

**SAN DIEGO**

# **MIRAMAR COLLEGE**

**2008-2009  
CATALOG**

Fall 2008, Spring 2009, Summer 2009

10440 Black Mountain Road  
San Diego, California 92126  
619-388-7800

[www.sdmiramar.edu](http://www.sdmiramar.edu)

Patricia Hsieh, Ed.D., President

San Diego Miramar 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

San Diego Miramar College, long known for our student centered campus climate and emphasis on quality in teaching, learning, and service, is in an exciting period of expansion. In the near future, you will also see a physical education facility, a large and impressive library and Learning Resource Center, and several additional classroom buildings—as well as a beautiful student plaza and renovations of our existing campus buildings.

Miramar College offers a wide variety of occupational programs. Additionally, we are positioned to ease the path to transfer if your goal is a bachelor's degree or higher. A visit to our Counseling Department is always a good first step, so we can help you achieve your university transfer and career goals efficiently. Our outstanding faculty and caring staff are committed to helping you succeed.

Sincerely,

*Patricia Hsieh*

Dr. Patricia Hsieh, President

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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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# Academic Calendar 2008-2009

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## Fall Semester 2008

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16-WEEK SEMESTER: Fall Classes August 25, 2008–December 17, 2008

### SPECIAL DATES

June 20, 2008 . . . . .	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 24, 2008 . . . . .	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
September 17, 2008 . . . . .	Constitution Day (Classes are in session)
October 31, 2008 . . . . .	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for June or Summer 2009 graduation in order to receive an evaluation prior to beginning of Spring semester.
November 11, 2008 . . . . .	Holiday—Veterans Day**
November 24–26, 2008 . . . . .	Classes not in session
November 27 & 28, 2008 . . . . .	Holiday—Thanksgiving**
December 18, 2008–January 2, 2009 . . . . .	Winter Recess

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## Intersession 2009

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Intersession: . . . . . January 5, 2009–January 31, 2009

### 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 19, 2009 . . . . .	Holiday—Martin Luther King**
January 25, 2009 . . . . .	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)

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## Spring Semester 2009

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16-WEEK SEMESTER: Spring Classes . . . . . January 26, 2009–May 23, 2009

### 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 25, 2009 . . . . .	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
February 13, 2009 . . . . .	Holiday—Lincoln's Day**
February 16, 2009 . . . . .	Holiday—Washington's Day**
March 27, 2009 . . . . .	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for June 2009 completion.
April 6–11, 2009 . . . . .	Spring Recess
April 10, 2009 . . . . .	Holiday—Cesar Chavez Day**
May 25, 2009 . . . . .	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.

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## Summer Session 2009

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Summer Classes: . . . . . June 1, 2009–August 15, 2009

### SPECIAL DATES

May 31, 2009 . . . . . RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)

July 3, 2009 . . . . . Holiday—Independence Day\*\*

July 31, 2009 . . . . . Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Completion in Summer 2009.

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



# General Information



# History

San Diego City College, San Diego Mesa College and San Diego Miramar College are public, two-year community colleges administered by the San Diego Community College District. Also under the auspices of this district are the Continuing Education division with six major centers throughout San Diego, and the Educational Cultural Complex which offers both college and continuing education courses. These educational programs carry out the charge made by the voters of San Diego in 1972, that the San Diego Community College District provide education for all high school graduates and adults 18 years of age and older in the District. This charge includes providing adult basic education through sophomore-level college degree programs, with both academic and vocational curricula.

Community college education in San Diego can be traced to 1914 when the Board of Education of the San Diego City Schools authorized post-secondary classes for the youth of San Diego. Classes opened that Fall at San Diego High School with four faculty members and 35 students.

This was the beginning of City College which is now in its 92nd year. For twenty-five years the Junior College program was located at San Diego State University. In 1938, the San Diego Vocational Junior College was established to offer training in technical-vocational skills to post-high school students. The following year the San Diego Evening Junior college was set up to provide college classes in the evening for adults unable to attend day classes.

In 1964, San Diego Mesa College was opened to 1,800 students. Five years later, in 1969, San Diego Miramar College opened on 140 acres in what was then undeveloped land north of the Miramar Naval Air Station, now known as Mira Mesa. Unlike City and Mesa colleges which offered a range of general education classes, San Diego Miramar College began by concentrating on law enforcement and fire science training. It has since broadened its curriculum to include the general education college courses needed by students in the rapidly growing northern area of the city.

In November 1972, the voters approved separating the San Diego Community College District from the San Diego Unified School District. The first election of community college district trustees was held in November 1973. Nineteen seventy-six brought the opening of a unique district campus, the Educational Cultural Complex, dedicated to offering both college

and continuing education classes to the multicultural population surrounding its Ocean View Boulevard site. In 1979–80 the administration of the Evening College program was merged with those of the day college programs at San Diego City, San Diego Mesa and San Diego Miramar Colleges.

With both college and continuing education programs, the San Diego district is the second largest community college district in California and offers a choice of educational programs unparalleled in the region.

## Statement of 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.

## Mission Statement

Our mission is to prepare students to succeed in a changing world within an environment that values excellence in learning, teaching, innovation and diversity.

### Values

We at San Diego Miramar College value . . .

- Student access, learning and success
- Preparing students for degrees, jobs, careers and transfer
- The ability to recognize and respond to opportunities
- A collegiate college community with mutual

respect, courtesy and appreciation

- Accomplishments of individuals, groups and the college as a whole
- Diversity of our students, staff, faculty and programs
- Creativity and excellence in teaching, learning and service
- Collaboration and partnerships
- Shared governance and communication

## Vision

- Student learning and success will be the focus of all we do.
- San Diego Miramar College will develop as a college that identifies student access, learning and success as the touchstone to guide planning, set priorities and measure effectiveness.
- Miramar College will have a beautiful campus that attracts students and is user friendly.
- Miramar College will be a hub of education, diversity, recreation and services to the community.

## Goals

- 1) Focus efforts on student learning.
- 2) Deliver instruction and services in formats and at sites that best meet student needs.
- 3) Provide a campus, programs and co-curricular activities at San Diego Miramar College that fully meet the comprehensive needs of college students.
- 4) Initiate and strengthen beneficial partnerships with business and industry, schools and community.
- 5) Enhance San Diego Miramar College's visibility, attractiveness and reputation for quality.

# Accreditation

San Diego Miramar College is approved by the California State Department of Education and is accredited by the Western Association of Schools and Colleges. The college is approved 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, the California State Universities, and by other universities and colleges.

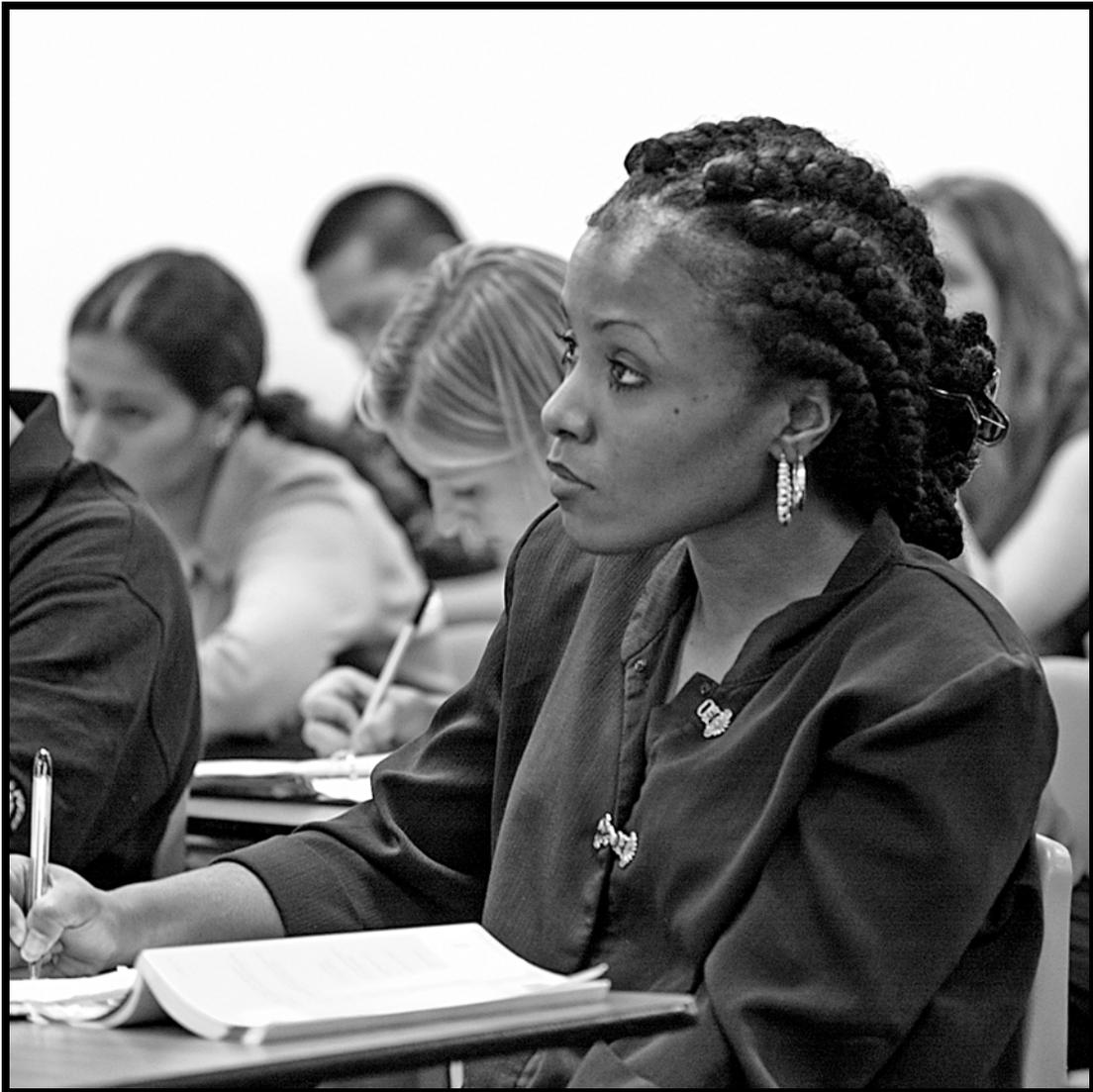
Individuals interested in the institution's accreditation and program approvals may gain an opportunity to review documents describing these activities from the President's Office. These documents will be available for such review at any mutually convenient time during regular business hours, and an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

## 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 or university
- 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 who possess a high school diploma or California high school proficiency exam certification or GED with an average score of 45 or higher.
- 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 admission 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.

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**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.**

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## 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) of at 619-388-7312 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 participate in assessment/orientation services before registering for classes.

For additional information call 619-388-7379 or stop by the Testing Office on campus in room B-203.

All new students are advised to complete online orientation at

[http://www.sdmiramar.edu/root/stu\\_svcs/orientation/index.html](http://www.sdmiramar.edu/root/stu_svcs/orientation/index.html)

## 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 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 77 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 aptitude 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. (Exception: English 51 and 56 no longer apply as Associate Degree credit).
- **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 and 272 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://schedule.sdccd.edu>

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](http://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.
- 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 wait listed class if a space becomes available before the semester begins.
- 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 wait listed classes on Reg-e daily.
- Upon notification, students will be given five (5) business days, including the day of notification, to add the wait listed class. (An add code is not required.)
- If students do not add their wait listed 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 his/her e-mail and/or Reg-e, weekly for the status of their wait listed 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 C-303.

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.

## Drop/Withdrawal from Classes

Students may drop or withdraw from classes online until the published deadline dates. Deadline dates are available in the Admissions Office or in the online schedule of classes at: <http://schedule.sdccd.edu> and by clicking on the "details" box next to the class they are interested in viewing.

- It is the student's responsibility to drop all classes in which he/she is no longer participating.
- Students, who remain enrolled in a class beyond the published withdrawal deadline, as stated in the online class schedule, will receive an evaluative letter grade.
- Final grades may be affected by attendance as described in the class syllabus.

**DROP**—ending enrollment in a class prior to about 20% point of class meetings. A drop is not recorded on the student's academic record.

**WITHDRAWAL**—ending enrollment in a class between about the 20% point and up to about 60% point of class meetings. A withdrawal is a permanent symbol on the student's academic record and is included in progress probation and disqualification determination.

### Administrative Drop

Registration may be administratively canceled 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.

### 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-quarter 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) Active Duty Military and Veteran students who meet the eligibility criteria\*
- 3) Continuing students
- 4) New matriculating students
- 5) New and returning students
- 6) 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) Active Duty Military and Veteran students who meet the eligibility criteria\*
- 3) Continuing students
- 4) New and returning students
- 5) Open registration

\* Students who are Active Duty Military, or discharged within the past two years, may be eligible for priority registration. Students should contact the Residency/ Admissions Office for additional information. A military ID Card or DD214 will be required for verification.

**Change of Name, Mailing Address, or Email 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.

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**Note: Unofficial transcripts are accepted for prerequisite clearance.**

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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 receive 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 55.

**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, Title 5, Sections 54000-54072.

**Residency Status**

Every person who is married or is 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 Admissions Office C-303.
- 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 decides 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
- Owning residential property in California for personal use
- Voting in California
- 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

## Exception 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 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 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. In addition, 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 Miramar 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  
San Diego Miramar College  
10440 Black Mountain Road  
San Diego, CA 92126-2999  
[www.sdmiramar.edu](http://www.sdmiramar.edu)

## General Information

- 1) An international student must register for and maintain a minimum of 12 units each semester while at Miramar 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 Miramar 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 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 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 TOFEL test, please visit the Educational Testing Service website at [www.ets.org/toefl/](http://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 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 (formerly 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. There are no housing facilities on campus and the college does not assist with housing. However, there is affordable housing within walking distance of the college. Students are welcome to stay in the residence halls at Alliant University (AIU). Contact the AIU Office of Housing and Residence Life at (858) 635-4292 or on the internet at: [www.alliant.edu/sandiego/housing/](http://www.alliant.edu/sandiego/housing/). Email: [housing@alliant.edu](mailto:housing@alliant.edu).

## Visa Students (other than F-1)

All other visa categories or immigrant classifications, must see the Admissions 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.

Note that an increase in enrollment fees is currently under discussion by the State Legislature and is subject to change.

- 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.

### 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 \$16 per semester for

Fall 2008 and Spring 2009, and \$13 for the Summer 2009 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 bona fide 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 858-536-7844 or 619-388-7844.

## 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 2008-2009 non-resident tuition fee is \$179.00 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 fees are currently under review and subject to change.

Automobile Permits per semester (hanger included) . . . . .	\$30.00
Automobile—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.*

*Student ID card replacement is \$5.*

### 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 \$25.00 fee will be assessed for any returned checks.

## 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 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.

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**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 period, the student will not receive a refund for the permit.**

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# Student Services



We, the Student Services Division, believe that students are the reason for our existence. We are dedicated to offering equitable and courteous services to our Miramar College community. We are committed to the development and empowerment of our students to their full potential.

## Services for Students

Accounting	C303	619-388-7326
Admissions	C303	858-536-7844
(General Inquiries, Applications/Enrollment) Adds/Drops/Student Petitions	C303	619-388-7844
Help Line		858-536-4300 619-388-7300
Enrollment Verifications	C303	858-536-7844
Reg-e		<a href="http://studentweb.sdccd.edu">http://studentweb.sdccd.edu</a> 619-388-7844
Residency	C303	858-536-7844 619-388-7844
Special Programs	C303	858-536-7848 619-388-7848
Student Records	C303	858-536-7844 619-388-7844
Assessment	B203	858-536-7379 619-388-7379
Associated Students	S101B	858-536-7877 619-388-7877
Bookstore	D301	858-536-7866 619-388-7866
CalWORKS	C301	858-388-7378 619-388-7378
Career/Student Employment Center	B203	858-536-7235 619-388-7335
Child Development Center	F200	858-536-7851 619-388-7851
College Police	B102	858-536-7353 619-388-7353
Counseling Department	C302	858-536-7840 619-388-7840

Disability Support Programs & Services	C304	858-536-7212 619-388-7312
	tty#	858-536-4301 619-388-7301
EOPS	C301	858-536-7869 619-388-7869
Evaluations	C304	858-536-7371 619-388-7371
Financial Aid	B205	858-536-7864 619-388-7864
Health Services	S103	858-536-7881 619-388-7881
High Tech Center	D104	858-536-4303 619-388-7303
International Student Information	C303	858-536-7844 619-388-7844
Journalism (The Sage)		858-536-7872 619-388-7872
Library	C400	858-536-7310 619-388-7310
Matriculation Office	S101	858-536-4313 619-388-7313
Outreach	B-304	619-388-7357
Records Office	C303	858-536-7844 619-388-7844
SDCCD Online at Miramar	T300	619-388-7330
Student Affairs	S101	858-536-4313 619-388-7313
Transfer Center	B203	858-536-7380 619-388-7380
TRIO	D203	619-388-7473
Tutoring (The PLACe)	D106	858-536-7852 619-388-7852
Veterans Affairs	B204	858-536-7862 619-388-7862
V. P., Student Services	A105	858-536-7810 619-388-7810

The college maintains a comprehensive program to assist students in achieving their goals. The services provided are detailed on the following pages.

## Counseling Services

The mission of the San Diego Miramar College Counseling Department is to provide comprehensive programs and services that empower students to identify and achieve educational, career, and personal goals to meet life's opportunities and challenges.

Academic, career, and personal counseling are provided in the Counseling Department in C-302. Services include academic skills assessment and development of a Student Educational Plan (SEP), which outlines what courses are needed for graduation and provides a checklist for requirements completed and remaining. Students should have official transcripts from other colleges attended on file and evaluated before seeking to obtain an official SEP. Students are advised to review the catalog and schedule of classes for program and general information prior to meeting with a counselor. The Counseling Department offers college success and career planning courses through Personal Growth listed in the schedule of classes.

The Counseling Office is open Monday to Thursday from 8:00 a.m. to 7:30 p.m. and on Friday from 8:00 a.m. to 3:30 p.m. For more information, please stop by or call 619-388-7840 or 858-536-7840.

## Transfer Services

The Transfer Center, located in B-203, is dedicated to helping Miramar 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. Transfer Center resources include: workshops, transfer fairs, meetings with college representatives, campus tours, a library of catalogs and publications, information on transfer guarantees, computer software for college research, and transfer advising. For more information, please contact 858-536-7380 or 619-388-7380 or visit our website at: [www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer).

## 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.

## Disability Support Programs and Services (DSPS)

Miramar 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 and the High Tech Center. 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 accommodation such as the use of tape recorders in the classroom and the modification of test-taking procedures may be arranged. The campus is physically accessible.

## Service Animals

The San Diego Community College District will permit qualified students with disabilities to use service animals in district facilities and on district campuses (Policy 3105.2) in compliance with state and federal law. Please contact the DSPS Office at the enrolled college for review and approval for the issuance of SDCCD identification.

Anyone interested in applying for services or obtaining further information may contact the Disability Support Programs and Services Department in C-304 by calling 858-536-7212 or 619-388-7312; tty 619-388-7301, or email [miradsps@sdccd.edu](mailto:miradsps@sdccd.edu).

## CalWORKs/TANF Training, Education and Service Program

The CalWORKs program offers support services to students who receive TANF/CalWORKs funding. Specialized services have been designed to support students in their education, career and personal goals while meeting their Welfare-to-Work requirements. Services include academic/vocational counseling, job placement, career transition counseling, workshops, work study placements and verification of Welfare-to-Work hours. For additional information, contact the CalWORKs Program Office at 619-388-7378 or 858-536-7378, or stop by C301.

## Extended Opportunity Programs and Services (EOPS) and Cooperative Agencies Resources for Education (CARE)

### What is EOPS?

EOPS is a state-funded student support services program. Its purpose is to provide enhanced 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 C301, or call 858-536-7869 or 619-388-7869, or email [miraeops@sdccd.edu](mailto:miraeops@sdccd.edu).

EOPS students who are single parents, have a child under 14 years of age, and are a member of a household that receives 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.

You may be eligible for EOPS if you are enrolled full-time (at least 12 units). At least 9 of these units must be taken at Miramar College and your financial aid must be at Miramar. 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) is 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.

### 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 Office in C301 and Financial Aid Offices in B205. 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.

# Financial Aid

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 taxable and non-taxable income, household size, allowable expenses, indebtedness, and assets. The U.S. Department of Education, in cooperation with Congress 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 15th. Students filing their application by this date will be considered first in the award process. However, applications for financial aid are accepted throughout the school year until June 30, 2009.

Prospective students do not have to be accepted for admission to San Diego Miramar 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.

All financial aid applicants must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA is available and can be filed on the Internet at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). Those who wish to file the paper application should mail the completed form directly to the processor according to the instructions.

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

## 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 temporary purpose with the intention of becoming a permanent resident.

Eligible non-citizens may be required to provide proof of permanent residency for Federal Aid. F-1 Visa students are not eligible for financial aid at San Diego Miramar 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.

**Please refer to the Financial Aid Bulletin for additional eligibility requirements.**

## 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 the availability of funds. Awards may be adjusted at any time upon notice of receipt of resources not previously reported. Revisions to awards are always possible because personal financial circumstances can be very 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 30).

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 must **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

The 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, or visit our website.

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 financial need as determined by Federal Methodology Need analysis system.
- You or your family are receiving TANF (Temporary Aid For Needy Families), SSI (Supplemental Security Income), or General Assistance/General Relief at the time of enrollment.
- You have a letter from the department of Veterans' Affairs certifying that you meet the eligibility requirements of "certain disabled veterans," or "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 2007 (adjusted gross income and/or untaxed income)
1	\$15,315 or less
2	\$20,535 or less
3	\$25,755 or less
4	\$30,975 or less
5	\$36,195 or less
6	\$41,415 or less
7	\$46,635 or less
8	\$51,855 or less

Add \$5,220 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

## 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 or once the Pell Grant award has been processed. The Pell Grant will not be adjusted for additional units added or dropped during the semester.

## Academic Competitiveness Grant

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 before January 1, 2005 and have completed a 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.

