration principles to the development of exercise programs. (FT) Associate Degree Credit only and not Transferable.

282 Techniques of Weight Training
2 hours lecture, 2 units
Grade Only

This course, part of the Fitness Specialist Certification Program, is designed to provide a thorough review for those intending to teach weight training. The course studies anatomy and physiology, training sequences, available equipment, and safety factors, including contraindications. Associate Degree Credit only and not Transferable.

283 Exercise and Fitness Assessment
1.75 hour lecture, .75 hour lab, 2 units
Grade Only

This course is designed for the student in the Fitness Specialist Certificate Program to learn how to assess cardiorespiratory endurance, muscular strength and

endurance, flexibility, body fat, pulmonary function, and blood pressure and evaluate the results. Emphasis is placed on determining the appropriate test, conducting the test, evaluating the results, and creating an exercise program. (FT). Associate Degree Credit only and not Transferable.

284 Fitness and Sports Nutrition

**2 hours lecture, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is part of the Fitness Specialist Certification Program. Students will study the basic principles of nutrition and the ramifications of nutrition on sports activities. Associate Degree Credit only and not Transferable.

285 Exercise for Special Populations

**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate to study the exercise implications for special populations related to age, medical condition and level of fitness. Emphasis is placed on cardiac conditions, diabetes, physical disabilities, HIV and AIDS, asthma, sensory impairments, seniors, children, athletes, mentally impaired and pregnant and post partum women and the issues and barriers to exercise. (FT) Associate Degree Credit only and not Transferable.

286 Techniques of Exercise Leadership

**1.75 hours lecture, .75 hour lab, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program to study the principles and techniques involved in teaching group exercise and

developing a personal trainer/client relationship. Emphasis is placed on client assessment, communication skills, program design, exercise adherence, teaching strategies, and professional responsibility and liability. (FT). Associate Degree Credit only and not Transferable.

287 Fitness Specialist Internship

**1 hour lecture, 6 hours lab, 2 units
Grade Only**

Prerequisite: Physical Education 280, 281, and 283, each with a grade of "C" or better, or equivalent. This course is designed to provide students in the Fitness Specialist Certificate Program with practical experience in the field of exercise and fitness. Emphasis is placed on participant screening, evaluation, and exercise program design, self marketing, fitness specialist/client relationships and professional responsibility in a fitness setting. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Physics

See "Physical and Earth Sciences" on page 336.

Physical Science

See "Physical and Earth Sciences" on page 336.

Political Science

	Units
Associate in Arts Degree:	
Political Science	18*
<p>*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.</p>	

Description

The primary objectives of the Political Science program are to meet general education requirements for American Institutions and Social Sciences for the associate degree and to complete general education requirements for baccalaureate degrees. Political science is the study of human behavior as it relates to political situations. It involves the examination of institutions, processes, people, ideas and policies. The study of political science develops cultural literacy, critical thinking and other useful skills.

Program Emphasis

San Diego City College offers four courses in Political Science: Political Science 101, 102, 103 and 140. Completion of Political Science 101, 102 and 103 provides the student with lower division preparation for a baccalaureate degree in Political Science at San Diego State University.

Faculty	Office	Telephone
Joon Kil jkil@sdccd.edu	A1-(Q)	(619) 388-3012

Career Options

Most careers in political science require education beyond the associate degree and some require a graduate degree. This is not a comprehensive list but some of the most common career options with political

science preparation include: public administrator, budget analyst, city planner, diplomatic corps member, elected official, legislative aide, journalist, lawyer, lobbyist, political scientist, public opinion surveyor, teacher and writer.

Academic Programs

The associate degree in Political Science requires completion of courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Political Science

Courses Required for the Major:	Units
HIST 100 & 101, World History, I & II (Mesa) OR	
HIST 105, 106, Introduction to Western Civilization, I & II	3,3
POLI 101, Introduction to Political Science	3
POLI 102, The American Political System	3
POLI 103, Comparative Politics.....	3
MATH 119, Elementary Statistics OR	
PSYC 258, Behavioral Science Statistics	3
Total Units = 18	

Recommended electives: Political Science 140, 290, 296.

Transfer Information

Common university majors related to the field of Political Science include:

Developmental Studies, International Relations, Law, Peace and Conflict Studies, Policy Analysis, Political Science, Public Administration.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Political Science (POLI)

101 Introduction to Political Science

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory study of the fundamental concepts and methods of Political Science. Emphasis is placed on historical and contemporary political theories, ideologies and cultures as well as on political institutions, parties and interest groups and the international political system. This course may be required for students planning to major in Political Science and is highly recommended for students transferring to four-year institutions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List

102 The American Political System

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This comprehensive survey course, designed for students intending to transfer to a four-year college or university, provides an in depth study of the American political system. Both national and California experiences are studied from the perspective of constitutional frameworks, institutions, issues, and policies. NOTE: If used to satisfy the American Institutions requirement, Political Science 102 may not be used to satisfy the SDCC District's three-unit social science requirement. Political Science 102 is required for completion of the major in political science. Political Science 102 may be offered in a self-paced format. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN GOVT 2).

103 Comparative Politics

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Political Science 130. A general study of selected governments, their development, organization, administration, and politics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140 Contemporary International Politics

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of world politics including the various approaches to international relations and international political economy. Emphasis is placed on the roles of nationalism, nation-states, transnationalism and international organizations in the making of contemporary world politics as well as on issues of national security, power and diplomacy, economic competition, international law and the environment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Psychology

See "Behavioral Sciences" on page 114.

Radio and Television

See "Communications" on page 176.

Real Estate

See "Business Studies" on page 142.

Russian

See "Languages" on page 294.

Selected Studies

Designed for students who are interested in a program of studies that will allow them to attain educational or career goals that are not satisfied by associate degrees offered in Programs of Instructions listed in this catalog.

Associate in Arts Degree: Selected Studies

Courses Required for the Major:

The student must earn a minimum of 18 required semester units in a single discipline or related disciplines. The approved course of study represents a cohesive and rigorous program of instruction related to a specific goal not met by other Programs of Instruction as found in this catalog. The student and a counselor will develop a Selected Studies program to be submitted to an academic standards committee for review and approval. The student is encouraged to meet with the counselor early in his or her educational career to review the student's statement of justification for the Associate in Arts Degree: Selected Studies and to develop an education plan.

Only one course from the approved pattern for the Selected Studies major may be used to satisfy SDCCD general education requirements. Students must fulfill additional requirements for the Associate Degree as listed in this catalog.

For graduation requirements see **Requirements for the Associate Degree** on page 64.

Electives as needed to meet minimum of 60 units required for the degree:

Recommended Electives: Electives are particularly important in this program. They may be used by the student to strengthen the major, explore new fields of interest, and satisfy graduation requirements at a four-year institute.

The student who plans carefully may fulfill the requirements for the A.A. Degree and also complete most lower division requirements at the four-year institution of his/her choice in the major area and in general education. See generalized guide for transfer student located in this catalog.

Social Work

See "Behavioral Sciences" on page 114.

Sociology

See "Behavioral Sciences" on page 114.

Spanish

See "Languages" on page 294.

Speech

See "Communications" on page 176.

Theater

See "Visual and Performing Arts" on page 394.

Shipbuilding Technology

	Units
Certificate of Achievement Shipbuilding Technology	24
Associate in Science Degree: Shipbuilding Technology	24*
*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.	

Description

Shipbuilding Technology, a specific concentration within the broad range of today's industrial manufacturing, was created as a cooperative effort between San Diego City College School of Math, Engineering & Technologies and National Steel and Shipbuilding's Training and Organizational Development Department. Shipbuilding Technology represents a technological field requiring the application of a variety of applied skills in support of manufacturing in large shipyards and in smaller shipbuilding companies. The education of technologists tends to be less theoretical and less mathematical than that of engineers, but more hardware, process and application oriented.

Statement of Goals:

The primary goals of the program are: 1. Occupational: To prepare students for the changing technology associated with shipbuilding by giving them a fundamental understanding of the trade, skill and management technologies and how they apply to a globally competitive industry. To help students enhance skills so they can advance as technologists and managers of technologists in the shipbuilding industry. 2. Transfer: To enable students to transfer to a four-year baccalaureate degree program in industrial technology. The objectives of the program are: 1. To provide students with a strong foundation in the practical and academic skills necessary for success in upper division study at a four-year college. 2. To give students a

strong foundation in the skills necessary for success in current job positions or for promotional opportunities in the shipbuilding industry. 3. To develop students' productivity, efficiency and creativity in the field of shipbuilding technology. 4. To provide students with the knowledge and ability to apply problem solving skills to real shipbuilding issues. 5. To offer students and local employers a complete certification program that can be used as a criterion in hiring processes. 6. To offer local shipbuilding employers and students a sequence of courses leading to a certificate that will improve the skill and abilities of their employees.

Program Emphasis

The program offers instruction in the specific trades, tools, techniques and processes involved in shipbuilding. Teamwork is emphasized, reflecting the interdisciplinary work environment emerging in the shipbuilding industry. The curriculum is project based and emphasizes the integration of technical knowledge with leadership skills to help shipyards achieve desired goals associated with global competition. An associate in science degree will be awarded upon completion of the common core courses and the San Diego City College graduation and general education requirements. In addition, a certificate of achievement may be awarded upon the completion of the courses required for the major.

Faculty	Office	Telephone
Fred Julian	A-107D	(619) 388-3720

Career Options

Sheetmetal mechanic, Welder, Electrician, Machinist, Pipefitter, Multi-skilled technician/mechanic, Manufacturing Engineer, Quality Systems Engineer, Supervisor, Shipyard Administrator, CAD/CAM Operator, Vocational Trainer.

Academic Programs

The associate degree in Shipbuilding Technology requires completion of courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Shipbuilding Technology

The Certificate of Achievement in Shipbuilding Technology prepares for entry-level employment as a shipyard multi-trade technician. Additionally, it is designed to give technical, trade-specific knowledge to those working in other jobs in a shipyard, such as finance or supervision. The sequence of courses

provides the basis for skills necessary to manage technicians in a globally competitive arena.

Courses Required for the Major:	Units
SHIP 101, Introduction to Shipbuilding Technology I	3
SHIP 103, Introduction to Shipbuilding Technology II	3
SHIP 110, Shipyard Safety and Safety Management.....	3
SHIP 115, Shipbuilding Processes	3
SHIP 115L, Shipbuilding Processes Lab.....	1
SHIP 201, Technological Issues: Organization and Effective Leadership in Shipbuilding	3
SHIP 205, Culminating Project	3
ELCT 111, Electrical Theory I.....	3
ELCT 111L, Electrical Laboratory I.....	2
Total Units = 24	

Associate in Science Degree: Shipbuilding Technology

The Associate in Science Degree in Shipbuilding Technology requires completion of courses listed below (24 units total). Additional general education and graduation requirements for the associate degree are listed in the Academic Requirement section of the catalog. The associate degree requires a minimum of 60 units.

Courses Required for the Major:	Units
SHIP 101, Introduction to Shipbuilding Technology I	3
SHIP 103, Introduction to Shipbuilding Technology II	3
SHIP 110, Shipyard Safety and Safety Management.....	3
SHIP 115, Shipbuilding Processes	3
SHIP 115L, Shipbuilding Processes Lab.....	1
SHIP 201, Technological Issues: Organization and Effective Leadership in Shipbuilding	3
SHIP 205, Culminating Project	3
ELCT 111, Electrical Theory I.....	3
ELCT 111L, Electrical Laboratory I.....	2
Total Units = 24	

Recommended electives: Electricity 121, 121L; Electronic Systems 124, 124L; Mathematics 095, 096, 118, 119; Speech Communications 103. Additional recommended electives -- Chemistry and Physics courses. Shipbuilding Technology recommended electives include major preparation transfer units for the Fresno State Industrial technology Bachelor of Science Degree as well as lower division transfer

preparation for San Diego State and other colleges and universities. See TRANSFER INFORMATION for more information.

Transfer Information

Common university majors related to the field of Shipbuilding include:

Industrial Engineering, Industrial Technology.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Shipbuilding Technology (SHIP)

050 Orientation to the Maritime Professions

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

This survey course provides students with an overview of the maritime industry. It provides a broad understanding of the waterfront community, its functions, terminology, and occupational choices in the various fields in maritime as well as the place of the industry in the American economy as a whole. (FT) Associate Degree Credit only and not Transferable.

101 Introduction to Shipbuilding Technology I

3 hours lecture, 3 units

Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is a survey course that covers the history, standard business models, and current concepts, theories and methods related to manufacturing in the shipbuilding industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

103 Introduction to Shipbuilding Technology II
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is a survey course designed to acquaint the student with the shipbuilding industry. The course will focus on essential products and processes required in strategic departments and organizations throughout the shipyard. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

110 Shipyard Safety and Safety Management
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course focuses on the principles of behavior-based safety as it relates to: safety legislations and organizations, management and employee responsibilities and attitudes, management systems, philosophy and issues, and the physical hazards associated with the shipyard environment. (FT) Associate Degree Credit and transfer to CSU and/or private colleges and universities.

115 Shipbuilding Processes
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course will investigate how ships are built; focusing on how raw materials (primarily steel) are changed into a finished product. The course provides an overview of the theory behind the manufacturing and construction processes required in shipbuilding including forming (heating, cutting, bending), separating (burning, cutting, drilling), assembling (mechanical, welding) and corrosion control. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

115L Shipbuilding Processes Lab
3 hours lab, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in Shipbuilding Technology 115 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course involves laboratory practice in basic metal processes. Emphasis is placed on safety, measurements, common formulas, machine, tool and equipment applications, and project work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Technological Issues: Organization and Effective Leadership in Shipbuilding
3 hours lecture, 3 units
Grade Only

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces shipbuilding technology students to the unique issues, problems and challenges encountered in a rapidly changing manufacturing environment. The course will analyze internal and external factors such as environment, size, technology, politics, strategy, human resources, job design and organization culture as they relate to the technologist or manager of technology. The course focuses on the basic tools and techniques for the planning and scheduling of projects, as well as the techniques for effective communication. The course will also address leadership theories, including building and motivating effective teams and the application of those theories to the shipyard environment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205 Culminating Project
3 hours lecture, 3 units
Grade Only

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

The Shipbuilding Technology final project is intended to be the culminating scholastic effort or capstone experience providing the student with the opportunity to use knowledge and skills acquired in previous courses in problem solving, research, teamwork, and communication in a shipbuilding environment. The student, with the approval of the assigned faculty advisor, selects a topic, develops a problem statement and outlines the approach. Then the student - by investigating and recommending a solution to a topic typical of problems graduates must solve in their field of employment - completes the project under the guidance of the faculty advisor. Project results are

presented in a formal report in both written and oral format. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Courses

Technical Writing (TEHW)

101 Introduction to Technical Writing 3 hours lecture, 3 units Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6. This course will cover how to evaluate and organize technical information, develop ideas, and establish good working relationships with technical experts. The course provides practice in technical writing formats and techniques, and offers an overview of career opportunities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Transfer Studies

	Units
Associate in Arts Degree:	
CSU Transfer Pattern	39-40*
Intersegmental General Education Transfer Curriculum (IGETC)	37-40*
UC Transfer Admission Guarantee (TAG)	34-38*
Other Institutions Transfer Pattern	36 Minimum*
*and courses as needed to meet minimum of 60 units required for the degree.	

Associate in Arts Degree: Transfer Studies

The Transfer Studies Associate Degree is designed to enable students to complete the requirements for an Associate in Arts Degree and transfer to the University of California or to the California State University with lower-division general education requirements met. Determining lower-division major preparation for a given campus and major can be complex, and requirements change frequently. It is strongly advised that students meet with a counselor to assist them with this process.

Caution: Because admission and major preparation requirements vary at each UC, CSU, and private institution, it is strongly advised that students meet with a counselor to determine the specific admissions and major preparation requirements of the selected transfer institution. **Some receiving institutions, such as San Diego State University, require that the student complete all courses offered in the preparation for the major, the general education pattern, and 60 transferable units before transferring. Completion of the Transfer Studies Degree does not guarantee acceptance into a four-year institution nor into a major.**

CSU Transfer Pattern

The District accepts completion of a CSU General Education Pattern as fulfilling all college general education and graduation requirements.

To meet the requirements for this program, students must:

1. Complete a California State University (CSU) General Education pattern (a minimum of 39 units) (see "Certification of CSU General Education Breadth Requirements" on page 86 for course offerings meeting requirements in each of the following areas):

Area A: Communications in the English Language & Critical Thinking-minimum of 9 semester units

Area B: Physical Universe & Its Life Forms; Mathematics/Quantitative Reasoning-minimum of 9 semester units

Area C: Arts, Literature, Philosophy & Foreign Languages-minimum of 9 semester units

Area D: Social, Political & Economic Institutions and Behavior; Historical Background-minimum of 9 semester units

Area E: Lifelong Understanding & Self-Development-minimum of 3 semester units

2. Complete the required courses in the transfer major and other transferable courses necessary to fulfill the 60 semester units required for the Associate in Arts degree. (Sixty semester units must be transferable.)
3. Demonstrate competence in reading, written expression and mathematics.
4. Meet the SDCCD's 12-unit residence requirement.

IGETC Transfer Curriculum

The District accepts completion of the Intersegmental General Education Transfer Curriculum as fulfilling all college general education and graduation requirements.

To meet the requirements for this program, students must:

1. Complete the Intersegmental General Education Transfer Curriculum (IGETC) for transfer to the University of California or California State University system (37-40 semester units) (see page 99 for course offerings meeting requirements in each of the following areas:

Area 1: English Communication-6-9 semester units

Area 2: Mathematical Concepts & Quantitative Reasoning-3 semester units

Area 3: Arts & Humanities-9 semester units

Area 4: Social & Behavioral Sciences-9 semester units

Area 5: Physical & Biological Sciences-7-9 semester units and Languages Other Than English (UC requirement)

2. Complete the required courses in the transfer major and other transferable courses necessary to fulfill the 60 semester units required for the Associate in Arts degree. (Sixty semester units must be transferable.)
3. Demonstrate competence in reading, written expression and mathematics.
4. Meet the SDCCD's 12-unit residence requirement.

UCSD Transfer Admission Guarantee (TAG)

The District accepts completion of a UCSD Transfer or Admission Guarantee as fulfilling all college general education and graduation requirements.

To meet the requirements for this program, students must:

1. Complete the UCSD Transfer Admission Guarantee (TAG) core requirements (34-38 semester units) (see page 95 for course offerings meeting requirements in each area):
 - A. Writing-2-course sequence
 - B. Humanities-2-course sequence
 - C. Foreign Language-2-course sequence
 - D. Social Science-2-course sequence
 - E. Calculus or Natural Science-2-course sequence

NOTE: Students who elect to take the Calculus course sequence in Area E must complete an approved Natural Science course within their program to meet district general education graduation requirements for the Transfer Studies AA degree.

2. Completion of all TAG contract requirements.

3. Complete the required courses in the transfer major and other transferable courses necessary to fulfill the 60 semester units required for the Associate in Arts degree. (Sixty semester units must be transferable.)
4. Demonstrate competence in reading, written expression and mathematics.
5. Meet the SDCCD's 12-unit residence requirement.

Other Institutions Transfer Pattern

The District accepts completion of the Other Institutions Transfer Pattern for private, independent or out-of-state institutions, as fulfilling college general education and graduation requirements for the Associate degree provided that a student has completed a minimum of 18 semester units in General Education and a minimum of 18 semester units in a major or courses in a discipline or related disciplines. Students must also demonstrate competence in reading, written expression and mathematics.

To meet the requirements for this program, students must:

1. Declare a specific accredited transfer institution and a specific transfer major.
2. Complete an educational plan with a counselor to include all GE requirements (minimum of 18 semester units) and preparation for the major for the Associate Degree. Educational plan must be on file in the Counseling Office.

Minimum general education requirements:

- A. Natural Sciences - 3 semester units
- B. Social and Behavioral Sciences - 3 semester units
- C. Humanities - 3 semester units
- D. Language and Rationality
 1. English Composition - 3 semester units
 2. Communication and Analytical Thinking - 3 semester units

Remaining 3-unit requirement must be selected from among the above four divisions of learning.

3. Complete the required courses in the transfer major and other transferable courses necessary to fulfill the 60 semester units required for the Associate in Arts degree. (Sixty semester units must be transferable.)
4. Demonstrate competence in reading, written expression and mathematics.
5. Meet the SDCCD's 12-unit residence requirement.

Two- and Three- Dimensional Art

See "Visual and Performing Arts" on page 394.

Visual and Performing Arts

Dance, Digital Audio, Digital Music Technology,
Fine Arts, Graphic Design, Musical Theater,
Theater, Photography, Recording Arts,

	Units
Certificate of Completion	
Dance	17
Digital Audio	12
Musical Theater Dance	13
Technical Theater	14
Certificate of Achievement	
Graphic Design	27
Photography	22
Recording Arts	21
Associate in Arts Degree	
Digital Music Technology	25*
Graphic Design	33*
Musical Theater	15.5-19*
Photography	28-29*
Theater	20*
Two-Dimensional Emphasis Art Emphasis	33*
Three-Dimensional Emphasis Art Emphasis	36*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

Visual and Performing Arts Art: Graphic Design

Description

Living in an information-seeking society, we are surrounded by words and pictures. It is the task of the graphic designer to research, analyze, organize and make artistic order out of chaos. Graphic design students must learn to speak a global visual language and develop an awareness of the meanings and power of symbols and words. The products and services they design and promote will make a social and ecological impact.

Program Emphasis

Early emphasis is on the design process, form, color and typography. The elements and principles of design are applied to projects which include packaging, magazine production, and design and production of posters, logos and brochures. Guided by instructors who are working design professionals, students learn to design for the real world. They make decisions about issues of concept, format, imagery, type, printing and methodology. Computer and traditional methods are used to solve graphic problems. The program culminates in a professional portfolio which can be used to continue studies to a four-year university or obtain employment. The portfolio is critiqued by practicing design advisors and alumni.

Faculty	Office	Telephone
Candice Lopez calopez@sdccd.edu	T-310A	(619) 388-3560
Andrea Singer asinger@sdccd.edu	T-309A	(619) 388-3933

For more information visit: www.sdccgraphicdesign.com

Career Options

Some careers in graphic design-related work require education beyond the associate degree. This list is not all-inclusive: advertising designer, art director, environmental graphic designer, graphic designer, type designer, illustrator, and magazine/editorial designer, multimedia designer, web page designer.

For additional information please visit our website: <http://www.sdccdgraphicdesign.com>

Academic Programs

Major requirements for an emphasis in graphic design for the certificate and associate degree require completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts Graphic Design

Students are provided with skills for entry-level employment in the graphic design field while also developing a portfolio in graphic design for jobs and/or specific university admission requirements.

Courses Required for the Major:	Units
ARTG 100, Basic Graphic Design	3
ARTG 106, Typography	3
ARTG 118, Graphic Design History.....	3
ARTG 120, Illustration	3
ARTG 124, Intermediate Graphic Design I (Page Layout).....	3
ARTG 125, Digital Media.....	3
ARTG 133, Intermediate Graphic Design II (Identity Systems)	3
ARTG 148B, Portfolio B	3
ARTF 155A, Freehand Drawing I.....	3
Total Units = 27	

Associate in Arts Degree: Visual and Performing Arts

Graphic Design

The associate degree program offers employment skills, development of a portfolio in graphic design and offers courses for preparation for university transfer.

Courses Required for the Major:	Units
ARTF 110, Art History: Prehistoric to Gothic.....	3
ARTF 111, Art History: Renaissance to Modern	3
ARTF 155A, Freehand Drawing I.....	3
ARTG 100, Basic Graphic Design	3
ARTG 106, Typography	3
ARTG 118, Graphic Design History.....	3
ARTG 120, Illustration	3
ARTG 124, Intermediate Graphic Design I (Page Layout).....	3
ARTG 125, Digital Media.....	3
ARTG 133, Intermediate Graphic Design II (Identity Systems)	3
ARTG 148B, Portfolio B	3
Total Units = 33	

Recommended electives: Art-Fine Art 210A; Art-Graphic Design 126, 144, 148A, 149, 206, 270, 290; Photography 100, 105.

Transfer Information

Common university majors related to the field of Art-Graphic Design include:

Graphic Communications, Communication Design, Design Media, Digital Design, Design Graphics, Graphic Design, Illustration.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer

institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Art - Graphic Design (ARTG)

100 Basic Graphic Design

1.5 hours lecture, 4.5 hours lab, 3 units

Grade Only

This course is an introduction to the fundamental principles of graphic communication. Instruction will incorporate traditional hand-rendering methods, as well as, use of the computer. In this class the fundamental principles and elements of design are identified and applied to two and three dimensional projects. This course is required for graphic design majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

106 Typography

1.5 hours lecture, 4.5 hours lab, 3 units

Grade Only

Limitation on Enrollment: This course is not open to students with credit for Art-Graphic Design 265A, Typography.