## 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 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.

## 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 2%. 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.dlsvicer.ed.gov](http://www.dlsvicer.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. Parents must begin repayment within 60 days of receiving the loan. The interest rate is a variable rate determined on June 1 for the following award year. Borrower must meet all other financial aid eligibility requirements, including completing the FAFSA.

If you have any questions, please call the Financial Aid Office, at 858-536-7864 or 619-388-7864.

### **Student Emergency Loans**

Short-term loans for limited amounts of money are available to students in emergency situations. Contact the Financial Aid Office for further information.

### **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.

## **Career/Student Employment Center**

Located in B-203, the Career/Student Employment Center offers a number of resources to assist students in college and career planning and employment. Resources consist of: career information, newsletters, occupational and interest inventories, resource directories, career assessments (including MBTI and Eureka), job listings, resume and cover letter writing assistance, and interview preparation. Contact the Career/Student Employment Center for more information at 858-536-7236 or 619-388-7335.

## **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 guidance to veterans and dependents 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.

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

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### **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 Dr., San Diego, CA 92108, to determine their eligibility for disabled status. Telephone: 800-827-1000.

## Veteran Dependent Tuition Waiver

The children and spouses of U.S. Veterans with service connected disabilities may be eligible for waiver of college tuition. 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 college 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. Veterans with disabilities are encouraged to pursue services offered through Disability Support Programs and Services.

## 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 Reg-e. Failure to comply with this regulation will be grounds for decertification of Veterans' benefits and/or potential overpayment liability.

## Veterans Academic Progress

A veteran student on Academic or Lack of Progress probation status is disqualified when his/her cumulative grade point average (GPA) falls below 2.0. 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 repeating a course in which a passing grade has been given may not receive VA benefits to repeat the course. By District policy, the veteran is eligible to repeat courses in which a "D" grade has been received; however, the course may be certified for benefits only if the catalog states that a grade of "C" or better in that course is required to earn a degree or meet a prerequisite.

## Work Experience

Veterans may be approved for Work Experience classes only if work experience is required in their major or if they have electives available according to their education plan.

## 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 Veterans Affairs Office for necessary forms.

# Library/Learning Resources

## Independent Learning Center (ILC)

Need a computer to do classroom research, to write a term paper, or to access the Internet? Come to Miramar's Independent Learning Center (ILC) located on the 2nd floor of the I-Building. The ILC provides Miramar students with the many instructional support services necessary to successfully complete classroom assignments. Along with a friendly, helpful staff, the ILC offers Miramar students access to computers (PCs and Macs), the Internet, printing, photocopying, and supplementary materials provided by various faculty. In addition, self-paced classes are available in Computer Business Technology (CBTE) and Math. The ILC hours are Monday—Friday 8 am to 8 pm and Fridays 8 am to 1 pm.

## Library

The Library/Learning Resources Center (LRC), located in building C-400, serves faculty, students, and staff. The LRC staff assists students who need information to complete class assignments or wish to improve their research skills. Faculty members can use library and audiovisual resources for classroom instruction and can house instructional material on reserve in the Library for their students to use. To support instructors' curriculum, librarians are also available to conduct library orientations for classes. LIBS 101, a course in Information Literacy and Library Research Skills is offered online (See page 298).

A few of the services the LRC provides include: reference materials and assistance, library orientations, Internet access, a local area network of electronic databases, e-books, periodicals, interlibrary loans, quiet study areas, photocopiers, video and DVD players, CD listening stations, and a typewriter. The LRC also houses a special law library collection.

For additional information, please call 858-536-7310 or 619-388-7310 during our regular working hours:

Monday through Thursday, 8:00 am–8:30 pm

Friday, 8:00 am–3:30 pm;

(Closed Saturday and Sunday)

or log on to the Library web site at:

[www.sdmiramar.edu/library.asp](http://www.sdmiramar.edu/library.asp)

## Computer Services

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

## Tutoring—The PLACe

The Personal Learning Assistance Center (The PLACe) is located in room D-106 and provides students with academic support in a number of areas: math, writing, college reading/study skills as well as Spanish, biology, history, political science, art, music, vocational courses, psychology and sociology.

Students may schedule appointments for tutoring or drop in for assistance where they will be assisted by the first available tutor. Students may use our computer lab to improve their writing, math and reading skills or attend on-going group workshops. Online tutoring is available. Please call for information.

The PLACe also provides weekly open math and writing labs (call for days and times). No appointment is necessary. A student can drop in and get help with a quick question or work on a written assignment, print it

and get feedback from a writing tutor. Stay as long or short a time as you need.

Miramar students may use The PLACe to work on classroom assignments or because they choose to use the services on their own.

The PLACe is open Monday–Thursday 8:30 am–6:30 pm, Friday 8:30 am–2:00 pm, selected Saturdays (please call) 9:00 am–12:00 noon. Please call The PLACe at 619-388-7852, for a tutoring appointment. For further information stop by D-106 during operating hours.

## 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 [www.sdccdonline.net/newstudents.htm](http://www.sdccdonline.net/newstudents.htm)

Get ready for online learning success! Visit [www.sdccdonline.net/students/training/](http://www.sdccdonline.net/students/training/)

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

## Child Development Center

The Child Development Center is the Campus Laboratory School providing students with the opportunity to observe and study growth and development patterns in young children. The Center offers an educational program for children two to five years of age. It provides a rich variety of preschool activities which encourage a sense of self-worth and creative expression.

Enrollment in this center is limited to the children of parents attending classes at Miramar College or any college within the San Diego Community College District. Due to limited space, priority is given based on eligibility as defined by the Child Development Division, California State Department of Education.

Parents are required to enroll in a child development lab course each semester their child attends the Center. Specific information will be provided by the Child Development Center faculty.

The Center is located in F-200 and is open 7:45 am–4:00 pm Monday–Thursday and 7:45 am–1:00 pm on Friday. For additional information call 858-536-7851 or 619-388-7851.

## TRIO/Student Support Services

TRIO/Student Support Services is a transfer-readiness program committed to providing educational advancement opportunities for underrepresented students. The program assists students with academic preparation, counseling, personal skill development, and serves to motivate students towards the successful transfer from Miramar College to a four-year college or university.

The following services are available to participants in the program:

- Academic, transfer, career, financial, and personal counseling
- Specialized tutorial services (through the PLACe)
- Workshops for personal growth and skill development
- Free field trips to various colleges and universities
- Professional & peer mentoring
- Free educational and cultural events to meet new friends, faculty and staff
- Free office services (i.e., copies, faxes, computer usage, etc.)
- Free school supplies (i.e., scantrons, bluebooks, highlighter, pens, etc.)

Students interested in submitting an application to the TRIO/SSS Program must meet at least **ONE** of the following eligibility requirements set forth under Title IV of the Higher Education Act:

- Be a first-generation college student (parents/guardian did not graduate from a U.S. four-year institution)
- Be a low-income student (based on the income levels set forth by the U.S. Department of Education)
- Have a verified disability

Other factors that will be taken into consideration for selection into the program include an educational goal to transfer to a four-year university, need for academic and transfer preparation, and a commitment to fulfill all the requirements and expectations of the program.

Applications for the TRIO/SSS Program are accepted on a rolling basis until the program is full. For more information or to get an application you can stop by room D-203, call 619-388-7488, or email at [miratrio@sdccd.edu](mailto:miratrio@sdccd.edu).

## Student Health Services

The Student Health Services supports the success of students by attending to their physical and emotional well-being through the following services:

- Nursing Assessment & Management
- General Medical Assessment
- First Aid/Emergency Care for students
- Health Counseling
- Blood Pressure screening
- Medical Referrals
- Psychological referrals
- STD information and referral

Nominal Fee Services:

- Physical Exams (including paps)
- Lab Services at reduced cost
- TB testing
- Immunizations and TB testing
- Women's Health and Family Planning

- Treatments such as nebulizer, wart removal, minor surgical procedures and laceration repairs, etc.
- Prescription medications (example: antibiotics)

A nurse is on duty during hours of operation. Medical doctor or nurse practitioner coverage varies. Most nurse, doctor, and nurse practitioner visits are free, however some medical procedures and visits may require a fee.

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. As always, medical confidentiality binds all verbal and written communication.

Room  
S-103                      858-536-7881 or 619-388-7881

## Student Accident Insurance

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. Evening students taking physical education or designated "hazardous" classes are also covered.

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. The student, however, is ultimately responsible for any medical expenses incurred.

# Campus Life

## Student Activities

The student activities program is designed to be an integral part of the total college experience. It provides an avenue for student involvement and offers an opportunity for students to contribute to the growth of themselves, the College, and the community.

## Office of Student Affairs

Located in the S-100 building, the Office of Student Affairs can provide guidance in certifying a club or

organization, information on leadership development and scholarship opportunities. It serves as a focal point for service and leadership resources. For more information contact the Office of Student Affairs at 858-536-4313 or 619-388-7313.

## 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 also vary and may include that the student meet financial need, a designated grade point average, a level of school or community service and/or other requirements to be eligible for consideration. Scholarship applications may be obtained from the Miramar College Student Affairs Office, located in S-101.

## Student Government

The principles of active student government are well established at San Diego Miramar College. The Associated Student Council (ASC) is the College-recognized student government organization established for the purpose of promoting and representing the best interests of the students and the College. Through involvement in the ASC, the opportunity exists for involvement in student government, development of leadership skills, and the planning and development of special programs and services. Student representatives on the ASC reflect the diverse constituencies of the student body and have the opportunity to serve on College and District committees which recommend policies and procedures in matters of student affairs, instruction, and fiscal planning.

Officers of the Associated Student Council are elected at large by the general student body. However, student government is not a closed governing body; ASC meetings are open to ALL interested students.

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.

For more information contact the ASC Office at 858- 536-7877 or 619-388-7877 (S-101B).

## Associated Students Membership

Support your AS by purchasing an AS membership. The membership entitles you to many special discounts and privileges. The revenues go to support various campus events and activities. Among the benefits:

- AS scholarship opportunities
- A free SDCCD transcript
- Free scantrons
- Discounts for campus events and activities
- Discounted snacks at the Student Activity Center
- A free student planner
- Advocacy at the local and state level

## Student Clubs and Organizations

Miramar College supports the idea that student clubs and organizations can enrich student campus life. It is a great way to meet others who are interested in similar types of co-curricular activities. You can join any of the many student clubs or start a new one to meet your needs. The following is a list of clubs and organizations that have been active at Miramar College:

- Black Student Union
- Amnesty International
- Child Development Professionals
- Students in Free Enterprise (SIFE)
- EOPS Student Association
- U.S. Tennis Association
- Filipino-American Student Association (FASA)
- Parent Student Advisory Board
- Science Club
- M.A.G.I.C. Club
- Gay Lesbian Bisexual Transgender Student Union
- Latin American Club
- Miramar Model of the United Nations
- Oasis Christian Club

## Phi Theta Kappa (ΦΘΚ)

### Miramar College International Honors Society

The Miramar Chapter of Phi Theta Kappa is an International Honors Society established for the purpose of recognizing outstanding scholarship and promoting campus activities, community service and maintaining academic ethics among two-year college students.

**Membership requirements:** Interested students must have completed 12 semester units within three semesters and have a cumulative grade point average of 3.25 or better. Temporary membership is open to recent high school graduates with a grade point average of 3.50.

Faculty Advisor: Professor Carmen Jay, Room C-202B

## Athletics

The physical education facilities at Miramar College are available to students for informal activities. Full-time Miramar students may also participate on District athletic teams offered throughout San Diego Community College District. Contact the Office of the Vice President of Instruction, if you're interested in learning more about the district teams. Eligibility will be governed by District policy at the time of enrollment.

## 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.

## Journalism

The widely recognized College newspaper, *The Sage*, provides students the opportunity for class workshops and actual experience in photograph, writing, editing and producing a newspaper.

# Support Services

## Student Accident Insurance Claims

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 that provider or insurance company. All student claims are made through the Health Services Office.

## Student Bookstore

The Miramar College Bookstore located in Room D-301, 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 Miramar Bookstore buys back textbooks everyday but Fridays. For the best return on your investment, sell your books for cash during finals week.

**Miramar Bookstore** hours of operation are extended during the first few weeks of each semester. Regular Semester Hours are as follows: Monday–Thursday 9:00 am–6:30 pm; Friday–9:00 am to Noon

[www.bookstore.sdccd.edu/miramar](http://www.bookstore.sdccd.edu/miramar)

**City Bookstore** Hours: Monday–Thursday 7:45 am–7:00 pm, Friday 7:45 am–1:00 pm.

**Mesa Bookstore** Hours: Monday–Thursday 7:45 am–7:00 pm, Friday 7:45 am–12:00 pm.

## College Dining Facilities

The Miramar College Cafeteria, located in room D-202, offers a la carte items, meals, snacks and beverages. During the fall and spring semesters, the cafeteria is open Monday through Friday. Regular hours of operation are posted and printed in the schedule of classes.

Food service is provided during the Summer sessions. Outdoor vending machine service is available at the south end of the A-100 building and on the north side of the U-100 building.

## College Police Department

The College Police Department, with offices located in room B-102, 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:

Miramar College (B-102)                      858-536-7353  
619-388-7353

Monday–Thursday

7:30 am–1:00 pm and 2:00 pm–7:00 pm

Friday

7:30 am–1:00 pm and 2:00 pm–4:30 pm

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

## Police Escort and Related Services

The college police are available to provide escort service, 7:00 am to 10:00 pm, Monday–Friday.

Students who wish 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 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. A student photo ID card is required to pick up a permit after classes begin. 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 Noon–6 pm 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 and display machines for visitor and student use. Pay and 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.

## Emergency Cell Phone Numbers

The College encourages students to provide cell phone numbers to communicate with them in the event of a college or district-wide emergency. Students can log-on to Reg-e at: <http://studentweb.sdccd.edu> to provide this important information.





# Academic Information and Regulations



# Academic Information

## 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. Typical assignments emphasize critical thinking, extensive reading, writing and student presentations and critiques. Activities may also include opportunity for individual research projects, close interaction with faculty and participation in community and cultural events. The Honors

Program can be found in all disciplines (vocational, liberal arts, fine arts, sciences, business, etc.). Students enrolled in an Honors section (including an honors contract), may not transfer to a regular section after the deadline to make a schedule adjustment for the class. For specific criteria and other information, please consult the schedule of classes or contact one of your campus Honors Coordinators Carmen Jay, at 619-388-7894, or via email at [cjay@sdccd.edu](mailto:cjay@sdccd.edu) or Susan Scott, at 619-388-7534 or via email at [sscott@sdccd.edu](mailto:sscott@sdccd.edu).

## 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 that academic year and have earned a grade point average of 3.5 or better.

## Phi Theta Kappa International Honor Society (ΦΘΚ)

### Beta Iota Lambda Chapter of Phi Theta Kappa

Beta Iota Lambda is the Miramar College chapter of the international honor society, Phi Theta Kappa, the largest and one of the most prestigious honor societies in higher education. PTK focuses on the four Hallmarks of Scholarship, Leadership, Service, and Fellowship.

**Membership requirements:** To be eligible, you must have completed 12 units of coursework leading to an associate degree program and you must have a grade

point average of 3.25. Provisional membership is available for part-time students and for recent high school graduates.

Applications and further information are available in room C-202B, by phone 619-388-7532, or by email at [cjay@sdccd.edu](mailto:cjay@sdccd.edu).

## Class Attendance

Students are responsible for dropping or withdrawing from classes they are no longer attending.

Students who remain enrolled in a class beyond the published withdrawal deadline will receive an evaluative letter grade. See the details for each class in the online schedule for these important dates.

# 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

Grades	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; IP—In Progress; RD—Report Delayed; W—Withdrawal. Administrative symbols are not used in the computation of GPA. See below for further explanation.

**Credit/No Credit (CR/NC)** is a non punitive 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 Policy on page 45.

**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 justifiable reasons at the end of a term. A copy of the “Assignment of Incomplete” form will be mailed to the student and the original retained in the Admissions Office. 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 deadline for withdrawal published in the schedule of classes 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 an 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 Procedure

### PURPOSE

This procedure is designed to provide uniform standards to assure due process when a student challenges a grade received for a class taken at the San Diego Community College District.

### PROCEDURE

#### 1. Instructor/Review

If a student feels he/she has valid grounds to challenge a grade, the student must first attempt to resolve the problem informally with the instructor. Once grades are available, the student is expected to contact his/her instructor directly to discuss the dispute by direct contact or by filing a general petition for grade review. If the instructor is not available or is no longer employed, the student should contact the Department Chair. If the challenge involves allegations of discrimination, the complaint should be processed through *Policy 4105, Investigation and Resolution of Complaints of Unlawful Discrimination*.

California Education Code, Section 76224 (a) states that: (a) when grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor of the course and the determination of the student's grade by the instructor, in the absence of mistake, fraud, bad faith, or incompetence, shall be final.

When challenging a grade assigned by an instructor, the burden of proof is on the student to provide evidence of mistake, fraud, bad faith, or incompetence. The formal request for review of a grade must be filed within 2 years after the issuance of grades for the semester during which the student was enrolled in the given course.

## 2. Department Chair Review

If the grade challenge cannot be resolved at the instructor level, or the instructor is no longer employed, the student may file a petition for grade challenge to the appropriate Dean who will work with the Department Chair to attempt to resolve the matter. This process is initiated by the completion of a petition.

- a. The petition should be processed with the Dean's Office of the course in which the grade is being challenged.
- b. The written petition must include, in detail, the student's basis for initiating the review, as well as any documentation, witness identification, or other supportive evidence. The basis of the review must support allegations of mistake, bad faith, fraud or incompetence.
- c. Within 10 working days after receipt of the petition, the Department Chair will consult with the faculty member and student to gather the facts.
- d. The Department Chair will attempt to resolve the issue within 5 working days.
- e. If resolution does not occur, the student may file an appeal with the Vice President of Instruction who will convene the Appeal Review Panel. The appeal must be filed within 10 working days.

## 3. Formal Resolution—Appeal Review Panel

- a. The Appeal Review Panel will consist of the Dean or designee, Vice President of Instruction and 1-3 faculty members appointed by the Academic Senate. In the event the Vice President of Instruction is not available to meet the timeline contained herein, the President shall designate a senior level administrator to complete the process.
- b. The Panel shall meet with the student and instructor, who assigned the grade, within 20 instructional days of the filing of the appeal. In the event that the instructor is no longer employed by the district, the Department Chair shall represent the instructor.
- c. The Panel meeting will be closed to observers and advocates.
- d. The Panel will review all information and evidence and make a recommendation. The recommendation will be sent to the college

President within 5 working days of the Panel Review meeting with copies to the student, instructor, and the Department Chair.

- e. The President shall review the recommendation of the Panel and make a final decision within 5 working days.
- f. If the recommendation is to change the grade, the new grade shall be the final grade assigned.
- g. If the recommendation is to uphold the grade, the student may appeal the decision in writing to the Chancellor.

## 4. Appeal—Chancellor

- a. Within 30 calendar days of the final decision of the President, the student may submit a written appeal to the Chancellor. The appeal should include all documentation to support allegations of mistake, fraud, bad faith or incompetence.
- b. Within 30 days of the receipt of such an appeal, the Chancellor shall meet with the student and the instructor. In the event the instructor is no longer employed, the Department Chair shall represent the instructor to determine whether to sustain or deny the allegations. The meeting shall be confidential and shall be recorded. If the Chancellor sustains the allegations, he/she shall order the custodian of records to immediately change the grade. Records of these administrative proceedings shall be maintained in a confidential manner and shall be destroyed one year after the decision of the Chancellor, unless the student initiates legal proceedings relative to the disputed information within the prescribed period. The decision of the Chancellor shall be in writing and shall be final.

### Definition of Terms

**Fraud:** A deliberate misrepresentation of the truth or a fact used to take money, rights, or other privilege or property away from a person or persons may be found to be fraud.

**Bad Faith:** Bad faith may be found in an instance of intent to deceive, in an act of dishonesty.

**Incompetence:** Incompetence may be found in a lack of ability, qualification, fitness, or performance.

**Mistake:** A mistake may be defined as an unintentional error.

**Instructional Days:** An instructional day is counted as any day the district conducts regularly scheduled classes.

**Working Day:** A working day is counted as any day that the college is open for business.

### 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.

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**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.**

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#### 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 or change their grading option through Reg-e by the deadline date listed in the appropriate schedule of classes. Deadline information can also be found at <http://studentweb.sdccd.edu>. **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 will be not allowed more than four enrollments in any activity course, regardless of grade or symbol earned.**

## Academic Renewal by Course Repetition

Each course in which an unsatisfactory grade ("D," "F," or "NC") has been earned may be repeated once. 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.

## Course Repetition—Lapse of Time

Academic departments may require that courses for the major be completed within a specified number of years prior to the granting of the Associate Degree, Certificate of Achievement, or Certificate of Performance. Students may be required to repeat a course in which a satisfactory (A,B, C, CR) grade has already been earned. Students with questions about the applicability of previous coursework are advised to consult the department as early as possible.

## Disability Support Programs and Services (DSPS) Repeat

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 DSPS Office on campus for more information.

## Mandated Training

Students who are required to meet a legally mandated training requirement as a condition of continued paid or volunteer employment may repeat a credit course any number of times. Students should complete the *Mandated Training Course Repetition* form.

For more information on course repetition, consult the Counseling Office at your college.

## 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.

- 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 college transcript of record by filing a request in person at the Admissions Office 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 October 1, 2008, the Transcript Office will move from the temporary location at 3390 Armstrong Street, Building Z-205, San Diego, CA 92111 back to its permanent address at: 3375 Camino del Rio South, San Diego, CA 92108-3883. The Transcript Desk will be operational at its permanent address beginning September 29, 2008.**

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

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	SDCCD Credit
Accounting, Principles of (Discontinued 07-08)	50	4	Elective Credit
Accounting, Financial	50	4	Elective Credit
Algebra	50	5	Math Comp & Area A2
Algebra—Trigonometry	50	3	Math Comp & Area A2
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
Chemistry	50	3	Area B
College Mathematics	50	3	Math Comp and Area A2
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	59	10	Area C
German—Level I	50	5	Area C
German—Level II	63	10	Area C
History of the U.S.: Early Colonizations to 1877	50	3	Area D
History of the U.S.: 1865 to the Present	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

CLEP Examination	Required Score	Number of Credits Granted	SDCCD 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	6	Area C
Spanish—Level II	63	12	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 6600, Princeton, NJ 08541-6600

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

CLEP tests can **NOT** be used to clear CSUGE or IGETC certification. See a counselor.