This beginning course covers the selection, styles, terminology, classifications, spacing, layout, and history of typography. Emphasis is placed on problem solving skills and analyzing concepts to solve typographic problems. Traditional hand rendering skills and computer software are used to develop effective typographic design. This course meets the requirements for the certificate of achievement and associate degree in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

118 Graphic Design History

3 hours lecture, 3 units

Grade Only

This course examines graphic design as a vital component of each culture and period in human history. Great minds in design, breakthrough technologies and important design movements are covered in their historical context. This course is designed for the student in graphic design as

preparation for the major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

120 Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Fine Art 150A and Art-Fine Art 155B, each with a grade of "C" or better, or equivalent.

This course addresses illustration methods, materials, and tools as related to the discipline of graphic design. Emphasis is placed on developing effective visual concepts and solutions through specific illustration assignments. Students explore a variety of media techniques utilizing both black and white and color. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

124 Intermediate Graphic Design I (Page Layout)

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Art-Graphic Design 125 and Art-Fine Arts 150A, 150B, and 185, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students who have completed Art-Commercial Art 120 or 124.

This intermediate course covers the design and layout of multiple page documents such as annual reports, brochures, newsletters, and stationery packages. The primary tool is the computer, utilizing layout software, but traditional design media is also used. Emphasis is placed on the application of grids and principles and procedures of effective layout. This course is designed for the student in graphic design as preparation for the major. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Digital Media

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Art-Commercial Art 125.

This course is an introduction to the principles of digital media utilized for visual communication. Instruction incorporates the current hardware and software utilized in the graphic design industry. The

specific hardware and software is announced for each course section. The course is tailored to the student in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

126 Intermediate Digital Media

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Graphic Design 125 with a grade of "C" or better, or equivalent.

This course is an intermediate level survey course which explores the principles of digital media utilized for visual communication. Instruction will incorporate the primary hardware and software utilized in the digital media industry today. Each section of this course may utilize different hardware and software and may therefore be taken three times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

133 Intermediate Graphic Design II (Identity Systems)

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Art-Graphic Design 125 and Art-Fine Arts 150A, 150B, and 185, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Art-Commercial Art 110 or 133. This intermediate course covers the application of design principles to the production of logos and marks. Students learn to use type in current marks, create design briefs, and use branding in the development of package designs. Traditional and computer approaches are covered. This course is designed for the student as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

144 Web Page Graphic Design

**.5 hour lecture, 4.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Graphic Design 124 and Art-Graphic Design 125, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Art-Graphic Art 265B, Web Page Design/Graphic Art.

This intermediate course explores the graphic elements of web page design. Emphasis is placed on the content,

look and feel and navigational issues of web design. Instruction incorporates the current hardware and software utilized in the web industry. The specific hardware and software will be announced for each course section each semester. This course is tailored to the student in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

148A Portfolio A

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitations on Enrollment: (1) This course is not open to students with credit for Art-Graphic Art 155 or 147; and (2) Student must submit portfolio of graphic design work in order to obtain add code from instructor for registration.

This advanced course covers the design and layout of personal identity to a stationery package, resume, cover letter and self-promotional piece. The class features guest lecturers in the fields of portfolio preparation, business and legal issues. Analysis of existing work, issues of format and content and implementation of a portfolio development plan culminates in completed panels. This course is designed as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

148B Portfolio B

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitations on Enrollment: (1) This course is not open to students with credit for Art-Graphic Art 147; and (2) Student must submit portfolio of graphic design work in order to obtain add code from instructor for registration.

This advanced course applies the portfolio strategies developed in ARTG 148A to the creation of a complete professional portfolio of work. Students are required to formally present their portfolios for review and critical analysis by department faculty and advisors. This course is designed as preparation for the major in graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

149 Studio Practices

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Students must submit portfolio of graphic design work in order to obtain an add code from the instructor for registration. This advanced course is designed to provide opportunities for professional practice in the field of

graphic design. Whenever possible students will work on real jobs for non-profit organizations and San Diego City College. Interfacing with clients, developing design briefs and graphic problem solving will result in printed portfolio samples. This course is designed for the student in graphic design as preparation for the major in graphic design. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206 Advanced Typography

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Graphic Design 106 with a grade of "C" or better, or equivalent.

This advanced course covers techniques and conceptual strategies to solve more complex typographic problems. Students will increase their knowledge of historical and contemporary letter forms and explore the expressive potential of typography to create meaning. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

270 Work Experience in Graphic Design

**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. To receive credit a student must complete a minimum of seven units during the semester, including work experience. A program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Graphic Design

**Hours by Arrangement, 1-3 Units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Open to advanced students interested in working on special problems in Graphic Design. (FT) This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296),

Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Dance

Description

Dance is a vigorous and specialized area in the performing arts, and is unique in its ability to convey emotional and cultural values. Dance is physically demanding and requires a thorough understanding of aesthetic values. The Dance major at San Diego City College is one of six options in the Visual and Performing Arts Division. This program is primarily designed for the student who intends to transfer to San Diego State University, or to other universities that offer baccalaureate preparation in Dance. Additionally, the program provides an excellent foundation in dance for students interested in other performing arts fields or entry level into the workforce.

The following dance courses meet the Physical Education graduation requirement: DANC 110, Ballet; DANC 120, American Street Dance; DANC 130, Dance Repertoire; DANC 135, Jazz Dance; DANC 140, Modern Dance; DANC 177, Dance Improvisation; DANC 178, Advanced Contemporary; DANC 179 Advanced Classical; and DANC 261, Dance Performance.

Program Emphasis

The focus of the Dance program at San Diego City College, is on jazz, modern and ethnic dance forms. Courses in choreography, dance history, dance performance and improvisation are among those required for the Associate in Arts degree in Dance. Dance students will work closely with the City College Theater and Musical Theater departments in production for public performance.

Faculty	Office	Telephone
Kristen Arcidiacono	C-108	(619) 388-3563
Grace Jun	C-108	(619) 388-3563
Alicia Rincon	C-108	(619) 388-3563
Terri Shipman	C-108	(619) 388-3563
Debi Toth-Ward	C-108	(619) 388-3563
Terry Wilson	C-214	(619) 388-3555

Career Options

Most careers related to Dance and other performing arts require education beyond the associate degree. Graduates of university dance programs may be eligible for careers in regional dance theater, musical theater or may qualify for teaching positions. Higher education positions in dance usually require graduate level preparation. Dance is an excellent form of exercise and recreation as well as a valuable asset in community theater production.

Academic Programs

The associate degree in Dance requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Completion: Dance

This certificate prepares the dance student with a solid foundation of kinesthetic training in one or more idioms, principles of choreography, movement education, along with the process of performance. Graduates will be qualified to work in regional dance Theater; as a professional dancer in industrial work in areas such as Los Angeles, and as a certified dance instructor or independent choreographer.

Courses:	Units
DANC 181, Introduction to Dance	3
DANC 111, Ethnic Dance Forms.....	2
DANC 253, Choreography	2

Select ten units from:

DANC 110, 120, 130, 135, 140, 177, 178, 179, 183, 261, 271	10
Total Units = 17	

Certificate of Completion: Musical Theater Dance

The Musical Theater Dance Certificate prepares students to develop and understand the skills and expectations required of professional musical theatre performers. Graduates will be qualified to perform in regional theatres, national tours, cruise ships, theme parks and on Broadway.

Courses:	Units
DRAM 173 Musical Theater Workshop.....	2
DRAM 251 Musical Comedy Rehearsal, Production and Performance	3

Select eight units from:

DANC 110, 130, 135, 140, 177, 261	8
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Total Units = 13

Visual and Performing Arts Dance

Associate in Arts Degree: Visual and Performing Arts

Dance

Courses Required for the Major:	Units
DANC 111, Ethnic Dance Forms	2
DANC 181, Introduction to Dance	3
DANC 183, Music for Dance	2
DANC 253, Choreography	2

Select 12 units from the following dance technique courses:

DANC 110, 120, 130, 135, 140, 177, 178, 179, 271	12
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Complete two semesters of the following course (4 units total):

DANC 261, Dance Performance.....	4
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Total Units = 25**Recommended electives:** DRAM 122, 173, 174, 251.

Transfer Information

Common university majors related to the field of Dance include:

Dance, Dance and Performance Studies, Kinesiology, Liberal Studies, Physical Education, Theater Arts, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Dance (DANC)

110 Ballet

2-3 hours lab, .5-1 unit**Letter Grade or Credit/No Credit Option**

Ballet is a course in traditional ballet technique focusing on correct body alignment and placement through repetition and centre work. The class analyzes, discusses, and critiques the line, design, ballet technique, choreography and dynamics of ballet movements. Ballet fulfills lower division requirements for Dance majors. This course, in combination with Physical Education 110, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer

111 Ethnic Dance Forms

1 hour lecture, 3 hours lab, 2 units**Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to multiple cultures and global dance traditions. Each tradition is examined in terms of its particular set of techniques, styles and rhythms. Special emphasis is placed on the exploration of movement characteristic of each cultural dance form. This course is not limited to dance majors and minors. Dance majors are encouraged to expose themselves to a variety of cultural dance forms. Course content, including country, culture and/or dance type, changes each semester. This course may be taken up to four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115 Tap

2-3 hours lab, .5-1 unit**Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Tap is an introductory course which explores a variety of tap dance styles. Emphasis is on the development of balance, ankle articulation, timing and clarity of sound in the performance of basic tap vocabulary. Rhythm studies include musical phrasing, dynamics, body placement, and improvisation. This course is designed

for dance and theater majors as well as students interested in exercise and aerobic experience. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of rhythmic and sound clarity. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

120 American Street Dance

2-3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

American Street Dance is an introductory course in a variety of established and emerging dance forms including Hip Hop, Funk, Pop, Lock and Fly. Street dance movements, rhythms and styles are explored through dance combinations. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

127 Body Modalities and Injury Prevention

1 hour lecture, 3 hours lab, 2 units

Letter Grade or Credit/No Credit Option

This course builds on basic concepts of anatomy, physiology, and kinesiology to introduce traditional and non-traditional approaches to movement and injury prevention. Emphasis will be placed on the following modalities: Feldenkrais, Alexander Technique, Rolfing, Pilates, Gyrokinesis, physioball, foam roller, theraband, yoga, breath support (Tai Chi and Qi Gung), and introduction to Bartenieff Fundamentals. Student skills and proficiencies are enhanced by supervised repetition of various body modalities techniques, alignment and core stabilization, and body connections; therefore, this course may be taken up to four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

130 Dance Repertoire

2-3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

Advisory: Dance 135 or 140 or Physical Education 110, 135, or 140 with a grade of "C" or better, or equivalent. Dance Repertoire is designed to introduce the dancer to the choreography of renowned choreographers. This course provides the opportunity for students to learn and perform selected choreography in ballet, modern, jazz, tap and musical theater. This course, in

combination with Physical Education 130, may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

135 Jazz Dance

2-3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

Jazz Dance is a course which explores a variety of jazz dance techniques focusing on the development of coordination, flexibility, balance, strength, correct body alignment and rhythmic perception. Dance combinations are performed to demonstrate technical ability at all skill levels. Jazz Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 135, may be taken of four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

140 Modern Dance

2-3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

Modern Dance is a course that explores the fundamental concepts and techniques of modern dance including floor stretch, center work, locomotor sequences and dance combinations. The student demonstrates, defines and performs flexibility, coordination, rhythmic and dynamic perception, control and strength. The class critiques, discusses and analyzes line, design, technique, choreography and dynamic qualities through lectures, videotapes and concert critiques. Modern Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 140, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

145 Ballroom and Social Dance

2-3 hours lab, .50 - 1 unit

Letter Grade or Credit/No Credit Option

Advisory: English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5. Ballroom and Social Dance is an introductory course focusing on the fundamentals of partner dance and basic steps in a variety of social and ballroom dance genres. Emphasis is placed on partnering technique, frame, style, and steps. This course is designed for dance and theatre majors as well as students who wish to explore historical dance. This course may be taken four times for credit. Students must demonstrate proficiency in the performance of increasingly complex Latin rhythms, tango variations, swing styles and

partnering with each repetition. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of styling, postures, rhythms and variations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

177 Dance Improvisation

2-3 hours lab, .5 - 1 unit

Letter Grade or Credit/No Credit Option

Advisory: Physical Education 135 or 140 or Dance 110, 135, or 140 with a grade of "C" or better, or equivalent. This course is designed to give students the opportunity to learn beginning and intermediate improvisational dance skills through the use of space, time, dynamics, and motion of body parts. Emphasis is placed on performance ability and technique. The student is involved in a structured dance performance in various situations and progresses to spontaneous movement in group and individual works. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 177, may be taken four times for credit. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

178 Advanced Contemporary Dance

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Advisory: Physical Education 135 or Dance 135 with a grade of "C" or better, or equivalent. This course focuses on the movement principles of American dance masters Jack Cole, Bob Fosse, Luigi and Matt Mattox. Instruction includes student performance of various contemporary dance styles for videotaped analysis of technical proficiency. This course, in combination with Physical Education 178, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

179 Advanced Classical Dance

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Advisory: Dance 110 with a grade of "C" or better, or equivalent. This course focuses on correct advanced body alignment, coordination, flexibility and strength. The class compares, discusses and analyzes the movement principles of the Royal, French, Cecchetti and Russian methods. This course, in combination with Physical Education 179, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or

private colleges and universities. UC Transfer Course List.

181 Introduction to Dance

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with credit for Physical Education 260. Introduction to Dance is designed to give students the opportunity to appreciate the aesthetic foundations of dance as interpreted within Western traditions. The course covers basic techniques of Western dance traditions that foster an awareness of dance as therapy and fitness as well as art and dance in film, video, and live performance. Additionally, students are introduced to dance as the expression of social discourse distinct to historical periods within Western history. Finally, students study the techniques of selected canonical or well known dancers, choreographers and their craft. This course is introductory but prepares both potential performers and scholars with an interest in performance for intermediate studies in dance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

183 Music for Dance

2 hours lecture, 2 units

Grade Only

Advisory: Dance 253 or Physical Education 116 with a grade of "C" or better, or equivalent; and English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5. Music for Dance introduces the fundamentals of music through the study of terminology, notation, elements and form as they relate to movement. The course explores the interrelationship of music and dance and provides students the opportunity to compose and perform rhythmic and movement projects. This course fulfills lower division requirements for dance majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

253 Choreography

1.5 hours lecture, 1.5 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Advisory: Physical Education 135 or 140 or Dance 110, 135, or 140 with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with credit for Physical Education 116.

Choreography is a course that explores the theories and elements utilized in the creative process of dance composition. Emphasis is placed on student application of choreographic concepts through the development of movement compositions. This course fulfills lower division requirements for dance majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

261 Dance Performance

**6 hours lab, 2 units
Grade Only**

Advisory: Physical Education 135 or 140 or Dance 110, 135, or 140 with a grade of "C" or better, or equivalent. Dance Performance provides the opportunity for students to apply intermediate and advanced skills in ballet, jazz and modern dance in preparation for public performance. Emphasis is placed on student application of dance, staging, and performance techniques in a theatrical environment. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 129, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

271 Dance Production

**3-6 hours lab, 1-2 units
Letter Grade or Credit/No Credit Option**

Dance Production explores the technical and management aspects of producing a dance concert. Emphasis is placed on student application of design and construction of costumes, lighting design, makeup application, stage and house management, and publicity. This course fulfills lower division requirements for dance majors. This course, in combination with Physical Education 118, may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Courses

Dramatic Arts (DRAM)

103 Acting for Non-majors

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 130. This course introduces students to improvisational acting. The first phase of the course treats acting as process-centered. The instructor leads the participants using a variety of exercises to imagine, enact and reflect upon human experiences. The second phase of the course emphasizes problem-solving skills in group improvisational work. The group improvises action and dialogue appropriate to the content it is exploring, using elements of drama to give form and meaning to the experience. This course is designed for students who are interested in studying acting. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Introduction to Dramatic Arts

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory study of the art and literature of the theater. Emphasis is placed on the examination and evaluation of dramatic texts in terms of genre, historical context, aesthetics and reception. In addition, this course introduces students to the technical aspects of the theatrical industry including production and personnel through campus drama productions and field trips. This course is designed for students pursuing a Liberal Arts degree with an emphasis in drama performance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN DRAM 18).

106 Acting for Radio/Voice-Over

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Radio and

Television 105 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Radio and Television 106 or 265 or Drama 265, Acting for Radio/Voice-Over. (Same as Radio and Television 106.)

This is an introductory course to train actors in the fundamentals of voice technique, dialects and voice-over. Emphasis in the voice-over component includes microphone technique, character voices and cartoon voices for commercial use as well as cold reading audio-taped audition skills. Other components include cold reading techniques, fundamental acting techniques required for voice-over work, and the production of a voice-over demo tape. This course provides a comprehensive introduction to students intending to enter a career in dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

107 Study of Filmed Plays

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a study of cinematic adaptations of plays, comparing stage and screen versions in the areas of form and structure, writing, and production. Emphasis is placed on developing students' appreciation for dramatic art and providing practice in the art of theater criticism. This course is designed for Drama majors and any student interested in the Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

119 Acting for Film and Television

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Radio and Television 119 or 265 or Dramatic Arts 265, Acting for Film and Television. (Same as Radio and Television 119.)

This course introduces students to the skills required for on-camera performing techniques as used in the motion picture and television industry. Students participate in the selection, rehearsal, and on-camera performance of material from television and motion picture scripts including drama, sitcoms, soaps and commercials. Emphasis is placed on cold reading taped audition skills, improvisational and interview techniques, and

the fundamental acting techniques required for camera, scene, and monologue studies. This course provides a comprehensive introduction to students intending to enter a career in the dramatic arts and radio/television. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

122 Makeup for the Stage

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

This course is an introductory hands-on study of the materials and techniques used in stage makeup design and application. Emphasis is placed on the acquisition of a lexicon pertinent to the history and use of makeup in the theater as well as on the actual application of stage makeup in the classroom as a member of the makeup crew for a theatrical production. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN DRAM 14).

123 Beginning Stagecraft

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 125. This lecture/laboratory course emphasizes student involvement in all phases of technical scene production. The course emphasizes construction, painting, rigging, placement, and manipulation of stage scenery, lighting equipment, sound and properties, and the organization and management of stage activity and stagecraft technology. Students study the aesthetics and practical application of set, sound and lighting design. This course is designed for students pursuing an Associates Degree in performance and technical theater and may be repeated one time. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. (CAN DRAM 12).

126 Advanced Stagecraft

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Dramatic Arts 123 with a grade of "C" or better, or equivalent.

This course offers students an advanced study of technical stage production and scene technology with an emphasis on the methods and practices of technical theory and on practical, hands-on experience. Course content includes theater design, stage decor and lighting and the synthesis of all elements of stagecraft within an environment of actual stage production. Students develop crew leadership skills as they create and construct set designs and operate stage equipment

for all Dramatic Arts production throughout the semester. This course is designed for students pursuing an associate degree in performance and technical theatre and may be repeated one time. (FT). Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

129 Beginning Scene Painting

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 265: Introduction to Scene Painting and Decorative Arts. This course introduces students to basic techniques and materials used in the painting of scenery for the stage. Students learn techniques in faux painting, murals, trompe l'oeil (trick the eye), and decorative motifs for theatre. Students experiment with color mixing, base, layout, ink, lay-in detail and the use of brushes and tools. Emphasis is placed on application of techniques for theatre settings. This course provides a comprehensive introduction to students pursuing a degree in Visual and Performing Arts or a Certificate in Technical Theatre. This course may be taken three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

132 Beginning Acting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 131A. This course is a beginning level study, practice and execution of the fundamentals of acting designed to develop a foundation in basic acting technique. Emphasis is placed on the effective communication of ideas and emotions by a dramatic character to audience. The course content includes staging techniques, improvisation, theater games, scenes, monologues, stage movement, and an introduction to the lexicon of acting for theater. This course is intended for students who are interested in developing basic acting techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN DRAM 8).

133 Intermediate Acting

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Dramatic Arts 132 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 131B. This course is designed to build upon the acting and scene work skills developed in Dramatic Arts 132. Emphasis is placed on character analysis through lecture, demonstration and exercises as well as on scene rehearsal and presentation. This course is intended for students who are interested in preparing for a major in drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN DRAM 22).

134 Beginning Voice for Actors

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

This course is designed as an introduction to voice for actors. Students learn the mechanics of voice production and the various elements of theatre speech: quality, strength time and pitch. The students are introduced to the American Standard Pronunciation and International Phonetic Alphabet. Lecture and discussion, plus individual and group exercises, are combined to help the student acquire the basics of good voice, speech and articulation. This course is for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN DRAM 6).

136 History of Canonized Theatre- Ancient Greece to the Restoration

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed to introduce the student to a history theatre of the Western canon from ancient times to the Restoration in England. The student examines the physical theatre and methods of staging drama from the earliest records to the mid-17th Century. Emphasis is placed on text analysis of the works of the canonized playwrights and the relationship of the theatre to the historical, political and religious events of the times. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in

Drama. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

137 History of Canonized Western Theatre-Restoration to the Present

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed to introduce students to a history of canonized Western theatrical experiences from the English Restoration to the present and includes examination of the physical theatre and methods of staging drama. Emphasis is placed on text analysis of the works of canonized playwrights and the relationship of theatre to the historical, political and religious events of the times. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

143 Beginning Costuming

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M20.

This is a lecture and laboratory course that emphasizes student involvement in the techniques and methodology of costume construction. Class material emphasizes practical experience in sewing, fabrics and their modification, costume craft techniques such as millinery, masks, footwear and accessories, and service on costumes crews. Students study costume production procedures in regards to time, budgets and labor. This course is designed for students pursuing an Associates Degree in performance and technical theater. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

165 Introduction to Stage Movement

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Dramatic Arts 165A. This course serves as an introduction to basic techniques of movement for the stage. Stage movement focuses on the actor's body as an expressive

instrument. Students acquire flexibility, strength, and physical repertoire of stage movement. The student is challenged to explore and utilize new areas of dramatic expression. Some examples of contemporary movement are Tai Chi, Suzuki, Alexander, and Feldenkrais. This course is intended for students pursuing a degree in Visual and Performing Arts with an emphasis in Drama. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

172 Beginning Musical Theater Audition

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

This course is a beginning-level study and demonstration of the skills needed to competitively audition for musical theater productions. Emphasis is placed on selecting and rehearsing appropriate ballads and up-tempo songs, as well as on music preparation, song interpretation, lyric memorization techniques, audition performance, projection, appearance, and communication. Course content also includes an introduction to the process of auditioning for musical theater within a professional context. Students are required to participate in an audition recital. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

173 Intermediate Musical Theater Workshop

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Dramatic Arts 172 with a grade of "C" or better, or equivalent.

This course is an intermediate-level study and demonstration of the skills necessary to integrate singing and movement in performance and to audition for musical theater in a competitive way. Emphasis is placed on student participation in the selection, rehearsal, and weekly performance of ballad and up-tempo audition songs. Course content includes music preparation, lyric interpretation, musical terms and notation, and stage movement at the intermediate level. By the end of the course, students are able to arrange an audition and apply professional conduct and standards toward the goal of theater as employment. This course is designed for students pursuing an Associates Degree in performance. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

174 Advanced Musical Theater Workshop

**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Credit/No Credit Option**

Limitation on Enrollment: Tryout or audition.

This course is an advanced-level study and demonstration of the skills needed to integrate acting, singing, and movement in Musical Theater. Emphasis is placed on student participation in the selection, rehearsal and class performance of a song and scene from a musical. Topics explored throughout the course include interpretation, characterization, professional conduct and theater as employment in addition to an overview of major musicals, roles, songs, authors and composers. By the end of the course, students are able to arrange an audition and apply professional conduct and standards as they seek employment in the theater. Participation in a musical revue open to the public is required. This course may be repeated one time with a different content. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Rehearsal, Production and Performance

3-12 hours lab, 1-4 units

Letter Grade or Credit/No Credit Option

This course is a study and application of the skills, responsibilities and commitment required for work in play production and performance. Throughout the course, students participate in the rehearsal, production and performance of an actual play. As part of this process, students research and provide written critiques of the background, style, historical conditions and artistic theory connected to the given play and apply these to an original interpretation of the production. This course may be repeated three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

251 Musical Comedy Rehearsal, Production and Performance

3-12 hours lab, 1-4 units
Grade Only

This course is a study and application of the skills, responsibilities and commitment required for work in the production and performance of a musical. Throughout the course, students participate in rehearsal, production and performance as actors, singers, dancers, technicians, assistant directors, stage managers and production crew. As part of this process, students research and provide written critiques of the background, style, historical conditions and artistic theory connected to the given musical and apply these to an original interpretation of the production. This course may be repeated three times. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Advanced special work in dramatic arts: acting, design, lighting, film, business, makeup, costumes, direction, or play production. This course may be taken four times with different content for a maximum of six units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Digital Audio

Program Emphasis

The Digital Audio Certificate of Completion is a course of study in digital recording, mixing and mastering of musical projects. This is a hands-on program in which students utilize state-of-the-art software and plug-ins for Musical Instrument Digital Interface (MIDI) sequencing projects. The Digital Audio Certificate of Completion program prepares students for entry-level positions in a variety of fields in the music industry.