## DANTES Subject Standardized Test (DANTES/DSST)

DANTES Examination	Required Score	Number of Credits Granted	SDCCD Credit
Fundamental College Algebra	50	3	Math Comp & Area A2
Principles of Statistics	50	3	Math Comp & Area A2
Art of the Western World	50	3	Area C
Contemporary Western Europe: 1946-1990	50	3	Area C
An Introduction to the Modern Middle East	50	3	Area D
Human / Cultural Geography	50	3	Elective
A History of the Vietnam War	50	3	Elective
Foundations of Education	50	3	Elective
Lifespan Developmental Psychology	50	3	Elective
General Anthropology	50	3	Elective
Introduction To Law Enforcement	50	3	Area D
Criminal Justice	50	3	Elective
Fundamentals of Counseling	50	3	Elective
Principles of Financial Accounting	50	3	Elective
Human Resource Management	50	3	Elective
Organizational Behavior	50	3	Elective
Principles of Supervision	50	3	Elective
Introduction to Computing	50	3	Elective
Introduction to Business	50	3	Area D
Personal Financial	50	3	Elective
Business Mathematics	50	3	Math Comp & Area A2
Astronomy	50	3	Area B
Here's to Your Health	50	3	Health Education
Environment and Humanity: the Race to Save the Planet	50	3	Elective
Principles of Physical Science I	50	3	Area B
Physical Geography	50	3	Area B
Technical Writing	50	3	Elective
Ethics in America	50	3	Elective
Introduction to World Religions	50	3	Area C
Principles of Public Speaking	50	3	Area A2

To request an official DANTES transcript, write to:

The Chauncey Group International, Attn: DSST Program, 664 Rosedale Road, Princeton, NJ 08541-6604

DANTES tests can **NOT** be used to clear CSUGE or IGETC certification. See a counselor.

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)	Area C1 (3 units)	Area 3A-Arts or 3B-Humanities* (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
Studio Art: 2D	3, 4 or 5	Elective Credit (3 units)	No Credit	No Credit
Studio Art: 3D	3, 4 or 5	Elective Credit (3 units)	No Credit	No Credit
Biology	3, 4 or 5	Area B (3 units)	Area B2 (3 units)	Area 5B-Biol. Sci. with Lab (4 units)
Calculus AB	3, 4 or 5	Area A2 & Math Competency (5 units)	Area B4 (3 units)	Area 2A-Math (3 units)
Calculus BC	3, 4 or 5	Area A2 & Math Competency (5 units)	Area B4 (3 units)	Area 2A-Math (3 units)
Chemistry	3	Chemistry 200 & Area B (6 units)	Area B1 & B3 (6 units)	Area 5A-Phys. Sci. with Lab (4 units)
	4 or 5	Chemistry 200 & 201 and Area B (6 units)	Area B1 & B3 (6 units)	Area 5A-Phys. Sci. with Lab (4 units)
Chinese Language & Culture	3, 4 or 5	Elective Credit (6 units)	No Credit	Area 3B-Humanities and Area 6A-Languages Other Than English
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 & Area D (3 units)	Area D2 (3 units)	Area 4B-Economics (3 units)
Economics - Micro	3, 4 or 5	Economics 121 & Area D (3 units)	Area D2 (3 units)	Area 4B-Economics (3 units)
English Literature & Composition*	3, 4 or 5	English 101 & Area C (6 units)	Area A2 & C2 (6 units)	Area- 1A-English Composition or Area 3B-Humanities (3 units)*
English Language & Composition	3, 4 or 5	English 101 (3 units)	Area A2 (3 units)	Area 1A- English Composition (3 units)
Environmental Science	4 or 5	Biology 120 & Area B (3 units)	No Credit	Area 5A- Phys. Sci. with Lab (3 units)
French Language	3, 4 or 5	Area C (6 units)	Area C2 (6 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
French Literature	3, 4 or 5	Area C (6 units)	Area C2 (6 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
German Language	3, 4 or 5	Area C (6 units)	Area C2 (6 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Government - Comparative	3, 4 or 5	Political Science 103 & Area D (3 units)	Area D8 (3 units)	Area 4H-Political Science, Government & Legal Institutions (3 units)
Government - U.S.	3, 4, or 5	Political Science 101 & Area D (3 units)	Area D8 (3 units)	Area 4H-Political Science, Government & Legal Institutions (3 units)

Advanced Placement Test				
Advanced Placement Examination	Required Score	SDCCD Course Equivalents Applicable District GE	CSUGE Certification	IGETC Certification
History - European*	3, 4, or 5	Area C (6 units)	Area D6 (3 units)	Area 3B- Humanities or Area 4F-History* (3 units)
History - U.S.*	3, 4, or 5	History 109 and Elective(6 units)	Area D6 (3 units)	Area 3B-Humanities or Area 4F-History (3 units)*
Human Geography	3, 4, or 5	Geography 102 & Area D (3 units)	No Credit	Area 4E- Geography (3 units)
History- World*	3, 4, or 5	History 101 & Area C (3 units)	No Credit	Area 3B-Humanities or Area 4F-History (3 units)*
Italian Language & Culture	3, 4, or 5	Elective Credit (6 units)	No Credit	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Japanese Language & Culture	3, 4, or 5	Elective Credit (6 units)	No Credit	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Latin Literature	3, 4, or 5	Area C (6 units)	Area C2 (3 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Latin: Vergil	3, 4, or 5	Area C (6 units)	Area C2 (3 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 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 5A- Phys. Sci. with Lab (4 units)
Physics C - Mechanics	3, 4, or 5	Area B (3 units)	Area B1 & B3 (3 units)	Area 5A- Phys. Sci. with Lab (3 units)
Physics C - Electricity and Magnetism	3, 4, or 5	Area B (3 units)	Area B1 & B3 (3 units)	Area 5A- Phys. Sci. with Lab (3 units)
Psychology	3, 4, or 5	Psychology 101 & Area D (3 units)	Area D9 (3 units)	Area 4I- Psychology (3 units)
Spanish Language	3, 4, or 5	Area C (6 units)	Area C2 (6 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Spanish Literature	3, 4, or 5	Area C (6 units)	Area C2 (6 units)	Area 3B-Humanities and Area 6A-Languages Other Than English (3 units)
Statistics	3, 4, or 5	Math 119 & Area A2 (3 units)	Area B4 (3 units)	Area 2A-Math (3 units)
*AP Exams may be used in either area regardless of where the certifying CCC's discipline is located.				
To request and official AP transcript, write to: College Board/SAT Program, Princeton, NJ, 08541				

International Baccalaureate Credit (IB)			
EXAMINATION	SCORE Higher level exam	UNITS	SDCCD Credit*
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
Economics	5-7	6	IGETC 4B (UC only)
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

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

\* Except as noted, IB tests can **NOT** be used to clear CSUGE or IGETC certification. 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, a military transcript should be submitted. Acceptable forms include:

- DD-214
- DD-295
- NAV/PERS 1070/604
- AARTS Transcript
- DD-2586
- SMART Transcript

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 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/SOCCOAST**

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 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/SOCCOAST (Service Members Opportunity College/ Navy/Marine Corps/Coast Guard) Program Network. SOCNAV/SOCMAR/SOCCOAST was established to better serve highly mobile service members and their families. The San Diego Community Colleges are members of the SOCNAV/SOCMAR/SOCCOAST 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	858-536-4329
Marine Corps Recruit Depot (MCRD)	619-295-9974
Sub Base	619-553-7194

- **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 City and Miramar Colleges students may enroll and attend ROTC classes at SDSU by contacting the Air Force ROTC at the Aerospace Studies Department 619-594-5545 or the Army ROTC at the Military Science Department 619-594-4943. The credits earned in these classes may be transferred as electives to meet the degree requirements of Miramar 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, substitution of course requirements, 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 Disability Support Programs and Services (DSPS) Department, C-304, and complete orientation procedures well before classes begin.

Contact DSPS early to ensure the timely processing of services. 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 DSPS Office to request 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. 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.

## Time/Schedule Conflicts

- Students may not register for classes with times that overlap (includes 10 minute passing period).
- Students may not enroll in two classes of the same subject and course number if the start and/or end date of one class overlaps with the other class.

## 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

In compliance with the Student-Right-to-Know and Campus Security Act of 1990, it is the policy of our college district to make available its completion and transfer rates for all certificate, degree and transfer seeking first-time, full-time students who began in Fall 2004. These rates do not represent the success rates of the entire student population at the college, nor do they account for student outcomes occurring after this three-year tracking period. The completion and transfer rates are listed below:

	<u>Completion Rates</u>	<u>Transfer-Out Rates</u>
City	13.06%	37.61%
Mesa	24.22%	40.87%
Miramar	27.24%	42.31%

## 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. 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 C-304 or call 619-388-7312. Students who want to file a grievance under the Americans with Disabilities Act (ADA) should contact the campus Equal Employment Opportunity (EEO) Officer.

## 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. For more information, contact the Dean of Business, Math & Sciences at 619-388-7813, Room T-200.

## Title IX Prohibiting Sex Discrimination in Education

San Diego Miramar 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 at 619-388-7313, Room S-101. Additional information may be obtained from the Office for Civil Rights, San Francisco, CA.

## 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 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 Continuing Education 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, rest rooms, 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://police.sdccd.edu/crimestats.htm>.

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 with 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 nor 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 Miramar 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 (Policy 3100)

## 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 Disability Support 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.

## Faculty Rights and Responsibilities

Community college faculty members, guided by a deep conviction of the worth and dignity of the advancement of knowledge, recognize the special responsibilities placed upon them. Their primary responsibility to their subjects is to seek and to state the truth as they see it. To this end faculty members devote their energies to developing and improving their scholarly competence. They accept the obligation to exercise critical self-discipline and judgment in using, extending, and transmitting knowledge. They practice intellectual honesty. Although faculty members may follow subsidiary interests, these interests must never seriously hamper or compromise their freedom of inquiry.

As teachers, faculty members encourage the free pursuit of learning in their students. They hold before them the best scholarly standards of their discipline. Faculty members demonstrate respect for the student as an individual, and adhere to their proper role as intellectual guides and counselors. Faculty members make every reasonable effort to foster honest academic conduct and to assure that evaluation of students reflects their true merit. They respect the confidential nature of the relationship between faculty member and student. They avoid any exploitation of students for private advantage and acknowledge significant assistance from them. They protect the academic freedom of students.

As colleagues, faculty members have obligations that derive from common membership in the community of scholars. Faculty members do not discriminate against or harass colleagues. They respect and defend the free inquiry of associates. In the exchange of criticism and ideas faculty members show due respect for the opinions of others. Faculty members acknowledge their academic debts and strive to be objective in their professional judgment of colleagues. Faculty members accept their share of faculty responsibilities for the governance of their institution.

As members of an academic institution, faculty members seek above all to be effective teachers and scholars. Although faculty members observe the stated regulations of their institutions, provided the regulations do not contravene academic freedom, they maintain their right to criticize and seek revision. Faculty members give due regard to their paramount responsibilities within their institution in determining

the amount and character of work done outside it. When considering the interruption or termination of their service, faculty members recognize the effect of their decisions upon the program of the institution and give due notice of their intentions

As members of their community, faculty members have the rights and obligations of all citizens. Faculty members measure the urgency of these obligations in the light of their responsibilities to their subject areas, to their students, to their profession, and to their institutions. When they speak or act as private persons they avoid creating the impression that they speak or act for their colleges or universities. As citizens engaged in a profession that depends upon freedom for its health and integrity, faculty members have a particular obligation to promote conditions of free inquiry and to further public understanding of academic freedom.

## 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 the student's 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 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/Records Office. Such 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 Miramar 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/Area of Emphasis Requirements**
- **One of the following four general education options:**
  - **Option 1**—San Diego Community College District General Education **AND** District Requirements. (See Miramar College Catalog 68).
  - **Option 2**—CSU General Education Breadth (CSU GE Pattern). (See Miramar College Catalog 93.)
  - **Option 3**—Intersegmental General Education Transfer Curriculum (IGETC) pattern. (See Miramar College Catalog 86.)
  - **Option 4**—San Diego Community College District General Education Requirements. (See Miramar College Catalog 72.) Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.  
**NOTE:** Option 4 is only available for the following Miramar degrees designed for transfer students:

## Areas of Emphasis

- Art/Visual Studies (see 120)
- Biology Studies (see page 125)
- Chemistry Studies (see page 131)
- Communication Studies (see page 138)
- Earth Science Studies (see page 177)
- Elementary Education (see page 149)
- English/Literature Studies (see page 153)
- Health and Physical Education Studies (see page 174)
- Human Development Studies (see page 136)
- Humanities Studies (see page 160)
- Mathematics Studies (see page 164)
- Music Studies (see page 168)
- Occupational/Technical Studies (see page 169)
- Physics Studies (see page 178)
- Pre-Engineering Studies (see page 180)
- Psychology (see page 182)
- Social and Behavioral Sciences (see page 184)
- World Language Studies (see page 188)
- **District competencies in reading, written expression, and mathematics (See Miramar College catalog 68.)**
- **A minimum of 12 semester units completed in residence as an officially enrolled student in the San Diego Community College District.**

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.

**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 Performance. Students with questions about the applicability of previous coursework are advised to consult the Department 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

The following information is based on 2008-2009 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 95	Elementary Algebra and Geometry (C,M,MMR)
MATH 98	Technical Intermediate Algebra and Geometry (C)
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 are required to complete the United States History, Constitution and American Ideals before being awarded an associate degree. This requirement may be fulfilled by completing any combination of two classes that, when combined, fulfill areas: US-1, US-2, and US-3. A course may be used to fulfill more than one area.

A check mark [✓] indicates course has been approved to meet the requirement for the area

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US3: California State & Local Governments
^BLAS 140A History of the United States, Black Perspectives (C, M, MMR)	✓	✓	
^BLAS 140B History of the United States, Black Perspectives (C, M, MMR)	✓		✓
^CHIC 141A U.S. History from a Chicano Perspectives (C, M)	✓	✓	
^CHIC 141B U.S. History from a Chicano Perspectives (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 123 U.S. History from the Asian Pacific American Perspective (C,M)	✓		✓
HIST 141 Women in United States History I (M, MMR)	✓	✓	
HIST 142 Women in United States History I (M, MMR)	✓		✓
^HIST 150 Native Americans in U.S. History (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)		✓	✓

#### NOTES:

- Three units of coursework used to fulfill the American Institutions/California Government requirement may also be used to fulfill the Area D, Social and Behavioral Sciences general education requirement.
- Courses designated with a carat (^) may also be used to fulfill the District Multicultural studies requirement.
- Completion of the Advanced Placement examination in U.S. History with a score of 3 or higher will satisfy the requirement for the CSU American Institutions Area US-1 only.
- Completion of the Advanced Placement examination in U.S. Government & Politics with a score of 3 or higher will satisfy the requirement for Area US-2.
- Students who have completed the American Institutions requirement except for the California government portion must complete one course approved in Area US-3

#### 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 or CCAF 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 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 Evaluations Office, Room C-304A. 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 or CCAF 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)
- ^ DRAM 109 Theatre and Social Issues (C)
- ^ ENGL 202 Introduction to Linguistics (C,M)
- ^ ENGL 230 Asian American Literature (M,MMR)
- ^ FILI 100 Filipino American Experience (M,MMR)
- ^ GEND 101 Introduction to Gender Studies (C)
- ^ 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)
- ^ INTE 125 History of Decorative Arts (M)
- ^ MUSI 109 World Music (C,M,MMR)
- ^ NUTR 153 Cultural Foods (M)
- ^ 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,M,MMR)
- ^ SOCO 150 Sociology of Latinos/Latinas (C)
- ^ 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. 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 2008-2009 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 95	Elementary Algebra and Geometry (C,M,MMR)
MATH 96	Intermediate Algebra and Geometry (C,M,MMR)
MATH 98	Technical Intermediate Algebra and Geometry (C)
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)
MATH 255	Differential Equations (C,M,MMR)
PHIL 100	Logic and Critical Thinking (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)
* PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)
SPEE 99	Voice and Diction for Non-Native Speakers of English (C,M,MMR)
SPEE 101	Voice and Articulation (C,M,MMR)
SPEE 103	Oral Communication (C,M,MMR)
SPEE 135	Interpersonal Communication (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 107	General Biology-Lecture/Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
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)
BIOL 210B	Introduction to the Biological Sciences II-Lecture/Laboratory (C,M,MMR)

BIOL 215	Introduction to Zoology (C,M,MMR)
BIOL 230	Human Anatomy (C,M,MMR)
BIOL 235	Human Physiology (C,M,MMR)
BIOL 250	Introduction to Botany (M,MMR)
BIOL 255	California Plants (M)
BIOL 285	Tropical Biology Field Experience (MMR)
MEDA 105	Fundamentals Human Anatomy and Physiology (M)
NUTR 150	Nutrition (M,MMR)
NUTR 155	Advanced Nutrition (M)
PSYC 260	Introduction to Physiological Psychology (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)	CHIC 130	Mexican Literature in Translation (C)
MCTR 120B	Basic Physics for Technical Applications II (C)	^ CHIC 135	Chicano Literature (C,M)
MCTR 120C	Basic Physics for Technical Applications III (C)	CHIC 138	Literature of La Raza in Latin America in Translation (C,M)
PHYN 100	Survey of Physical Science-Lecture (C,M,MMR)	^ CHIC 190	Chicano Images in Film (C,M)
PHYN 101	Survey of Physical Science-Laboratory (C,M,MMR)	CHIC 203	Introductory Spanish for Spanish Speakers (C)
PHYN 120	Physical Oceanography (M,MMR)	CHIC 204	Intermediate Spanish for Spanish Speakers (C)
PHYS 100	Introductory Physics Lecture/Laboratory (C,M)	^ CHIC 210	Chicano Culture (C,M)
PHYS 121A	General Physics Lab (C)	CHIC 230	Chicano Art (M)
PHYS 121B	General Physics Lab (C)	CHIN 101	First Course in Mandarin Chinese (M)
PHYS 125	General Physics (C,M,MMR)	CHIN 102	Second Course in Mandarin Chinese (M)
PHYS 126	General Physics II (C,M,MMR)	CHIN 201	Third Course in Mandarin Chinese (M)
PHYS 180A	General Physics I (C)	DANC 181	Introduction to Dance (C,M)
PHYS 180B	General Physics II (C)	DFLM 101	Introduction to Film (MMR)
PHYS 195	Mechanics (C,M,MMR)	DFLM 102	The American Cinema (MMR)
PHYS 196	Electricity and Magnetism (C,M,MMR)	DRAM 105	Introduction to Dramatic Arts (C,M)
PHYS 197	Waves, Optics and Modern Physics (C,M,MMR)	DRAM 107	Study of Filmed Plays (C)
		DRAM 108	Playwriting (C)
		^ DRAM 109	Theatre and Social Issues (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)

## 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	History of Modern 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)
^ BLAS 155	Afro-American Literature (C,M)



ANTH 107	Introduction to Archaeology (C,M,MMR)	HIST 109	History of the United States I (C,M,MMR)
^ ANTH 200	Introduction to North American Indians (M)	HIST 110	History of the United States II (C,M,MMR)
ANTH 205	Introduction to Medical Anthropology (M)	^ HIST 115A	History of the Americas I (C,M)
^ ANTH 210	Introduction to California Indians (C,M)	^ HIST 115B	History of the Americas II (C,M)
ANTH 215	Cultures of Latin America (C,M)	** HIST 123	U. S. History from the Asian Pacific American Perspective (C,M)
BLAS 100	Introduction to Black Studies (C,M)	^ HIST 130	The Middle East Today (M)
^ BLAS 104	Black Psychology (C,M)	* HIST 131	Latin America Before Independence (M)
^ BLAS 115	Sociology from a Black Perspective (C)	* HIST 132	Latin America Since Independence (M)
^ BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)	HIST 141	Women in United States History I (C,M,MMR)
^ BLAS 125	Dynamics of the Black Community (M)	HIST 142	Women in United States History II (C,M,MMR)
^ BLAS 130	The Black Family (C,M)	^ HIST 150	Native Americans in United States History (M,MMR)
^ BLAS 135	Introduction to Black Politics (C)	^ HIST 151	Native Americans in United States History (M,MMR)
^ BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)	HIST 154	Ancient Egypt (M)
^ BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)	^ HIST 168	The United States in Vietnam (M)
^ BLAS 145A	Introduction to African History (C,M)	HIST 171	Twentieth Century America on Film (M)
^ BLAS 145B	Introduction to African History (C)	HIST 175	California History (M)
BUSE 100	Introduction to Business (C,M,MMR)	JOUR 202	Introduction to Mass Communication (C,M,MMR)
BUSE 140	Business Law and the Legal Environment (C,M,MMR)	^ NUTR 153	Cultural Foods (M)
^ CHIC 110A	Introduction to Chicano Studies (C,M)	PEAC 101	Introduction to Peace Studies (C)
^ CHIC 110B	Introduction to Chicano Studies (C,M)	* PHIL 108	Perspectives on Human Nature and Society (C,M)
^ CHIC 141A	United States History from a Chicano Perspective (C,M)	PHIL 109	Issues in Social Philosophy (M)
^ CHIC 141B	United States History from a Chicano Perspective (C,M)	** PHIL 125	Philosophy of Women (C,M)
CHIC 150	History of Mexico (C,M)	PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
CHIC 170	La Chicana (C,M)	POLI 101	Introduction to Political Science (C,M,MMR)
CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)	POLI 102	The American Political System (C,M,MMR)
CHIL 101	Human Growth and Development (C,M,MMR)	^ POLI 103	Comparative Politics (C,M,MMR)
CHIL 103	Lifespan Growth and Development (MMR)	^ POLI 140	Contemporary International Politics (C,M,MMR)
^ CHIL 141	The Child, Family and Community (C,M,MMR)	PSYC 101	General Psychology (C,M,MMR)
ECON 120	Principles of Economics I (C,M,MMR)	PSYC 111	Psychological /Social Aspects of Aging, Death and Dying (C,M)
ECON 121	Principles of Economics II (C,M,MMR)	PSYC 121	Introduction to Child Psychology (M,MMR)
^ ENGL 202	Introduction to Linguistics (C,M)	PSYC 123	Adolescent Psychology (M,MMR)
^ FILI 100	Filipino American Experience (M,MMR)	PSYC 133	Psychology of Women (M,MMR)
^ GEOG 102	Cultural Geography (C,M,MMR)	PSYC 135	Marriage and Family Relations (C,M,MMR)
GEOG 104	World Regional Geography (C,M,MMR)	PSYC 137	Human Sexual Behavior (C,M,MMR)
GEOG 154	Introduction to Urban Geography (M)	PSYC 155	Introduction to Personality (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PSYC 166	Introduction to Social Psychology (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)		

	PSYC 211	Learning (C,M,MMR)
	PSYC 230	Psychology of Lifespan Development (C,M,MMR)
	PSYC 245	Abnormal Psychology (C,M,MMR)
	RTVC 200	Introduction to Mass Communications (C)
^	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 150	Sociology of Latinos/Latinas (C)
	SOCO 201	Advanced Principles of Sociology (C,M,MMR)
^	SOCO 223	Globalization and Social Change (C,M,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 Performance

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

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

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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.

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

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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 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 after completion of all graduation requirements has been verified. Diplomas will be issued in the name of record at the time the diploma is awarded. 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 Programs

(See "Transfer Guide" on page 81.)

## 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 ARTICULATED COURSES

For the most updated list visit: [www.sdccd.edu/techprep](http://www.sdccd.edu/techprep)

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	MIRAMAR COURSE(S)	UNITS
Transportation Technology 1-2, 3-4 <b>AND ROP</b> Auto Quick Service (2 years)	Clairemont, Crawford Educational Complex, La Jolla, Madison, Patrick Henry, Point Loma, Serra, Scripps Ranch and San Diego Educational Complex	AUTO 32	3
Air Force ROTC, Aerospace 1-3 (2 years)	Scripps Ranch	AVIA 290	3
Air Force ROTC, Aerospace 4	Scripps Ranch	AVIA 101	3
<b>ROP</b> Business & Computer Applications (2 years)	Clairemont, Gompers Secondary, Hoover, Kearny Educational Complex, Madison, Mira Mesa, Mission Bay, Morse, San Diego Educational Complex, Point Loma, Scripps Ranch, Serra, Twain, University City	CBTE 101 CBTE 120 CBTE 122 CBTE 127 CBTE 140 CBTE 151 CBTE 170 CBTE 210 <b>OR</b> CBTE 211 (City)	up to 16
Computer Applications <b>or</b> Computer Applications in Business (1 year)	Clairemont, Crawford Educational Complex, Hoover, Kearny Educational Complex, Mira Mesa, Mission Bay, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Serra, and University City	CBTE 101 CBTE 120	up to 3
<b>ROP</b> Computerized Graphic Design	Crawford Educational Complex, Morse, Patrick Henry, Point Loma, Scripps Ranch, Hoover, Kearny Educational Complex, San Diego Educational Complex, Serra and Twain	CBTE 162 CBTE 170 CISC 114 (city)	up to 6
Biotechnology 1 & 2 <b>OR</b> Biomedical Technology 1-2 (1 year)	High Tech High, Mount Carmel and Westview (Poway Unified) San Diego Educational Complex, Kearny Educational Complex and Mira Mesa	BIOL 131	4
Biotech	Mount Carmel (Poway Unified)	BIOL 132	4
<b>ROP</b> Developmental Psychology of Children 1-4 (2 years)	Clairemont, Garfield, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch, Twain and University City	CHIL 160 CHIL 161 CHIL 270	up to 6
<b>ROP</b> Introduction to Teaching and Learning (1 year)	Clairemont, Garfield, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch, Twain and University City	CHIL 270	up to 4

## TECH PREP ARTICULATED COURSES

For the most updated list visit: [www.sdccd.edu/techprep](http://www.sdccd.edu/techprep)

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	MIRAMAR COURSE(S)	UNITS
Web Programming/ Website Architecture (1 year)	Crawford Educational Complex, Hoover, La Jolla and Serra	CBTE 162	2
Teaching Academy	Mira Mesa	EDUC 200	2
Teaching Academy (2 years)	Patrick Henry	EDUC 200 CHIL 270 SPAN 085 (city)	up to 9
Teaching Academy	Mira Mesa and Patrick Henry	EDUC 203	1

# Transfer Guide



## 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's degree just as if they had been taken at the four-year institution.

Miramar College students transfer to a wide variety of universities within California and throughout the world.

## Transfer Services

The Miramar College Transfer Center is designed to help you during each step of your transfer experience to ensure a smooth and positive transition. A variety of resources are available, including:

- Academic Counseling
- Guidance in researching and selecting a transfer institution
- Individual appointments with representatives from UC, CSU, and independent colleges and universities
- Transfer workshops including application and TAG
- Transfer Admission Agreements and Guarantees with selected universities
- A library of catalogs and college publications
- Information on important dates and deadlines
- Computer software for college research
- Transfer Fairs

For additional information regarding specific services, contact the San Diego Miramar College Transfer Center at 619-388-7380 located in B-203 or visit [www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer).

## Your Educational Options

Transfer is one of several different educational options available to you at Miramar. The college also offers programs and courses designed to prepare students for a new career field, or to upgrade work skills related to a current occupation. The following are the most common degrees and certificates awarded:

**Vocational Certificates** are awarded after completing specific courses related to a particular occupational area. They are intended for students seeking employment or job skills in a specific career field. Vocational Certificates are awarded by community colleges and some private schools.

**Associate Degrees** are awarded after completing 60 semester units of study to include major and general education requirements. It certifies the achievement of in-depth knowledge about a field of study (your major) as well as the ability to communicate, use mathematics, think critically, and understand various modes of inquiry. This degree is the highest level awarded by community colleges and other "two year" schools. It can be in arts (A.A.) or sciences (A.S.). The Associate Degree can also be thought of as the "first half" of a Bachelor's Degree, although most universities do not require that you earn it prior to transfer.

**Bachelor's Degrees** are awarded after completing at least 120 semester units of study, including major, general education, and graduation requirements. This is the basic degree awarded by "four-year" colleges and universities. Units earned in community college count toward the total units needed for a Bachelor's Degree if they are transferable. A Bachelor's Degree is usually earned in arts (B.A.) or sciences (B.S.), although other more "specialized" options exist, such as the Bachelor of Fine Arts.

### 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.

## Choosing Your University 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 Miramar 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:

- 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.
- 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](http://www.assist.org) (click on "Explore Majors").
- 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.
- For descriptions of the 75 most popular majors, visit [www.petersons.com/majordecision/](http://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. Choosing a transfer university is also important because:

- The majors offered at each university are different.

- Each university has unique features, including factors like its student body, its location, and its extracurricular activities.
- You are more likely to do well academically in a university environment that you enjoy.

The most common that Miramar students transfer to include:

### University of California (UC)

Combines undergraduate education (leading to a Bachelor's 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.

### California State University (CSU)

Emphasizes undergraduate education (leading to a Bachelor's 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. Usually smaller and more focused in academic emphasis than public universities.

### Historically Black Colleges and Universities (HBCU's)

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.

### 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.

## Preparation for Major Courses

For each major at a four-year institution, there are lower-division (freshman and sophomore level) preparatory courses designed to prepare students for upper-division study (junior and senior level). Based on the availability of courses, students are strongly encouraged to complete as many major prerequisite courses as possible prior to transfer.

Preparation for Major courses for UC and CSU schools can be found on ASSIST ([www.assist.org](http://www.assist.org)). The ASSIST website is designed to provide students with the most accurate and up-to-date information available. ASSIST lists which community college courses are equivalent to their four-year counterparts and/or will meet specific requirements. Students can also get valuable information such as additional screening requirements, if the major is impacted, and if there is a required GPA for a specific major on ASSIST.

For students looking to transfer to a private/independent or out-of-state school, you should first access the Miramar Transfer Center website or talk to a Counselor to find out if Miramar has an articulation agreement with your school of interest ([www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer)). If Miramar has no articulation with the school, you should contact the school's admissions office directly or talk to a Miramar Counselor to find out the best way for you to take courses towards major preparation.

## General Education Courses

General Education (GE) is a set of courses from a variety of different subject areas that every student must complete in order to earn a bachelor's degree, regardless of major. The goal is to provide a well-rounded or "liberal" education and to develop the knowledge, skills, and attitudes that together help make up an "educated person."

The completion of GE prior to transfer is not required for admission to most universities. However, it is usually in the students' best interest to complete an appropriate transfer GE pattern at the community college. This is because GE requirements that are not fulfilled prior to transfer must be completed later at the university, which often extends the time and expense of a university education.

Students usually follow one of three transfer GE options. These are:

**The IGETC pattern** (see page 85).

IGETC is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.

**The CSU GE pattern** (see page 93).

CSU GE is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

**An alternative general education pattern** (see page 101).

It is usually not recommended for students who plan to transfer to the UC or CSU systems to follow this option. However, students entering high-unit majors such as science or engineering, those transferring to a private/independent or out of state institution, or those who plan to apply to only one university may be best served by an alternative general education pattern.

**It is strongly recommended that students consult with a counselor to determine which general education pattern is most appropriate for their individual educational goals.**

Completion of the IGETC or CSU GE pattern also fulfills the requirements for a General Education Certificate (see page 161). Students who complete one of these patterns and additional transfer coursework may also qualify for one of the following Miramar College associate degrees:

- Art/Visual Studies (see page 120)
- Biology Studies (see page 125)
- Chemistry Studies (see page 131)
- Communication Studies (see page 138)
- Earth Science Studies (see page 177)
- Elementary Education (see page 149)
- English/Literature Studies (see page 153)
- Health and Physical Education Studies (see page 174)
- Human Development Studies (see page 136)
- Humanities Studies (see page 160)
- Mathematics Studies (see page 164)
- Music Studies (see page 168)
- Occupational/Technical Studies (see page 169)

- Physics Studies (see page 178)
- Pre-Engineering Studies (see page 180)
- Psychology (see page 182)
- Social and Behavioral Sciences (see page 184)
- World Language Studies (see page 188)

### **General Education Certification**

General Education Certification is a legal agreement between the UC or CSU systems and the California Community Colleges that permits a student to transfer from a community college to a UC or CSU campus without the need to complete additional lower division general education courses to satisfy university GE requirements after transfer. Miramar College will provide an IGETC or CSU GE certification to one university campus when specifically requested by the student. This certification may include courses taken from other colleges, or credit earned through other means, such as Advanced Placement (AP) test credit. Students do not have "catalog rights" to a certification pattern. Additional information on certification rules that are specific to the IGETC and CSU GE patterns are discussed later in those sections.

IGETC or CSU GE certification also fulfills the requirements for a General Education Certificate (see page 161).

Students who transfer without certification may have to meet additional GE requirements at the university. This often means taking additional courses after transfer.

### **CSU U.S. History, Constitution, and American Ideals Certification (see page 100)**

The California State University, before awarding a degree, requires students to complete courses or examinations that address American Institutions, the U.S. Constitution, and California government. This requirement may be fulfilled at a California Community College prior to transfer by completing a combination of courses that satisfies all three areas of the requirement. The requirement may also be completed at a CSU campus after transfer.

Certification of CSU U.S. History, Constitution, and American Ideals is not required prior to transfer. However, it is usually in the students' best interest to complete this certification at the community college.

CSU U.S. History, Constitution, and American Ideals certification is described in more detail on page 100.

## **Intersegmental General Education Transfer Curriculum (IGETC)**

### **About The IGETC Pattern**

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](http://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.
- Students should apply for IGETC certification at the last community college attended prior to transfer. Forms are available from the Counseling or Evaluations office.
- 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](http://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

## The IGETC Pattern

( ) 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.

## Area 1—English Communication

**2-3 courses, 6-9 semester/8-12 quarter units**

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### Group A: English Composition

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**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)

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### Group B: Critical Thinking - English Composition

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**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)

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### Group C: Oral Communication

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**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 History of Modern 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)  
 \* 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)  
 \* BLAS 145A Introduction to African History (C,M)  
 \* BLAS 145B Introduction to African History (C)  
 BLAS 150 Black Women in Literature & 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 210 Chicano Culture (C,M)  
 CHIN 102 Second Course in Mandarin Chinese (M)  
 CHIN 201 Third Course Mandarin Chinese (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 240 Shakespeare (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 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)  
 \* 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 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)
ITAL 102	Second Course in Italian (C,M)
ITAL 201	Third Course in Italian (C,M)
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.

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#### 4A: Anthropology and Archaeology Courses:

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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)

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#### 4B: Economics Courses:

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

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#### 4C: Ethnic Studies Courses:

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* 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:**

- GEND 101 Introduction to Gender Studies (C )  
 + 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)  
 NUTR 153 Cultural Foods (M)  
 SOCO 223 Globalization and Social Change (C,M,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 (C,M,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,MMR)  
 PSYC 166 Introduction to Social Psychology (C,M,MMR)  
 PSYC 211 Learning (C,M,MMR)  
 PSYC 230 Psychology of Lifespan Development (C,M,MMR)  
 PSYC 245 Abnormal Psychology (C,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 (C,M,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.

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### 5A: Physical Science Courses:

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- 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)

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### 5B: Biological Science Courses:

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- 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 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,MMR)  
 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)

## Area 6—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:

### 6A: Languages Other Than English

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)
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. Achieve a satisfactory score on the SAT Subject Test in languages other than English, as listed below. If the test was taken before May 1995, the first score is the minimum; if the test was taken after May 1995, the second score is the minimum:
  - Chinese With Listening: not offered before 1995/520
  - French/French With Listening: 500/540
  - German/German With Listening: 500/510
  - Hebrew (Modern): 500/470
  - Italian: 500/520
  - Japanese With Listening: 500/510
  - Korean/Korean With Listening: not offered before 1995/500
  - Latin: 500/530
  - Spanish/Spanish With Listening: 500/520
4. Achieve a score of 3, 4 or 5 on a College Board Advanced Placement (AP) Examination in a language other than English.
5. Achieve a score of 5 or higher on an International Baccalaureate (IB) Higher Level Examination in a language other than English.
6. Satisfactorily complete a proficiency test administered by a community college, university or other college in a language other than English. The test must assess the student proficiency at a level equivalent to at least two years of high school language. The San Diego Community College District does not administer this test.

7. Complete, with grades of C or better, two years of formal schooling at the sixth-grade level or higher in an institution where the language of instruction is not English. If secondary school was completed in a non-English-speaking country and the language of instruction of the secondary school was not English, language other than English proficiency can be certified for IGETC without further evaluation. The student must present appropriate documentation of attendance at the secondary school.
8. Earn a passing grade on the international A level or O level exam in a language other than English.
9. If an appropriate achievement test is not available to assert proficiency, have competency verified by a faculty member associated with a California community college. Such verification requires that the college provide a document on letterhead asserting that the student's proficiency in the language is equivalent to two years of high school study. See a counselor for more information. Only students who have no other means to verify foreign language proficiency may pursue this option. Students must petition for faculty member verification through the Evaluations Office.

***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.***

## California State University General Education Breadth (CSU GE)

### About The CSU GE Pattern

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 described in the CSU GE pattern.

*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

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)
<u>ENGN 110</u>	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)
<u>BIOL 107</u>	General Biology-Lecture and Laboratory (C,M,MMR)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
<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,MMR)
<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)
<u>BIOL 255</u>	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)
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)
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)
PSYC 258	Behavioral Science Statistics (C,M,MMR)

MUSI 125	Music, the Arts and Humanity (M)
PHOT 150	History of Photography (C)
RTVC 160	Introduction to Cinema (C)

## 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	History of Modern 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)
DANC 181	Introduction to Dance (C,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 and Communication I (M)
DRAM 151	Cinema as Art and 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 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)

### 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,MMR)
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)
CHIC 210	Chicano Culture (C,M)
CHIN 101	First Course in Mandarin Chinese (M)
CHIN 102	Second Course in Mandarin Chinese (M)
CHIN 201	Third Course in Mandarin Chinese (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)	PHIL 125	Philosophy of Women (C,M)
* HIST 100	World History I (C,M,MMR)	* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
* HIST 101	World History II (C,M,MMR)	PHIL 130	Philosophy of Art and Music (M)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PSYC 207	Psychology of Religion (M)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	RUSS 101	First Course in Russian (C,M)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	RUSS 102	Second Course in Russian (M)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	RUSS 201	Third Course in Russian (M)
* HIST 131	Latin America Before Independence (M)	SPAN 100	First/Second Course in Spanish-Accelerated (M)
* HIST 132	Latin America Since Independence (M)	SPAN 101	First Course in Spanish (C,M,MMR)
* HIST 154	Ancient Egypt (M)	SPAN 102	Second Course in Spanish (C,M,MMR)
HUMA 101	Introduction to the Humanities I (C,M,MMR)	SPAN 201	Third Course in Spanish (C,M,MMR)
HUMA 102	Introduction to the Humanities II (C,M,MMR)	SPAN 202	Fourth Course in Spanish (C,M,MMR)
HUMA 103	Introduction to the New Testament (C,M)	SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
HUMA 104	Introduction to the Old Testament (M)	SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
HUMA 106	World Religions (C,M)	TAGA 101	First Course in Tagalog (M,MMR)
HUMA 201	Mythology (C,M,MMR)	TAGA 102	Second Course in Tagalog (M,MMR)
HUMA 202	Mythology: Hero's Journey (C)	TAGA 201	Third Course in Tagalog (M,MMR)
ITAL 101	First Course in Italian (C,M)	VIET 101	First Course in Vietnamese (M)
ITAL 102	Second Course in Italian (C,M)	VIET 102	Second Course in Vietnamese (M)
ITAL 201	Third Course in Italian (C,M)	VIET 201	Third Course in Vietnamese (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)		

### 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.*

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#### DO: Sociology and Criminology

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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 (C,M,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 205	Introduction to Medical Anthropology (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)

**D4: Gender Studies**

CHIC 170	La Chicana (C,M)
GEND 101	Introduction to Gender Studies (C)
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)
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 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)

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#### D7: Interdisciplinary Social or Behavioral Science

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- \* 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 (C,M,MMR)
- NUTR 153 Cultural Foods (M)
- PHIL 109 Issues in Social Philosophy (M)
- SOCO 223 Globalization and Social Change (C,M,MMR)

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#### D8: Political Science, Government, and Legal Institutions

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- 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 (C,M,MMR)

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#### D9: Psychology

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- 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,MMR)
- PSYC 166 Introduction to Social Psychology (C,M,MMR)
- PSYC 211 Learning (C,M,MMR)
- \* PSYC 230 Psychology of Lifespan Development (C,M,MMR)
- PSYC 245 Abnormal Psychology (C,M,MMR)

### Area E. Lifelong Understanding and Self-Development:

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

- BIOL 120 The Environment of Man (M)
- \* 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)
- NUTR 153 Cultural Foods (M)
- PERG 120 College Success and Lifelong Learning (C,M,MMR)
- PERG 130 Career - Life Planning (C,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 (C,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 230 Psychology of Lifespan Development (C,M,MMR)
- SPEE 180 Intercultural Communication (C,M,MMR)

## CSU U.S. History, Constitution, and American Ideals Certification

The California State University, before awarding a degree, requires students to complete courses or examinations that address:

1. The historical development of American institutions and ideals (Area US-1), and
2. The Constitution of the United States and the operation of representative democratic government under that Constitution (Area US-2), and
3. The process of California state and local government (Area US-3).

This requirement may be fulfilled at a California Community College prior to transfer by completing a combination of courses that satisfies all three areas of the requirement. The requirement may also be completed at a CSU campus after transfer. Courses approved in two US areas may be used to satisfy both areas.



## CSU U.S. History, Constitution, and American Ideals Certification Courses

A check mark ✓ indicates course has been approved to meet the area.

Note: Not required for Certification.

Course	Area US-1: Development of American Institutions	Area US-2: U.S. Constitution	Area US-3: California State & Local Government
BLAS 140A History of the United States, Black Perspectives (C, M, MMR)	✓	✓	
BLAS 140B History of the United States, Black Perspectives (C, M, MMR)	✓		✓
CHIC 140A U.S. History from a Chicano Perspective (C, M)	✓	✓	
CHIC 140B 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 I (C,M)	✓		✓
HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)	✓		✓
HIST 141 Women in United States History I (M, MMR)	✓	✓	
HIST 142 Women in United States History II (M, MMR)	✓		✓
HIST 150 Native Americans in U.S. History (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)		✓	✓

### NOTES:

- Completion of the Advanced Placement examination in U.S. History with a score of 3 or higher will satisfy the requirement for Area US-1.
- Completion of the Advanced Placement examination in U.S. Government & Politics with a score of 3 or higher will satisfy the requirement for Area US-2.
- Students who have completed this requirement except for the California government portion must complete one course approved in Area US-3

## Other Transfer General Education Options

Some transfer students are best served by following a general education pattern other than the IGETC or CSU GE patterns. These typically include students who fall into one of the following three categories:

**1) Students entering high unit majors such as an engineering or science discipline.** Major preparation for the engineering and science fields typically consists of a high number of units. Most universities prefer (and some require) that these preparation for major courses be completed prior to transfer. Therefore, it may be more beneficial for students entering these majors to complete relatively fewer GE courses and more major preparation courses at the community college, while still meeting the minimum admission requirements of the university. Students should review the catalog or other published advising materials of the university and major to which they intend to transfer and then consult a Miramar counselor for assistance in selecting appropriate courses.

**2) Students transferring to a private/independent or out-of-state university.** Some private/independent and out-of-state universities accept IGETC or CSU GE, but most do not. Instead, each university has its own unique GE pattern.

Miramar College has established articulation agreements with many of these institutions. These agreements specify the courses students can complete at Miramar to fulfill the university's GE requirements. They are available at [www.sdmiramar.edu/transfer/articulation](http://www.sdmiramar.edu/transfer/articulation). For more information on transferring to a private/independent or out-of-state university, visit the Transfer Center or see a counselor.