Faculty

Stephanie Robinson

Office

C-225F

Telephone

(619) 388-3933

Career Options

Entry level employment options for graduates of the Digital Audio Certificate of Completion programs include positions in recording, mixing, mastering music for music compact discs, jingles or commercials, and radio and television station packages. This program also serves as a base for future career options such as digital art technician, recording studio engineer, synthesizer programmer, and retail music equipment sales.

Academic Programs

The Certificate of Completion in Digital Audio requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Completion: Digital Audio

Courses Required for the Major:	Units
MUSI 150A, Basic Musicianship	3
MUSI 190, Electronic Music Studio	3
MUSI 201, Recording Arts.....	3
MUSI 202, Computer Music	3
Total Units = 12	

Recommended electives: Music 115A, 205A

Visual and Performing Arts Recording Arts

Program Emphasis

The Certificate of Achievement in Recording Arts prepares Music students with a solid foundation in digital recording, mixing and mastering of musical projects using state-of-the-art software and plug-ins. Students produce musical projects using Musical Instrument Digital Interface (MIDI) sequencing, as well as music for multimedia projects, film and video. Combined with course work in basic musicianship, students are prepared for entry-level positions in a variety of fields in the music industry.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	(619) 388-3933

Career Options

Examples of entry level employment options after successful completion of the Certificate of Achievement in Recording Arts include: recording, mixing, mastering, composition and/or production of music for music CDs, film, video, music videos, jingles or commercials, radio and television station identification packages, and multimedia projects. This program also serves as a base for further education leading to careers such as digital audio technician, recording studio engineer, producer, sound re-enforcement engineer, synthesizer programmer, and retail music equipment sales.

Academic Programs

The Certificate of Achievement in Recording Arts requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts

Recording Arts

Courses Required for the Major:	Units
MUSI 150A, Basic Musicianship	3
MUSI 190, Electronic Music Studio	3
MUSI 201, Recording Arts.....	3
MUSI 202, Computer Music	3
MUSI 205A, Projects in Electronic Music	3
RTVC 107, Broadcast Audio	3
RTVC 152, Digital Audio Post Production.....	3
Total Units = 21	

Recommended elective: Music 115A

Visual and Performing Arts Digital Music Technology

Program Emphasis

The Digital Music Technology program provides an opportunity for students to gain specific hands-on skills in each of the technologies currently used in the music industry. Students will also gain practical experience for professional and community musical performance and preparation for continued higher education. Students will participate in various facets of music production for a variety of uses in the commercial marketplace which will allow them to develop practical skills and talents while earning college credit for transfer to universities or entry into the workplace.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	(619) 388-3933

Career Options

Examples of employment options available in entry level digital music technology after successful completion of the associate degree program include: composition and/or production of music for music CD's, film, video, music videos, jingles or commercials, radio and TV station ID packages, and multimedia projects. Additional careers include digital audio technician, recording studio engineer, sound re-enforcement engineer, and synthesizer programmer. Some of these careers require education beyond the associate degree.

Academic Programs

The associate degree in Digital Music Technology requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

**Associate in Arts Degree:
Visual and Performing Arts
Digital Music Technology**

Courses Required for the Major:	Units
MUSI 108, The Business of Music	3
MUSI 115A, Elementary Piano	1
MUSI 150A, Basic Musicianship	3
MUSI 190, Electronic Music Studio	3
MUSI 201, Recording Arts.....	3
MUSI 202, Computer Music	3
MUSI 205A, Projects in Electronic Music	3
RTVC 107, Broadcast Audio OR	
RTVC 152, Digital Audio Post Production	3
RTVC 151, Introduction to Multimedia	3
Total Units = 25	

Recommended electives: Music 100, 109, 111, 115B, 120, 121, 215A, 215B, 230A, 230B, 290, 296; Radio and Television 154, 157, 167.

Transfer Information

Common university majors related to the field of Music include:

Composition, Creative Studies, Ethnomusicology, Liberal Studies, Music, Music Business, Music Education, Music Industry and Technology, Music Performance, Music Theater, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Music (MUSI)

100 Introduction to Music

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is a survey course designed to develop listening perception through lectures, recordings, films and concerts. The conceptual and stylistic differences in music from various periods and cultures will be examined through discussion of the elements of music as well as through discussions of ethnic, jazz, vocal instrumental and 20th century music. This course is designed to support students in all majors who are interested in satisfying the general education requirements for Arts and Humanities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

108 The Business of Music

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: Completion of or concurrent enrollment in English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course is a comprehensive survey of the music business. Course content emphasizes the various areas of the music business, the functions of each area and the relationships between the areas. Topics covered include songwriting, music publishing, copyright, music licensing, unions and guilds, agents and managers, artists and management, the record industry, artists' recording contracts, studios and engineers, and music in radio, television and advertising. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

109 World Music

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This music survey course explores the music cultures of Asia, the Middle East, Africa, Central and South America, the Caribbean and other areas with resident populations in San Diego. Musical practices and

perspectives from several music cultures are studied with an emphasis on understanding and appreciation from non-ethnocentric viewpoints. Listening perception is developed through lectures and multimedia presentations. The course is intended to satisfy general education requirements for Arts and Humanities and satisfies the San Diego Community College District's Multicultural Course Studies requirement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110 Music for Elementary School Teachers

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course prepares students to teach music as part of the curriculum in the elementary school classroom, the preschool, or day-care program. Students develop an understanding of musical concepts primarily by singing and/or playing an instrument and create lesson plans for teaching these concepts to children. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

111 Jazz - History and Development

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of the history and development of jazz in the United States. Emphasis is placed on the origins of jazz, the variety of styles that developed throughout the twentieth century, current trends and outstanding performers and composers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

115A Class Piano I

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces basic skills to music majors whose theoretical and practical keyboard skills are deficient, and to non-music majors who have had little or no experience at the piano. This course focuses on developing repertoire, sight reading, transposition, harmonization, creative composition, and modulation techniques. (FT) Associate Degree Credit & transfer to

CSU and/or private colleges and universities. UC Transfer Course List. (CAN MUS 22).

115B Class Piano II

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Music 115A with a grade of "C" or better, or equivalent.

This course is a continuation of Music 115 A, with an emphasis on moderately difficult techniques in developing repertoire, keyboard techniques, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. This course is appropriate for music majors whose theoretical and practical keyboard skills are deficient as well as for non-music majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN MUS 24).

120 Beginning Voice Class

1.5 hour lecture, 1.5 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Music 120A.

Beginning Voice Class is an introductory study of efficient vocal production and performance. Beginning exercises for breath management, extending the vocal range, increasing vocal resonance and volume, and singing in an expressive manner are introduced. Vocal exercises and solos are performed to demonstrate these skills. Choral singers, all music majors and students considering music as a major benefit from this class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

121 Intermediate Voice

1.5 hours lecture, 1.5 hours lab, 2 units

Letter Grade or Credit/No Credit Option

Prerequisite: Music 120 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Music 120B. Intermediate Voice is an in-depth study of specific elements of efficient vocal technique and performance. These include breath management via body alignment, managing stage fright, and analyzing the expressive

elements of selected music. Vocal exercises and songs from various music styles are performed including selections made by students. Choral singers, all music majors, elementary education majors and students considering singing as a profession benefit from this class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130A College Chorus I

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

This course is an entry-level introduction to choral singing for potential music majors. Emphasis is placed on developing good vocal tone, intonation, and breath support. Students rehearse and perform easy choral literature arranged for soprano, alto, tenor and bass with piano accompaniment, including but not limited to selections from Broadway musicals, popular and light classical genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130B College Chorus II

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Advisory: Music 130A with a grade of "C" or better, or equivalent.

This course is an intermediate-level exploration of choral singing for potential music majors. Emphasis is placed on developing the musical ear, intonation, diction and independence within a choral section. Students rehearse and perform intermediate-level choral literature arranged for soprano, alto, tenor and bass with piano accompaniment, including but not limited to selections from Broadway musicals, popular and light classical genres. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130C College Chorus III

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Advisory: Music 130B with a grade of "C" or better, or equivalent.

This course is an intermediate to advanced level exploration of choral singing for potential music majors. Emphasis is placed on further developing the musical ear, diction, sight-singing pitch, and independence within a choral section or small ensemble. Students rehearse and perform intermediate to advanced level choral literature arranged for soprano, alto, tenor and bass with and without piano

accompaniment, including but not limited to selections from standard classical repertory in English and Latin. Students rehearse and perform a cappella literature arranged for soprano, alto, tenor and bass. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

130D College Chorus IV

**1 hour lecture, 2 hours lab, 1.5 units
Letter Grade or Credit/No Credit Option**

Advisory: Music 130C with a grade of "C" or better, or equivalent.

This course is an advanced-level exploration of choral singing for potential music majors. Emphasis is placed on further developing the musical ear, identifying aspects of musical notation, sight-singing, and exploring a wider range of choral literature. Students rehearse and perform advanced-level contrapuntal "a cappella" choral literature arranged for soprano, alto, tenor and bass as both part of a larger ensemble and in solo quartets. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

150A Basic Musicianship

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

This course is designed for music majors as well as non-music majors. It enables the student to develop perceptions in sight and sound as related to the symbols of rhythmic, melodic, and harmonic notation. It will also enable the student to develop skill in writing, major, minor, and chromatic scales, chord construction and intervals; and to identify terms used to indicate tempo and dynamics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN MUS 2).

190 The Electronic Music Studio

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Music 150A with a grade of "C" or better, or equivalent.

This course is a study of recording and electronic music equipment. It is a prerequisite to future work in the electronic music studio and also prepares students for a major in music. The course demonstrates basic techniques using microphones, tape recorders, the mixing board, synthesizers, samplers and music applications such as sequencing on computers,

Emphasis is on students' acquisition of basic skills needed for practical application and on acquiring knowledge of simple electronic and acoustic theory, including Musical Instrument Digital Interface (MIDI). Students design and create special projects using this equipment and proper protocol during lab hours and present their projects in class. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

201 Recording Arts

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and completion of or concurrent enrollment in Music 150A with a grade of "C" or better, or equivalent.

This course is a study of advanced acoustics and electronic theory as applied to recording, mixing, and sound processing. The course will demonstrate various applications of advanced tape recording, microphone use, and mixing, such as tape editing, effects processing, music concrete composition, and other techniques for music composition. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

202 Computer Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Music 150A with a grade of "C" or better, or equivalent.

This course is a study of the application of contemporary digital technology to the practice of music performance and composition. The emphasis of this course is on the acquisition of computer skills to access and manipulate musical data via MIDI and other digital formats. These skills allow students to digitally sample sounds, control synthesizers and samplers, synchronize computers to tape, sequence music, transcribe and print musical scores and conceive new techniques for music composition. This course is designed for students who are interested in continuing their education in the Electronic Music Studio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205A Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: Music 201 or Music 202 with a grade of "C" or better, or equivalent.

In this course, students create a portfolio of music recordings and/or productions in an electronic music studio. Assigned projects incorporate composition, arranging, engineering, and production applications in a variety of media environments. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music created. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

205B Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Music 205A with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Music 150A with a grade of "C" or better, or equivalent.

In this course, students expand their portfolio to include music projects /productions for various media applications and industries such as for the Internet, television and cinema. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music and sound recordings created. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206A Projects in Composition

**3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Music 150A with a grade of "C" or better, or equivalent.

Completion of or concurrent enrollment in Music 190. Students have the option to create their music with the aid of recording facilities and computer workstations on campus if they are currently enrolled in or have passed Music 190 with a grade of "C" or better, or equivalent. In this course students learn to work efficiently as composers with the added support of constant positive feedback. This course is not limited to composing in a classical style but addresses broader issues common to all styles and genres. Included are such studies in compositional principles of form and structure, and other issues that enable students to analyze the nature

of their musical creativity. The emphasis is on the students' examining from a critical standpoint weaknesses and strengths in their own original compositions as well as that of their peers, and on the students' developing their creative potential. In addition to music majors and students with advanced knowledge of music, this course is intended for any students actively creating their own music. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

206B Projects in Composition

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Music 150A with a grade of "C" or better, or equivalent.

Completion of or concurrent enrollment in Music 190. Students have the option to create their music with the aid of recording facilities and computer workstations on campus if they are currently enrolled in or have passed Music 190 with a grade of "C" or better, or equivalent. This course is a companion course to Music 206A and is designed to allow students, with the aid of recording facilities and computer workstations running music software, to pursue their work as composers. This course is not limited to composing in a classical style but addresses broader issues common to all styles and genres. Included are such studies in compositional principles of balance, texture, dramatic emphasis and other issues that enable students to analyze the nature of their musical creativity. Upon completion of the Music 206 course sequence students have a portfolio of original music. In addition to music majors and students with advanced knowledge of music, this course is intended for any students actively creating their own music. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

209 Electronic Music Studio Internship

4 hours lab, 1 units

Grade Only

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in Music 201 or Music 202 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Tryout or Audition.

This course allows advanced students in recording arts and computer music to get credit for assisting others in the Electronic Music Studio lab. After audition students are assigned to assist beginning and intermediate students from other classes working in the Electronic

Music Studio lab. In this way students reinforce their knowledge and skills by guiding and mentoring others on the basis of what they had learned by seeing and doing in previous courses. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

215A Class Piano III

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Music 115B with a grade of "C" or better, or equivalent.

This course is an intermediate level of study of practical and theoretical keyboard techniques for music majors, credential applicants, and non-music majors with comparable skills. The course focuses on intermediate skill development of repertoire, keyboard technique, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

215B Class Piano IV

.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Music 215A with a grade of "C" or better, or equivalent.

This course is an advanced level of study of practical and theoretical keyboard techniques for music majors, credential applicants, and non-music majors with comparable skills. The course focuses on advanced skill development of repertoire, keyboard technique, sight-reading, transposition, harmonization, creative composition, improvisation, ensemble playing, and modulation techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230A-B Jazz Improvisation

3 hours lab, each course: 1 unit

Letter Grade or Credit/No Credit Option

A comprehensive study of the techniques and literature of improvisation with an emphasis of jazz improvisation and interpretation. Analysis and practical application of chord progressions used in jazz. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

230C Jazz Improvisation

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Music 230B with a grade of "C" or better, or equivalent.

This course is a continuation of Music 230 A and B, Jazz Improvisation. Emphasis is placed on providing students with an ever-broadening repertoire of Jazz standards and theory as well as an introduction to the basics of commercial arranging. This course is designed for Music majors, students planning on a career in commercial music, and anyone interested in honing their Jazz skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230D Jazz Improvisation

3 hours lab, 1 unit

Letter Grade or Credit/No Credit Option

Prerequisite: Music 230C with a grade of "C" or better, or equivalent.

This course is a continuation of Music 230 A, B and C, Jazz Improvisation. Emphasis is placed on providing students with an ever-broadening repertoire of Jazz standards as well as more contemporary Jazz tunes. Topics also include advanced Jazz theory and commercial arranging concepts. This course is designed for Music majors, students planning on a career in commercial music, and anyone interested in honing their Jazz skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

Hours by Arrangement, 1-3 units

Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Course is designed to meet individual needs or interests of students who wish to work on special projects in music. Special projects include all aspects of music and may involve topics which are broad in scope along with those that are narrow in scope. Special projects may include an unlimited number of diversified phases of the music curricula. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

296 Individual Instruction in Music

1.5 - 6 hours lab, .5 - 2 units

Credit/No Credit Only

Limitation on Enrollment: Enrollment in an approved related course; Must obtain an Add Code from instructor for registration.

Individual instruction in music which employs self-paced audio and visual multimedia systems designed to assist students in reaching specific learning objectives related to other instructional course areas; hence, it is

designed to supplement related courses as specified above. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts Photography

Program Description

The photography program offers a wide range of theory, technique and skills course work from beginning through advanced levels. The program is structured to emphasize the development of creative expression, visual awareness, and technical skills required to enter the photography field or to prepare for transfer to four-year institutions.

Program Emphasis

The certificate of achievement program and the associate degree, Visual and Performing Arts, Photography Emphasis, is designed for students seeking employment in the photography field.

Faculty

David Eichinger
David King

Office

A-1(J)
A-1(J)

Telephone

(619) 388-3368
(619) 388-3649

Career Options

This list is not all-inclusive. Some careers require education beyond the associate degree: advertising photographer, commercial photographer, fashion photographer, food photographer, editorial photographer/journalist, industrial photographer, portrait/wedding photographer, photo researcher, photographic artist, photographic printer, photography instructor, photo laboratory technician, stock photographer.

Academic Programs

The associate degrees in photography requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Achievement: Visual and Performing Arts Photography

The certificate of achievement in photography requires completion of the courses listed below:

Courses Required for the Major:	Units
ARTF 150A, Design I.....	3
PHOT 100, Basic Black & White Photography	3
PHOT 125, Photo Business Operations.....	2
PHOT 135, Intermediate Black & White Photography. 3	
PHOT 145, Color Transparency Photography	2
PHOT 200, Photographic Lighting Techniques	3
Select one course from:	
PHOT 155, Color Negative Photography	
PHOT 156, Color Positive Photography	
PHOT 180, Digital Imaging	3
Select one course from:	
ARTF 193, Photography as Fine Art	
PHOT 220, Portraiture	
PHOT 230, Advertising Photography	
PHOT 240, Large Format Photography	
PHOT 250, Fashion Photography	3
Total Units = 22	

Associate in Arts Degree: Visual and Performing Arts Photography

Courses Required for the Major:	Units
ARTF 150A, Design I.....	3
PHOT 100, Basic Black & White Photography	3
PHOT 135, Intermediate. Black & White Photography	3
PHOT 145, Color Transparency Photography	2
PHOT 200, Photographic Lighting Techniques	3
Select one course from:	
PHOT 155, 156, 180	3
Select one course from:	
ARTF 110, 111, 150B, 151, 155A, 193	3
Select three courses from:	
PHOT 125, 220, 230, 235, 240, 250	8-9
Total Units = 28-29	

Recommended electives: Photography 270, 290, 296.
Suggested courses for Photography Fine Arts, Design
Emphasis: ARTF 193, PHOT 180, 181, 235, 240
Suggested courses for Photography Advertising,
Commercial Emphasis: PHOT 125, 220, 230, 240, 250

Transfer Information

Common university majors related to the field of Photography include:

Art, Art and Design, Art Photography, Communication, Film and Electronic Arts, Photography, Visual and Public Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Photography (PHOT)

100 Basic Black-and-White Photography

1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course is an introduction to basic camera handling skills and the aesthetics of photography. Emphasis is placed on how to use cameras, lenses, exposure meters, flash, enlargers, related equipment and compositional skills to create original images. Laboratory practice includes Black and White film processing, printing and presentation. This course is the entry level course for students working toward a certificate or degree in Photography and in other Visual Arts programs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 18).

102 Directed Photo Lab Studies

3 hours lab, 1 unit
Credit/No Credit Only

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent or Photography 143 with a grade of "C" or better, or equivalent.

A supervised laboratory in darkroom and/or digital photography. Emphasis is placed on refinement of personal photographic skills. This course is designed for intermediate and advanced photography students. May be taken up to four times. Content will vary with each repetition in photographic subjects and application of techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

105 Introduction to Photography

**3 hours lecture, 3 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. Basic photo class for non-photo majors. Will discuss how to use cameras, lenses, exposure meters and similar equipment using flash and available light. Use of various films including black and white, color slide, color negative, and color polaroid will be covered. Outside assignments will be required and will include photographing of art for portfolios. Lecture. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

125 Photo Business Operations

**2 hours lecture, 2 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. Survey of basic organization and planning techniques utilized in media and production with emphasis on pre-production planning, budgeting and scheduling. Variety of current photography related business operations will be covered and concentration on portfolio development and presentation and career opportunities in photography. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

135 Intermediate Black-and-White Photography

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent. This course provides students with intermediate-level instruction and practice in black and white film exposure and development procedures and printing. Emphasis is placed on various techniques for enhancing black and white negative and print quality. Topics also include composition, visual communication skills, use of light, lighting control and equipment. Instruction includes use of 35 mm format and an introduction to medium format cameras. This course is designed for the

student working on a certificate or degree in Photography and as preparation for higher level courses in the program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

143 Introduction to Digital Photography

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in: Photography 100 and Photography 105 and Art-Fine Art 190A, each with a grade of "C" or better, or equivalent. This course is an introduction to the methods and processes involved in photographic image acquisition, optimization and output used in Digital Photography. Emphasis is placed on the evolution from traditional, analog/wet darkroom to digital approaches to photography and the relationship between these approaches. This course is designed for students who wish to pursue a career in photography. Students should provide digital or film camera with manual controls. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

145 Color Transparency Photography

**2 hours lecture, 2 units
Grade Only**

Prerequisite: Photography 100 or Photography 105 with a grade of "C" or better, or equivalent. This course is an introduction to color photography, covering color perception, color theory, and the principles of color as they apply to transparency/slide films, and how they compare to color negative and B/W materials. Other topics to be covered will include: exposure techniques; using camera filters; composition; and the types and characteristics of light. There is a strong emphasis on understanding and using lighting and lighting control with all types of light sources both in the studio and on location. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

150 History of Photography

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5. This class is a survey of the history and development of photography and traces the various scientific and aesthetic issues involved in creating the 'light-based' image. It traces its progress from being a tool of fine art mediums through its involvement in the digital revolution. The course examines photography's social/cultural/economic impact, its impact on the study of

history, and discusses present and future directions. The class is required for photography majors in the degree program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

155 Color Photography, Negative

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

This course will explore the concepts of using color negative photography materials with the emphasis on proper film exposure, printing procedures, and color composition. The topics covered will include the theory of color, color perception, visual concepts, and lighting control. The student will be shown the proper techniques for exposing and processing color negatives, printing from color negative materials, print finishing and presentation and understanding and using various light sources with color negative materials, both in the studio and on location. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

156 Color Photography Positive

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 and Photography 145, each with a grade of "C" or better, or equivalent.

This course will cover the concepts and techniques of using color positive/reversal photography materials, with the emphasis on proper film exposure, printing procedures, and color composition. The topics covered will include: the theory of color; color perception; visual concepts; and light and lighting control. The student will be shown the proper techniques for exposing and processing color positive materials, printing with color positive materials, print finishing and presentation, and the use of various light sources both in the studio and on location. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

180 Digital Imaging

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 or Photography 105 with a grade of "C" or better, or equivalent.

This course is an introduction to theories and methods of computer use in image making utilizing both

traditional photography and advanced technology. The course focus will be on application and principles of image creation, manipulation and enhancement for visual expression and communication using digital technology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

181 Intermediate Digital Imaging

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W6 and R6; or English 105 with a grade of "C" or better, or equivalent. This course emphasizes the continued instruction and practice required for understanding and improving image creation and visual communication utilizing traditional photography methods in combination with digital technology. Students will explore a variety of creative techniques for producing, editing and altering images using computers, software and digital tools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

200 Photographic Lighting Techniques

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 and Photography 145, each with a grade of "C" or better, or equivalent.

This course is the study of the lighting concepts, techniques, and equipment used in all phases and types of color equipment used in all phases and types of color and B/W photography. Emphasis in on the understanding, control, and manipulation of lighting and lighting equipment using both additive and subtractive lighting techniques. This includes the use of studio and portable lighting equipment, and the techniques of mixing natural and man-made light. Other topics to be explored include: related special shooting techniques; multiple exposure; matte-boxing; using a shooting light-table; painting with light and advertising/product-specific lighting considerations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

220 Portraiture

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Photography 100 with a grade of "C" or better, or equivalent.

Advisory: Photography 135 and Photography 155, each with a grade of "C" or better, or equivalent.

Camera types and formats, lenses, films, and accessory equipment used for portrait and wedding photography. How to use different types and sources of light both in the studio and on location. Using B/W and color films. Posing techniques and proper use of cosmetics, clothing, etc. The physical, psychological, and compositional aspects and characteristics of different portrait styles. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

230 Advertising Photography
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

The emphasis in this course is in producing photographs to sell a product or service using both black and white and color film materials. An understanding of the photographer's role in the advertising industry will be explored and used as the basis from which all assignments are evaluated. Topics for lecture will include terminology used in the advertising field, layout production and working to layouts. The psychology of ad design and color usage will be covered. Lighting staples and techniques will be discussed as they relate to projects. The photographer's role working with clients and on assignment work with the Art Director and as a member of the creative team will be heavily emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

235 Advanced Black and White Photography
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 135 with a grade of "C" or better, or equivalent.

This course concentrates on advanced theory and the practice of black and white photography to include professional applications, specialized processes, master of dark room skills with emphasis on individual expression. Presentation of advanced printing techniques, film, paper types, toners, and archival processing, are topics to be covered. Students will concentrate on individualized goals, exploring visual ideas and expanding their abilities using the black and white photography medium. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

240 Large Format Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

It is recommended, but not required, that students have their own view camera. Instruction and practice in view camera techniques used in architecture, advertising, product, landscape and other commercial and artistic applications in B/W and color. Using the camera movements for perspective control and image manipulation. Processing sheet film. Doing close-up and copy work. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

245 Landscape and Nature Photography
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 or Photography 105 or Photography 143, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Photography 265C. This course explores the application of film and digital photography in the natural outdoor setting. From images of the "Grand Landscape" to details and abstracts drawn from nature, the class studies effect of light, exposure, composition, concepts of isolation and context, color theory, and various camera shooting techniques along with the work of major landscape and nature photographers. The class is designed for intermediate level photo students who have basic film or digital skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

250 Fashion Photography
2 hours lecture, 3 hours lab, 3 units
Grade Only

Prerequisite: Photography 100 and Photography 145, each with a grade of "C" or better, or equivalent.

Advisory: Photography 135 with a grade of "C" or better, or equivalent.

This course will show the student how to create and produce attractive, exciting fashion photos. It will cover both B/W and color, and how to shoot for advertising and fashion magazines. The student will be given instruction and practice in using natural and man-made light on location and in the studio. Posing; clothing; accessories; locations/props; and special techniques in shooting and lighting will be discussed and demonstrated. The student will be shown how to shoot and layout effective fashion model composites.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study in Photography
3-9 hours lab, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Advanced individual projects in Photography. Open only to those photo students who have exhausted departmental offerings in their area of emphasis. Independent Study contract between student and professor required. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit only and not Transferable.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Visual and Performing Arts
Theater

Program Emphasis

The Theater Arts program provides an opportunity to gain practical experience in professional and community theater work and to prepare for continued higher education. Major theater productions are offered each year, allowing students to develop practical skills and talents while earning college credit for transfer to universities.

Faculty	Office	Telephone
Jerry Fenwick	C-106	(619) 388-3337
Duane Gardella	C-107	(619) 388-3594
June Richards	C-110	(619) 388-3617
Alicia Rincon	C-108	(619) 388-3563

Career Options

Most careers related to theatre require education beyond the associate degree, however, an understanding and mastery of technical theatre skills provides some preparation for work in local community theatre and professional theatre. A partial list of possible career options follows: Set designer, model builder, makeup artist, lighting designer, stage manager, scenic artist, set builder, set carpenter, set painter, stage technician, sound technician, prop maker, lighting operator.

Academic Programs

The associate degree in Theater requires completion of the courses listed for the degree. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Certificate of Completion:
Technical Theater

Courses:	Units
DRAM 122, Makeup for the Stage.....	2
DRAM 123, Beginning Stagecraft.....	3
DRAM 126, Advanced Stagecraft.....	3
DRAM 129, Beginning Scene Painting.....	3
DRAM 143, Beginning Costuming.....	3
Total Units = 14	

This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

Associate in Arts Degree:
Visual and Performing Arts
Theater

The theater program offers transfer courses in preparation for university theater majors as well as fundamental skills in acting and play production useful for employment or for participation in community theater productions.

Courses Required for the Major:	Units
DRAM 105, Introduction to Dramatic Arts	3
DRAM 119, Acting for Film and Television	3
DRAM 122, Makeup for the Stage.....	2
DRAM 123, Beginning Stagecraft.....	3
DRAM 132, Beginning Acting	3
DRAM 134, Beginning Voice for Actors	3
DRAM 165, Introduction to Stage Movement	3
Total Units = 20	

Recommended electives: Dramatic Arts 103, 106, 107, 250, 251, 290.

Transfer Information

Common university majors related to the field of Drama include:

Drama, Liberal Studies, Theater, Theater and Performance Studies, Theatre Arts, visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the

Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Visual and Performing Arts Musical Theater

Program Emphasis

This program provides some of the preparation for transfer to programs in dance, voice, acting, movement and provides basic training in musical theater and theater.

Faculty	Office	Telephone
Stephanie Robinson	C-225F	(619) 388-3933
Duane Gardella	C-107	(619) 388-3594
June Richards	C-110	(619) 388-3617
Alicia Rincon	C-103	(619) 388-3563

Career Options

Some career options listed require a baccalaureate degree: musical theater stage performer, actor, television actor/performer, choreographer, stage chorus actor, show dancer, stage movement instructor, high school and elementary movement and dance instructor, creative dramatics instructor.

Academic Programs

The associate degree in Musical Theater requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

Associate in Arts Degree: Visual and Performing Arts Musical Theater

This program provides fundamental skills and theory in musical comedy, theater and music both for transfer students and for persons interested in participating in theater and musical theater productions.

Courses Required for the Major:	Units
DANC 135, Jazz Dance	0.5-1

DRAM 132, Beginning Acting	3
DRAM 251, Musical Comedy Rehearsal, Production and Performance	1-4
DRAM 119, Acting for Film and Television	3
DRAM 172, Beginning Musical Theater Audition	2
DRAM 173, Intermediate Musical Theater Workshop ..	2
DRAM 174, Advanced Musical Theater Workshop.....	2
MUSI 120, Beginning Voice	2

Total Units = 15.5-19

Recommended electives: Dance 110, 261; Dramatic Arts 134; Music 121.

Transfer Information

Common university majors related to the field of Musical Theater include:

Composition, Liberal Studies, Music, Music Business, Music Industry and Technology, Music Performance, Music Theater, Visual and Performing Arts.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Visual and Performing Arts Two-and Three-Dimensional Art

Description

This program provides fundamental training in two-dimensional design (art) enabling students to earn an associate degree while completing lower division preparation for a four-year degree. The curriculum is designed to maximize transferable course units and to provide basic skills required for employment in art-related fields.

Faculty	Office	Telephone
Wayne Halgin	C-225E	(619) 388-3693
whulgin@sdcdd.edu		

Yoonchung P. Kim C-225B (619) 388-3600
 ykim@sdccd.edu
 Cynthia Lyons-Dailard C-225C (619) 388-3794
 clyons@sdccd.edu

Career Options

Some careers listed require education beyond the associate degree: art critic, art dealer, educator, historian, arts administrator, advertising specialist, ceramicist, community or computer artist, computer graphics illustrator, computer publishing, design consulting, display designer, gallery director, graphic artist, illustrator, muralist, painter, printmaker, sculptor and visual information specialist.

Academic Programs

The associate degree in Two- and Three- Dimensional Art requires completion of the courses listed below. Additional general education and graduation requirements for the associate degree are listed in the catalog. **The associate degree requires a minimum of 60 units.**

**Associate in Arts Degree:
 Visual and Performing Arts
 Two-Dimensional Art Emphasis**

Courses Required for the Major:	Units
ARTF 110, 111, Art History	3,3
ARTF 150A, Design I.....	3
ARTF 151, Three-Dimensional Design	3
ARTF 155A, 155B, Freehand Drawing, I,II	3,3
ARTF 165A, Composition in Painting	3
ARTF 210A, Life Drawing	3
PHOT 100, Basic Black & White Photography	3
Select two courses (six units) from:	
ARTF 100, 109, 115, 150B, 165B,C,D, 170A, B,C, 175A,B,C, 195A,B,C,D, 196, 197A,B, 210B,C	6
Total Units = 33	

**Associate in Arts Degree:
 Visual and Performing Arts
 Three-Dimensional Art Emphasis**

Courses Required for the Major:	Units
ARTF 110, 111, Art History	3,3
ARTF 150A, Design I.....	3
ARTF 151, Three-Dimensional Design	3
ARTF 155A, 155B, Freehand Drawing, I,II	3,3
ARTF 175A, Sculpture I	3
ARTF 195A, Ceramics I	3
PHOT 100, Basic Black & White Photography	3

Select three units from:

Fine Arts 165A,B,C,D, 170A,B, 175B,C..... 3

Select six units from:

Fine Arts 109, 115, 150B, 195B,C,D, 197B,
210A,B,C 3,3

Total Units = 36

Recommended electives: Art-Fine Arts 193, 270, 290.

Transfer Information

Common university majors related to the field of Art-Fine Art include:

Apparel Design and Merchandising, Art, Art Education, Art History, Creative Arts/Studies, Design, Industrial Arts, Interior Design, Multimedia, Photography, Studio Art, Textiles.

Course Requirements for Transfer Students

Students who plan to transfer to a four year college or university and earn a bachelor's degree in this discipline should consult with a counselor or visit the Transfer/Career Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate of Arts degree in Transfer Studies. This degree is individually tailored to each student's specific transfer requirements in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Programs section of the catalog.

Courses

Art - Fine Art (ARTF)

100 Art Orientation

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is a survey of the visual arts. Students learn about the different aesthetic approaches, philosophies, and regional and cultural contributions the visual arts field has on societies. Students also learn about different media and art professions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

109 Nineteenth and Twentieth Century Art
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: Art-Fine Art 110 and Art-Fine Art 111, each with a grade of "C" or better, or equivalent.

This course is designed not only for art students but also for those who are interested in history, humanities, teaching, travel and cultural enrichment. It is an introductory survey of the visual arts that are most relevant to an understanding of western civilization in the 19th and 20th centuries. It includes major monuments and representative art works from Europe, Russia and the Americas. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

110 Art History: Prehistoric to Gothic
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed not only for art students, but also for those who are interested in history, humanities, teaching, travel, and cultural enrichment. It is an introductory survey of the visual arts that are most relevant to an understanding of western civilization, from prehistoric Africa and Europe through the Gothic period. It includes major monuments and representative artworks from Mesopotamia, Iran, Egypt, the Aegean and Greece. Also included are the Hellenistic, Roman, early Christian, Byzantine, and Islamic worlds and art work from early Medieval, Romanesque, and Gothic Europe. Material is presented in illustrated lectures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 2) (CAN ART SEQ A = ARTF 110 + 111).

111 Art History: Renaissance to Modern
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed not only for art students, but also for those who are interested in history, humanities, travel, and cultural enrichment. It is an introductory survey of the visual arts that are recognized as salient in the development of western civilization from the Renaissance to the early twentieth century. The art styles covered in the course include Renaissance, Mannerism, Baroque, Rococo, Neo-Classicism, Romanticism, Impressionism, post-Impressionism, and early twentieth century Modern movements. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 4) (CAN ART SEQ A = ARTF 110 + 111).

115 African Art
3 hours lecture, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is designed not only for art students, but also for those who are interested in history, religion, philosophy, humanities, and cultural enrichment. It is an introduction to the background, aesthetics, styles and iconography of African art. It covers a selected group of cultures throughout the continent, with an emphasis on sub-Saharan West and Central Africa. Classroom lectures are illustrated. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC transfer Course List.

150A Design I
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This is a course about visual form, and about ways of organizing two-dimensional visual forms into vivid and coherent images. As such, this course may serve as both an introduction to art for those with a tentative interest in art making, and as a foundation course for all other studio courses offered by this department, including courses such as ceramics and sculpture which involve construction in three-dimensions. This course does not require drawing expertise. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 14).

150B Beginning Graphic Design
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This is an introductory class in graphic communication which uses the computer as a tool for building and editing images. As in Art 150A, students address problems of visual form and organization, but with an emphasis in this course on visual constructions which convey information, and on type and text as graphic components of those constructions. This is a core course for art majors and would be useful for anyone

interested in computer graphic applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

151 Three-Dimensional Design

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This introduction to design in three dimensions continues the investigation of elements and principles of visual organization begun in Art 150A. Students learn to solve design problems using a variety of three-dimensional materials, and a variety of approaches to three-dimensional structure. This is a foundation course for students planning to major in art, and a useful course for all students interested in building visually coherent three dimensional objects. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 16).

155A Freehand Drawing I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course introduces anyone with an interest in drawing to the techniques and theory they need to create naturalistic drawings in various media. It provides students with the means to see and describe the world three-dimensionally using lines and differences in dark and light, and it provides students with compositional strategies for making their depictions more meaningful and effective. No previous art experience is required. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 8).

155B Freehand Drawing II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5; and Art-Fine Art 155A with a grade of "C" or better, or equivalent.

This course builds upon the technical and compositional means introduced in 155A. It differs from 155A in its range of media and form, and in its emphasis on helping students find individual solutions to particular problems of graphic representation and

expression. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165A Composition in Painting I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Art-Fine Art 150A and Art Fine Art 155A, each with a grade of "C" or better, or equivalent.

This course is an introduction to oil and acrylic painting methods and techniques with emphasis on composition, color, and application of general design principles. A variety of subject matter such as still-life, landscape, portrait and non-objective subjects, and a variety of stylistic approaches such as cubism, collage, realism and expressionism, are explored. This course is designed to develop students' creative abilities and critical thinking in visual terms. The course is designed for students who are pursuing an Associate in Arts degree, preparing for a major in Art, as well as for those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 10).

165B Composition in Painting II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 165A with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A and Art-Fine 155A, each with a grade of "C" or better, or equivalent; and English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course continues the introduction to oil/acrylic painting methods begun in Art 165A and provides for the continued development of concepts of pictorial space, composition, and color. The course is designed to further develop students' creative abilities and critical thinking through the construction of images designed to address specific pictorial problems and goals. This course is intended for students who are preparing for a major in Art as well as for those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165C Composition in Painting III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 165B with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent; and English

51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

This course continues the study begun in Art-Fine Art 165A and 165B of oil/acrylic painting methods and techniques. Composition, color, and application of general design principles are explored at a more advanced level of creativity and sophistication. A variety of subject matter such as still life, landscapes, portraits and non-objective subjects, and a variety of stylistic approaches such as cubism, collage, realism, and expressionism are explored. The course is designed to develop students' creative abilities and critical thinking in visual terms through the use of individual assignments tailored to students' skills. The course is intended for students who are preparing for a major in art, as well as for those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

165D Composition in Painting IV

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 165C with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent.

This course is the culmination of a four-semester sequence of study of oil/acrylic painting methods and techniques. The student continues to explore and develop skills and techniques in subject matter such as still-life, landscape, portrait, and non-objective subject matter, demonstrating an advanced level of creativity and critical thinking in visual terms. This course is intended for students preparing for a major in Art and may also be of interest to those who wish to improve their artistic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

170A Contemporary Crafts I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

In this course students learn to produce a variety of handmade crafts. Students develop projects using

various media including ceramics, wood, fabrics, glass, and enamels. In addition, they learn about design principles and expressive quality. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

170B Contemporary Crafts II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Crafts problems adjusted to students' individual needs and interests. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

175A Sculpture I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This course is an introduction to sculptural materials, processes and forms. The course helps students to appreciate the shapes and functions of sculpture (past and present) in the context of hands-on experience. This course is intended for transfer students planning to major in art and for all students interested in working in three-dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 12).

175B Sculpture II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Art-Fine Art 175A with a grade of "C" or better, or equivalent.

This course continues the introduction to sculptural materials, processes and forms begun in Art-Fine Art 175A. It differs from 175A in that it requires that students show more initiative in their selection and pursuit of sculptural goals, that they be more articulate in defining these goals, and that they extend their sculptural reach to include either new sculptural forms or new sculptural materials. This course is intended for transfer students planning to major in art and for all students interested in working in three dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

175C Sculpture III**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Art-Fine Art 175B with a grade of "C" or better, or equivalent.

This course continues the acquaintanceship with sculptural materials, processes and forms begun in Art-Fine Art 175A and 175B. It differs from 175B in that it requires that students show more self-reliance in their selection and pursuit of sculptural goals, and that the goals they select be more complex and ambitious. This course is intended for transfer students planning to major in art and for all students interested in working in three-dimensional media. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

193 Photography as Fine Art**2 hours lecture, 3 hours lab, 3 units
Grade Only**

The application of photography techniques, traditional and experimental, is the basis in this course with concentration being on creative expression. Students are encouraged to combine photography with a variety of art media work and techniques which might include darkroom manipulation, collage, painting, hand coloring, assemblage, Polaroid transfer, electronic imaging, non-silver processes, and other mixed media techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

195A Ceramics I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introductory level ceramics course in which students design and construct hand-built and wheel-thrown ceramic objects. Students learn form and surface enrichment, use glazes, and load kilns. This course is designed to meet art major and transfer requirements for ceramic or art majors and also serves students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 6).

195B Ceramics II**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an intermediate level ceramics course in which students design and construct wheel thrown and handbuilt ceramic objects emphasizing form and surface enrichment, use molds, weigh, mix and use glazes, as well as load kilns and fire electric kilns. This course is designed for major requirements and transfer by ceramic or art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

195C Ceramics III**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 195B with a grade of "C" or better, or equivalent.

Advisory: English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Level W5 and R5.

Continuation of Art-Fine Art 195A/B.

This course is an advanced level ceramics course in which students design and construct wheel thrown and handbuilt ceramic forms selecting an area of focus emphasizing form and surface enrichment. Student will develop, mix and use clay and glazes, as well as load and fire gas and electric kilns. This course is intended for transfer students planning to major in art and for all students interested in designing objects in three dimension. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

196 Clay and Glaze Technology**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 195B or Art-Fine Art 197B with a grade of "C" or better, or equivalent.

This is a survey of technical processes in ceramics that introduces students to basic and advanced techniques of glaze formulation, mixing, and testing. The course also acquaints students with the composition of clays, stains, and engobes and how these respond to different kilns and firing conditions. This course is designed to help ceramics majors and other interested students understand the physical and chemical nature of ceramic materials. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

197A Handbuilding Ceramics I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course provides instruction in the design and construction of hand-built ceramic forms. Students create ceramic forms emphasizing form and surface enrichment, while gaining experience applying glazes and loading kilns. This course is designed for art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

197B Handbuilding Ceramics II**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Prerequisite: Art-Fine Art 197A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an intermediate level ceramics course in which students design and construct hand-built ceramic forms emphasizing form and surface enrichment, weigh, mix and use glazes, as well as load kilns and fire electric kilns. This course is designed for major requirements and transfer by ceramic or art majors and for students interested in developing ceramic skills. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210A Life Drawing I**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent; and English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This basic course in figure drawing helps students understand form, structure, and proportions of the

human figure as they apply to visual expression.

Students learn about human anatomy and physical features, composition and perspective, and developing and evaluating their personal style.

(FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN ART 24).

210B Life Drawing II**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Art-Fine Art 210A with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent; and English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5. This course is a continued study and refinement of skills and concepts acquired in ARTF 210A. Students develop the skills needed to successfully draw the human form. Areas covered include further study of the skeletal and muscular systems in humans, perception of form, contour drawing, and modeling. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

210C Life Drawing III**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Credit/No Credit Option**

Figure drawing and composing related to the individual interests of the student. Enrollment based upon space availability and previous high achievement/portfolio. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

270 Work Experience**Hours by Arrangement, 1-4 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for registration. To receive credit a student must complete a minimum of seven units during the semester, including work experience. A program of on-the-job learning experiences for students employed in a job related to their major. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

290 Independent Study

Hours by Arrangement, 1-3 units
Letter Grade or Credit/No Credit Option

Limitation on Enrollment: Must obtain an Add Code from instructor for registration.

Open only to those students who have exhausted departmental offerings in their areas of emphasis. This course may be taken four times with different content for a maximum of six units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Special Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 110. Please refer to the class schedule and/or see the dean or department chair for availability.

Occupational Work Experience

OCCUPATIONAL WORK EXPERIENCE is a program of on-the-job learning experiences for students employed in a job related to an occupationally oriented major. The goals and assignments for completion of the courses are formulated with industry under the direction of the college instructor assigned to teach Work Experience 270. The grading system is the same as for other subjects offered by the college and the time spent for preparation and training is also comparable. Adequate records are maintained to determine satisfactory progress and attendance.

Courses

Work Experience (WORK)

270 Occupational Work Experience (Parallel Plan)

Hours by Arrangement, 1-4 units
Grade Only

Limitation on Enrollment: To receive credit a student must complete a minimum of seven units during the semester, including work experience. During summer sessions, one other course must be taken concurrently. Failure to complete seven units during Fall/Spring and/or other class during Summer Session will result in course credit being denied and/or removed.

A program of on-the-job learning experiences for students employed in a job related to an occupationally oriented major for which no work experience course is offered. One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work. This course may be taken four times for a maximum of 16 units. However, the combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

272 General Work Experience (Parallel Plan)
Hours by Arrangement, 1-3 units
Grade Only

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment. To receive credit a student must complete a minimum of seven units during the semester, including work experience. During summer sessions, one other course must be taken concurrently. Failure to complete seven units during Fall/Spring and/or other class during Summer Session will result in course credit being denied and/or removed.

A program of on-the-job learning experiences designed to assist the student in developing occupational effectiveness. Employment need not be related to a vocational or occupational major. One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work, with a maximum of three units per semester or summer session. This course may be taken twice for a maximum of six units. However, the combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

Apprenticeship

	Units
Associate in Science Degree/Certificate of Achievement	
ABC Construction Electronic Systems Technician	25-48*
ABC Electrical	25-48*
ABC Heating, Ventilation, & Air Conditioning	25-48*
ABC Pipefitting	25-48*
ABC Plumbing	25-48*
ABC Sheet Metal	25-48*
Honeywell Tool & Die	23
San Diego and Imperial Counties Pipetrades-Pipefitting	34-35*
San Diego and Imperial Counties Pipetrades-Plumbing	34-35*
San Diego City Civil Service Communications Technician	34.5*
San Diego Gas and Electric Co.	25-48*
San Diego Trolley:	
Light Rail Vehicle Lineman	41.5*
Revenue Maintainer	40*
Wayside Assistant Lineman	46*
Solar Turbines	56*

*and courses to meet graduation requirements, general education and electives as needed to meet minimum of 60 units required for the degree.

The apprenticeship training program provides an opportunity for a balanced approach of on-the-job training and related technical instruction to achieve the position of journeyman in one of the state-approved programs. The length of the program depends on the trade selected and can range from two to five years. The program encourages the transfer of skills and knowledge from master journeymen and journeymen to apprentices to further employment potential in their

trade. The California state system was established in 1939 with the passage of the Shelley-Maloney Apprenticeship Labor Standards Act. This act established the California Apprenticeship Council as the policy-making body; named the State Director of Industrial Relations as the administrator of apprenticeship; authorized the Division of Apprenticeship Standards (DAS) to approve training standards and provide assistance in the development of apprenticeship programs; and assigned responsibility for related and supplemental training to state and local boards responsible for vocational education.

Affirmative Action Statement

The Apprenticeship Committees for whom the District provides related and supplemental instruction have indicated they do not and will not discriminate against any employee or against any applicant for employment because of age, race, color, religion, handicap, ancestry, sex or national origin.

Admission To The Program

Indenture in a state-approved apprenticeship program is a required prerequisite to enroll in the apprenticeship related and supplemental classes. Applicants for apprenticeship should contact the employer, program coordinator or labor union listed before each program in the apprenticeship course description section of the catalog. Each of the individual programs listed in the apprenticeship course description section of this catalog is administered by an apprenticeship committee made up of member representatives from the respective trades or industries. This committee serves as the approval body for all apprenticeship matters relating to the particular trade. **See our Website for more information. <http://www.sdccd.edu/econ>**.

Completion Requirements

In addition to the academic requirements listed below, each apprentice must complete the prescribed number of hours of training during the period of the apprenticeship program as approved by the apprenticeship committee to receive the certificate of achievement or two-year degree.

Certificate of Achievement Requirements:

Courses Required for the Major:	Units
A. Completion of the related and supplemental instruction during the period of the program as approved by the Apprenticeship Committee	
Total Units = 25-48	

Associate in Science Degree Requirements:

The Associate in Science degree is conferred upon successful completion of the required apprenticeship programs of Associated Builders and Contractors (A.B.C.), Honeywell Tool and Die, Jet Products Corporation, Operating and Maintenance Engineers HVAC, San Diego and Imperial Counties Pipetrades, San Diego City Civil Service Communications Technician, San Diego Gas and Electric Company, San Diego Trolley, or Solar Turbines, Incorporated.

Courses Required for the Major:	Units
A. Completion of the related and supplemental instruction during the period of the program as approved by the Apprenticeship Committee	
Total Units = 25-48	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101.

Associated Builders and Contractors Construction Electronic Systems Technician Apprenticeship

This is a three-year electrical apprenticeship program in the low-voltage electrical trade. Applications for this program should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway, CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following Construction Electronic Systems Technician courses.

Courses

Construction Electronic Systems Technician (CEST)

301A Introduction to Construction Electronic Systems Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician apprentice with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit only and not Transferable.

301B Introduction to Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician apprentice with instruction in industry standards and building codes, residential and commercial construction methods, basic electrical theory, electrical meters, OSHA safety standards, and ladders and rigging. (FT) Associate Degree Credit only and not Transferable.

302A Intermediate Construction Electronic Systems Technician I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in mathematics related to the trade and electronic theory. Also includes electronic measurement tools and techniques, Alternating Current (AC) and Direct Current (DC) electrical systems and grounding, and blueprint reading related to the trade. (FT) Associate Degree Credit only and not Transferable.

302B Intermediate Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in types of cabling, switches and relays, terminating conductors, low-voltage codes and standards, and computer cabling applications. (FT) Associate Degree Credit only and not Transferable.

303A Advanced Construction Electronic Systems Technician

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in wire and cable selection, advanced buses and networks, fiber optic installation, cable and satellite television systems, and wireless communications. (FT) Associate Degree Credit only and not Transferable.

303B Advanced Construction Electronic Systems Technician II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course provides the Construction Electronic Systems Technician with instruction in site survey, job planning and documentation, maintenance and repair, supervision, and fire and security alarm systems. (FT) Associate Degree Credit only and not Transferable.