**3) Students who wish to complete the general education requirements of one specific university.** Some students decide to complete the GE requirements for one specific university, rather than the more universally applicable IGETC or CSU GE patterns, for several reasons:

- Some universities and/or majors do not accept IGETC and instead suggest following the university's own GE pattern.
- Some students know that they will attend only one university (such as those with a guarantee of transfer admission) and so plan to complete the specific GE pattern for that institution only.
- Some university-specific GE patterns require fewer total units than IGETC or CSU GE.

Each university's unique GE pattern can be found in the university catalog. In addition, some UC and CSU campuses have posted their unique general education patterns to the ASSIST website at [www.assist.org](http://www.assist.org).

## Applying to a University

### About applying for admission

Universities require you to apply and be admitted before you start attending school there. All students who apply must meet the minimum requirements (usually certain coursework requirements and a minimum transferable GPA). Some schools accept all transfer students who meet the minimum requirements, while others go through a selection process to determine which students will be offered admission.

### Application dates and deadlines

Different systems have different dates and deadlines to apply. If you plan to attend a private/independent or out-of-state university, you should check with that school to find their application deadline and procedures. The following dates and deadlines apply to California public universities only:

### California State University

Term of Transfer	Initial Filing Period
Summer	February 1-28/29 of current year
Fall	October 1 - November 30 of preceding year
Winter	June 1 – 30 of preceding year
Spring	August 1 – 31 of preceding year

### University of California

Term of Transfer	Initial Filing Period
Fall Semester or Quarter	November 1 – 30 of preceding year
Winter Quarter	July 1 – 31 of preceding year
Spring Quarter	October 1 – 31 of preceding year

All campuses are open for any given Fall term. For Winter/Spring terms, students should verify that the specific campus accepts transfers for that specific term.

Check [www.csumentor.edu](http://www.csumentor.edu) for CSU campuses and [www.universityofcalifornia.edu](http://www.universityofcalifornia.edu) for UC campuses.

Each campus accepts applications until the end of the filing period or until capacities are reached. If applying after the initial filing period check the campus websites to verify if the campus is still open.

### How to apply

The UC and CSU systems strongly encourage all students to apply using the online application process. Not only does it make it easier to read and evaluate your application, but the websites also "check your work" to make sure you are not missing any required information before you submit your final application.

### The UC application is available at:

[www.universityofcalifornia.edu/apply](http://www.universityofcalifornia.edu/apply)

### The CSU application is available at:

[www.csumentor.edu/admissionapp/undergrad/apply.asp](http://www.csumentor.edu/admissionapp/undergrad/apply.asp)

## Final Steps to Transfer

Many universities require you to submit documents, take assessment exams, attend orientations, or meet other requirements before you enroll. It's also a good idea to apply for your degree and General Education certification from Miramar College prior to transfer. You should do as much as you can now to make the transition to your university as smooth as possible.

### Petition to Graduate from Miramar

Graduation from Miramar College is not automatic. You must petition at the Evaluations Office in B-304 to receive your degree or certificate. We recommend you petition to graduate even if you are only completing transfer coursework. Most transfer students are eligible to receive a General Education Certificate (see page 161) and/or an Associate degree in a transfer-related subject area (see page 84). You should petition to graduate during your second to last semester at Miramar.

### File for General Education (GE) Certification

GE Certification is a legal agreement between Miramar College and a California public university (UC or CSU campus) that all of your lower division GE requirements have been completed. Certification can be awarded for either of the entire IGETC or CSU GE patterns, or for part of the CSU GE pattern (for more information, see page 93). Some California private / independent institutions also accept IGETC or CSU GE certification. IGETC or CSU GE certification also fulfills the requirements for a General Education Certificate (see page 161). You

should file for GE certification when you are enrolled in your final GE courses and know which university you will be attending. Apply at the Evaluations Office in C-304.

### Attend Graduation

You don't have to attend Miramar College graduation to transfer or to receive a degree, but it's a great way to celebrate and be publicly recognized for your achievement. You earned it! Information about the graduation ceremony is available on the Miramar College website at [www.sdmiramar.edu/depts/stusvcs](http://www.sdmiramar.edu/depts/stusvcs).

### Find Out How to Get There

Are you using public transportation to commute to your new university? It's a good idea to figure out your best route to the university now, before you start attending.

### Submit Intent to Register and Transcripts

After offering you admission, most universities require you to send a statement of intent to register (SIR), official transcripts, a deposit, and sometimes additional materials. Review your university admission paperwork for details. Information on ordering transcripts from the San Diego Community College District is available at [www.sdccd.edu/alumni/transcripts](http://www.sdccd.edu/alumni/transcripts).

### Attend New Student Orientation

Most universities offer a new student orientation day, where you learn about university services and requirements, get academic advising, tour the campus, etc. Review your university admission paperwork for details.

### Complete Assessment Tests

Some universities require transfer students to complete assessment tests either prior to enrollment or during their first year of attendance. Review your university admission paperwork for details.

### Find Housing

Are you going to live on campus? If so, you will need to apply for campus housing. See your university admission paperwork or the university website for more information. If you are living off campus you may need to start searching for housing in the local community. Most universities have housing assistance offices to help you.

### Send Your Final Transcripts

You are usually required to send your university a final official transcript after the end of your last regular semester prior to transfer. Information on ordering transcripts from the San Diego Community College District is available at [www.sdccd.edu/alumni/transcripts](http://www.sdccd.edu/alumni/transcripts).

### **Meet Immunization Requirements**

Most universities require you to provide documentation of immunizations against certain communicable diseases, like measles or rubella. Review your university admission paperwork for more information.

## **Other Transfer Information**

### **UC Transfer and Physical Education Activity Courses**

The University of California 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](http://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.

### **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.



# Degree Curricula and Certificate Programs



## Accounting

See "ACCOUNTING (ACCT)" on page 197.

# Administration of Justice

	Units
<b>Certificate of Performance:</b>	
P.C. 832 Laws of Arrest	2.5
P.C. 832 Laws of Arrest - Firearms	1
<b>Certificate of Achievement:</b>	
Advanced Traffic Accident Investigation	34.5
Correctional Training for Deputy Sheriffs	29.5
Contemporary Police Technologies	34.5
Correctional Technologies	33
Investigations Specialization	33
Law Enforcement Specialization	33
Law Enforcement Supervision	28.5
Law Enforcement Technologies	25.5
Technical Achievement for Field Training Officers	30
<b>Associate in Science Degree:</b>	
Contemporary Police Technologies	34.5*
Correctional Technologies	33 *
Investigations Specialization	33 *
Law Enforcement Specialization	33 *
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

### Description

The Administration of Justice program provides professional education and training for students in Law Enforcement, Investigations, Contemporary Police Technologies, and Correctional Technologies.

Specialized seminars and intensified course offerings are designed to meet all current training mandated and prescribed by law. The program offers weekend, morning, afternoon, night classes and online classes to accommodate student needs. Students who meet the academic requirements may obtain an Associate in Science Degree or select from a variety of certificates of performance and certificates of achievement. The program is also designed to enhance general knowledge of the Administration of Justice System for the community at large.

## Program Learning Outcomes

The Administration of Justice program offers course work for students seeking employment with local, state, or federal law enforcement agencies, correctional agencies, court services, private and industrial security fields. The programs are designed to meet lower division transfer requirements and entry-level job requirements. Students specializing in law enforcement and investigations are taught in accordance with the learning domain areas developed by the Commission on Peace Officer Standards and Training (POST). Short-term course work is available for students needing specialized training as a condition of employment. Public safety personnel currently employed can benefit from specialized course work and continuing educational opportunities for professional advancement.

Faculty	Office	Telephone
Steve Lickiss	A-224C	619-388-7455
Jordan Omens	A-224E	619-388-7454

## Career Options

The following list is a small sample of the variety of city, county, state and federal career options available for the administration of justice major.

Arson Investigator  
 Border Patrol officer  
 Communications Officer  
 Correctional Officer  
 Crime Prevention Specialist  
 Customs Agent  
 Deputy Sheriff  
 Evidence Technician  
 Parking Enforcement  
 Parole Officer  
 Police Officer  
 Police Service Officer  
 Postal Inspector  
 Private and Industrial Security Officer  
 Probation Officer

## Academic Programs

The associate degree, certificates of performance, and certificates of achievement listed 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.

## Transfer Information

**Common university majors related to the field of Administration of Justice include:** Criminal Justice, Law, Public Administration.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Performance: P.C. 832 Laws of Arrest\*

Courses:	Units
ADJU 356A, 832 PC Laws of Arrest.....	2.5
<b>Total Units =</b>	<b>2.5</b>

### Certificate of Performance: P.C. 832 Laws of Arrest - Firearms\*

Courses:	Units
ADJU 356B, 832 PC Firearms.....	1
<b>Total Units =</b>	<b>1</b>

\*These are department awards in recognition of information on the transcript and does not imply that a graduation requirement has been met.

*Certificates of Achievement available for the working professional or pre-employment student.*

### Certificate of Achievement: Administration of Justice

#### Advanced Traffic Accident Investigation Certification

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4
<b>Select nine units from the following:</b>	
ADJU 304, Intermediate Traffic Accident Investigation .....	1.5

ADJU 305, Advanced Traffic Accident Investigation .....	3.5
ADJU 307, Traffic Enforcement Radar Certification .....	1.5
ADJU 322, Basic Traffic Accident Investigation .....	2
ADJU 332, P.O.S.T. Certified Driving Under the Influence Course .....	1
<b>Total Units = 34.5</b>	

### Certificate of Achievement: Administration of Justice

#### Correctional Training for Deputy Sheriffs

Courses Required for the Major:	Units
ADJU 336, S.T.C Advanced Arrest and Firearms Training .....	0.5
ADJU 339, S.T.C Certified Detentions Special Incident Response Training .....	0.5
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4
<b>Select three units from the following:</b>	
ADJU 325, S.T.C. Certified Jail Training Officer .....	2
ADJU 326, S.T.C. Certified Detentions Special Incident Response Training .....	1.5
ADJU 338, S.T.C. Certified Jail OPS .....	1.5
ADJU 352, S.T.C. Certified Jail OPS .....	1.5
ADJU 361, Current Issues for Advanced Officers .....	0.5-2.5
<b>Total Units = 29.5</b>	

### Certificate of Achievement: Administration of Justice

#### Contemporary Police Technologies

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4

#### Select nine units from the following:

ADJU 160, Criminal Law II .....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence .....	3
ADJU 230, Constitutional Law I .....	3
<b>Total Units = 34.5</b>	

### Certificate of Achievement: Administration of Justice

#### Correctional Technologies

Courses Required for the Major:	Units
ADJU 101, Introduction to Administration of Justice .....	3
ADJU 102, Criminal Law I.....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 162, Criminal Investigation .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures.....	3
ADJU 323, S.T.C. Certified Corrections Officer Core Course.....	15
<b>Total Units = 33</b>	

### Certificate of Achievement: Administration of Justice

#### Investigations Specialization

Courses Required for the Major:	Units
ADJU 101, Introduction to Administration of Justice	3
ADJU 102, Criminal Law I.....	3
ADJU 106, Diversity and Community Relations.....	3
ADJU 160, Criminal Law II .....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 162, Criminal Investigation .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence .....	3
ADJU 220, Law Enforcement Forensics.....	3
<b>Select three units from the following:</b>	
ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 230, Constitutional Law I .....	3
<b>Total Units = 33</b>	

## Certificate of Achievement: Administration of Justice

### Law Enforcement Specialization

Courses Required for the Major:	Units
ADJU 101, Introduction to Administration of Justice .....	3
ADJU 102, Criminal Law I.....	3
ADJU 106, Diversity and Community Relations.....	3
ADJU 160, Criminal Law II.....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence.....	3

#### Select nine units from the following:

ADJU 140, Patrol Procedures .....	3
ADJU 147, Physical Conditioning .....	1
ADJU 148, Defensive Tactics .....	1
ADJU 149, Firearms .....	1
ADJU 162, Criminal Investigation .....	3
ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 220, Law Enforcement Forensics .....	3
ADJU 230, Constitutional Law I .....	3
ADJU 356A, 832 PC Laws of Arrest .....	2.5
ADJU 356B, 832 PC Firearms .....	1

**Total Units = 33**

## Certificate of Achievement: Administration of Justice

### Law Enforcement Supervision

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4

#### Select three units from the following:

ADJU 312, Basic Supervisory Course .....	3
ADJU 361, Current Issues for Advanced Officers .....	0.5-2.5

**Total Units = 28.5**

## Certificate of Achievement: Administration of Justice

### Law Enforcement Technologies

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4

**Total Units = 25.5**

## Certificate of Achievement: Administration of Justice

### Technical Achievement for Field Training Officers

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4
ADJU 314, Officer Safety and Field Tactics.....	1.5
ADJU 327, Advanced Patrol Strategies.....	1.5
ADJU 330, P.O.S.T. Certified Field Training Officer Course.....	1.5

**Total Units = 30**

## Associate in Science Degree: Administration of Justice

### Contemporary Police Technologies

Courses Required for the Major:	Units
ADJU 381, P.O.S.T. Certified Regional Academy Module 1 .....	15
ADJU 382, P.O.S.T. Certified Regional Academy Module 2 .....	4.5
ADJU 383, P.O.S.T. Certified Regional Academy Module 3 .....	2
ADJU 384, P.O.S.T. Certified Regional Academy Module 4 .....	4

**Select nine units from the following:**

ADJU 160, Criminal Law II.....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence.....	3
ADJU 230, Constitutional Law I .....	3

**Total Units = 34.5****Associate in Science Degree:  
Administration of Justice****Correctional Technologies**

<b>Courses Required for the Major:</b>	<b>Units</b>
ADJU 101, Introduction to Administration of Justice .....	3
ADJU 102, Criminal Law I.....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 162, Criminal Investigation .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 323, S.T.C. Certified Corrections Officer Core Course.....	15

**Total Units = 33****Associate in Science Degree:  
Administration of Justice****Investigations Specialization**

<b>Courses Required for the Major:</b>	<b>Units</b>
ADJU 101, Introduction to Administration of Justice .....	3
ADJU 102, Criminal Law I.....	3
ADJU 106, Diversity and Community Relations.....	3
ADJU 160, Criminal Law II.....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 162, Criminal Investigation .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence.....	3
ADJU 220, Law Enforcement Forensics.....	3

**Select three units from the following:**

ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 230, Constitutional Law I .....	3

**Total Units = 33****Associate in Science Degree:  
Administration of Justice****Law Enforcement Specialization**

<b>Courses Required for the Major:</b>	<b>Units</b>
ADJU 101, Introduction to Administration of Justice .....	3
ADJU 102, Criminal Law I.....	3
ADJU 106, Diversity and Community Relations.....	3
ADJU 160, Criminal Law II .....	3
ADJU 161, Juvenile Procedures .....	3
ADJU 167, Report Writing .....	3
ADJU 201, California Criminal Procedures .....	3
ADJU 210, Rules of Evidence .....	3

**Select nine units from the following:**

ADJU 140, Patrol Procedures .....	3
ADJU 147, Physical Conditioning .....	1
ADJU 148, Defensive Tactics .....	1
ADJU 149, Firearms .....	1
ADJU 162, Criminal Investigation .....	3
ADJU 180, Drug Abuse and Law Enforcement .....	3
ADJU 181, Vice and Organized Crime.....	3
ADJU 182, Street Gangs and Law Enforcement .....	3
ADJU 220, Law Enforcement Forensics .....	3
ADJU 230, Constitutional Law I .....	3
ADJU 356A, 832 PC Laws of Arrest .....	2.5
ADJU 356B, 832 PC Firearms .....	1

**Total Units = 33**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Any of the above listed Administration of Justice courses or any of the following: Administration of Justice 85, 101, 102, 106, 140, 147, 148, 149, 160, 161, 162, 167, 180, 181, 182, 201, 210, 220, 230, 270, 290, 300, 304, 307, 312, 313, 314, 320, 322, 323, 324, 327, 330, 332, 333, 334, 335, 343, 344, 346, 348, 350, 351, 356A/B, 361, 375, 381, 382, 383, 384.

# Aeronautical and Aviation Technology

	Units
<b>Certificate of Performance:</b>	
Commercial Pilot Option	6
Flight Instructor	7
Helicopter Operations	6
Instrument Pilot	7
Private Pilot	6
Team Resource Management	9
<b>Certificate of Achievement:</b>	
Airframe & Powerplant	78
Airframe	47
Powerplant	52.5
Aviation General Studies	18
Pilot Studies	21
Professional Pilot	26
<b>Associate in Science Degree:</b>	
Airframe & Powerplant	78*
Airframe	47*
Powerplant	52.5*
Aviation General Studies	18*
Pilot Studies	21*
Professional Pilot	26*
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

## Aviation Maintenance Technology

Miramar College maintains a Federal Aviation Administration (FAA), Federal Aviation Regulation (FAR) Part 147 approved Aviation Maintenance Technician School with both an Airframe and Powerplant rating. This program is structured to allow the student to complete a required minimum of 1900 hours of instruction in four semesters. Each student is required to complete the minimum hours of instruction

to qualify for these ratings. Students completing the Airframe and/or Powerplant program will be qualified to take the examinations given by the FAA.

To obtain a Mechanic's Certificate with Airframe or Powerplant Ratings, arrangements are made with the local FAA District Office to take the appropriate written examinations.

Additionally, students pursuing an interest in Aviation Maintenance Technology not resulting in an FAA rating may receive a Certificate of Achievement or an Associate in Science Degree in Aviation General Studies or Pilot Studies.

### Credit For Aviation Maintenance Technician-Airframe or Powerplant Rating

Pending Aviation Department review and approval, students who hold a valid FAA Airframe or Powerplant Rating may apply to the Aviation Maintenance Technology Department for a maximum of 35 units. The units granted with a grade of CR will be posted to the student's transcript upon completion of the remaining Associate in Science Degree requirements.

### Credit for Military Schools and Experience

Pending Aviation Department review and approval, students who have completed military technical schools recognized by the FAA may apply to the Aviation Maintenance Technology Department for a maximum of 15 units.

### Credit for Work Experience

Students who have valid work experience in the aviation industry may challenge a maximum of 15 units. (See Challenge Procedure.)

### Transfer Information

Common university majors related to the field of Aviation Maintenance Technology include: Aeronautical Science and Engineering, Aerospace Engineering, Aviation, Aviation Maintenance Management, Aviation Technical Management.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on

transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Certificate of Achievement or Associate in Science Degree: Aviation Maintenance Technology

### Airframe & Powerplant

Qualifies the student for the FAA Airframe and Powerplant exam.

#### Courses Required for the Major: Units

##### General Curriculum

AVIM 100, General Aviation Technology Theory .....	12
AVIM 100S, General Aviation Maintenance Technology Practices.....	4
AVIM 109D, Aircraft Fire Protection and Digital Logic.....	1
AVIM 120, Basic D.C. Electronics Theory.....	3
AVIM 121A, Basic D.C. Electronics Lab .....	1.5

##### Airframe Curriculum

AVIM 103A, Aircraft Wood, Fabric, Finishing and Composite Structures .....	3
AVIM 104A, Applied Aircraft Wood, Fabric Finishing and Composite Structures.....	1.5
AVIM 103B, Aircraft Welding and Sheetmetal Structures .....	3
AVIM 104B, Applied Aircraft Welding and Sheetmetal Structures .....	1.5
AVIM 103C, Aircraft Hydraulic Systems.....	3
AVIM 104C, Applied Aircraft Hydraulic Systems.....	1
AVIM 103D, Aircraft Landing Gear Systems .....	3
AVIM 104D, Applied Aircraft Landing Gear Systems .....	1
AVIM 105A, Aircraft Cabin Atmosphere Control.....	1.5
AVIM 106A, Aircraft Cabin Atmosphere Control.....	0.5
AVIM 105B, Aircraft Assembly, Rigging and Inspection .....	1.5
AVIM 106B, Applied Aircraft Assembly, Rigging and Inspection .....	1
AVIM 109A, Airframe Electrical Systems .....	3
AVIM 110A, Airframe Electrical Systems Lab.....	1

##### Powerplant Curriculum

AVIM 107B, Turbine Engines.....	3
AVIM 108B, Turbine Engines Laboratory .....	1
AVIM 109B, Powerplant Ignition Systems .....	2
AVIM 110B, Applied Powerplant Ignition Systems .....	0.5
AVIM 109C, Powerplant Electrical Systems .....	3
AVIM 110C, Powerplant Electrical Systems Laboratory .....	0.5
AVIM 111C, Reciprocating Engines I .....	3
AVIM 112C, Applied Reciprocating Engines I.....	2

AVIM 111D, Reciprocating Engines II.....	3
AVIM 112D, Applied Reciprocating Engines II .....	1
AVIM 241, Aircraft Propeller Systems Lecture .....	3
AVIM 242, Aircraft Propeller Systems Laboratory, .....	1
AVIM 249, Induction and Fuel Metering.....	3
AVIM 250, Applied Induction and Fuel Metering .....	1
AVIM 253, Lubricating, Cooling, and Exhaust .....	3
AVIM 254, Applied Lubricating, Cooling, and Exhaust .....	1

**Total Units = 78**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

## Certificate of Achievement or Associate in Science Degree: Aviation Maintenance Technology

### Airframe

Qualifies the student for the FAA Airframe exam.

#### Courses Required for the Major: Units

##### General Curriculum

AVIM 100, General Aviation Technology Theory.....	12
AVIM 100S, General Aviation Maintenance Technology Practices.....	4
AVIM 109D, Aircraft Fire Protection and Digital Logic.....	1
AVIM 120, Basic D.C. Electronics Theory.....	3
AVIM 121A, Basic D.C. Electronics Lab .....	1.5

##### Airframe Curriculum

AVIM 103A, Aircraft Wood, Fabric, Finishing and Composite Structures .....	3
AVIM 104A, Applied Aircraft Wood, Fabric Finishing and Composite Structures.....	1.5
AVIM 103B, Aircraft Welding and Sheetmetal Structures .....	3
AVIM 104B, Applied Aircraft Welding and Sheetmetal Structures .....	1.5
AVIM 103C, Aircraft Hydraulic Systems .....	3
AVIM 104C, Applied Aircraft Hydraulic Systems.....	1
AVIM 103D, Aircraft Landing Gear Systems.....	3
AVIM 104D, Applied Aircraft Landing Gear Systems .....	1
AVIM 105A, Aircraft Cabin Atmosphere Control .....	1.5
AVIM 106A, Aircraft Cabin Atmosphere Control .....	0.5
AVIM 105B, Aircraft Assembly, Rigging and Inspection.....	1.5
AVIM 106B, Applied Aircraft Assembly, Rigging and Inspection.....	1
AVIM 109A, Airframe Electrical Systems.....	3

AVIM 110A, Airframe Electrical Systems Laboratory... 1  
**Total Units = 47**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

### **Certificate of Achievement or Associate in Science Degree: Aviation Maintenance Technology**

#### **Powerplant**

Qualifies the student for the FAA Powerplant exam.