349 Construction Electronic Systems Technician Work Experience

**Hours by Arrangement, 300 hours total, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the Construction Electronic Systems Technician occupational field. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Electrical Apprenticeship

This is a four-year electrical apprenticeship program in the electrical trades (inside wireman). Applications for this program should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following electrical courses.

Courses

Electrical (ELEC)

301A Introduction to Electrical Apprenticeship I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 108 or Electrical 60A.

This course provides the electrical apprentice with instruction in general construction site safety, measurements and formulas, use of hand and power tools, interpretation of blueprints, basic rigging techniques and methods used to move equipment and materials. (FT) Associate Degree Credit only and not Transferable.

301B Introduction to Electrical Apprenticeship II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Electrical 301A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 109 or Electrical 60B.

This course provides the electrical student with instruction in basic principles of electrical safety and

hazard procedures including working with toxins and vapors. Students will also be provided with instruction in techniques used to hand bend conduits and install anchors and supports. Additional instruction will include an introduction to basic electrical theory and test equipment, the use of NEC boxes, fittings and conductors, and the interpretation of related electrical blueprints and commercial/industrial/residential symbols, diagrams and schematics used for wiring. (FT) Associate Degree Credit only and not Transferable.

302A Intermediate Electrical Apprenticeship I 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: Electrical 301B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 110 or Electrical 65A.

This course covers intermediate electrical techniques including principles of alternating currents, characteristics of circuits, transformers, motor theory applications, grounding purposes and methods, NEC requirements for conduit bending, types of bends, specifications for boxes and fittings, and location considerations. (FT) Associate Degree Credit only and not Transferable.

302B Intermediate Electrical Apprenticeship II 2 hours lecture, 3 hours lab, 3 units Grade Only

Advisory: Electrical 302A with a grade of "C" or better, or equivalent.

Limitation on enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 111 or Electrical 65B.

This course provides the electrical apprentice with the installation of connections for conductor termination and splices; use of cable pulling instruments and NEMA and NEC standards for cable tray; installation of electrical service and related components and equipment; use of manual take-off methods and troubleshooting techniques; identification of ratings for current breakers and fuses and regulations for sizing, use, and installation of relay switches, conductors and overrides; electrical lighting principles, types and applications. (FT) Associate Degree Credit only and not Transferable.

303A Advanced Electrical Apprenticeship I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 302B with a grade of “C” or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 212 or Electrical 70A.

This course includes instruction in branch load calculations for circuits and varied electrical appliances; introduction to and identification of electrical conductors; devices used for overprotection of loads, currents, circuits and fuses; fill requirements for boxes/raceways; principles of wiring devices, switches and receptacles and their locations; requirements for distribution equipment; settings for voltage, switch gear, circuits and components; distribution system transformers and their characteristics; types of components; NEC requirements; methods for locating and troubleshooting problems. (FT) Associate Degree Credit only and not Transferable.

303B Advanced Electrical Apprenticeship II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 303A with a grade of “C” or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 213 or Electrical 70B.

This course provides the electrical apprentice with instruction in basic lighting and NEC requirements for lighting fixtures for indoor and outdoor use; an introduction to motor basics, calculations, transformers, instruments for testing, wiring, protection, maintenance, and troubleshooting for various types of motors and motor controls; introduction to HVAC systems and refrigeration theory, compressors, operating systems and system maintenance equipment, and safety requirements for varied locations; principles for combustion, hazardous materials and their reactions in varied locations, and the use of safety equipment. (FT) Associate Degree Credit only and not Transferable.

304A Electrical Apprenticeship Specialties I
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 303B with a grade of “C” or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 222 or Electrical 75A.

This course provides the electrical apprentice with instruction in calculations for wiring commercial and residential dwellings and NEC requirements for lighting and specialty fixtures; characteristics and types of standby emergency electrical systems and system applications, size of disconnect switches, feeder and branch circuits for DC systems; theory and operating principles for solid-state devices, operational amplifier circuits, specialty and transformers and components of fire alarm and security systems; installation methods for smoke and heat detectors. (FT) Associate Degree Credit only and not Transferable.

304B Electrical Apprenticeship Specialties II
2 hours lecture, 3 hours lab, 3 units
Grade Only

Advisory: Electrical 304A with a grade of “C” or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Building Construction Technology 223 or Electrical 75B.

This course is designed to provide the electrical apprentice with advanced instruction of controls for motors, starters, relays, switches and transformers; installation and connection of gas burner controls and commercial and industrial HVAC control systems. NEC and OSHA requirements for connecting and grounding varied welding machines; installation and protection of heat-tracing and freeze protection equipment; principles and maintenance of motors and selection of materials and tools required for high voltage termination/splices according to manufacturer’s specifications. (FT) Associate Degree Credit only and not Transferable.

349 Electrical Work Experience
300 hours lab, 4 units
Credit/No Credit Only

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of electrical trades. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Heating, Ventilation & Air Conditioning Apprenticeship

A four-year Heating, Ventilation and Air Conditioning (HVAC) apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following HVAC courses.

Courses

Heating, Ventilation & Air Conditioning (HVAC)

301 Introduction to HVAC I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: English 56 and Mathematics 35, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M30.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

In this course, trade mathematics and drawings, the tools of the trade, blueprint terminology and basic rigging equipment and procedures as applicable to HVAC are covered. This course is designed to give the HVAC apprentice student an understanding of copper and plastic piping practices. (FT) Associate Degree Credit only and not Transferable.

302 Introduction to HVAC II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 301 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course introduces the HVAC trainee to the basic concepts and environmental concerns related to heating, ventilation, and air conditioning including soldering, brazing, ferrous metal piping practices, basic electricity, heating and cooling. This course also describes the HVAC program and the career opportunities available in the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

303 Intermediate HVAC I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 302 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in the properties of air and covers chimneys, flues and vents. Students are introduced to basic mechanical procedures commonly performed in HVAC service work such as the operation, installation and servicing of electric furnaces. This course also introduces the student to alternating current and electronic components and circuits used in HVAC systems. (FT) Associate Degree Credit only and not Transferable.

304 Intermediate HVAC II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 303 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in HVAC controls and metering devices and introduces the trainee to control circuit analysis. This course also covers compressors and heat pumps and instructs the student in leak detection, evacuation, recovery and charging service procedures used to troubleshoot, repair and/or maintain proper operation of the mechanical refrigeration system. (FT) Associate Degree Credit only and not Transferable.

305 Advanced HVAC I **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 304 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in preventive maintenance and provides an introduction to troubleshooting applying to all types of HVAC equipment. This course also covers troubleshooting electronic controls, gas heating, electric heating and oil heating. (FT) Associate Degree Credit only and not Transferable.

306 Advanced HVAC II **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 305 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course instructs the HVAC trainee in troubleshooting cooling, accessories, heat pumps and commercial heating and cooling systems. This course also covers water and air balance, steam systems and customer relations. (FT) Associate Degree Credit only and not Transferable.

307 HVAC Specialties

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 306 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course offers advanced blueprint reading and specifications as they relate to HVAC, indoor air quality and energy conservation equipment commonly used in HVAC systems. This course also covers energy management systems and the methods of water treatment and water treatment equipment used with HVAC systems. (FT) Associate Degree Credit only and not Transferable.

308 HVAC Specialties II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Heating, Ventilation & Air Conditioning 307 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This course covers commercial heating and cooling systems, maintenance of these systems and system start-up and shut down. This course also covers commercial and industrial refrigeration systems, equipment, refrigerated warehouses, walk-in coolers display cases, etc. (FT) Associate Degree Credit only and not Transferable.

349 HVAC Work Experience

**Hours by Arrangement, 300 hours total, 1-4 units
Credit/No Credit Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of HVAC. Student must be an indentured HVAC apprentice and be currently enrolled in

a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Pipefitting Apprenticeship

A four-year apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following pipefitting courses

Prerequisite: Pipefitting apprentices must complete Plumbing (PLBG) 305, 310, 315 and 320 with a grade of "C" or better or equivalent prior to enrolling in the Apprenticeship Pipefitting program.

Proficiency in oxy-fuel cutting of straight, curved and bevel cuts, and shielded metal arc welding of mild steel plate is required for completion of the apprenticeship program. Welding proficiency can be achieved through non-credit courses offered through the San Diego Community College District Continuing Education division.

Courses

Pipefitting (PLPF)

180 Introduction To Pipefitting

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (PLBG) 165B or 320, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 80 or 325.

This course is designed to give the Pipefitting student an introduction to blueprint drawings and detail sheets, piping systems, standards and specifications. The course content includes advanced blueprint reading and trade math as well as motorized equipment and aboveground pipe installation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

185 Intermediate Pipefitting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Pipefitting (PLPF) 180 or 325, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 85 or 330.

This course is designed to give the Pipefitting student instruction in pipe hangers and supports, identifying and installing valves, field routing and vessel trim and spring can supports. Emphasis is placed on planning work activities and performing non-destructive examination testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

190 Advanced Pipefitting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Pipefitting (PLPF) 185 or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 90 or 335.

This course is designed to give the Pipefitting student instruction in advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, in-line specialties, special piping, hot taps and maintaining valves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

325 Introduction to Pipefitting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Plumbing (PLBG) 165B or 320, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 80 or 180. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting student an introduction to blueprint drawings and detail sheets, piping systems, standards and specifications. The course content includes advanced blueprint reading and trade math as well as motorized equipment and aboveground pipe installation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Intermediate Pipefitting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Pipefitting (PLPF) 180 or 325, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting PLPF 85 or 185. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting Apprentice student instruction in pipe hangers and supports, identifying and installing valves, field routing and vessel trim, spring can supports. Emphasis is placed planning work activities and performing non-destructive examination testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

335 Advanced Pipefitting**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Pipefitting (PLPF) 185 or 330, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Pipefitting (PLPF) 90 or 190. Apprenticeship - Student must be a state registered apprentice in this trade.

This course is designed to give the Pipefitting Apprentice student instruction in advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, in-line specialties, special piping, hot taps and maintaining valves. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Pipefitting Work Experience**Hours by Arrangement, 4 units
Credit/No Credit Only**

Advisory: English 43 and English 42, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R4.

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of pipefitting. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (FT) Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Plumbing Apprenticeship

A four-year apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following plumbing courses.

Courses

Plumbing (PLBG)

305 Introduction to Plumbing I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 35, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W5, R5 and M30.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

Limitation on Enrollment: This course is not open to students with previous credit for Plumbing (Construction Trades) 60A, 105 or 160A.

This course is designed to give the plumbing apprentice student introductory information regarding OSHA (Occupational Safety & Health Administration) standards of safety and precautions for working on the construction site; a review of math as it relates to plumbing, hand and power tool usage, basic plumbing blueprint reading and basic rigging. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

310 Introduction to Plumbing II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 160A with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Apprenticeship) 305 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is not open to students with previous credit for Plumbing (Construction Trades) 60B, 110 or 160B. This course is designed to give the plumbing apprentice student an introduction to reading and interpreting the IAMPO (International Association of Plumbing and Mechanical Officials) uniform plumbing codes and

residential plumbing drawings, identifying various types of pipe and the procedures for working with the pipe. This course will also include identification of various plumbing lines and their components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

315 Intermediate Plumbing I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Plumbing (PLBG) 310 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Plumbing (PLGB) 115 or 65A.

This course is designed to provide the intermediate plumbing apprentice student the knowledge of introductory plumbing math, the identification of various commercial drawings, the installation of DWV piping components and systems for commercial properties utilizing local and BOCA National Plumbing Codes. (FT) Associate Degree Credit only and not Transferable.

320 Intermediate Plumbing II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 165A with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Country Pipetrade) 315 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is not open to students with previous credit for Plumbing (Construction Trades) 65B, 120 or 165B.

This course is designed to give the intermediate plumbing apprentice student the ability to perform testing of water supply piping and systems, installation of the components of a water supply system, and the ability to read and interpret commercial plumbing drawings for project requirements according to local and national codes. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

325 Advanced Plumbing I

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 165B with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Apprenticeship) 320 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 70A, 125 or 170A. This course is designed to provide the advanced plumbing apprentice student with the ability to perform applications of advanced math for plumbers and methods of handling waste. This course also provides information relating to water softening measures, methods of locating buried lines, the installation and maintenance of waste pressure booster systems, and the prevention of backflow. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Advanced Plumbing II

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 175B with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Apprenticeship) 340 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 70B, 130 or 070B. This course is designed to provide the advanced plumbing apprentice student with the ability to organize job tasks, clean and disinfect potable water systems, thaw frozen pipes, install main to meter water services and solar systems. This course also covers the ability to rough-in fixtures for residential, commercial and handicapped settings and install natural gas and storm drainage systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

335 Plumbing Construction Specialties

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 170B with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Apprenticeship) 330 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 75A, 135 or 175A. This course is designed to introduce the plumbing apprentice student to specialty topics such as swimming pool installation, medical gas systems, mobile home and mobile home park plumbing systems, and private water waste and treatment systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

340 Plumbing Code

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Prerequisite: Plumbing (Construction Trades) 170A with a grade of "C" or better, or equivalent.

Advisory: Plumbing (Apprenticeship) 325 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Plumbing (Construction Trades) 75B or 175B. This course is designed to prepare the advanced plumbing apprentice to apply plumbing codes to correctly design and build plumbing systems. Primary topics include coverage of codes pertaining to Plumbing Fixtures and Fittings, Water Heaters and Fuel Piping, Drainage, Waste and Vent Systems, Sewage and Reclaimed Water Systems, Sizing and Standards, and Alternate Plumbing Systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Plumbing Work Experience

**300 hours lab, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

This course consists of on-the-job learning experiences in the occupational field of plumbing trades. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

Associated Builders and Contractors Sheet Metal Apprenticeship

A four-year sheet metal apprenticeship program. Applications should be directed to Associated Builders and Contractors, 13825 Kirkham Way, Poway CA 92064; (858) 513-4700. Only students accepted as apprentices under Associated Builders and Contractors are eligible for enrollment in the following sheet metal courses.

Proficiency in oxy-fuel cutting of straight, curved and bevel cuts, and shielded metal arc welding of mild steel plate and thin gauge metal is required for completion of the apprenticeship program. Welding proficiency can be achieved through non-credit courses offered through the San Diego Community College District Continuing Education division.

Courses

Sheet Metal (SHEE)

301A Level 1 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 060A or 105. This course introduces the Sheet Metal/HVAC trade. Topics include the tools of the trade, safety practices, trade mathematics, blueprints and drawings, and basic rigging. (FT) Associate Degree Credit only and not Transferable.

301B Level 1 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 060B or 110. This course continues the introductory level of Sheet Metal and HVAC trades. Topics include intermediate math, duct and air distribution theory and installation, welding concepts, insulation, and electricity related to the HVAC trade. (FT) Associate Degree Credit only and not Transferable.

302A Level 2 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 065A or 115. This course is an intermediate level introduction to the concepts of cooling and sheet metal layout. Topics include layout and line development, mathematics and measurements used in the trade, bend allowances and triangulation. (FT) Associate Degree Credit only and not Transferable.

302B Level 2 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is not open to students with previous credit for Sheet Metal 065B or 120.

This course covers intermediate heating and metering. Topics also include basic electronics, metering devices, compressors, heat pumps, and leak detection, evacuation, recovery and charging. (FT) Associate Degree Credit only and not Transferable.

304A Level 3 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 070A or 125. This course covers intermediate blueprints and specifications for HVAC duct work. Topics include Sheet Metal and Air Conditioning Contractors of North America (SMACNA) Manuals, duct and fabrication standards, gutters and downspouts, roof flashing, and principles of air flow. (FT) Associate Degree Credit only and not Transferable.

304B Level 3 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 070B or 130. This course covers advanced blueprint reading and system design. Topics also include indoor air quality, types of duct systems, and field measuring and fitting. (FT) Associate Degree Credit only and not Transferable.

305A Level 4 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 075A or 135. This course covers advanced HVAC and Sheet Metal applications. Topics include system start-up and shut-down, commercial and industrial refrigeration systems, hydronic heating and cooling systems, and how to design fume and exhaust systems per OSHA and ACGHI standards. (FT) Associate Degree Credit only and not Transferable.

305C Level 4 Sheet Metal/HVAC Apprenticeship 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Sheet Metal 075B.

This course covers advanced HVAC troubleshooting and Sheet Metal roofing. Topics include troubleshooting and repair of gas and electric heating systems, cooling systems, heat pumps, and electronic controls, as well as system balancing. Sheet Metal topics include metal roof system applications and installation. (FT) Associate Degree Credit only and not Transferable.

349 Sheet Metal Work Experience 300 hours per semester, 4 units Credit/No Credit Only

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit.

Honeywell Tool and Die Apprenticeship

A four-year apprenticeship in the tool and die and mold maker trades at Honeywell Corporation. Applications for the program are accepted at Honeywell Controls Corporation, 2055 Dublin Drive, San Diego, CA 92154.

This program will prepare the student for a career in machining as a Tool and Die Maker or Mold Maker. Upon completion of the apprenticeship program the student will receive a Journeyman certificate in the trade from the State of California.

Career options include Tool and Die Maker, Mold Maker. The Journeyman certificate will prepare the student for

all aspects of the trade, promotion into supervisory and management positions may be possible upon completion of the Associate or Bachelor's degree.

Certificate of Achievement: Honeywell Tool and Die Apprenticeship

Courses Required for the Major:	Units
MATH 104, Trigonometry	3
ENGL 101, Reading and Composition	3
SPEE 103, Oral Communication	3
ENGE 151, Engineering Drawing.....	2
MACT 140, Machine Technology.....	4
MFET 105, Print Reading and Symbology.....	3
Total Units = 18	

Associate in Science Degree: Honeywell Tool and Die Apprenticeship

Courses Required for the Major:	Units
MATH 104, Trigonometry	3
ENGL 101, Reading and Composition	3
SPEE 103, Oral Communication	3
ENGE 151, Engineering Drawing.....	2
MACT 140, Machine Technology.....	4
MFET 105, Print Reading and Symbology.....	3
Total Units = 18	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

San Diego and Imperial Counties Pipetrades Apprenticeships

Five-year apprenticeship programs in Pipefitting and in Plumbing are available. Applications for these programs are accepted at San Diego and Imperial Counties Pipetrades, 6225 Federal Blvd., San Diego, CA 92114. Call (619) 262-7588 for application information.

**Certificate of Achievement:
San Diego and Imperial Counties
Pipetrades Apprenticeship
Pipefitting Apprenticeship**

Courses Required for the Major:	Units
PMBG 301, Pipe Trades Orientation	3
PMBG 303, Piping Mathematics	3
PMBG 305, Pipe Bending and Rigging.....	2
PMBG 307, Drawing I.....	3
PMBG 311, Basic Science.....	3
PIPF 331, Arc Welding I	2
Select two to three units from the following:	
PIPF 328, 330, 334, 335	2-3
PIPF 349 or PMBG 349, Work Experience	16
Total Units = 34-35	

**Certificate of Achievement:
San Diego and Imperial Counties
Pipetrades Apprenticeship
Plumbing Apprenticeship**

Courses Required for the Major:	Units
PMBG 301, Pipe Trades Orientation	3
PMBG 303, Piping Mathematics	3
PMBG 305, Pipe Bending and Rigging.....	2
PMBG 307, Drawing I.....	3
PMBG 311, Basic Science.....	3
PIPF 331, Arc Welding I	2
Select two to three units from the following:	
PMBG 327, 330, 332	2-3
PMBG 349 or PIPF 349, Work Experience	16
Total Units = 34-35	

**Associate in Science Degree:
San Diego and Imperial Counties
Pipetrades Apprenticeship
Pipefitting Apprenticeship**

Courses Required for the Major:	Units
PMBG 301, Pipe Trades Orientation	3
PMBG 303, Piping Mathematics	3
PMBG 305, Pipe Bending and Rigging.....	2
PMBG 307, Drawing I.....	3
PMBG 311, Basic Science.....	3
PIPF 331, Arc Welding I	2
Select two to three units from the following:	
PIPF 328, 330, 334, 335	2-3
PIPF 349 or PMBG 349, Work Experience	16
Total Units = 34-35	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101; PIPF 304, 308, 310, 314, 318, 320, 322, 324, 326.

**Associate in Science Degree:
San Diego and Imperial Counties
Pipetrades Apprenticeship
Plumbing Apprenticeship**

Courses Required for the Major:	Units
PMBG 301, Pipe Trades Orientation	3
PMBG 303, Piping Mathematics	3
PMBG 305, Pipe Bending and Rigging	2
PMBG 307, Drawing I.....	3
PMBG 311, Basic Science.....	3
PIPF 331, Arc Welding I	2
Select two to three units from the following:	
PMBG 327, 330, 332	2-3
PMBG 349 or PIPF 349, Work Experience	16
Total Units = 34-35	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: English 101; PMBG 317, 319, 321, 323, 325, 329, 335, 337, 339; PIPF 332, 333, 334, 335.

Courses

Pipefitting (PIPF)

304 Heating I, Steam

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides an introduction to hot water steam heating, gravity hot water systems, forced hot water heating systems, problems caused by air in the systems, hot water piping connections, and installation of equipment safety devices for hot water boilers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

308 Pneumatic Controls**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is a review of the fundamentals of pneumatics, controllers, controlled devices and auxiliary devices. The course includes day-night and heat-cooling thermostats, ventilation, heating, and cooling controls, humidity control, year-round air conditioning, and master-submaster systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

310 Refrigeration and Air Conditioning**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers refrigeration and air conditioning systems. Emphasis is placed on the components in refrigeration and air conditioning systems, theories of electricity relevant to the trade, operation of evaporative condensers, maintenance on refrigeration systems, and pipe and line layout and installation in a refrigeration system. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

314 Heating II Hydronics**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This Hydronics course introduces the technical aspects of the design, calculation and installation of hydronics heating and cooling systems. Emphasis is placed on residential, commercial, institutional and industrial hydronics applications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

318 Fitting Fabrication**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides the student with basic pipefitting skills; taking accurate measurements, cutting pipe and calculating fitting "take off". Topics include the difference between screw and welded pipe and their uses; proper and safe use of copper and plastic pipe as well as pipe hangers and supports. Students learn to apply pipe layout and fitting fabrication principles/procedures for elbows, tees and laterals used in the industrial piping industry. In addition the student

learns to use welding experience and mathematics to design, lay out and fabricate fittings used in the pipefitting trade. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

320 TIG Welding**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is designed to provide the apprentice with a working knowledge of the welding process known as TIG (Tungsten Inert Gas)/GTAW (gas tungsten arc welding). Students learn the fundamentals, the process, equipment, techniques, preparation, shielding gas and electrodes. Guided bend testing and quality weld inspection are also covered. Emphasis is on performing TIG/GTAW welding in a safe manner. (FT) Associate Degree Credit only and not Transferable.

322 Instrumentation and Automated Systems**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the operation, installation and testing of instruments and automated systems. Emphasis is placed on pressure measuring instruments, liquid level instruments, density measuring instruments, temperature and humidity measuring instruments, speed and position transmitters, automatic force balance controllers, pneumatic control valves, control valve accessories and instrumentation systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

324 Pipe Drafting and Blueprint Reading**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is an introduction to blueprint reading and drafting pertaining to domestic water systems and piping layout. Emphasis is placed on the use of drawing tools and appropriate pipefitting diagrams to draw waste vent systems and to diagram water and gas lines using mock-ups. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

326 Advanced Piping Mathematics**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

Advanced Piping Mathematics is designed to introduce and develop the applied piping and calculating skills necessary in the piping industry. Topics include the application of trigonometry, offset problems, and pipe and tube bending mathematics. (FT) Associate Degree Credit only and not Transferable.

328 Pipefitters Code

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course reviews the fundamentals of pipefitting. Topics include isometric drawing interpretation, tools and tool safety, hydronics, plan reading, and trigonometry tables. The foundations of hydraulics, pneumatics, refrigeration, arc welding and rigging are introduced and explored. (FT) Associate Degree Credit only and not Transferable.

330 Pipefitting Certification

**3 hours lecture, 3 units
Credit/No Credit Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers the application of the most current codes and state regulations governing piping, mechanical installations and excavating operations. Upon completion, the apprentice will be prepared to take the Journeyman P.I.P.E. exam and Cal/OSHA Excavation Competent Person exam. (FT) Associate Degree Credit only and not Transferable.

331 Arc Welding I

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Student must be a state registered apprentice in this trade. This course is not open to students with credit for Pipefitting (PIPF) 302. In this course the student is introduced to arc welding, intensive pipe and plate welding, safe welding practices, personal protection and fire protection. Basic electricity, the types of arc welding machines, arc welding consumables, and arc welding symbols are covered. This course is designed to give the apprentice student a basic understanding of arc welding. (FT) Associate Degree Credit only and not Transferable.

332 Arc Welding II

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 331 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

In this course the student is introduced to the safety procedures for arc welding, arc welding equipment and equipment maintenance. Students learn how to weld trial beads. Additional instruction on basic electricity is covered. This course is designed to build on the students' basic understanding of arc welding. (FT) Associate Degree Credit only and not Transferable.