#### **Courses Required for the Major:**

##### **General Curriculum**

AVIM 100, General Aviation Technology Theory .....	12
AVIM 100S, General Aviation Maintenance Technology Practices .....	4
AVIM 109D, Aircraft Fire Protection and Digital Logic .....	1
AVIM 120, Basic D.C. Electronics Theory .....	3
AVIM 121A, Basic D.C. Electronics Laboratory .....	1.5

##### **Powerplant Curriculum**

AVIM 107B, Turbine Engines .....	3
AVIM 108B, Turbine Engines Laboratory .....	1
AVIM 109B, Powerplant Ignition Systems .....	2
AVIM 110B, Applied Powerplant Ignition Systems..	0.5
AVIM 109C, Powerplant Electrical Systems .....	3
AVIM 110C, Powerplant Electrical Systems Laboratory .....	0.5
AVIM 111C, Reciprocating Engines I .....	3
AVIM 112C, Applied Reciprocating Engines I .....	2
AVIM 111D, Reciprocating Engines II .....	3
AVIM 112D, Applied Reciprocating Engines II .....	1
AVIM 241, Aircraft Propeller Systems Lecture .....	3
AVIM 242, Aircraft Propeller Systems Laboratory .....	1
AVIM 249, Induction and Fuel Metering .....	3
AVIM 250, Applied Induction and Fuel Metering .....	1
AVIM 253, Lubricating, Cooling, and Exhaust .....	3
AVIM 254, Applied Lubricating, Cooling, and Exhaust .....	1

**Total Units = 52.5**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

### **Certificate of Achievement or Associate in Science Degree: Aviation Maintenance Technology**

#### **Pilot Studies**

Qualifies the student for the FAA Private Pilot exam, with an emphasis on aircraft maintenance as it applies to the pilot.

#### **Courses Required for the Major:**

##### **General Curriculum**

AVIA 101, Private Pilot Ground School .....	3
AVIA 128, Group Dynamics: Teams Under Stress .....	3
AVIA 133, Human Factors in Aviation .....	3
AVIM 100, General Aviation Technology Theory .....	12

##### **Recommended Electives:**

AVIA 105, Introduction to Aviation and Aerospace ...	3
AVIM 075, Basic Avionics Theory .....	3
AVIM 100S, General Aviation Maintenance Technology Practices .....	4
AVIM 105B, Aircraft Assembly, Rigging and Inspection .....	1.5
AVIM 112D, Applied Reciprocating Engines II .....	1
AVIM 111C, Reciprocating Engines I .....	3
AVIM 112C, Applied Reciprocating Engines I .....	2

**Total Units = 21**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

Students who intend to transfer to a four-year institution should select courses for their General Education requirements that are on the CSU General Education Breadth List.



**Flight Training:**

Pending Aviation Operations Program Director review and approval, a student awarded a Miramar College Certificate of Performance for an academic phase of ground instruction (AVIA 101, 199, 201, 212) who subsequently earns the associated FAA certificate or rating can request that 3 units of credit be awarded for that flight training. As a result, it is possible for a student to earn up to 12 units at Miramar College for flight training.

**Transfer Information**

Common university majors related to the field of Aviation Operations include: Aeronautical Science and Engineering, Aviation, Aviation Administration, Professional Aeronautics

**Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

**Certificate of Performance\*  
Commercial Pilot**

<b>Courses:</b>	<b>Units</b>
AVIA 133, Human Factors in Aviation .....	3
AVIA 201, Commercial Airline Pilot Instruction .....	3
<b>Total Units = 6</b>	

When passed with a "C" or better, indicates student qualification to take the FAA Commercial Pilot Knowledge Examination.

\*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 Performance\*  
Flight Instructor**

<b>Courses:</b>	<b>Units</b>
AVIA 133, Human Factors in Aviation .....	3
AVIA 212, Flight Instructor Ground School .....	4
<b>Total Units = 7</b>	

When passed with a "C" or better, indicates student qualification to take the FAA Fundamentals of Instruction and the Certified Flight Instructor Knowledge Examination.

\*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 Performance\*  
Helicopter Operations**

The Certificate of Performance Helicopter Operations provides an introduction to helicopter operations and careers.

<b>Courses:</b>	<b>Units</b>
AVIA 133, Human Factors in Aviation .....	3
AVIA 151, Helicopter Pilot Ground School .....	3
<b>Total Units = 6</b>	

\*This is a department award in recognition of information on the transcript and does no imply that a graduation requirement has been met.

**Certificate of Performance\*  
Instrument Pilot**

<b>Courses:</b>	<b>Units</b>
AVIA 133, Human Factors in Aviation .....	3
AVIA 199, Instrument Ground School .....	4
<b>Total Units = 7</b>	

When passed with a "C" or better, indicates student qualification to take the FAA Instrument Rating Knowledge Examination.

\*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 Performance\*  
Private Pilot**

<b>Courses:</b>	<b>Units</b>
AVIA 101, Private Pilot Ground School.....	3
AVIA 133, Human Factors in Aviation .....	3
<b>Total Units = 6</b>	

When passed with a "C" or better, indicates student qualification to take the FAA Private Pilot Knowledge Examination.

\*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 Performance\* Team Resource Management

The award of this Certificate represents a focused study of the human factors which affect performance in high-risk teams.

Courses:	Units
AVIA 128, Group Dynamics: Teams Under Stress .....	3
AVIA 133, Human Factors in Aviation .....	3
AVIA 228, Group Dynamics II .....	3
<b>Total Units = 9</b>	

\*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 or Associate in Science Degree: Aviation Operations Management

Courses Required for the Major	Units
AVIA 101, Private Pilot Ground School.....	3
AVIA 105, Introduction to Aviation & Aerospace .....	3
AVIA 125, Aviation and Airport Management .....	3
AVIA 128, Group Dynamics: Teams Under Stress .....	3
AVIA 133, Human Factors in Aviation .....	3
AVIA 195, Basic Instrument Flight Procedures.....	3
AVIA 196, Basic Instrument Flight Lab .....	1
BUSE 119, Business Communications.....	3
BUSE 201, Business Organization and Management...	3
<b>Total Units = 25</b>	

For graduation requirements, see **Requirements for the Associate Degree** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

### Certificate of Achievement or Associate in Science Degree: Aviation Operations

#### Professional Pilot

Courses Required for the Major	Units
AVIA 101, Private Pilot Ground School.....	3
AVIA 105, Introduction to Aviation and Aerospace ...	3
AVIA 125, Aviation and Airport Management .....	3
AVIA 128, Group Dynamics: Teams Under Stress .....	3
AVIA 133, Human Factors in Aviation .....	3
AVIA 199, Instrument Ground School .....	4
AVIA 201, Commercial Airline Pilot Instruction .....	3
AVIA 212, Flight Instructor Ground School .....	4
<b>Total Units = 26</b>	

For graduation requirements, see **Requirements for the Associate Degree** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

# Anthropology

## Units

### Associate in Arts Degree:

Social and Behavioral Sciences (see page 184)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

## Description

Anthropology is a scientific discipline that studies human societies, both present and past. The discipline is divided into four broad fields. Cultural anthropology deals with cross-cultural studies of learned behavior, such as language, kinship, religion, economics, technology, values and personality. This field prepares one to work in development, community organizing, policy analysis, and social research. Linguistics is the study of the origin and evolution of languages and how they reflect the behavioral patterns of people. Work in this area focuses on inter-cultural communication. Physical anthropology is concerned with hominid evolution and the biological features of human populations. These people work in the growing sector of health related occupations and research. Archaeology is involved in the recovery of material remains of past peoples with the objective of reconstructing the past.

## Program Learning Outcomes

The curriculum prepares students for advance degrees at baccalaureate colleges and universities. In addition, courses in this curriculum meet the general education requirements for degrees at two and four-year institutions.

### Faculty

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### Office

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### Telephone

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## Career Options

Most careers related to this discipline require education beyond the associate degree level. Anthropological skills are important for careers in areas such as: social services, health, community organizing, cultural resource management, urban planning, international economic development, education, social work and public policy.

## Transfer Information

**Common university majors related to the field of Anthropology include:** Anthropology, Archeology, 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 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 with an area of emphasis in Social and Behavioral Sciences (see page 184). 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 Guide section of the catalog.

## Arabic

See "World Language Studies" on page 188.

# Art-Fine Art

	Units
<b>Certificate of Performance:</b>	
Craft Skills	10-15
<b>Associate in Arts Degree:</b>	
Combined Drawing/Painting	27*
Craft Skills	24*
Studio Arts	48*
Art/Visual Studies	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

## Description

Art is the study of the arrangement of forms that affect the senses, communicate political, social, cultural, religious, or emotional ideas that manifest in scenes and through objects produced throughout the world. This field includes the study and design of both two-dimensional and three-dimensional art. The art program is designed to maximize transferable course units and to provide basic skills required for employment in art-related fields.

## Program Learning Outcomes

Within the major, courses are suggested with an emphasis to suit the student's interests. One of twelve areas of emphasis may be selected: painting, pictorial (drawing), combined drawing/painting, sculpture, craft skills including ceramics, art education, art history, graphic communications, studio arts, or a non-specialized art major.

**Note:** *Not all areas of emphasis may be offered at every campus.*

Faculty	Office	Telephone/Email
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Rex Heftmann	B-302B2	619-388-7205 rheftman@sdccd.edu

## Career Options

Some careers listed require education beyond the associate degree: art educator, art historian, arts administrator, advertising specialist, ceramicist, computer publishing, design consulting, display designer, gallery director, illustrator, muralist, printmaker, sculptor, and digital graphics specialist.

## Academic Programs

The associate degree in Fine 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.

## 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, Graphic Communications, Graphic 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 in this discipline should consult with a counselor or visit the Transfer 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 with an area of emphasis in Art/Visual Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Certificate of Performance: Craft Skills\*

Courses:	Units
ARTF 170A, Contemporary Crafts I .....	3
ARTF 170B, Contemporary Crafts II .....	3
ARTF 170C, Contemporary Crafts III .....	3
ARTF 290, Independent Study .....	1-3
<b>Total Units = 10 -15</b>	

\*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: Art-Fine Art

### Combined Drawing/Painting

Courses Required for the Major:	Units
ARTF 150A, Design I.....	3
ARTF 150B, Design II.....	3
ARTF 155A, Freehand Drawing I.....	3
ARTF 155B, Freehand Drawing II .....	3
ARTF 165A, Composition Painting I.....	3
ARTF 210A, Life Drawing I.....	3

**Select six-units from:**

ARTF 109, Nineteenth and Twentieth Century Art,	
ARTF 110, Art History: Prehistoric to Gothic, <b>or</b>	
ARTF 111, Art History: Renaissance to Modern .....	6

**Select three-units from:**

ARTF 107, Contemporary Art	
ARTF 151, Three-Dimensional Design	
ARTF 161A, Museum Studies/Gallery Exhibition Skills I	
ARTF 175A, Sculpture I	
ARTF 185, Lettering	
ARTF 190A, Black and White Photography*(Mesa)	
ARTF 198A, Introduction to Printmaking I	
ARTF 198B, Introduction to Printmaking II*(Mesa)	
ARTF 198C, Introduction to Printmaking III*(Mesa)	
ARTF 210B, Life Drawing II	
ARTF 210C, Life Drawing III *(City, Mesa)	
PHOT 105, Introduction to Photography*(City) .....	3

**Total Units = 27**

Note: Only one ARTF Arts (ARTF) course from the above list may be used to satisfy SDCCD general education requirements.

## Associate in Arts Degree: Art-Fine Art

### Craft Skills

Courses Required for the Major:	Units
ARTF 150A, Design I.....	3
ARTF 151, Three-Dimensional Design .....	3
ARTF 155A, Freehand Drawing I.....	3
ARTF 170A, Contemporary Crafts I.....	3
ARTF 195A, Ceramics I.....	3

**Select six-units from:**

ARTF 109, Nineteenth and Twentieth Century Art	
ARTF 110, Art History: Prehistoric to Gothic, <b>or</b>	
ARTF 111, Art History: Renaissance to Modern .....	6

**Select three-units from:**

ARTF 107, Contemporary Art	
ARTF 155B, Freehand Drawing II	

ARTF 161A, Museum Studies/Gallery Exhibition Skills I\*(Mesa)

ARTF 161B, Museum Studies/Gallery Exhibition Skills II\*(Mesa)

ARTF 170B, Contemporary Crafts II

ARTF 170C, Contemporary Crafts III

ARTF 175A, Sculpture I

ARTF 177A Contemporary Wood Furniture\*(Mesa)

ARTF 177B Contemporary Wood Furniture II\*(Mesa)

ARTF 177C Contemporary Wood Furniture III\*(Mesa)

ARTF 195B, Ceramics II

ARTF 195C, Ceramics III

ARTF 196, Clay and Glaze Technology

ARTF 220A, Life Sculpture I

**Any art history course, or**

ARTF 281, Issues in Visual Art (Lab)\*(Mesa)

PHOT 105, Introduction to Photography\*(City) .....

**Total Units = 24**

Note: Only one Art-Fine Art (ARTF) course from the above list may be used to satisfy SDCCD general education requirements.

## Associate in Arts Degree: Art-Fine Art

### Studio Arts

Courses Required for the Major:	Units
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ARTF 100, Art Orientation, **or**

ARTF 161A Museum Studies/Gallery Exhibition Skills I\*(Mesa) .....

ARTF 150A, Design I.....

ARTF 150B, Design II .....

ARTF 151 or 161B\*(Mesa) .....

ARTF 155A, Freehand Drawing I.....

ARTF 155B, Freehand Drawing II .....

ARTF 165A, Composition in Painting I.....

ARTF 175A, Sculpture I.....

ARTF 210A, Life Drawing I, **or**

ARTF 220A, Life Sculpture I.....

**Select six-units from:**

ARTF 109, Nineteenth and Twentieth Century Art

ARTF 110, Art History: Prehistoric to Gothic, **or**

ARTF 111, Art History: Renaissance to Modern .....

Foreign Language Requirement: three semesters of one

foreign language or the successful completion of a

proficiency examination is required.....

**Total Units = 48**

Note: Only one Art-Fine Art (ARTF) course from the above list may be used to satisfy SDCCD general education requirements.

**\*Note: Students may not be able to take all courses listed at this campus. You may wish to consult a counselor or department chairperson.**

### Associate in Arts Degree: Art/Visual Studies

The Associate in Arts degree with an area of emphasis in Art/Visual Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in an art-related major. Common university majors in this field include: Apparel Design and Merchandising, Art, Art Education, Art History, Creative Arts / Studies, Design, Graphic Communications, Graphic Design, Industrial Arts, Interior Design, Multimedia, Photography, Studio Art, and Textiles.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

#### Courses Required for the Major: Units

ARTF 110, Art History: Prehistoric to Gothic..... 3

ARTF 111, Art History: Renaissance to Modern..... 3

**Select at least 12 units, including at least two ARTF courses or one ARTF course and one ARTG course, from the following:**

ARTF 100, Art Orientation

ARTF 107, Contemporary Art

ARTF 109, Nineteenth and Twentieth Century Art

ARTF 113, African, Oceanic, and Native American Art

ARTF 125, History of Far Eastern Art

ARTF 150A, Design I

ARTF 150B, Beginning Graphic Design

ARTF 151, Three-Dimensional Design

ARTF 155A, Freehand Drawing I

ARTF 155B, Freehand Drawing II

ARTF 165A, Composition in Painting I

ARTF 170A, Contemporary Crafts I

ARTF 170B, Contemporary Crafts II

ARTF 195A, Ceramics I

ARTF 198A, Introduction to Printmaking I

ARTF 210A, Life Drawing I

ARTF 210B, Life Drawing II

ARTG 125, Fundamentals of Digital Media

ENGL 209, Literary Approaches to Film

GEOG 102, Cultural Geography

SOCO 101, Principles of Sociology.....12

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

#### Transfer Information

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. **Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.**

## Astronomy

See "Physical Science" on page 176.

# Automotive Technology

	Units
<b>Certificate of Achievement:</b>	
Automotive Brakes & Suspension	20.5
Automotive Electrical	18.5-19.5
Automotive Engine	19.5
Automotive Transmission	19.5-21
<b>Associate in Science Degree:</b>	
Automotive Technology	38.5-39.5*
*and electives as needed to meet minimum of 60 units required for the degree.	

## Description

The Automotive Technology program provides both classroom theory and extensive hands-on (shop) entry-level employment training and as well as professional upgrading to persons in the automotive industry. The program provides all training required for state licenses as well as for each of the areas tested for National Automotive Service Excellence (ASE) certification. A Certificate Program is offered in Automotive Electrical, Automotive Engines, Automotive Transmission, and Automotive Brakes and Suspension, which consist of required pattern of certificate courses.

## Program Learning Outcomes

The program emphasis is on various automotive manufacturer products, with specific training in Toyota, Honda and Daimler Chrysler Motor Service internship training. The program provides opportunity for internship training at Toyota, Honda and Daimler Chrysler automotive dealers, if selected. The student intern would work for a dealership while receiving formal training in the Auto Tech classes and attend classes on their off work schedule. Upon completion, the student will have the opportunity for full-time employment at that dealership. While progressing through the training, students are strongly encouraged to obtain at least two Automotive Service Excellence (ASE) Certifications.

## Faculty

Raley Quon  
 Miramar College,  
 Miramar College,  
 Joe Young  
 Mark Dinger  
 Ryan Monroe

## Office

Dept. Chair  
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 Rm. S-204C  
 Rm. S-294B  
 Rm. S-204A

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 619-388-7499  
 619-388-7672  
 619-388-7642  
 619-388-7499

## Careers

Employment may be found as an entry-level automotive technician in an automotive manufacturer dealership, an independent repair garage or automotive franchise such as: Firestone Tire, Sears or Pep Boys.

## Academic Programs

The certificates of achievement and associate degree, Automotive, require completion of the courses listed below.

### Certificate of Achievement: Automotive Technology

#### Automotive Brakes and Suspension

Courses Required for the Major:	Units
AUTO 053, Automotive Introductory & Safety .....	3
AUTO 055, Basic Electricity and Electrical Systems Fundamentals.....	3
AUTO 062, Electrical Mastery <b>or</b>	
AUTO 072, Manual Transmissions Drive Lines .....	4
AUTO 068, Climate Control Systems.....	2.5
AUTO 076, Automotive Brake Systems .....	4
AUTO 078, Suspension and Steering Systems .....	4
<b>Total Units = 20.5</b>	

### Certificate of Achievement: Automotive Technology

#### Automotive Electrical

Courses Required for the Major:	Units
AUTO 053, Automotive Introductory & Safety .....	3
AUTO 054, Engine and Related Systems .....	3
AUTO 055, Basic Electricity and Electrical Systems Fundamentals.....	3
AUTO 062, Electrical Mastery.....	4
AUTO 066, Drivability .....	2
AUTO 068, Climate Control Systems.....	2.5
AUTO 081, Introduction to Alternative Fuels and Electric Hybrid Vehicles <b>or</b>	
AUTO 095, Automotive Technology Internship .....	1-2
<b>Total Units = 18.5-19.5</b>	

## Certificate of Achievement: Automotive Technology

### Automotive Engine

<b>Courses Required for the Major:</b>	<b>Units</b>
AUTO 053, Automotive Introductory & Safety .....	3
AUTO 054, Engine and Related Systems .....	3
AUTO 055, Basic Electricity and Electrical Systems Fundamentals .....	3
AUTO 062, Electrical Mastery .....	4
AUTO 068, Climate Control Systems .....	2.5
AUTO 078, Suspension and Steering Systems .....	4
<b>Total Units = 19.5</b>	

## Certificate of Achievement: Automotive Technology

### Automotive Transmission

<b>Courses Required for the Major:</b>	<b>Units</b>
AUTO 053, Automotive Introductory & Safety .....	3
AUTO 054, Engine and Related Systems .....	3
AUTO 055, Basic Electricity and Electrical Systems Fundamentals .....	3
AUTO 072, Manual Transmissions Drive Lines .....	4
AUTO 074, Automatic Transmissions/Axles .....	4
AUTO 068, Climate Control Systems <b>or</b> AUTO 078, Suspension and Steering Systems .....	2.5-4.0
<b>Total Units = 19.5 - 21</b>	

## Associate in Science Degree: Automotive Technology

<b>Courses Required for the Major:</b>	<b>Units</b>
AUTO 054, Engine and Related Systems .....	3
AUTO 055, Basic Electricity and Electrical Systems Fundamentals .....	3
AUTO 062, Electrical Mastery .....	4
AUTO 064, Advanced Fuel and Emissions Systems .....	2
AUTO 066, Drivability .....	2
AUTO 068, Climate Control Systems .....	2.5
AUTO 072, Manual Transmissions Drive Lines .....	4
AUTO 074, Automatic Transmissions/Axles .....	4
AUTO 076, Automotive Brake Systems .....	4
AUTO 078, Suspension and Steering Systems .....	4
AUTO 084, The Clean Air Car .....	5
AUTO 095, Automotive Technology Internship .....	1-2
<b>Total Units = 38.5-39.5</b>	

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Automotive Technology 81, 95, 270, 290.

Courses designed as a bridge from high school courses to college to support this major: Automotive Technology (AUTO) 32, 34, 35, and 37.

# Biology

	Units
<b>Certificate of Performance:</b>	
Applied Biotechnology-Analytical Chemistry	9
Applied Biotechnology-Molecular Biology	8
<b>Associate in Science Degree:</b>	
Allied Health Track	21*
Applied Biology Track	35*
Biology Studies	18*

\*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 Learning Outcomes

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 Associate Degree curriculum provides preparation for entry level employment as a technician in the life sciences industry. In addition to the associate degree programs, certificates in Applied Biotechnology with emphasis in either Molecular Biology or Analytical Chemistry are offered. 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.

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Rebecca Bowers-Gentry		619-388-7494 rbowersg@sdccd.edu
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Andrew Loew	B301	619-388-7170 alowe@sdccd.edu

## Career Options

The following list is a sample of the many career options available for the biology major. A few of these require a certificate, some an associate degree, some 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, lab assistant, 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 associate degrees and the certificates in Biology offered at Miramar College 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.

## Transfer Information

**Common university majors related to the field of Biology include:** Agricultural Science, Biochemistry, Bioengineering and Technology, 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 Sciences.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Biology Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Performance: Applied Biotechnology-Analytical Chemistry\*

Students may take the specific biotechnology courses and receive a Certificate of Performance authorized and issued by the academic department. It is not intended to nor will it be recognized as an official state approved program. It is intended to provide students with intensive laboratory skills development experience to meet entry-level employment requirements in the biotechnology industry.

Courses:	Units
BIOL 132, Applied Biotechnology I.....	4
CHEM 251, Analytical Chemistry .....	5
<b>Total Units = 9</b>	

\*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 Performance: Applied Biotechnology-Molecular Biology\*

Students may take the specific biotechnology courses and receive a Certificate of Performance authorized and issued by the academic department. It is not intended to nor will it be recognized as an official state approved program. It is intended to provide students with intensive laboratory skills development experience to meet entry-level employment requirements in the biotechnology industry.

Courses:	Units
BIOL 132, Applied Biotechnology I.....	4
BIOL 133, Applied Biotechnology II .....	4
<b>Total Units = 8</b>	

\*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 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 107, General Biology-Lecture & Lab .....	4
BIOL 205, General Microbiology .....	5
BIOL 230, Human Anatomy .....	4
BIOL 235, Human Physiology.....	4
CHEM 100, Fundamentals of Chemistry .....	3
CHEM 100L, Fundamentals of Chemistry Lab.....	1
<b>Total Units = 21</b>	

Note: Only one Biology (BIOL) course, from the above list may be used to satisfy SDCCD general education requirements.

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives** Biology 101\*, 115, 130, 131, 180, 215, 250; Chemistry 130, 130L.

\*Note: Only one Biology (BIOL) course, from the above list may be used to satisfy SDCCD general education requirements. BIOL 101 is not currently offered at Miramar College, but is offered at City College.

## Associate in Science Degree: Biology

### Applied Biology Track

Courses Required for the Major:	Units
BIOL 107, General Biology-Lecture & Lab .....	4
BIOL 131, Introduction to Biotechnology .....	4
BIOL 205, General Microbiology .....	5
BIOL 132, Applied Biotechnology I .....	4
BIOL 133, Applied Biotechnology II .....	4
CHEM 200, General Chemistry I Lecture .....	3
CHEM 200L, General Chemistry I Lab.....	2
CHEM 201, General Chemistry II Lecture .....	3
CHEM 201L, General Chemistry II Lab.....	2
**CISC 181, Principles of Information Systems.....	4
<b>Total Units = 35</b>	

Note: Only one Biology (BIOL course, from the above list may be used to satisfy SDCCD general education requirements.

**\*\*Students may complete this course requirement by challenge exam or other equivalent proof of computer/software proficiency certified by the CISC department.**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Biology 131, Physics 121A, 121B, 180A, 180B.

### Associate in Science Degree: Biology Studies

The Associate in Science degree with an area of emphasis in Biology Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a biology-related major. Common university majors in this field include: Agricultural Science, Biochemistry, Bioengineering, Bioinformatics, Biological Sciences, Biophysics, Biotechnology, Botany, Cell Biology, Conservation, Developmental Biology, Ecology, Entomology, Life Science, Genetics, Marine Biology, Medical Sciences, Microbiology, Molecular Biology, Natural Sciences, Neuroscience, Psychobiology, Toxicology, and Zoology / Animal Sciences.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

<b>Courses Required for the Major:</b>	<b>Units</b>
BIOL 210A, Introduction to the Biological Sciences I.....	4

**Select 4 to 9 units from the following:**

BIOL 210B, Introduction to the Biological Sciences II	
CHEM 200, General Chemistry I Lecture	
CHEM 200L, General Chemistry I Laboratory.....	4-9

**Select 5 to 10 or more units from the following:**

ACCT 116A, Financial Accounting	
ACCT 116B, Managerial Accounting	
BIOL 115, Marine Biology	
BIOL 205, General Microbiology	
BIOL 215, Introduction to Zoology	
BIOL 230, Human Anatomy	

BIOL 235, Human Physiology	
BIOL 250, Introduction to Botany	
CHEM 201, General Chemistry II Lecture	
CHEM 201L, General Chemistry II Laboratory	
CISC 190, Java Programming	
CISC 192, C/C++ Programming	
MATH 104, Trigonometry	
MATH 116, College and Matrix Algebra	
MATH 119, Elementary Statistics	
MATH 121, Basic Techniques of Applied Calculus I	
MATH 122, Basic Techniques of Applied Calculus II	
MATH 141, Precalculus	
MATH 150, Calculus with Analytic Geometry I	
MATH 151, Calculus with Analytic Geometry II	
PHYS 125, General Physics	
PHYS 126, General Physics II	
PHYS 195, Mechanics	
PHYS 196, Electricity and Magnetism	
PHYS 197, Waves, Optics, and Modern Physics	
PSYC 101, General Psychology	
PSYC 258, Behavioral Science Statistics	
SOCO 101, Principles of Sociology.....	5-10
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

## Business Administration

	Units
<b>Certificate of Achievement:</b>	
Business Administration	30
<b>Associate in Science Degree:</b>	
Business Administration	33*
*and electives as needed to meet minimum of 60 units required for the degree.	

### **Description**

The business program prepares the student for transfer to a four-year college or for a business occupational area of his/her own choice.

### **Program Learning Outcomes**

The Business Program offers a certificate of Achievement and an Associate of Science Degree in Business Administration, Business Management, and Business Management: Mortgage Brokerage and Banking.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Dorothy Simpson	I-102A	619-388-7697
Octavian Dobre	I-104A	619-388-7692
Helen Webb	I-103BA	619-388-7699

### **Career Options**

Prepares students for initial employment in the mortgage brokerage and banking industry. Flexible course selection makes it possible for a student to advance or start a small business of his own. Further education may be necessary for entry-level management positions.

### ***Transfer Information***

**Common university majors related to the field of Business Administration 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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see page 184). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Achievement: Business Administration

Courses Required for the Major:	Units
BUSE 100, Introduction to Business (recommended as a first semester course), or	
MARK 100, Principles of Marketing.....	3
BUSE 119, Business Communications.....	3
BUSE 140, Business Law & the Legal Environment....	3
ACCT 116A, Financial Accounting .....	4
ACCT 116B, Managerial Accounting .....	4
CISC 181, Principles of Information Systems.....	4
ECON 120, Principles of Economics I .....	3
ECON 121, Principles of Economics II .....	3
MATH 119, Elementary Statistics.....	3
<b>Total Units = 30</b>	

***The Business Administration degree is not intended for transfer.***

### Associate in Science Degree: Business Administration

Courses Required for the Major:	Units
BUSE 100, Introduction to Business (recommended as a first semester course), or	
MARK 100, Principles of Marketing.....	3
BUSE 119, Business Communications.....	3
BUSE 140, Business Law & the Legal Environment....	3
ACCT 116A, Financial Accounting.....	4
ACCT 116B, Managerial Accounting .....	4
CISC 181, Principles of Information Systems.....	4
ECON 120, Principles of Economics I .....	3
ECON 121, Principles of Economics II .....	3
ENGL 101, Reading and Composition .....	3
MATH 119, Elementary Statistics .....	3
<b>Total Units = 33</b>	

Note: Only one Business (BUSE) course from the above list may be used to satisfy SDCCD general education requirements.

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Business \*092, 101, 270; Marketing 100. Electives should be chosen after consultation with a counselor and with reference to programs at a four-year institution to which the student will transfer.

\*Business 092 is not offered currently at Miramar College, but is offered at City College.

# Business Management

	Units
<b>Certificate of Performance:</b>	
Loan Closer	8
Loan Processor	9
Loan Underwriter	9
<b>Certificate of Achievement:</b>	
Business Management	35
Mortgage Brokerage & Banking	18
<b>Associate in Science Degree:</b>	
Business Management	47*
Mortgage Brokerage & Banking	27*
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

**Description**

Intended for the student who wishes to plan a program in preparation for a business occupational area of his/her own choice. Flexible course selection is emphasized to enable students to achieve their specific educational, vocational and personal goals.

**Program Learning Outcomes**

The Business Program offers a certificate of Achievement and an Associate of Science Degree in Business Management. This program prepares students for initial employment in the business field or the possibility of starting a small business of his/her own.

Faculty	Office	Telephone
Dorothy Simpson	I-102A	619-388-7697
Octavian Dobre	I-102C	619-388-7692

**Transfer Information**

**Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the

appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

**Certificate of Achievement:  
Business Management**

Courses Required for the Major:	Units
BUSE 100, Introduction to Business (Recommended as a first semester course) .....	3
BUSE 101, Business Mathematics .....	3
BUSE 119, Business Communications.....	3
BUSE 140, Business Law & the Legal Environment....	3
ACCT 116A, Financial Accounting.....	4
CISC 181, Principles of Information Systems.....	4
ECON 120, Principles of Economics I .....	3
**Occupational Electives.....	12
<b>Total Units = 35</b>	

**Associate in Science Degree:  
Business Management**

Courses Required for the Major:	Units
BUSE 100, Introduction to Business (Recommended as a first semester course) .....	3
BUSE 101, Business Mathematics .....	3
BUSE 119, Business Communications.....	3
BUSE 140, Business Law & the Legal Environment... 3	3
BUSE 150, Human Relations in Business .....	3
BUSE 201, Business Organization and Management... 3	3
ACCT 116A, Financial Accounting.....	4
CISC 181, Principles of Information Systems.....	4
ECON 120, Principles of Economics I .....	3
ECON 121, Principles of Economics II.....	3
Marketing 100, Principles of Marketing.....	3
**Occupational Electives.....	12
<b>Total Units = 47</b>	

Note: Only one Business (BUSE) course from the above list may be used to satisfy SDCCD general education requirements.

For graduation requirements see **Associate Degree Requirements** on page 66. Electives as needed to meet minimum of 60 units required for the degree: **Recommended Electives:** Accounting 116B; Business 143\*, 155, 270; CBTE 180; Marketing 105.

**\*Note: Courses designated with \* above are not offered currently at Miramar College, but are offered at City and/or Mesa Colleges.**

\*\*These courses should be planned with the assistance of a counselor and must be approved by a department member. Approval forms may be obtained in the counseling office.

## Business Management Mortgage Brokerage and Banking

### Description

The Mortgage Brokerage and Banking program prepares students with the knowledge and skills necessary for initial employment in the mortgage brokerage and banking industry and facilitates advanced employment opportunities for persons already employed in the industry.

### Program Learning Outcomes

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 hands-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 Associate in Science Degree. Individual courses may meet continuing education real estate license requirements in the State of California.

### Careers

Individual courses in addition to the entire Mortgage Brokerage and Banking program prepares students for careers in loan processing, loan underwriting, loan closing.

### Academic Programs

### Certificate of Performance: Loan Processor\*

The 9 unit 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.

Courses:	Units
BANK 102, Mortgage Brokerage and Banking .....	4
BANK 104, Principles of Loan Processing .....	5
<b>Total Units = 9</b>	

\*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 Performance: Loan Underwriter\*

The 9 unit 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.

Courses:	Units
BANK 102, Mortgage Brokerage & Banking .....	4
BANK 106, Loan Underwriter.....	5
<b>Total Units = 9</b>	

\*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 Performance: Loan Closer\*

The 8 unit 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.

Courses:	Units
BANK 102, Mortgage Brokerage and Banking .....	4
BANK 108, Principles of Loan Closing.....	4
<b>Total Units - 8</b>	

\*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: Business Management

### Mortgage Brokerage and Banking

Courses Required for the Major:	Units
BANK 102, Mortgage Brokerage and Banking .....	4
BANK 104, Principles of Loan Processing .....	5
BANK 106, Loan Underwriting .....	5
BANK 108, Principles of Loan Closing .....	4
<b>Total Units = 18</b>	

## Associate in Science Degree: Business Management

### Mortgage Brokerage and Banking

Courses Required for the Major:	Units
BANK 102, Mortgage Brokerage and Banking .....	4
BANK 104, Principles of Loan Processing .....	5
BANK 106, Loan Underwriting .....	5
BANK 108, Principles of Loan Closing .....	4
REAL 101, Real Estate Principles.....	3
REAL 115, Real Estate Finance I .....	3
BUSE 119, Business Communications.....	3
<b>Total Units = 27</b>	

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Business 140, 143\*; Computer and Information Science 110; Economics 120; Real Estate 105\*; Escrow 101\*.

**\*Note: Courses designated with \* above are not offered currently at Miramar College, but are offered at City and/or Mesa Colleges.**

# Chemistry

Associate in Science Degree:	Units
Chemistry Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

## Description

The Chemistry Program fosters an understanding of the fundamental principles of chemistry in a variety of applications - medicine, health-care products, energy, food production, body metabolism, structural materials, microelectronics, and the environment. Students learn how chemical knowledge is derived, theorized, and applied in solving problems in everyday life. Students perform experiments in a modern chemistry laboratory under the guidance of experienced faculty.

## Program Learning Outcomes

The curriculum is designed to meet the needs of students who wish to pursue a major in fields such as: (1) chemistry, biology, marine science, geology, physics, medicine, engineering, or technology; (2) paramedical or allied health science, including nursing, physical therapy, or nutrition; or (619-3883) liberal arts. Courses will also meet general education requirements for both the two and four-year institutions.

Faculty	Office	Telephone/email
Rebecca Bowers-Gentry	S5-201	619-388-7494 rbowersg@sdccd.edu
Daphne Figueroa	S5-201	619-388-7494 dfiguero@sdccd.edu
Fred Garces	S5-210	619-388-7493 fgarces@sdccd.edu
Namphol Sinkaset	S5-201	619-388-7494 nsinkase@sdccd.edu
Linda Woods	B-301E2	619-388-7434 lwoods@sdccd.edu

## Career Options

Most careers in this discipline require education beyond the associate degree level. A baccalaureate degree in chemistry prepares students for careers such as: teaching, research, and advancement into professional graduate programs.

## Transfer Information

**Common university majors related to the field of Chemistry include:** Biochemistry, Chemical Engineering, Chemical Physics, Chemistry, Environmental Chemistry.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Chemistry Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Associate in Science Degree: Chemistry Studies

The Associate in Science degree with an area of emphasis in Chemistry Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a chemistry-related major. Common university majors in this field include: Biochemistry, Chemical Engineering, Chemical Physics, Chemistry, and Environmental Chemistry.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

<b>Courses Required for the Major:</b>	<b>Units</b>
CHEM 200, General Chemistry I Lecture .....	3
CHEM 200L, General Chemistry I Laboratory .....	2
CHEM 201, General Chemistry II Lecture .....	3
CHEM 201L, General Chemistry II Laboratory .....	2

### Select at least 8 units from the following:

ASTR 101, Descriptive Astronomy

CISC 192, C/C++ Programming	
GEOL 104, Earth Science	
MATH 150, Calculus with Analytic Geometry I	
MATH 151, Calculus with Analytic Geometry II	
MATH 252, Calculus with Analytic Geometry III	
PHYS 195, Mechanics	
PHYS 196, Electricity and Magnetism	
PHYS 197, Waves, Optics, and Modern Physics	
CHEM 231, Organic Chemistry I-Lecture	
CHEM 231L, Organic Chemistry I-Laboratory	
CHEM 233, Organic Chemistry II-Lecture	
CHEM 233L, Organic Chemistry II-Laboratory	
CHEM 251, Analytic Chemistry.....	8
	<b>Total Units = 18</b>

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

This option is not recommended for students transferring to the UC or CSU systems.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

## Transfer Information

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. **Course requirements at the transfer**

*institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.*

## Child Development

	<b>Units</b>
<b>Certificate of Performance:</b>	
Assistant Teacher	10-13
Family & Child Relations	13
Family Child Care	9
Infant/Toddler Care	9
Residential Care Workers	12
<b>Certificate of Achievement:</b>	
Associate Teacher	18-19
Teacher	26-29
Master Teacher	35-39
<b>Associate in Arts Degree:</b>	
Human Development Studies	18*
<b>Associate in Science Degree:</b>	
Child Development	26-29*
Site Supervisor	35-38*
*and electives as needed to meet the minimum of 60 units required for the degree.	

### Description

Child Development offers programs for career and transfer students. Certificates of Performance, 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 Learning Outcomes

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.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Peter Elias	Child Dev. Center F-201	619-388-7677
Sally Nalven	Child Dev. Center F-207	619-388-7681

**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 **Family and Child Relations** Certificate offered at Miramar prepares students to work with families and their children in educational and service related agencies. The **Infant/Toddler Care** Certificate of Performance offers skills for working with children aged birth to three years. The **School Age Child Care** Certificate of Performance offered at City and Mesa provides training for working with school age children. The **Assistant Teacher** Certificate of Performance 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.

**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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Human Development Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs

and procedures is available in the Transfer Guide section of the catalog.

**Academic Programs**

**\*Certificates of Performance**

These are department awards in recognition of information on the transcript and does not imply that a graduation requirement has been met.

**Certificate of Performance: 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.

<b>Courses:</b>	<b>Units</b>
CHIL 101, Human Growth and Development.....	3
CHIL 180, Nutrition, Health & Safety for Children ....	3
<b>Select one course from:</b>	
CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science	
CHIL 141, The Child, Family and Community.....	3
<b>Select one course from:</b>	
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
<b>Total Units = 10-13</b>	

**Certificate of Performance: Family and Child Relations\***

This certificate prepares students to work with families and their children in educational settings and service related agencies.

<b>Courses:</b>	<b>Units</b>
CHIL 101, Human Growth and Development.....	3
CHIL 141, The Child, Family and Community.....	3
CHIL 160, Observing and Understanding Children .....	2
CHIL 161, Observations and Issues in Child Development.....	2
<b>Select one course from:</b>	
CHIL 162, Observing and Guiding Child Behavior	
CHIL 165, Children with Special Needs	
CHIL 188, Child Abuse .....	3
<b>Total Units = 13</b>	

### Certificate of Performance: 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 101, Human Growth and Development.....	3
CHIL 180, Nutrition, Health & Safety for Children.....	3
<b>Select one course from:</b>	
CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science	
CHIL 175, Infant-Toddler Growth and Development .....	3
<b>Total Units = 9</b>	

### Certificate of Performance: 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 101, Human Growth and Development.....	3
CHIL 175, Infant-Toddler Growth and Development .....	3
CHIL 176, Principles of Infant/Toddler Caregiving ....	3
<b>Total Units = 9</b>	

### Certificate of Performance: 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
<b>Total Units = 12</b>	

**For the Certificates of Performance 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
<b>Select two courses from:</b>	
CHIL 111, Curriculum: Music/Motor Skills	
CHIL 121, Curriculum: Art	
CHIL 131, Curriculum: Language/Science .....	3,3
<b>Select three or more units from:</b>	
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
<b>Total Units = 18-19</b>	

### 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
<b>and concurrent enrollment in:</b>	
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.

<b>Courses Required for the Major:</b>	<b>Units</b>
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

**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**  
**Family Life**

- 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, 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**

## 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, <b>or</b>	
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 <b>and</b>	
CHIL 161, Observation & Issues in Child Development <b>or</b>	
CHIL 165, Children with Special Needs <b>or</b>	
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)

## Associate in Arts Degree: Human Development Studies

The Associate in Arts degree with an area of emphasis in Human Development Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a human development-related major. Common university majors in this field include: Child Development, Family and Consumer Studies, Gerontology, and Human Development.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

Courses Required for the Major:	Units
CHIL 101, Human Growth and Development	
PSYC 101, General Psychology.....	6

#### Select at least twelve units from the following:

ANTH 103, Introduction to Cultural Anthropology
BIOL 107, General Biology-Lecture and Laboratory
BIOL 210A, Introduction to the Biological Sciences I
BIOL 210B, Introduction to the Biological Sciences II
BIOL 230, Human Anatomy
BIOL 235, Human Physiology
BLAS 140A, History of the U.S., Black Perspectives
BLAS 140B, History of the U.S., Black Perspectives
CHIL 103, Lifespan Growth and Development
CHIL 111, Curriculum: Music/Motor Skills
CHIL 121, Curriculum: Art
CHIL 131, Curriculum: Language/Science
CHIL 141, The Child, Family and Community
CHIL 151, Program Planning
CHIL 160, Observing and Understanding Children
CHIL 162, Observing and Guiding Child Behavior
CHIL 175, Infant-Toddler Growth and Development

CHIL 176, Principles of Infant/Toddler Caregiving	
CHIL 180, Nutrition, Health and Safety for Children	
CISC 190, Java Programming	
CISC 192, C/C++ Programming	
MATH 119, Elementary Statistics	
MATH 121, Basic Techniques of Applied Calculus I	
MATH 150, Calculus with Analytic Geometry I	
MATH 210A, Concepts of Elementary School Mathematics I	
NUTR 150, Nutrition	
PHIL 101, Symbolic Logic	
PSYC 135, Marriage and Family Relations	
PSYC 258, Behavioral Science Statistics	
PSYC 260, Introduction to Physiological Psychology	
SOCO 101, Principles of Sociology.....	12
<b>Total Units =</b>	<b>18</b>

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate

for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Communication Studies

	Units
<b>Associate in Arts Degree:</b> Communication Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

**Description**

Communication is the study of human interaction in the verbal and non-verbal arena. It describes, explains, and depicts the various elements that influence communication such as age, gender, culture, settings, and circumstance. Communication provides a foundation for success in an individual's personal, social and professional roles.