333 Arc Welding III

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 332 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course. In this course the student studies Federal OSHA rules and regulations related to arc welding. The student is introduced to and begins to prepare for the SMAW/GTAW United Association Arc Welding certification test. (FT) Associate Degree Credit only and not Transferable.

334 Arc Welding IV

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 333 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course. In this course the student is introduced to the fundamentals of metallurgy, mechanical properties of metals, non-ferrous metals, shielding gases, and heat-treating. Welding low-, medium- and high-carbon steel is also covered, as well as welding alloy steels, stainless steels and high-chromium alloys. In addition, this course covers the use of computer-assisted arc welding machines for the high-tech industry. (FT) Associate Degree Credit only and not Transferable.

335 Arc Welding V

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Pipefitting (PIPF) 334 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Student must be a state registered apprentice in this trade.

This is an advanced Arc Welding course and is the last in a series of five welding courses required for a Pipefitting Apprenticeship. In this course students take the FED OSHA 10-hour course on confined space entry as related to arc welding and receive a certificate from FED OSHA. All procedures and techniques required for the SMAW/GTAW United Association welding certification are reviewed. The student takes the required arc-welding test at the end of this course for this certification. (FT) Associate Degree Credit only and not Transferable.

349 Pipefitting Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding Apprenticeship listing. (FT) Associate Degree Credit only and not Transferable.

Courses

Plumbing (PMBG)

301 Pipe Trades Orientation

**3 hours lecture, 3 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the fundamentals of the pipe trades and includes OSHA regulations, tool safety, first-aid and prevention, proper use and care of tools, workplace habits and attitudes, business practices and employer-employee relationships as they apply to the pipefitting trades. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

303 Piping Mathematics

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course introduces Piping Mathematics and its practical application to the trade. Topics include basic math, piping formulas, symbols and terms, and the metric system of measurement. Content is explored and developed through problem solving. (FT) Associate Degree Credit only and not Transferable.

305 Pipe Bending and Rigging

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces pipe bending and rigging principles as they apply to plumbing jobs. Topics include principles, mathematics, and methods of pipe bending. Rigging hardware, slings, signal systems, and knot tying are a sampling of the course rigging topics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

307 Drawing I

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces drawing concepts used in the pipetrades and includes preliminary drawings, isometric and plan flat symbols, applied drawing and blueprint reading, plans used in the trade, and architects scale. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

309 Supervision and Leadership

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. Students learn leadership skills as defined by the United Association (UA) and the Mechanical Contractors' Association (MCA) in the field of plumbing. In addition, students are introduced to the theory and installation of domestic hot water energy systems, and the design of plumbing modules including waste vents, water and gas lines using mock-ups. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

311 Basic Science

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course reviews the fundamental science and mechanics of the piping trade. Topics include industry

applications of the properties of water, hydraulics, pneumatics and metals. (FT) Associate Degree Credit only and not Transferable.

313 Copper and Gas Welding

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides hands-on use of soldering, brazing, welding and metal cutting procedures. Topics include safety practices, equipment needs, filler materials, types of pipe welds, oxyacetylene cutting, cutting defects, flame straightening, and use of templates. (FT) Associate Degree Credit only and not Transferable.

315 Metallic Arc Welding

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides instruction on arc welding, pipe and plate welding, and operation of oxyfuel cutting equipment. Students learn how to set up equipment, perform trial beads and maintain equipment. Topics also include types of welds, preheating and stress relieving and quality control and codes. This course also covers welding procedure qualifications, vee welds, pipe welds, piping materials, a basic electricity review, and pipe welding processes. Emphasis is on the safe use of equipment. (FT) Associate Degree Credit only and not Transferable.

317 Drainage Systems

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on the application of the waste and vent section of the Plumbing Code. Topics include sewage disposal and safety and the installation and testing of plumbing drainage systems, traps, vents, municipal and private sewers, and plumbing fixtures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

319 Gas Distribution

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on the application of the gas section of the Plumbing Code with respect to the

operation and installation of gas vent systems and controls. Emphasis is placed on the implications of the laws of gases and the safe design and lay out of a gas system to code specification. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

321 Math/Builder Level-Transit

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course focuses on advanced math applied to science and mechanics problems in the field. Topics include piping and offset calculations, basic flow problems and use of the builders level-transit to determine elevation differentials and simple tangents. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

323 Water Distribution Systems

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is a study of the principles which govern the method of water supply and distribution. Topics covered include water treatment, pipeline materials, pipe losses, cross connectors and backflow prevention. The focus is on the construction of a hot water supply in accordance with the Uniform Plumbing Code and sizing charts. Safety is emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

325 Fixtures and Controls

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course emphasizes plumbing fixtures and controls. Topics covered include institutional fixtures and design, fixture controls, appliances, accessories, standard abbreviations and standard specifications. Safe use of tools and equipment is emphasized. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

327 Plumbing Code

**3 hours lecture, 3 units
Grade Only**

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is a survey of the Plumbing Code emphasizing special areas requiring knowledge of large multiple installations of plumbing. Emphasis is placed on a working knowledge of applicable plumbing codes for layout and installation in the field. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

329 Advanced Drawing and Plan Reading
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides the student with advanced level plan reading and drawing skills related to plumbing systems. Emphasis is placed on the ability to independently develop drawings and sketches and accurately interpret building plans and specifications for all primary building systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

330 Fifth Year Specialties
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers the application of the most current codes and state regulations governing plumbing, piping and excavating operations. Upon completion, the apprentice will be prepared to take the Journeyman P.I.P.E. exam and Cal/OSHA Excavation Competent Person exam. (FT) Associate Degree Credit only and not Transferable.

332 Piping Technologies
1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This is a piping course designed for plumbing apprentices wishing to expand their knowledge of the plumbing industry and the "state of the art" medical gas systems used in the trade. Topics include the necessary information and skills needed to pass the Medical Gas Installation Certification Examination recognized by the San Diego Plumbing and Pipefitter Joint Apprenticeship Committee. Apprentices also utilize computers and software to plan, diagnose, and

layout plumbing projects. (FT) Associate Degree Credit only and not Transferable.

335 Solar Systems and Plumbing Modules
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course provides an introduction to the theory and installation of domestic hot water energy systems. Emphasis is placed on solar plumbing modules. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

337 Service and Repair
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course introduces the theory and practice of service work in the plumbing industry. Emphasis is placed on understanding customer relations, work planning, and troubleshooting plumbing systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

339 Plumbing Design and Layout
3 hours lecture, 3 units
Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course emphasizes the principles, operation, installation and distribution of hot and cold water, drainage and ventilation systems in regards to the Plumbing Code. Topics prepare the student to plan for plumbing project labor and material costs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

349 Plumbing Work Experience
300 hours per semester, 4 units
Credit/No Credit Only

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

San Diego City Civil Service Communications Technician Apprenticeship

A four-year apprenticeship program in the installation, maintenance and repair of communications equipment offered through the City of San Diego. This is a promotional opportunity for City of San Diego employees only and applicants must meet criteria specified by the city. For information about employment through the City of San Diego, call (619) 682-1011.

This apprenticeship program combines classroom instruction in Electronic Systems with on-the-job training to prepare City of San Diego Communication Technicians in the areas of installation, maintenance and repair of communications equipment in City facilities and vehicles

Upon successful completion of the program, the student will receive a Journeyman certificate from the State of California, and will be eligible for employment in the field of communication equipment maintenance and repair.

Certificate of Achievement: San Diego City Civil Service Communications Technician Apprenticeship

Prepares student for employment as a Communications Technician with the City of San Diego.

Courses Required for the Major:

ELDT 123, Introduction to Digital Circuits	3.0
ELDT 123L, Digital Circuits Laboratory	1.0
ELDT 124, Basic DC/AC Electronics	4.0
ELDT 124L, Basic DC/AC Laboratory.....	1.0
ELDT 143, Semiconductor Devices	3.0
ELDT 143L, Semiconductor Devices Laboratory	1.5
ELDT 144, OP-AMPS, Sensors and Computers.....	3.0
ELDT 144L, OP-AMPS and Sensors Laboratory.....	1.5
ELDT 224, Microprocessor Design	3.0
ELDT 224L, Microprocessor Design Laboratory	1.5
ELDT 228, Communication Circuits and CET/NARTE Preparation	3.0

ELDT 228L, Communication Circuits and Certification Laboratory	1.0
ELDT 229, Advanced Telecommunications Networks	3.0
ELDT 229L, Advanced Telecommunications Networks Laboratory	1.0
ELDT 230, Advanced Computer Designs	3.0
ELDT 230L, Advanced Computer Designs Laboratory	1.0
Total Units = 34.5	

Associate in Science Degree: San Diego City Civil Service Communications Technician Apprenticeship

Prepares student for employment as a Communications Technician with the City of San Diego.

Courses Required for the Major:

ELDT 123, Introduction to Digital Circuits	3.0
ELDT 123L, Digital Circuits Laboratory	1.0
ELDT 124, Basic DC/AC Electronics	4.0
ELDT 124L, Basic DC/AC Laboratory.....	1.0
ELDT 143, Semiconductor Devices	3.0
ELDT 143L, Semiconductor Devices Laboratory	1.5
ELDT 144, OP-AMPS, Sensors and Computers.....	3.0
ELDT 144L, OP-AMPS and Sensors Laboratory.....	1.5
ELDT 224, Microprocessor Design	3.0
ELDT 224L, Microprocessor Design Laboratory	1.5
ELDT 228, Communication Circuits and CET/NARTE Preparation	3.0
ELDT 228L, Communication Circuits and Certification Laboratory	1.0
ELDT 229, Advanced Telecommunications Networks	3.0
ELDT 229L, Advanced Telecommunications Networks Laboratory	1.0
ELDT 230, Advanced Computer Designs	3.0
ELDT 230L, Advanced Computer Designs Laboratory	1.0
Total Units = 34.5	

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

San Diego Gas and Electric Company Apprenticeship

A three-year apprenticeship program in various electrical trades at the San Diego Gas and Electric Company. Applications for the following trades are accepted at SDG&E, 8306 Century Park Court, San Diego, CA 92123.

1. Lineman
2. Electric Meter Tester
3. Substation Electrician

All applicants must be company employees.

Apprentices in all three trades will complete the following courses:

Courses

San Diego Gas and Electric (SDGE)

302 Electric Lineman IA

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 190.

This course provides an orientation in the power distribution and line construction industry. Basic electrical principles and safety on the job are emphasized. Topics include basic mathematical computations, including trigonometry fundamentals, electron theory and the fundamentals of magnetism. Students will combine electrical theory with laboratory and practical applications in the course of study. (FT) Associate Degree Credit only and not Transferable.

304 Electric Lineman IB

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for ELCT 191.

This course involves the study of the power distribution and line construction industry. Topics include methods of producing electricity, A.C. and D.C. meters and

circuitry and electric batteries. Students will also learn about Ohm's Law and Kirchhoff's Law and electromagnetic induction. (FT) Associate Degree Credit only and not Transferable.

310 Electric Lineman IIA

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 192.

This course is a study of alternating current circuits, A.C. and D.C. motors and generators, pole and overhead construction, and transformers and voltage regulators. Topics include schematics, shunt and series capacitors and safety issues outlined by the Occupational Safety and Health Act (OSHA). Calculating power used by electrical circuits is also covered. (FT) Associate Degree Credit only and not Transferable.

312 Electric Lineman IIB

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 193.

This course covers state safety orders for line construction and maintenance, transmission and distribution systems and conductors and electrical systems faults. Students will also learn about short circuits, system protective concepts and how to identify control circuits from wiring diagrams. (FT) Associate Degree Credit only and not Transferable.

320 Electric Lineman IIIA

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is not open to students with previous credit for Electricity 194.

This course covers advanced theory of electrical distribution lines and systems. Other topics include

phasing, system groundings, substations and the use of electrical instruments. Students will also learn how to connect transformers in accordance with the state code. Usage of fusing tables and reference tables, including technical symbols are also covered. (FT) Associate Degree Credit only and not Transferable.

322 Electric Lineman IIIB

**5 hours lecture, 5 units
Grade Only**

Advisory: English 51 and English 56 and Mathematics 95, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5 and M40.

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade.

This course is not open to students with previous credit for Electricity 195.

This course is a continuation of advanced theory of electrical distribution lines and systems. Topics include the use of "hot sticks" and special equipment; repair and maintenance of poles and lines both cold and energized, safety practices and the local/state requirements. Students will be expected to master competencies such as those included in elements of electricity, overhead pole and electrical line construction, safety codes and applications, electric power system, transformer and meter installations, and exploration of underground electrical distribution. (FT) Associate Degree Credit only and not Transferable.

349A Electric Meter Tester Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units.

See note preceding Apprenticeship course listings. Associate Degree Credit only and not Transferable.

349B Substation Electrician Work Experience

**4 units, 4 hours other
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units (300 hours per semester). See note preceding Apprenticeship course listings. (FT) Associate Degree Credit only and not Transferable.

349C Electric Lineman Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units.

See note preceding Apprenticeship course listings.

Associate Degree Credit only and not Transferable.

San Diego Trolley Apprenticeship

A four-year apprenticeship in electro-mechanical trades at San Diego Trolley. Application for the following trades are accepted at 1255 Imperial Avenue, Suite 900, San Diego, CA 92101-7492.

Certificate of Achievement: San Diego Trolley Apprenticeship Light Rail Vehicle Lineman

Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELDT 123 Introduction to Digital Circuits	3
ELDT 123L Digital Circuits Laboratory	1
ELDT 124, Basic DC/AC Electronics	4
ELDT 124L, Basic DC/AC Laboratory.....	1
ELDT 143, Semiconductor Devices	3
ELDT 143L, Semiconductor Devices Lab.....	1.5
AIRE 100, Thermal Refrigeration Theory.....	4
AIRE 103, Thermal Refrigeration Lab	2
TROL 301 San Diego Trolley Light Rail Vehicle I	2
TROL 302 San Diego Trolley Light Rail Vehicle II	1.5
TROL 303 San Diego Trolley Light Rail Vehicle III	3
TROL 304 San Diego Trolley Light Rail Vehicle IV.....	3
Total Units =	34

Certificate of Achievement: San Diego Trolley Apprenticeship Revenue Maintainer

Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELDT 123 Introduction to Digital Circuits	3
ELDT 123L Digital Circuits Laboratory	1
ELDT 124, Basic DC/AC Electronics	4
ELDT 124L, Basic DC/AC Laboratory.....	1

ELDT 125, DE/AC Circuit Analysis with Pspice.....	4
ELDT125L, DC/AC Circuit Analysis Lab.....	1
ELDT 143, Semiconductor Devices	3
ELDT 143L, Semiconductor Devices Lab.....	1.5
Total Units =	23.5

**Certificate of Achievement:
San Diego Trolley Apprenticeship
Wayside Lineman**

Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELCT 111, Electrical Theory I.....	3
ELCT 111L, Electrical Laboratory I.....	2
ELCT 121, Electrical Theory II	3
ELCT 121L, Electrical Laboratory II.....	2
ELCT 131, Electrical Theory III	3
ELCT 131L, Electrical Laboratory III	2
ELCT 141, Electrical Theory IV	3
ELCT 141L, Electrical Laboratory IV	2
ELCT 200, Electrical Control Systems	3
ELCT 200L, Electrical Control Systems Lab	2
Total Units =	30

**Associate in Science Degree:
San Diego Trolley Apprenticeship
Light Rail Vehicle Lineman**

Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELDT 123 Introduction to Digital Circuits	3
ELDT 123L Digital Circuits Laboratory	1
ELDT 124, Basic DC/AC Electronics	4
ELDT 124L, Basic DC/AC Laboratory.....	1
ELDT 143, Semiconductor Devices	3
ELDT 143L, Semiconductor Devices Lab.....	1.5
AIRE 100, Thermal Refrigeration Theory.....	4
AIRE 103, Thermal Refrigeration Lab	2
TROL 301 San Diego Trolley Light Rail Vehicle I.....	2
TROL 302 San Diego Trolley Light Rail Vehicle II	1.5
TROL 303 San Diego Trolley Light Rail Vehicle III	3
TROL 304 San Diego Trolley Light Rail Vehicle IV.....	3
Total Units =	34

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 125, 125L, 126, 126L, 144, 144L; English 101;

**Associate in Science Degree:
San Diego Trolley Apprenticeship
Revenue Maintainer**

Courses Required for the Major:	Units
Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELDT 123 Introduction to Digital Circuits	3
ELDT 123L Digital Circuits Laboratory	1
ELDT 124, Basic DC/AC Electronics	4
ELDT 124L, Basic DC/AC Laboratory.....	1
ELDT 125, DE/AC Circuit Analysis with Pspice	4
ELDT125L, DC/AC Circuit Analysis Lab.....	1
ELDT 143, Semiconductor Devices	3
ELDT 143L, Semiconductor Devices Lab.....	1.5
Total Units =	23.5

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 126, 126L, 144, 144L; English 101.

**Associate in Science Degree:
San Diego Trolley Apprenticeship
Wayside Lineman**

Courses Required for the Major:	Units
MATH 95, Elementary Algebra & Geometry.....	5
ELCT 111, Electrical Theory I.....	3
ELCT 111L, Electrical Laboratory I.....	2
ELCT 121, Electrical Theory II	3
ELCT 121L, Electrical Laboratory II	2
ELCT 131, Electrical Theory III	3
ELCT 131L, Electrical Laboratory III	2
ELCT 141, Electrical Theory IV	3
ELCT 141L, Electrical Laboratory IV.....	2
ELCT 200, Electrical Control Systems	3
ELCT 200L, Electrical Control Systems Lab	2
Total Units =	30

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Electronic Systems 123, 123L, 124, 124L, 125, 125L, 126, 126L, 143, 143L, 144, 144L; English 101;

Courses

San Diego Trolley (TROL)

301 San Diego Trolley Light Rail Vehicle I 1.5 hours lecture, 1.5 hours lab, 2 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course is an introduction to the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include organization of the company, on-the-job safety, use of tools and test equipment, lubrication and maintenance, and vehicle layout and component identification. (FT) Associate Degree Credit only and not Transferable.

302 San Diego Trolley Light Rail Vehicle II 1 hour lecture, 2 hours lab, 1.5 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers beginning levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include mechanical concepts, planned and unplanned maintenance, component inspections, and use of support equipment. (FT) Associate Degree Credit only and not Transferable.

303 San Diego Trolley Light Rail Vehicle III 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers intermediate levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include electrical theory, electrical measurement, schematic drawings, control systems, and system troubleshooting. (FT) Associate Degree Credit only and not Transferable.

304 San Diego Trolley Light Rail Vehicle IV 2 hours lecture, 3 hours lab, 3 units Grade Only

Limitation on Enrollment: Apprenticeship - Student must be a state registered apprentice in this trade. This course covers advanced levels of maintenance and inspection of Light Rail Vehicles in the San Diego Trolley Light Rail Vehicle apprenticeship program. Topics include electrical component and circuit theory, number systems, logic, small to large scale circuit integration, and analysis and troubleshooting of vehicle controls. (FT) Associate Degree Credit only and not Transferable.

349A Wayside Assistant Lineman Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

349B Light Rail Vehicle Lineman Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

349C Revenue Maintainer Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. See note preceding apprenticeship course listings. Associate Degree Credit only and not Transferable.

Solar Turbines Incorporated Apprenticeship

A four-year indentured apprenticeship program in a number of manufacturing or technical trades is available. Applications for the following trades are accepted at Solar Turbines, Incorporated. 2200 Pacific Coast Highway, P.O. Box 85376 MZ-M1, San Diego, CA 92186-5376.

1. Master Machinist
2. Tool and Die Maker
3. Sheet Metal Experimental Mechanic
4. Precision Machine Tool Mechanic

Enrollment in classes other than those listed will be allowed with the approval of the Solar Turbines Incorporated Apprenticeship Coordinator.

Certificate of Achievement: Solar Turbines, Incorporated Apprenticeship

Courses Required for the Major:	Units
MFET 105, Print Reading and Symbolology.....	3
MFET 115, Properties of Materials	3
MFET 120, Manufacturing Process	4
MATH 104, Trigonometry	3
ENGE 110, Science for Technical Applications	4
ENGE 151, Engineering Drawing.....	2
ENGL 101, Reading and Composition	3
SPEE 103, Oral Communications.....	3
MACT 150, Introduction to Computer Numerical Control (CNC) & Electrical Discharge Machining (EDM) ...	4
Total Units =	29

Associate in Science Degree: Solar Turbines Incorporated Apprenticeship

Complete the following, as required, for a minimum of 60 units.

1. Certificate of Achievement, Solar Turbines Incorporated Apprenticeship
2. District Requirements
3. General Education Requirements

The additional district and general education requirements are listed in the Academic Requirements section of the catalog. **The associate degree requires a minimum of 60 units.**

Recommended electives: Machine Technology 160M, 160S, 170; Manufacturing Technology 150, 210; Electronics 125; Computer Business Technology 180; Aviation Technology (Miramar Campus) 103B, 103C.

Courses

Solar Turbines (SOLR)

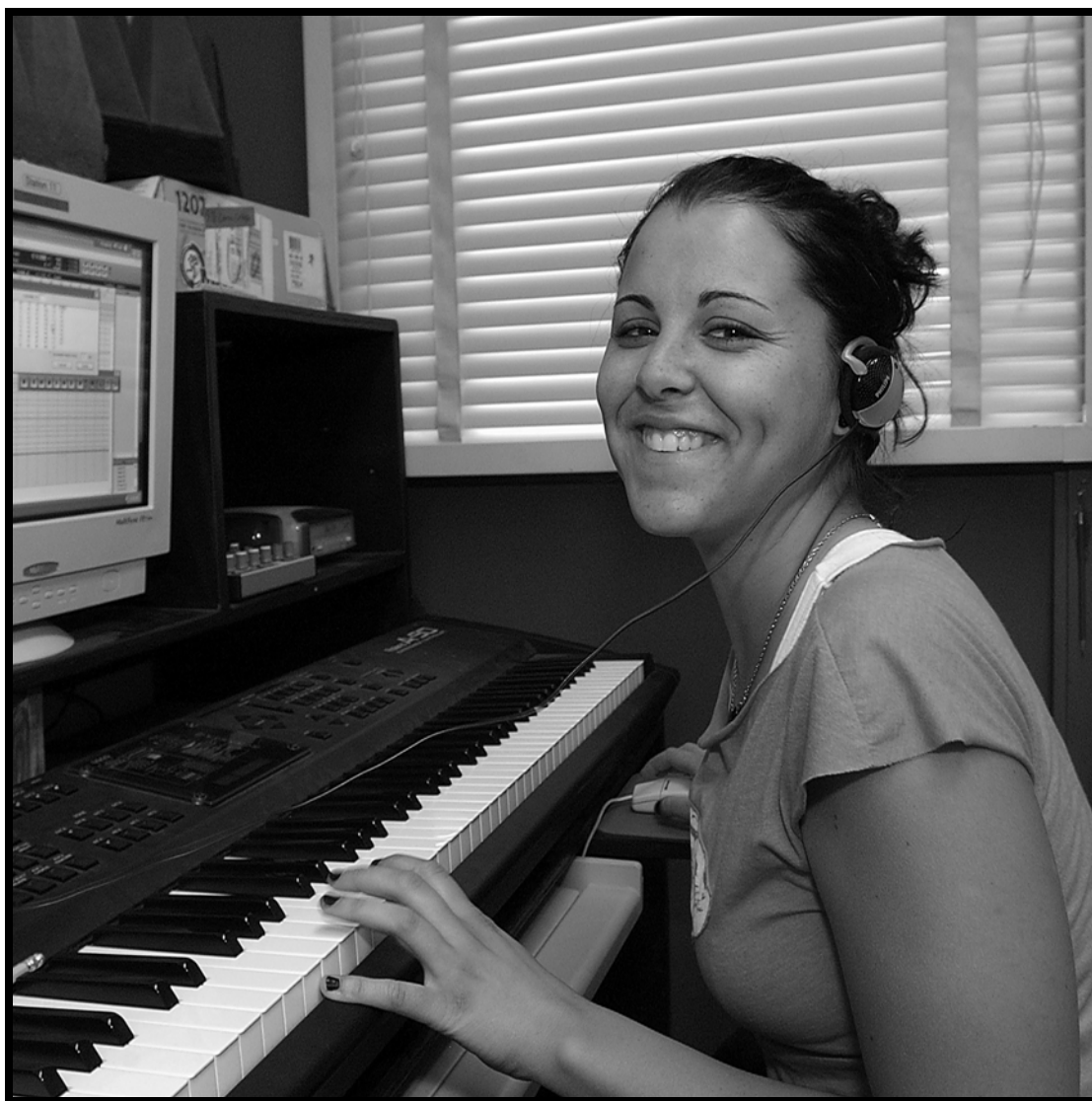
349 Solar Work Experience

**300 hours per semester, 4 units
Credit/No Credit Only**

Limitation on Enrollment: Student must be a state registered apprentice in this trade and concurrently enrolled in a related apprenticeship class.

The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. Associate Degree Credit only and not Transferable.

San Diego City College Community



SAN DIEGO CITY COLLEGE FACULTY

2007-2008

Akers, Justin

Assistant Professor, Chicano Studies
B.A., San Diego State University
M.A., San Diego State University
Teaching Credential, University of Phoenix

Alexander, Roberta

Professor, English and English as a Second Language
B.A., University of California, Berkeley
Ph.D., University of California, San Diego

Andersen, Elizabeth C.

Professor, Adapted Physical Education, College Articulation Officer
B.A., M.A., San Diego State University

Armstrong, Dometrives

Assistant Professor, Nursing Education
A.S., San Diego City College
B.S., University of Phoenix
M.S., University of San Diego

Ascione, Louis

Dean (Interim), School of Arts, Humanities, Communications, Foreign Languages, Chicano and Black Studies
B.A., William Paterson College
Ph.D., Temple University

Baron, Chris

Professor
B.A., San Diego State University
M.F.A., San Diego State University

Barnes, Randy

Dean, Business, Information Technology, Cosmetology and Child Development
B.A., University of California, San Diego
M.B.A., National University

Barton, Cynthia

Associate Professor, Mental Health Specialist
B.A., University of California, San Diego
M.S.W., San Diego State University
Licensed Clinical Social Work (LCSW)

Benard, Mary

Dean, School of Science, Nursing, Health and Athletics
B.S., State University of New York, College at Buffalo
M.B.A., University of San Diego

Berg, Deborah Jo

Director, Nursing Education
B.S.N., University of Michigan
M.S.N., San Diego State University

Bernal, Juan Manuel

Professor, Spanish
B.A., M.A., San Diego State University

Bodnar, Dede

Professor, Physical Education
B.S., M.S., California Polytechnic State University, San Luis Obispo

Bolanos, Theresa

Assistant Professor, Chemistry
B.S., University of Houston
Ph.D., University of Texas, Austin

Bollinger, John C.

Professor, Machine Technology
15 years experience

Bouscaren, Stephen J.

Professor, Anthropology
A.A., Sacramento City College
B.S., M.S., Ph.D., University of California, Riverside
Bilingual Certification for Secondary Teaching Credential

Brady, Leroy

Associate Professor, Business

Breay, Audrey

Professor, English

Brooks, Raelene

Associate Professor, Nursing Education
B.S.N., University of Phoenix
MSN, University of Phoenix

Brown, Christopher

Associate Professor, Health & Exercise Science
B.A. Mt. Vernon Nazarene, Mt. Vernon, Ohio
M.S., Cal State University Fullerton

Brown, Michael

Associate Professor, Electricity
A.S., City College
B.S., Pacific Western University

Calhoun, Constance

Professor, Cosmetology
A.A., National University
B.A., National University

Camarena, Misael

Professor, Mathematics
M.A., San Diego State University

Cary, Nancy

Professor, English
B.A., University of Oregon
M.A., San Diego State University

Castaneda, Laura

Assistant Professor, Radio & TV
B.A., University of Illinois, Urbana

Cayouette, Michelle

Assistant Professor, Biology
B.A., M.A., Case Western Reserve University, Cleveland, OH

Ceccacci, Vincent

Professor, Disability Support Programs & Services Counselor
B.A., State University of New York at Stony Brook
M.S., State University of New York at Albany

Chacon, Mario A.

Dean, Student Affairs

B.A. California State University,
Los Angeles

M.S. San Diego State University

Charlens, MitchAssistant Professor, Physical
Education/Head Men's Basketball
CoachB.A. San Francisco State
UniversityM.A. California State University,
Chico**Cheung, Cecilia Y.K.**

Professor, Librarian

B.A., University of Hong Kong
M.L.S., State University of New
York at Albany

M.B.A., Adelphi University

Colbert, JimProfessor, Health and Physical
Education

B.A., M.A., Adams State College

Coleman, Mary

Associate Professor

B.A., Emory University
M.A., San Diego State
University**Cordell, Dotti**Associate Professor, Student Health
ServicesB.S., University of California,
IrvineB.S.N., M.P.H., University of
California, Los Angeles**Corona, Laurel**

Professor, English & Humanities

A.B., University of California,
DavisM.A., University of Chicago
Ph.D., University of California,
Davis**Covalt, James**B.S., University of Chicago
M.S., Ph.D., University of
California, San Diego**Crispen, Nancy**

Professor, Chemistry

B.S., M.S., M.A.T. University of
Chicago**Davalos, Enrique**

Assistant Professor, Chicano Studies

B.A., M.A., Autonomous
National University of Mexico**Davies, Thomas**Assistant Professor, Air
Conditioning

A.A., Palomar College

A.A., Miramar College

B.S. Cal. State San Marcos

Deaton, Marilyn S.Professor, Business
StudiesB.S., M.S., San Diego State
University**De Fulvio, Barbara**Assistant Professor, Nursing
Education

B.S.N. Cal. State Bakersfield

M.S.N. University of Phoenix

de la Lama, Carlos

Professor, Mathematics

B.A., M.A., University of
California, San Diego**Didulo-Masangkay, Dinnak**Assistant Professor, Nursing
Education

A.A. Fresno City College

B.S., San Diego State University

M.S., University of California,
San Francisco**DiPaolo, Donna**

Associate Professor, Biology

B.S., Widener University,
Chester, PAM.S., University of California,
DavisPh.D., University of California,
San Diego**Djawdan-Spradley, Minou**

Associate Professor, Biology

B.A., Goucher College

Ph.D., University of California,
Irvine**Dubon, J. Armando**

Professor, Business Studies

B.A., University of Honduras
M.A., University of Kansas**Eichinger, David**

Assistant Professor, Photography

B.A., M.A., California State
University, Long Beach**Engstrom, Erin**Assistant Professor, Speech
Communications

B.A. University of Washington

M.A. Colorado State University,
Fort Collins**Enright, Gwyn**

Professor, English

B.A., University of California,
Santa BarbaraM.A., University of Washington
Ph.D., University of California,
Los Angeles**Erreca, Lorraine**

Director, Off Campus Programs

A.A., Chaffey College

B.A., San Diego State University
M.A. San Diego State University**Escalante, Virginia**

Professor, English

Estrada, Jaime

Assistant Professor, Spanish

A.A., Palomar College

B.A., Escuela Normal, Mexico

B.A., Cal State San Marcos

M.A., San Diego State
University**Evans, James H.**Professor, Behavioral
Sciences

B.A., Virginia Union University

M.S., San Diego State University

C.C.D.P., University of
Minnesota**Fenwick, Jerry**

Professor, Music

B.A., M.A., San Diego State
University

Feyen, Jennifer

Assistant Professor, ESOL
 A.A., Grossmont College
 B.A., San Diego State University
 M.A., San Diego State University

Fierro, David

Associate Professor, Engineering
 B.S., M.S., California State University, San Diego

Figueroa, Maria

Associate Professor
 B.A., University of California, San Diego
 M.A., Dartmouth College

Finkel, Pamela J.

Professor, DSP&S/ Counseling
 B.A., Southern Illinois University
 B.A., San Diego State University
 M.S., San Diego State University

Fontana, Susan

Associate Professor, Child Development

Forman, Lawrence

Professor, Computer Science
 B.S., Brown College
 Ph.D., University of California, Berkeley

Gaipa, Brenda

Assistant Professor, Mathematics
 B.A., University of California, San Diego
 M.A., San Diego State University

Gallo, Theresa

Professor, Mathematics
 B.A., Catholic University of America
 M.A., Ph.D., University of California, San Diego

Gardella, Duane

Professor, Drama and Radio and Television
 B.A., M.F.A., University of California, Los Angeles

Gerald, Gertrude

Associate Dean/Director, Center for Applied Competitive Technologies
 B.A., University of Phoenix
 M.A., California State University, Northridge

Greer, Paul

Assistant Professor, Physical Education
 B.A., San Diego State University
 M.A., Azusa Pacific University

Grooms, Jones, Patricia

Associate Professor, Cosmetology

Gum, Aileen

Professor, English and English as a Second Language
 B.A., University of Minnesota
 M.A., University of Colorado
 M.A. Monterey Institute of International Studies (TESOL)

Gurumurthy, Ram

Associate Professor, Chemistry
 B.S., M.S. Madras University
 Ph.D., Iowa State University

Hale, Kris

Associate Professor, Nursing Education
 A.D.N., Del Mar College, Corpus Christi, TX
 B.S.N., California State University, Domingue Hills
 M.S.N., California State University, Domingue Hills

Hammond, John

Professor, Computer Information Systems
 B.S., University of Arizona
 M.A., University of Northern Colorado

Harlow, Catherine

Professor, Philosophy
 B.A., M.A., University of California, Los Angeles

Harris, Berta

Professor, Child Development
 B.S., M.S., San Diego State University

Hasegawa, Susan

Professor, History
 B.A., Colorado College
 M.P.I.A. University of California, San Diego
 M.A., San Diego State University

Heredia, Gloria

Professor, Counselor
 B.A., M.S., San Diego State University

Hettena, Anita

Assistant Professor, Biology
 B.S., University of Kansas
 Ph.D., Johns Hopkins University

Hicks, Barry M.

Professor, English
 B.A., University of California, Los Angeles
 M.A., University of California, San Diego

Hicks, Rose

Assistant Professor, Computer Science
 A.A., San Diego City College
 B.A., San Diego State University
 M.A., National University

Hiel, Edwin Ramon

Assistant Professor, Counselor
 B.S., M.S. Cal Poly San Luis Obispo
 M.A. San Diego State University

Hildebrand, John

Professor, Radio and Television
 B.V.E., M.A., San Diego State University
 Cert. Educational Technology, San Diego State University

Hong, Lan

Assistant Professor, Mathematics
 B.A., University of California, San Diego
 M.A., Ph.D., University of California, Davis

Hopkins, Paulette Wong

Professor, Physical Education
 B.S., Springfield College
 M.S., Pennsylvania State University
 Ph.D., University of San Diego

Howell, Catherine

Professor, Nursing Education
 A.D.N., Sierra College
 B.S.N., M.S.N., Azusa Pacific University

Hulgin, Wayne

Assistant Professor, Art-Fine Arts

Jarrell, Janet

Assistant Professor, English/ESOL
 B.A., San Diego State University
 M.A., San Diego State University

Julian, Fred

Associate Professor, Engineering
 M.S., Georgia Institute of Technology

Kater, David

Professor, Mathematics
 B.A., University of California, Los Angeles
 M.A., San Diego State University (Mathematics)
 M.A., San Diego State University (Educational Technology)

Keesey, Miriam E. A.

Professor, Mathematics
 B.A., M.A., San Diego State University

Kersey-McCandless, Pam

Assistant Professor, Nursing
 B.S.N., M.S.N. California State University, Dominguez Hills

Khoromi, Farnaz

Associate Professor, Engineering
 B.S., M.S., University of Southern California
 M.A., USIU
 Ph.D., Brentwick University

Kil, Joon

Assistant Professor, Political Science
 B.A., University of California, Los Angeles
 Ph.D., University of Pennsylvania

Kim, Yoonchung Park

Professor, Fine Art
 B.F.A., M.F.A., Seoul National University
 M.A., University of California, Berkeley

Kimm, Jenny

Associate Professor, Mathematics

King, David

Assistant Professor, Photography

Klippel, Karon

Assistant Professor, Mathematics
 B.A., Trinity University
 Ph.D., Texas A&M University

Kraffert, Katheryn

Professor, Counselor
 A.B., M.S., San Diego State University
 M.S., National University

Lahijani, Roya

Assistant Professor, Biology
 B.S., University of Oklahoma
 M.S., University of Oklahoma
 Ph.D., University of Nevada, Reno

Le, Hoat

Professor, Mathematics
 B.A., Pomona College
 M.S., Ohio State University

Leboffe, Michael J.

Professor, Biology
 B.S., M.S., San Diego State University
 D.A., Idaho State University

Leon, Sylvia

Assistant Professor, Cosmetology
 B.S., University of Southern Illinois, Carbondale

Lim, Karen

Professor, English
 B.A., University of Arizona
 M.S. Ed., Elmira College

Lollis, Kirsten

Associate Professor, Mathematics
 B.S., Spelman College
 M.Ed., Ph.D., University of Maryland, College Park

Lombardi, Jan

Professor, English
 B.A., Briar Cliff College
 M.A., San Francisco State University

Long, Don

Associate Professor, ILC Specialist/
 Coordinator Independent Learning Center

B.A. Morehouse College
 M.P.A. University of Southern California

Lopez, Candice

Professor, Graphic Design
 A.A. West Valley College
 B. S., Cal Poly State University, San Luis Obispo
 M.A., San Diego State University

Lopez, Catherine

Professor, Counselor
 A.A., Monterey Peninsula College
 A.B., San Diego State University
 M.S., San Diego State University

Lyon, Gloria G.

Professor, Child Development
 B.S., M.A., Howard University
 M.S., National University

Lyons-Dailard, Cynthia

Professor, Fine Art,
 Photography
 B.A., M.A., San Diego State University
 22 years experience

Macias, Cassandra L.

Professor, Health and Physical Education
 B.S., University of Florida
 M.Ed., Delta State University

Mahler, Jim

Professor, Engineering and Mathematics
 B.S., M.S., University of California, Berkeley

Mandilawi, Nadia

Assistant Professor, English
B.A., New York University
M.F.A., San Diego State
University

Manzoni, Ronald D.

Vice President, Instruction
A.A., West Hills College
B.A., Humboldt State University
M.A., University of California,
Riverside

Mahoney, Patrick

Professor, Computer Information
Systems
B.A., B.S.E.E., Rice University
M.B.A., University of California,
Berkeley

Martin, Fred

Assistant Professor, EOPS Counselor
B.A., Chapman University
M.A., University of San
Francisco
Ed.D., University of San
Francisco

Martin, Sue

Professor, Child Development

Martinez, Hector

Associate Professor
B.A., University of Southern
California
M.F.A., San Diego State
University

Mason, Barbara

Professor
LD Specialist, Disability Support
Programs & Services Coordinator
B.S., M.S., Western Oregon State
University

Mayhew, Kelly

Associate Professor, English
B.A., University of California,
Santa Barbara
M.A., San Diego State
University
Ph.D., Bowling Green State
University

McConnico, Laurie

Assistant Professor, Biology
B.S., University of California,
San Diego
M.S., San Jose State University

McGinnis, Kathy M.

Professor, Health and Physical
Education
B.S., Central Michigan
University
M.A., San Diego State
University

Medina, Tanya

Professor, Speech Communications
B.A., M.A., San Diego State
University

Meehan, Elizabeth F.

Professor, English & Humanities
B.A., University of California,
San Diego
M.A., Claremont Graduate
School

Milburn, Andrea

Assistant Professor, Health and
Exercise Science
B.S., Regis University
M.S., Azusa Pacific University

Miller, James

Professor, English
B.A., M.F.A., San Diego State
University
Ph.D., Bowling Green State
University

Molina, Jake

Professor, Physical Education
B.S., University of California,
Los Angeles
M.A., San Diego State
University

Moreno, Francisco

Assistant Professor, Sociology
A.A., Palomar College
B.A., M.A., California State
University, San Marcos

Morton, Cassie

Counselor
B.A. University of California,
Los Angeles
M.S. San Diego State University

Murugesan, Poovan

Professor, Physics and Astronomy
B.Sc., M.Sc., Madras University
M.A., Ph.D., University of
Oregon

Ngo, Truc

Assistant Professor, Manufacturing
Technology
B.ChE., Ph.D. Chemical
Engineering, Georgia Institute
of Technology

Nowbahari, Zahra

Assistant Professor, Nursing
Education
B.A., Reza Shah Nursing
College, Tehran, Iran
B.A., Loma Linda University
M.A., University of California,
San Diego

Obiya, Alex

Professor, Business
Studies
B.S., M.S., Ph.D., Michigan
State University

Ocen-Ododge, Linda

Professor, Nursing Education
B.S.N., Chicago State University
M.S.N., Northern Illinois
University
F.N.P., University of California,
San Diego

Oliveri, Dee

Associate Professor, Nursing Educa-
tion
B.S.N., William Paterson
University, Wayne, New Jersey
M.S.N., University of Phoenix

Ortega-Welch, Veronica

Assistant Professor, Psychology
 B.A., San Diego State University
 M.A., Ph.D., University of California, Los Angeles

Patto, Philippe

Assistant Professor, French
 B.A., College De Dieppe, France
 B.A., Indiana University of Pennsylvania
 M.B.A., Indiana University of Pennsylvania
 M.A., San Diego State University

Pelletier, Richard

Professor, Computer Information Systems
 A.A., San Diego City College
 B.S., San Diego State University

Peters, Bonnie

Associate Professor, Counseling
 B.A., University of the West Indies
 M.S. University of Connecticut

Phillips, Sudabeh

Professor, Cosmetology
 B.A., University of Missouri, Kansas City

Pitcher, Sarah

Assistant Professor, Sociology
 B.A., California State University Fresno
 M.A., Ph.D., Syracuse University

Pruitt, Robert L.

Assistant Professor, Electronics Engineering Technology
 B.A., Northwest Missouri State University
 M.S., University of Missouri, Columbia, Missouri

Ramsey, Gerald

EOPS Officer
 B.A., California State University, Long Beach
 M.S., National University

Renker, Laura

Professor, Counselor
 B.A., University of San Diego
 M.A., University of Arizona

Reyes, Rodrigo

Professor, Counseling
 B.A., Fresno State
 M.A., Harvard University
 M.A., San Diego State University

Richards, June

Professor, Theatre
 A.A., Santa Rosa Jr. College
 B.A., Sonoma State University
 M.A., San Jose State University

Rincon, Alicia

Professor, Dance
 B.A., M.A., United States International University

Riva, Barbara

Professor, Computer Business Technology
 A.A., B.S., M.S., University of Nebraska, Omaha

Rivera, John

Professor, Counselor
 B.A., San Diego State University
 M.A., University of New Mexico
 Ph.D., Claremont Graduate School, San Diego State University

Robinson, Stephanie

Associate Professor, Music
 B.A., University of California, Los Angeles
 M.A., University of Michigan, Ann Arbor
 Ph.D., University of California, San Diego

Romero-Huerta, Maria Clara

Professor, Spanish
 B.A., San Diego State University
 M.A., San Diego State University

Salgado, José Francisco

Professor, Librarian
 B.A., San Diego State University
 M.S.L.S., University of Southern California

Salinas, Elva

Professor, English
 A.A., San Diego City College
 B.A. San Diego State University
 M.A. University of California, San Diego

Sanchez, Gabriel

Assistant Professor, Counselor
 A.A. Southwestern College
 B.A. San Diego State University
 M.A. San Diego State University

Sandoval, Rosalinda

Associate Professor, Spanish

Savarese, Theresa M.

Professor, Computer Business Technology
 A.A., Phoenix College
 B.A., M.A., Arizona State University

Scappaticci, Gerardo

Professor, Physics and Astronomy
 B.S., University of Illinois at Chicago
 M.S., Ph.D., University of Illinois at Urbana, Champaign

Schommer, Steven

Associate Professor, Counseling
 B.A., Southern California College, Costa Mesa
 M.S., San Diego State University

Selkin, Peter

Assistant Professor, Geography/Geology
 B.A., Amherst College
 Ph.D. University of California, San Diego

Shafer, Catherine

Associate Professor, Vocational Nursing
 B.S., Seton Hall University, South Orange, NJ

Shelton, Deanna

Assistant Professor, Speech
Communications
B.S., University of Texas,
Austin
M.A., San Diego State
University

Singer, Andrea

Associate Professor, Graphic Design
B.A., University of California,
San Diego
M.F.A.

Singer, David L.

Professor, Biology
B.A., University of California,
Los Angeles
M.S., San Diego State University
D.A., Idaho State University

Slinglend, Nick

Assistant Professor, Mathematics
B.S., Wayne State University,
Michigan
M.A., University of California,
San Diego

Smith, Manfred C.

Professor, Mathematics
B.A., Berea College
M.S., Miami University
Ph.D., Virginia Polytechnic
Institute

Spearman, Darius

Assistant Professor, Black Studies
A.A., College of Marin
B.A., Sonoma State University
M.A., Sonoma State University
M.A., San Diego State
University

Spikes, Margie

Professor, Counseling

St. George, Marie

Assistant Professor, Psychology
B.A., Fairfield University
M.A., Ph.D., University of
Delaware
M.S., National University

Stewart, William

Professor, Philosophy
B.A., University of California,
Santa Barbara
M.A., University of California,
San Diego

Stockert, Brian

Professor, DSPS Counselor
Learning Disabilities Specialist
B.S. National University, San
Diego
M.S. National University,
San Diego

Sullivan, John

Professor, Counseling

Sun, Yu-Hua A.

Professor, Mathematics
B.S., National Taiwan University
M.A., Ph.D., Wayne State
University

Taylor, LeeAnn

Assistant Professor, Health and
Exercise Science
A.A., San Diego Mesa College
B.A., California State University,
Northridge
M.F.A., Azusa Pacific University

Tesfamariam, Alazar

Professor, Black Studies
B.A. University of Asmara,
Asmara Eritera
M.A., Oklahoma State University

Thomas, Carolyn R.

Professor, Mathematics
B.S., St. Lawrence University
M.A., Ph.D., University of
California, San Diego

Tunnell, Julie

Professor, Business
Studies
B.B.A., University of Notre
Dame
M.B.A., San Diego State
University

Turkel, Ellen

Professor, Physical
Education
B.A., Plattsburgh State
University College
M.S., University of Arizona,
Tucson

Voden, Thomas

Assistant Professor, Mathematics
B.S., University of California,
Riverside
M.A., University of California,
San Diego

Walelign, Adamu

Professor, English
B.A., Haile Selassie I University,
Ethiopia
Dip. TEFL, University of London,
England
M.Ed., University of Wales,
Cardiff, Wales
Ph.D., Indiana University of
Pennsylvania

Ward, Tandy

Assistant Professor, Counseling

Watson, Donna

Professor, Black Studies and English
B.A., California State University,
San Bernardino
M.F.A., San Diego State
University

Weiner, William J.

Professor, Psychology
B.A., Northeastern University
M.A., Boston University
M.S., University of Southern
California

Wilson, Terry

Assistant Professor, Dance
A.A., Palomar College
B.A., San Diego State
University
M.F.A., University of Michigan,
Ann Arbor

Wisehart, Gary

Professor, Biology
B.S., M.S., San Diego State
University
M.A., Azusa Pacific University
R.S., State of California

Withers, Carol M.

Librarian

B.A.San Diego State University
M.L.I.S., San Jose State
University

Wong, Ray

Professor

B.A., M.S., San Diego State
University

**FACULTY/ADMINISTRATORS
EMERITUS**

Abiña, Armando, Administrator
Baldwin, Harry L. Jr., Faculty
Battad, Hestor, Faculty
Bauer, John, Faculty
Berkley, James, E., Faculty
Boghos, Moheb E., Faculty
Boley, Rita A., Faculty
Brashars, Janet, Faculty
Brill, Jack A., Faculty
Brown, Larry J., Administrator
Burdg, Marvin L., Executive
Dean
Burton, James M., Faculty
Bush, Louis F., Faculty
Butler, Winston, Administrator
Clancy, John, Administrator
Clark, Ken A., Faculty
Clowers, Myles, Faculty
Coppola, Joseph, Faculty
Costello, Joyce, Faculty
Couch, John, Faculty
Crabtree, Lyle Fred, Faculty
Crowe, Alicia, Faculty
Cydell, Alice H., Faculty
Dawes, Betty R., Faculty
Dark, James Dark,
Administrator
Decker, Mary, Administrator
Downs, Robert L., Faculty
Duke, Joe W., Faculty
Escamilla, Augustine, Faculty
Flaherty, Bernard, Faculty
Forman, Sidney
Galas, James, Faculty
Geddes, John, Faculty
Gooden, Frances, Faculty
Gosewisch, Vincent Robert,
Faculty
Gray, Ansel, Faculty/
Administrator
Halbeisen, Merla, Faculty
Hansen, Barbara, Faculty
Hardison, James M., Faculty
Harkness, Shirley, Faculty
Harms, Marie-Louise Lind,
Faculty
Harron, Vince, Faculty
Hayward, Peggy F.,
Administrator
Henderson, Charles B., Faculty

Hendry, Willoene, Faculty
Hock, Betty, Faculty
Hoeschen, Robert, Faculty
Howard, Dennis, Faculty
Hudlemeyer, Elsie B., Faculty
Irwin, Alfred L., Faculty
Jenkins, Marian B., Faculty
Kane, Heralk, Faculty
Katungi, Nathan, Faculty
Korski, Victor, Faculty
Kosiba, Walter L., Faculty
La Rosa, Frank, Faculty
Lang, Curtis E., Faculty
Leavitt, Daniel David, Faculty
Leiseth, Barbara, Faculty
Lemons, Lemuel W., Faculty
Leslie, Gary E., Faculty
Lewis, Fred G., Faculty
Lim, Patricia, Faculty
Liska, Paula, Faculty/
Articulation
Long, James H., Faculty
Lynch, Donna, Faculty
Lynch, Jeremiah, Faculty
MacRenato, Ternet, Faculty
Maes-Erickson, Patsy, Faculty
Margolin, Elias L., Faculty
Markley, John, Faculty
Massa, Richard N.,
Administrator
McCarty, Curt, Faculty
McCommins, Patricia, Faculty
McDowell, Madeline E., Faculty
Menchaca, Miguel, Faculty
Meyers, Lorraine, Faculty
Miller, Carl V., Faculty
Morgan, Barbara, Faculty
Nelson, H. J., Administrator
Nimmo, Leslie, G., Faculty
Nulton, James D., Faculty
Owens, Donna, Faculty
Peterson, Catherine Libert,
Faculty
Rangel, Cruz, Faculty
Repashy, Allen J., President
Reid, Josephine F., Faculty
Richards, Freddie, Faculty
Richardson, James R.,
Administrator
Ripley, Robert, Faculty
Roach, Edward, Faculty
Roach, Thomas W., Faculty
Robinson, Patricia, Faculty

Rossitto, JoAnn, Faculty/
Administrator
Rossmassler, Pauline M.,
Faculty
Sauer, June C., Faculty
Schutte, George A., Faculty
Scott, Kathryn Jane, Faculty
Seiler, James, Faculty
Shaff, Jimmie L., Faculty
Shannon, Mary, Faculty
Shaw, Hope W., Faculty
Shina, Abraham
Short, Robert, Faculty
Skillen, Shirley, Faculty
Sloan, Ella, Faculty
Smith, Dorothy, Faculty
Smith, Robert L., Faculty
Soler-Tossas, José Antonio,
Faculty
Spafford, Paul, Faculty
Strecker, Robert, Faculty
Sullivan, Norma, Faculty
Sullivan, Jack, Faculty
Swenson, Darrell, Faculty
Teeple, Kerry J., Faculty
Tepper, Albert, Faculty
Theis, Edward L., Faculty
Thomas, Edward L., Faculty
Valenzuela, Dora,
Administrator
Van Tassel, Lowell T., Faculty
Von Sein, Edward C., Faculty
Wade, Juanita M., Faculty
Waltz, Candace, Faculty
Weiss, Robert, Faculty
Wellnitz, Jerry N., Faculty
Welch, Douglas R., Faculty
Wemple, Don K., Faculty
West, Harry, Faculty
Whittleton Jr., H. Mark, Faculty
Willis, John R., Faculty
Wilson, Bobby, Administrator
Wilson, Kenneth, Faculty
Witt, Betty, Faculty
Witt, John, Faculty
Worley, Ronald C.
Young, Dwight, Faculty

CONTRACT CLASSIFIED EMPLOYEES

Abbott, Perla,
Food Service
Abbott, Sylvette,
Student Services Assistant,
Financial Aid.
Aguayo, Margie
Evaluator, A.S., Office
Information Systems, San
Diego City College
Aldave, Alfonso, C.,
Custodian I, Plant
Operations
Alenazi, Slah
Account Clerk
Accounting Office
Alvarez, Patricia,
College Police
Anderson, Bill,
Police Officer, College Police
Anderson, George,
College Police
Anderson, Marilyn D.,
Instructional Support
Supervisor, Library
Aragon, Tracy Lee
Senior Clerical Assistant
Child Development Center
Armstrong, Alan J.,
Account Technician,
Accounting, B.B.A,
Accounting, National
University; A.A. General
Education, Mesa College
Armstrong, Ofelia,
Student Services Assistant,
Financial Aid
Avila, Angie
Student Services Assistant
Balagtas, Jr., Teofilo,
Custodian I, Plant
Operations
Baldwin, Carol E.,
Assistant Bookstore Sales
Clerk, Bookstore
Balintec, Reggie,
Student Services Assistant,
Student Affairs
Bang, Gary
Senior Account Clerk
Accounting Office

Bartley, Jr., James,
Instructional Lab
Technician, Science, Biology
Barrett, Earline
Senior Account Clerk
Business Services
Baumgardner, Nancy,
Food Service Worker III,
Cafeteria
Beasley, April N.,
Duplicating and
Reproduction Clerical
Assistant
Benedito, Alfred,
Police Officer, College Police
Benjamin, Juliet
Account Clerk
Accounting Office
Bhakta, Kamini
Senior Clerical Assistant,
Schedule Preparer, Vice
President of Instruction
Biesiada, David,
Parking Enforcement Officer,
College Police
Black, Laurie,
Athletic Trainer, Physical
Education, NATA Certified,
B.S., Physical Education,
San Diego State University
Bromley-Taylor, Cherie
Administrative Technician
TRIO-ASPIRE
Browne, Darwin,
Student Services Assistant
Disability Support Programs
& Services
Buelna, Hope,
Food Service
Bueltel, Maria D.,
Food Service Worker I,
Cafeteria
Bunkowske, Heidi,
Public Information Officer,
B.A., Political Science &
Public Administration, SDSU
M.A., Communications,
SDSU
Caldwell, Craig P.,
Gardener and
Groundskeeper, Plant
Operations

- Carter**, Erlinda,
Student Assistant
Technician
Financial Aid
- Castillo**, Icasiano,
- Cavalcanti**, Cicero H.,
Custodian I, Plant
Operations
- Chandler**, Derrell,
Regional Plant Operations
Officer, Plant Operations
- Chandler**, Susan
Clerical Assistant,
Instruction
- Chatfield**, Craig H.,
Broadcast Engineer, Radio
and Television
- Clarborne**, Jeff,
College Police
- Cohen**, Rochelle C.,
Senior Clerk, Plant
Operations
- Collins**, Artis L,
Food Service Worker IV,
Cafeteria
- Cordeiro**, Alberto DaSilva,
Micro Specialist Supervisor,
Computer Science
- Cordero**, Aurea,
Senior Secretary,
Off Campus Programs
- Cordova**, Cleofe M.,
Senior Account Clerk, ASB
Cashier, Bookstore
- Cressy**, June Annette,
Offset Press
Operator, Duplicating, A.A.,
Liberal Arts, San Diego City
College; Certificates in
Massage Technology - IPSB,
Boatbuilding - Pioneer
Marine
- Day**, Alan Jr.,
Custodian I, Plant
Operations
- Deer**, Maria
Instructional Assistant
DSPS
- De la O**, John "Nikko"
Media Technician
Learning Resource Center
- Dexheimer**, Carol,
Business Manager, Business
Services, A.S., Biology, San
Diego Evening College;
B.S., Accounting San Diego
State University; M.P.A.,
Administration, National
University
- Dobies**, Kenneth,
Gardener and Groundskeeper
- Douglas**, Marilyn
Senior Clerical Assistant
Disability Support Program
& Services
- Duenas**, Greg
Senior Secretary, School of
Business
- Ebner**, Leslie
Senior Clerical Assistant,
KSDS
- Elejorde**, Eduardo F.,
Assistant Food Services
Supervisor
- Esparza**, Guillemina
Media Clerk
Library
- Faller**, Larry,
Parking Enforcement Officer,
College Police
- Feria**, Adam
Account Clerk, Accounting
Office
- Fernandez**, Patricia,
Clerical Services Assistant,
Duplicating
- Flores**, Cynthia,
Police Officer, College Police
- Flores**, Eric M.
Senior Student Services
Assistant, Counseling
- Fox**, Heidi,
Administrative Technician,
Institutional Research &
Planning, Vice President of
Instruction
- Frazier**, Gladis
Senior Student Services
Assistant, Records
- Freed**, Scott B.,
Custodian I, Plant
Operations
- Galicia**, Herlinda,
Student Services Assistant,
Financial Aid
- Garcia**, Kitz,
Senior Secretary, Dean of
School of Math, Engineering
& Technologies
- Garcia**, Rodrigo,
Plant Operations
- Garibay**, Susanna,
Student Assistant
Technician, Financial Aid
- Geisberg**, Zdenka,
Senior Student Services
Assistant, Work Experience
- Givens**, Tammy Lee,
Instructional Lab
Technician, Child
Development
- Gonzales**, Daniel
Media Technician
- Gonzales**, Lydia,
Administrative Secretary,
Vice President of Instruction
- Gonzalez**, Oscar,
Parking Enforcement Officer,
College Police
- Gonzalez**, Samuel,
Food Service
- Gonzalez**, Laura V.,
Senior Student Services
Assistant, Financial Aid
- Gough**, Gary W.,
Lead Interpreter, Disabled
Student Program
- Gradilla**, John,
Student Services Assistant,
Counseling
- Granderson**, Mary A.,
Accounting Supervisor,
Business Services
- Gregory**, Susan
Senior Secretary, School of
Science, Nursing, Health &
Athletics
B.S., Human Services,
University of Phoenix
- Habeck**, Kimberly D.,
Athletic Equipment
Attendant, Athletics
- Hammond**, Edward,
Custodial Supervisor I
- Harris**, Belinda,
Senior Student Services
Assistant, Veterans Affairs

- Hays**, Wanda F.,
Food Service Worker I,
Cafeteria
- Headtke**, Edward,
Sergeant, College Police
- Hedayat**, Blanca I.,
Clerical Services Assistant,
Duplicating
- Henry**, Sharon L.,
Sales Audit Clerk, Cafeteria
- Hernandez**, Rachel
Student Services Assistant
Admissions
- Hiett**, Terry,
Police Officer, College Police
- Hilbert**, Nolmi,
Food Service
- Hill**, Josolyn,
Senior Secretary, School of
Arts and Humanities,
Communications, Foreign
Languages
- Hollis**, Denise
Supervisor I, Admissions
and Records
- Huerta**, Meliton Ortega,
Custodian I, Plant
Operations
- Humphries**, Lou E.,
Admissions and Records
Officer,
A.A., Business Education,
Coahoma Jr. College,
Clarksdale, MS;
B.B.A., Administration,
National University,
San Diego
- Ignacio**, Jennifer
Senior Media Clerk
- Jackson**, Terri
Administration Technician
EOPS
- Jacobs**, Donna
Instructional Assistant
DPS
- Jennings**, Patrick Keith,
Food Service Worker I,
Cafeteria
- Johnson**, Theresa,
Senior Student Services
Assistant, Admissions, A.A.,
Liberal Arts, San Diego City
College, B.S., Administration
of Justice, National
University
- Jones**, Maryola,
Food Service
- Juneja**, June,
Instructional Lab
Technician, Child
Development
- Keithly**, Joy
Clerical Assistant
DPS
- Kockerhahns**, Joseph,
Radio KSDS,
Broadcast Operations
Specialist, A.A. San Diego
City College
- Lafaver**, Fred Louis,
Food Service Stock Clerk,
Cafeteria
- Leverette**, Brenda,
Business Services, Senior
Clerical Assistant
- Lindsey**, Ozzie L.,
Custodian I, Plant
Operations, B.A., Chemistry,
University of California, San
Diego; Certificates in
Typing, Medical Laboratory
Assistant, Phlebotomy
- Locklin**, Sammy,
Custodian II, Plant
Operations
- Loera**, Lupe
Student Services Assistant
Veterans Affairs
- Lopez**, George R.,
Athletic Equipment
Attendant, Athletics
- Lopez**, Marie A.,
Food Service Worker I,
Cafeteria
- Lopez**, M.,
Food Service I, Cafeteria
- Lozares**, Robert A.,
Custodian and Crewleader,
Plant Operations
- Ludwick**, J. Diann,
Executive Assistant to the
President, Presidents Office
- Ly**, Daniel,
Bookstore Sales Clerk,
Bookstore
- Majeda**, Maria
Instructional Support
Supervisor/TLC & Multimedia
Center
Business Technology, B.A.
Linguistics, UC San Diego;
M.S., Educational
Technology, National
University
- Manliscic**, Ricardo I.,
Custodian I, Plant
Operations
- Marquez**, Jenny
Student Services Assistant,
Financial Aid
- Martinez**, David,
Supervisor II, Plant
Operations
- Martinez**, Lupie,
Senior Account Clerk
- Mason**, Joyce,
Clerical Assistant, College
Police
- Mason**, Rita D.,
Clerical Assistant,
Cosmetology
- Maule**, Steve,
Sales Clerk, Bookstore
- McDaniel**, Yolan,
Senior Student Services
Assistant, Admissions
- Mello**, Irene,
Athletic Equipment
Attendant, Athletics
- Mendoza**, Elisabeth
Senior Student Services
Assistant
Outreach Office
- Mendoza**, Lorenza,
Student Services Assistant,
Financial Aid
- Meza**, Dora,
Senior Student Services
Assistant, International
Student Specialist
Admissions
- Michel**, Edward G.,
Custodian I, Plant
Operations

- Miller, Betty Jean,**
Instructional Lab
Technician, Learning
Resource Center, A.A.,
Liberal Studies, San Diego
City College
- Millum, Joanne,**
Student Assistant
Technician, Financial Aid
- Minniti, Edwina,**
Food Service Worker IV,
Cafeteria
- Misere, Mary Ann,**
Student Services Assistant,
Admissions
- Mitchell, D'Andrea A.,**
Student Assistant
Technician, Financial Aid
- Mohseni, Shirin O.,**
Accounting Technician,
Accounting
- Monaco, Christina,**
Evaluator, Evaluations
- Montanez, Michelle**
Student Services Assistant,
Records
- Morford, Charlene,**
Clerical Assistant, College
Police
- Morgan, Byron**
Student Services Assistant
Records & Veterans Affairs
- Moton, Roy, Sergeant,**
College Police
- Nakada, Tamosu,**
Instructional Lab
Technician, Computer
Science
- Navarro, Cecilia,**
Supervisor I, Counseling
- Nellis, Ronald,**
Physical Science,
Instructional Assistant
- Newton, George Vickers,**
Custodian I, Plant
Operations
- Nicholls, John,**
Gardener and
Groundskeeper, Plant
Operations
- Nguyen, Tinh Van,**
Assistant Bookstore Sales
Clerk, Bookstore
- Noel, Mary E.,**
Food Service Worker II,
Cafeteria
- Noel, Sammie,**
Food Service Worker III,
Cafeteria
- Norberg, Robert D.,**
Theatre Technician, Theatre,
B.A., Sociology, University
of California, San Diego;
Certificates Lifetime
Teaching Credential, Theatre
and Related Arts
- Norris, Michael,**
Custodian, Plant Operations
- Oldham, Lori L.**
Instructional Program
Placement Specialist, School
of Business Technologies;
A.S., San Diego City College;
B.A., Education, The Union
Institute and University;
M.S., Educational
Technology, National
University
- Olson, Kevin,**
College Police
- Olson, Valerie,**
Interpreter, Disabled
Student Program
- Oviedo, Cindy**
Student Services Assistant
Transfer/Career Center
- Pace, Carl M.,**
Stock Clerk, Stockroom,
A.A., Liberal Arts, San Diego
City College
- Palacios, Ed,**
Police Officer, College Police
- Payton, Tom,**
Clerical Assistant, College
Police
- Perez, Cynthia**
Senior Clerical Assistant
Tutorial Learning Services
- Pierce, Burton E.,**
Instructional Lab Technician
Science, Biology, A.S.,
Human Biology, San Diego
City College
- Pineda, Sanita, C.,**
Food Service Worker I
- Potter, Tyrone,**
Custodian I, Plant
Operations
- Quick, Gerald L.,**
Chief Broadcast Engineer,
Radio
- Reed, Debra,**
Biology, Instructional Lab
Technician
- Reidel, Sonia,**
Student Services Assistant,
Financial Aid
- Roberts, Gwendolynn,**
Media, Library Technician
- Rodgers, Stacy**
Senior Clerical Assistant
EOPS
- Rodriguez, Gail**
Senior Secretary
Student Affairs
- Rodriguez, Hilda G.,**
Senior Clerical Assistant,
Nursing, Education
- Rozier, Elcia**
Clerical Assistant &
Telephone Operator
Admissions & Records
- Ruffo, Carmen**
Administrative Technician
Student Affairs
- Ruston, Brett,**
Instructional Assistant,
Physical Science, B.A.,
Biology, University of
California, San Diego
- Ryan, Sean**
Media Tech, LRC
- Sampson, Valerie Joy,**
Assistant Textbook Buyer,
Bookstore
- Sanchez, Gregory R.,**
Financial Aid Manager, B.S.
Accounting, Loyola
Marymount University

- Sandoval**, Augustine F.,
Student Assistance
Technician, EOPS, A.A.,
Social Science/Chicano
Studies, San Diego City
College, B.A., Public
Administration, San Diego
State University; B.A.
Sociology, San Diego State
University
- Santos**, Danilo T.,
Custodian I, Plant
Operations
- Schumaker**, Nancy,
Police Officer, College Police
- Shurtleff**, Charlene,
Clerical Assistant, College
Police
- Sickler**, Nancy,
Senior Clerical Assistant,
Health Services
- Silas**, Myrtle,
Student Services Assistant,
EOPS
- Sim, Neary**
Senior Clerical Assistant
Admissions & Records
- Simpson**, Chadwick,
College Police
- Sisti**, Tony,
Broadcast OP Specialist,
Radio KSDS
- Smith, Alonso**
Student Services Assistant,
Counseling
- Smock**, Ronald W.,
Athletic Groundskeeper,
Athletics
- Sokanthong**, Roger K.,
Gardener and
Groundskeeper, Plant
Operations
- Soukhaseum**, Lance,
Director, Tutorial Center,
B.A., Business
Administration, Cal State
Fullerton
M.A., Educational
Technology, San Diego State
University
- Stanton**, Michael,
College Police
- Strand**, Marcia,
Laboratory Technician,
Computer Lab, Certificate of
Computer Electronics,
Coleman College
- Swift**, Coleen A.,
Senior Secretary, Student
Development, B.A., Liberal
Arts, Pennsylvania State
University
- Tanjaquio**, Espie
Accounting Supervisor,
Accounting Office
- Thao**, Vang
Senior Student Services
Assistant, Admissions
- Thurman**, Joyce A.,
Administrative Secretary,
Business Services
- Tintiango**, Rodolfo M.,
Custodian I, Plant Operation
- Titus**, Joseph,
Custodian, Plant Operations
- Tomeldan**, Gil,
College Police
- Tutokey**, William G.,
Instructional Assistant,
Photography
- Ukapatayasakul**, Banjerd,
Custodian I, Plant
Operations
- Valdez**, Dante C.,
Custodian I, Plant
Operations
- Valencia**, Jose M.,
Custodian I, Plant
Operations
- VanSaanen**, Desiree
Administrative Secretary,
Student Services
A.A., English, Mesa College
- Vargas**, Anthony,
Senior Student Services
Assistant, Nursing
Admissions Specialist,
Admissions
- Vargas**, Jose,
Lieutenant, College Police
- Vasquez**, David,
Sergeant, College Police
- Vilaboy**, Teresa,
Student Services Supervisor
I., Financial Aid
- Villarreal**, David,
Custodian I, Plant
Operations
- Vo**, Lynna
Student Assistant
Technician, Financial Aid
- Werdick-Stillson**, Kimberly,
Gardener and Groundskeeper
- Westman**, Dianne,
Clerical Assistant II,
Duplicating and
Reprographics
- Wilson**, Ernestine,
Food Service
- Woodward**, Mary
Station Manager, KSDS,
A.A. San Diego City College,
B.A., National University,
M.A., San Diego State
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- Zamora**, Jesus,
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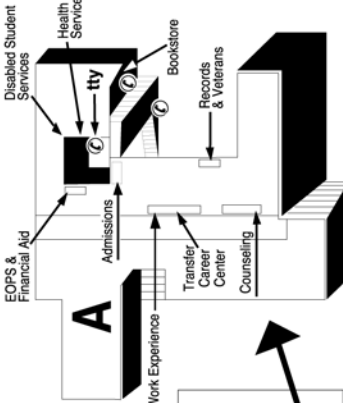
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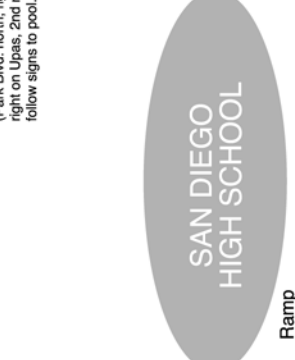
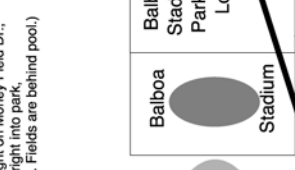
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SAN DIEGO COLLEGE

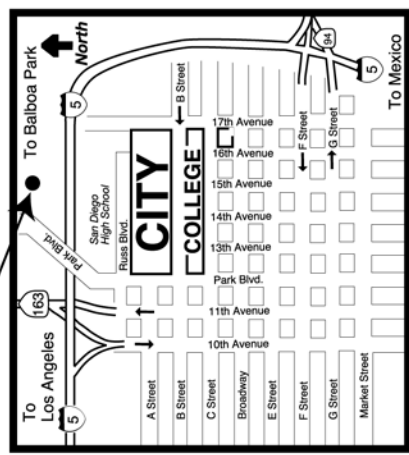
- "A" Building**
- Admissions
 - Bookstore
 - Cashier/Accounting
 - Counseling
 - Disabled Student Services
 - EOPS/Financial Aid
 - Health Services
 - Mental Health Services
 - Residency Determination
 - Transfer-Career Center
 - Veterans/Records
 - Work Experience



◆ Baseball venue Morley Field (Park Blvd. north, right on Morley Field Dr., right on Upas, 2nd right into park, follow signs to pool. Fields are behind pool.)



Additional parking (free) at Inspiration Point, Park Blvd. & Presidents' Way. Free shuttle runs continuously to campus Mon.-Thurs., 7:20 a.m.-12:40 p.m. & 5:10-20 p.m., except holidays, during fall & spring semesters.



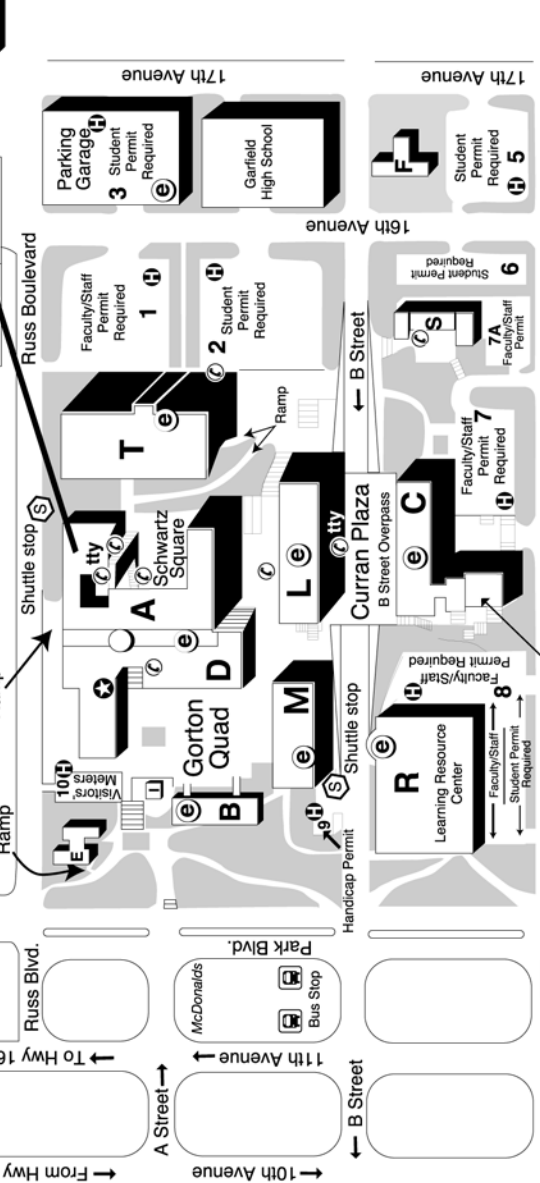
HOW TO GET TO CITY COLLEGE
 Transit Bus Schedules: (619) 233-3004

Disabled route maps and parking info available in room A-115 and at the Information Center Booth



Bicycle racks located throughout campus near major classroom buildings, cafeteria and Student Affairs

Feb. '07



- SAN DIEGO CITY COLLEGE/BUILDING CODES**
- A** Admissions/Bookstore/Cashier/Counseling/Disabled Services
 - EOPS/Financial Aid/Health Services/Work Experience**
 - B** Educational Technology Center
 - C** Cafeteria/Student Affairs/Fine Arts/Music/Radio-TV/KSDS/Saville Theatre
 - D** Administration/President
 - E** Child Development Center
 - F** Information Center Booth
 - I** Academic Success Center, Tutoring Center/Classrooms
 - M** Mathematics/Science
 - P** Gym/Athletic Fields/Tennis Courts
 - P-1** Fitness Center
 - HWG** Harry West Gymnasium
 - R** Library/Independent Learning Center
 - S** Media-Audio Visual Center/"Down Under" Classrooms
 - T** Police, Rim 211/Plant Operations/Graphic Design/CAD-CAM
 - S** Technology Incubator/Nursing/Engineering
 - C** CACT/Computer Business Technology/Stockroom
 - Pay Telephone** (tty available on phones near A-116 & L-110)
 - Student Activities Cashier**
 - Elevators**
 - H** Handicap Parking