**Program Learning Outcomes**

The curriculum focuses on preparing students with basic concepts in Speech Communication, which provides the foundation pursuing a baccalaureate degree. Courses will also satisfy requirements for general education at both the two and four-year institutions. Students planning to major in a communications field should prepare themselves with courses that complement that major.

Faculty	Office	Telephone
Lisa Brewster	I-103C1	619-388-7701
Leslie Klipper	1-102D	619-388-7694

**Career Options**

Most careers require degrees beyond the associate level. Graduates with advanced degrees have secured positions such as: customer relations officers, public relations managers, human resources trainers, employment specialists, marketing representatives, broadcasters, and sales representatives.

**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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Communication Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

**Associate in Arts Degree: Communication Studies**

The Associate in Arts degree with an area of emphasis in Communication Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a communications-related major. Common university majors in this field include: Broadcast Media, Communication, Film and Television, Graphic Communications, Mass Communications, Media Studies, Journalism, Speech Communication, Advertising and Public Relations.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

**Required Courses:**

**Select 6 to 15 units from the following communications core courses:**

- JOUR 202, Introduction to Mass Communication
- SPEE 103, Oral Communication
- SPEE 135, Interpersonal Communication
- SPEE 160, Argumentation
- SPEE 180, Intercultural Communication .....6-15

**Select 3 to 12 or more units from the following:**

- ANTH 103, Introduction to Cultural Anthropology
- ARTF 109, Nineteenth and Twentieth Century Art
- ARTF 111, Art History: Renaissance to Modern
- ARTF 150B, Beginning Graphic Design
- CBTE 162, Web Page Creation
- CISC 181, Principles of Information Systems
- CISC 192, C/C++ Programming
- DFLM 101, Introduction to Film

ECON 120, Principles of Economics I	
ECON 121, Principles of Economics II	
ENGL 105, Composition and Literature	
ENGL 205, Critical Thinking and Intermediate Composition	
ENGL 209, Literary Approaches to Film	
ENGL 237, Women in Literature	
ENGL 249, Introduction to Creative Writing	
HIST 110, History of the United States II	
JOUR 210A, Journalism Workshop I	
JOUR 210B, Journalism Workshop II	
JOUR 210C, Journalism Workshop III	
JOUR 210D, Journalism Workshop IV	
MATH 119, Elementary Statistics	
MUSI 109, World Music	
PHIL 101, Symbolic Logic	
POLI 101, Introduction to Political Science	
POLI 102, The American Political System	
PSYC 101, General Psychology	
PSYC 258, Behavioral Science Statistics	
SOCO 101, Principles of Sociology	
SPEE 101, Voice and Articulation .....	3-12
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or

out of state universities. It is not accepted by the UC system.

- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Computer Business Technology

	Units
<b>Certificate of Performance:</b>	
Administrative Assistant	14
E-Commerce	15
Typist/Word processor	11
Website Designer	12
<b>Certificate of Achievement:</b>	
Administrative Assistant	32
Microcomputer Applications	29
<b>Associate in Science Degree:</b>	
Administrative Assistant	30*
Microcomputer Applications	38*
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

## Description

The Computer Business Technology program provides theory and hands-on training in major office systems, webpage design, and technology used to enhance productivity and communications. Students are prepared, through extensive coursework, with the necessary skills and knowledge for initial employment in the field of business.

## Learning Outcomes

Emphasis is on modern methods and updated software and equipment.

Faculty	Office	Telephone
Wahid Hamidy	I-102C1	619-388-7702

## Transfer Information

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a

counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Performance: Administrative Assistant\*

This certificate prepares students for entry-level positions as administrative assistants.

Courses:	Units
CBTE 101, Keyboarding for Computers .....	1
CBTE 114, Introduction to Microsoft Windows .....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 164, Introduction to Microsoft Outlook .....	1
CBTE 180, Microsoft Office .....	3
CBTE 210, Computers in Business .....	3
BUSE 102, Introduction to Customer Service .....	3
<b>Total Units = 14</b>	

\*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 Performance: 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
CBTE 210, Computer in Business .....	3
BUSE 119, Business Communications .....	3
<b>Total Units = 15</b>	

\*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 Performance: Typist/Word Processor\*

This certificate prepares students for entry-level positions as typists and word processors in a variety of occupations.

Courses:	Units
CBTE 101, Keyboarding for Computers.....	1
CBTE 114, Introduction to Microsoft Windows .....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 122, Intermediate Microsoft Word .....	3
CBTE 164, Introduction to Microsoft Outlook .....	1
BUSE 102, Introduction to Customer Service.....	3
<b>Total Units = 11</b>	

\*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 Performance: Website Designer\*

This certificate prepares students for entry-level positions as web page designers.

Courses:	Units
CBTE 126, Document Processing .....	3
CBTE 127, Introduction to PowerPoint .....	2
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 161, Learning the Internet.....	1
CBTE 162, Web Page Creation .....	2
BUSE 102, Introduction to Customer Service.....	3
<b>Total Units = 12</b>	

\*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

### 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.....	1

CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 122, Intermediate Microsoft Word .....	3
CBTE 127, Introduction to PowerPoint .....	2
CBTE 140, Microsoft Excel.....	2
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 170, Desktop Publishing .....	2
CBTE 205, Records Management.....	3
CBTE 210, Computers in Business <b>or</b>	
CBTE 211, Office Administration .....	3
BUSE 101, Business Mathematics.....	3
BUSE 102, Introduction to Customer Service.....	3
BUSE 119, Business Communications.....	3
<b>Total Units = 29</b>	

### Associate in Science Degree: Computer Business Technology

#### Administrative Assistant

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers .....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 122, Intermediate Microsoft Word .....	3
CBTE 127, Introduction to PowerPoint .....	2
CBTE 140, Microsoft Excel.....	2
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 170, Desktop Publishing.....	2
CBTE 200, Office Telecommunications.....	2
CBTE 205, Records Management.....	3
CBTE 210, Computers in Business, <b>or</b>	
CBTE 211, Office Administration .....	3
BUSE 101, Business Mathematics.....	3
BUSE 102, Introduction to Customer Service.....	3
BUSE 119, Business Communications.....	3
<b>Total Units 30</b>	

For graduation requirements see **Associate Degree Requirements** on page 66.

**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.

### Microcomputer Applications

Provides training in major office systems and Technology used to enhance productivity and communications.

## Certificate of Achievement: Computer Business Technology

### Microcomputer Applications

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers .....	1
CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 122, Intermediate Microsoft Word .....	3
CBTE 126, Document Processing .....	3
CBTE 127, Introduction to PowerPoint .....	2
CBTE 140, Microsoft Excel.....	2
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 161, Learning the Internet.....	1
CBTE 163, Introduction to Microsoft FrontPage .....	2
CBTE 164, Introduction to Microsoft Outlook .....	1
CBTE 170, Desktop Publishing .....	2
CBTE 200, Office Telecommunications.....	2
BUSE 102, Introduction to Customer Service .....	3
BUSE 119, Business Communications.....	3
<b>Total Units = 29</b>	

## Associate in Science Degree: Computer Business Technology

### Microcomputer Applications

Courses Required for the Major:	Units
CBTE 101, Keyboarding for Computers .....	1
CBTE 114, Introduction to Microsoft Windows.....	1
CBTE 120, Beginning Microsoft Word .....	2
CBTE 122, Intermediate Microsoft Word .....	3
CBTE 126, Document Processing .....	3
CBTE 127, Introduction to PowerPoint .....	2
CBTE 140, Microsoft Excel.....	2
CBTE 151, Introduction to Microsoft Access.....	1
CBTE 161, Learning the Internet.....	1
CBTE 163, Introduction to Microsoft FrontPage .....	2
CBTE 164, Introduction to Microsoft Outlook .....	1
CBTE 170, Desktop Publishing .....	2
CBTE 200, Office Telecommunications.....	2
CBTE 205, Records Management .....	3
CBTE 210, Computers in Business <b>or</b>	
CBTE 211, Office Administration .....	3
BUSE 101, Business Mathematics.....	3
BUSE 102, Introduction to Customer Service .....	3
BUSE 119, Business Communications .....	3
<b>Total Units = 38</b>	

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

**Recommended Electives:** Business 150; Computer Business Technology 126, 161, 162, 270; Computer and Information Sciences 130.

# Computer and Information Sciences

	Units
<b>Certificate of Performance:</b>	
Computer Programming	15
<b>Certificate of Achievement:</b>	
Computer and Information Science	31
<b>Associate in Science Degree:</b>	
Computer and Information Science	31*
*and electives as needed to meet minimum of 60 units required for the degree	

## Description

The focus of the Computer and Information Sciences program is on the function and use of the computer. The program includes general study of computer languages as well as utilization and application of computer software.

## Program Learning Outcomes

The Computer and Information Sciences program offers: a Certificate of Achievement and an Associate Degree in Computer and Information Sciences; and a Certificate of Achievement an Associate Degree in Computer and Information Sciences with an emphasis in Microcomputer Professional.

Faculty	Office	Telephone
Ed Brunjes	I-103C	619-388-7700
John Couture	I-103A	619-388-7698
Alan Viersen	I-102C2	619-388-7693

## Career Options

Upon completion of the Computer and Information Sciences curriculum the student should be qualified for entry-level employment in the area of microcomputer support, or with additional courses should be qualified for employment in entry-level programmer position.

## Academic Programs

The certificate of achievement in Computer Information Sciences requires completion of the courses listed below and is meant to prepare students who are planning and preparing for entry-level positions in the Computer Information Sciences Industry.

## Transfer Information

**Common university majors related to the field of Computer and 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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Mathematics Studies (see page 164). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Certificate of Performance Computer Programming\*

This Certificate of Performance 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 Performance 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
<b>Total Units =</b>	<b>15</b>

\*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 Achievement: Computer and Information Sciences

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
<b>Total Units = 31</b>	

\*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.

### Associate in Science Degree: Computer and Information Sciences

The associate degree in Computer Information Sciences requires completion of the courses listed below and is meant to prepare students in Information Decision 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
<b>Total Units = 31</b>	

\*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.

For graduation requirements, see the **Requirements for the Associate Degree** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

**Recommended Electives:** Computer Business Technology 120B, 120B, Business 119.

**Note:** Some courses are not currently offered at Miramar, but are offered at City and/or Mesa Colleges. Please see a counselor.

# Diesel Technology

	<b>Units</b>
<b>Certificate of Performance:</b>	
Diesel Fuel Injection Systems	7
Steering, Suspension, & Drivelines	7
Truck & Equipment Electrical Systems	8
Truck Air Brake Systems	7
Truck Drive Axles	7
Truck Transmissions & Clutches	13
<b>Certificate of Achievement:</b>	
Diesel Equipment Repair Technology (Evening Program)	32
Engine Overhaul, Caterpillar	18
Engine Overhaul, Cummins	18
Engine Overhaul, Detroit Diesel	18
Engine Repair, Caterpillar	19
Engine Repair, Cummins	19
Engine Repair, Detroit Diesel	19
Heavy Duty Transportation Technology— (HDDT) (Day Program)	47
Heavy Equipment Technology (HET)— (Day Program)	44
<b>Associate in Science Degree:</b>	
Heavy Duty Transportation Technology— (HDDT) (Day Program)	47*
Heavy Equipment Technology (HET)— (Day Program)	44*
*and electives as needed to meet minimum of 60 units required for the degree.	

**Description**

The diesel technology program provides the student with an opportunity to master the skills and knowledge required for success in servicing and maintaining diesel powered highway trucks, off-road heavy equipment, stationary engines, and marine craft. The two-year curriculum has three tracts which lead to a Certificate of Achievement, and three tracts which lead to an

Associate in Science degree. In addition, the diesel program offers the Certificate of Performance in ten specialty areas. These certificates can be applied toward the Certificate of Achievement or the Associate in Science degree.

**Program Learning Outcomes**

The program is designed to prepare students for entry level employment as service technicians in the diesel powered equipment industry. Shop work is conducted in a manner consistent with industry standards regarding safety and hazardous material handling, shop organization and operation, use of hand and power tools, use of shop equipment, and the use of shop supplies and hardware. Hands-on experience is stressed, however, this is enriched with in-depth classroom instruction concerning theory of operation, service procedures, special tools, and troubleshooting. All classes emphasize critical thinking.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Jim Lewis	C-122	619-388-7526
Dan Willkie	C-122	619-388-7527

**Career Options**

Employment may be found as a heavy-duty truck technician, heavy-equipment technician, power generation technician, and marine engine technician. Diesel technicians are employed by truck dealerships, heavy equipment dealerships, engine companies, equipment rental companies, trucking companies, truck leasing companies, bus companies, railroad companies, and independent engine and component rebuilding companies. Diesel technicians find employment in local, state, and national government agencies, boatyards and shipyards, construction, mining, agriculture, power generation, oil fields, off-shore drilling, and stand-by emergency power.

**Academic Programs**

The certificates of performance, certificates of achievement, and associate degrees require completion of the courses listed below.

**Certificate of Performance:  
Diesel Fuel Injection Systems\***

<b>Courses:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 144, Electronics for Diesel Technology .....	3
<b>Total Units =</b>	<b>7</b>

**Certificate of Performance:  
Steering, Suspension, and Drivelines\***

Courses:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 180, Steering, Suspension & Driveline Systems.....	3
<b>Total Units = 7</b>	

**Certificate of Performance:  
Truck & Equipment Electrical Systems\***

Courses:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology.....	3
<b>Total Units = 8</b>	

**Certificate of Performance:  
Truck Air Brake Systems\***

Courses:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 155, Air Brake Systems .....	3
<b>Total Units = 7</b>	

**Certificate of Performance:  
Truck Drive Axles\***

Courses:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 170, Truck Drive Axles and Specifications .....	3
<b>Total Units = 7</b>	

**Certificate of Performance:  
Truck Transmissions and Clutches\***

Courses:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 160, H.D. Transmissions.....	3
DIES 165, Truck Automatic Transmissions .....	3
DIES 175, Truck Chassis R&R .....	3
<b>Total Units = 13</b>	

\*These are departmental awards in recognition of information on the transcript and does not imply that a graduation requirement has been met.

**Certificate of Achievement:  
Diesel Technology**

**Diesel Equipment Repair Technology  
(Evening Program)**

Courses Required for the Major:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 135, Applied Failure Analysis.....	3
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology .....	3
DIES 155, Air Brake Systems .....	3
DIES 160, H.D. Transmissions.....	3
DIES 170, Truck Drive Axles and Specifications .....	3
<b>Select two courses from:</b>	
DIES 125, Diesel Engines I	
DIES 126, Diesel Engines II	
DIES 128, Diesel Engines III.....	8
<b>Total Units = 32</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Overhaul, Caterpillar**

Courses Required for the Major:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 122, Diesel Engines B.....	7
DIES 123, Diesel Engines C .....	2
DIES 135, Applied Failure Analysis.....	3
DIES 137, Diesel Fuel Injection Systems .....	2
<b>Total Units = 18</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Overhaul, Cummins**

Courses Required for the Major:	Units
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 123, Diesel Engines C .....	2
DIES 124, Diesel Engines D.....	7
DIES 135, Applied Failure Analysis.....	3
DIES 137, Diesel Fuel Injection Systems .....	2
<b>Total Units = 18</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Overhaul, Detroit Diesel**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 121, Diesel Engines A .....	7
DIES 123, Diesel Engines C .....	2
DIES 135, Applied Failure Analysis .....	3
DIES 137, Diesel Fuel Injection Systems .....	2
<b>Total Units = 18</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Repair, Caterpillar**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 126, Diesel Engines II .....	4
DIES 135, Applied Failure Analysis .....	3
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology.....	3
<b>Total Units = 19</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Repair, Cummins**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 128, Diesel Engines III .....	4
DIES 135, Applied Failure Analysis .....	3
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology.....	3
<b>Total Units = 19</b>	

**Certificate of Achievement:  
Diesel Technology**

**Engine Repair, Detroit Diesel**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 125, Diesel Engines I.....	4
DIES 135, Applied Failure Analysis .....	3
DIES 137, Diesel Fuel Injection Systems .....	2

DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology .....	3
<b>Total Units = 19</b>	

**Certificate of Achievement:  
Diesel Technology**

**Heavy Duty Transportation Technology  
(HDTT) (Day Program)**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 123, Diesel Engines C .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology .....	3
DIES 155, Air Brake Systems .....	3
DIES 160, H.D. Transmissions <b>and</b>	
DIES 175, Truck Chassis R&R <b>or</b>	
DIES 185, Power Trains A (HDT).....	6
DIES 165, Truck Automatic Transmissions <b>and</b>	
DIES 200 Mobile Hydraulic Systems <b>or</b>	
DIES 190, Power Trains B (HDT).....	6
DIES 170, Truck Drive Axles and Specifications .....	3
DIES 180, Steering, Suspension and Driveline Systems.....	3
<b>Select two courses from:</b>	
DIES 121, Diesel Engines A	
DIES 122, Diesel Engines B	
DIES 124, Diesel Engines D.....	14
<b>Total Units = 47</b>	

Note: Students may take DIES 185 (6 units) in place of DIES 160 & 175; and students may take DIES 190 (6 units) in place of DIES 165 & 200.

**Certificate of Achievement:  
Diesel Technology**

**Heavy Equipment Technology (HET)  
(Day Program)**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 123, Diesel Engines C .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology .....	3
DIES 160, H.D. Transmissions <b>and</b>	
DIES 240, Equipment Chassis R&R <b>or</b>	
DIES 235, Power Trains C (HET) .....	6
DIES 200 Mobile Hydraulic Systems <b>and</b>	
DIES 230, Heavy Equipment Transmissions <b>or</b>	
DIES 245, Power Trains D (HET).....	6

DIES 210, Breaks, Final Drives and Steering Systems.....	3
DIES 220, Undercarriage.....	3

**Select two courses from:**

DIES 121, Diesel Engines A	
DIES 122, Diesel Engines B	
DIES 124, Diesel Engines D.....	14

**Total Units = 44**

Note: Students may take DIES 235 (6 units) in place of DIES 160 & 240; and students may take DIES 245 (6 units) in place of DIES 200 & 230.

**Associate in Science Degree:  
Diesel Technology**

**Heavy Duty Transportation Technology  
(HDTT) (Day Program)**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 123, Diesel Engines C .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology.....	3
DIES 155, Air Brake Systems .....	3
DIES 160, H.D. Transmissions <b>and</b>	
DIES 175, Truck Chassis R&R <b>or</b>	
DIES 185, Power Trains A (HDT).....	6
DIES 165, Truck Automatic Transmissions <b>and</b>	
DIES 200 Mobile Hydraulic Systems <b>or</b>	
DIES 190, Power Trains B (HDT).....	6
DIES 170, Truck Drive Axles and Specifications .....	3
DIES 180, Steering, Suspension and Driveline Systems.....	3

**Select two courses from:**

DIES 121, Diesel Engines A	
DIES 122, Diesel Engines B	
DIES 124, Diesel Engines D.....	14

**Total Units = 47**

Note: Students may take DIES 185 (6 units) in place of DIES 160 & 175; and students may take DIES 190 (6 units) in place of DIES 165 and 200.

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Diesel Technology 90, 121, 122, 125, 126, 128, 135, 137, 137A, 160, 165, 175, 185, 190, 200, 210, 220, 230, 235, 240, 245, 270; Computer Business Technology 103.

**Associate in Science Degree:  
Diesel Technology**

**Heavy Equipment Technology  
(HET) (Day Program)**

<b>Courses Required for the Major:</b>	<b>Units</b>
DIES 100, Introduction to Diesel Technology .....	2
DIES 105, Measuring Tools & Applied Mathematics ...	2
DIES 123, Diesel Engines C .....	2
DIES 138, Electrical Systems .....	3
DIES 144, Electronics for Diesel Technology .....	3
DIES 160, H.D. Transmissions <b>and</b>	
DIES 240, Equipment Chassis R&R <b>or</b>	
DIES 235, Power Trains C (HET) .....	6
DIES 200 Mobile Hydraulic Systems <b>and</b>	
DIES 230, Heavy Equipment Transmissions <b>or</b>	
DIES 245, Power Trains D (HET).....	6
DIES 210, Breaks, Final Drives and Steering Systems.....	3
DIES 220, Undercarriage.....	3

**Select two courses from:**

DIES 121, Diesel Engines A	
DIES 122, Diesel Engines B	
DIES 124, Diesel Engines D.....	14

**Total Units = 44**

Note: Students may take DIES 235 (6 units) in place of DIES 160 & 240; and students may take DIES 245 (6 units) in place of DIES 200 and 230.

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree:**

**Recommended Electives:** Diesel Technology 90, 121, 122, 125, 126, 128, 135, 137, 137A, 155, 160, 165, 170, 175, 180, 185, 190, 200, 210, 220, 230, 235, 240, 245, 270; Computer Business Technology 103.

**Earth Science**

See "Physical Science" on page 176.

# Elementary Education

## Associate in Arts Degree:

Elementary Education

### Units

18\*

\*and electives as needed to meet minimum 60 units required for the degree.

## Description

The Elementary Education program is designed to prepare students to transfer to a four-year university in an elementary education preparation program such as Liberal Studies. Students usually complete this major with the ultimate goal of earning a Multiple Subject Teaching Credential. Coursework in this program is interdisciplinary in nature, reflecting the variety of subject area knowledge necessary to teach at the elementary level.

## Program Learning Outcomes

The Elementary Education program is designed to prepare students to transfer to a four-year university in an elementary teacher education preparation program.

Faculty	Office	Telephone
Carol Murphy	I-102B	619-388-7691

## Career Options

Careers related to this discipline require education beyond the associate degree level. A bachelor's degree in Liberal Studies or a related major is common preparation for a post-baccalaureate Multiple Subject Teaching Credential program.

## Transfer Information

Common university majors related to the field of Education include: Liberal Studies, Human Development, Interdisciplinary Studies, Teacher Preparation.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the

appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Elementary Education. This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Associate in Arts Degree: Elementary Education

The Associate in Arts degree with an area of emphasis in Elementary Education is intended for students who plan to complete a bachelor's degree at a transfer institution in preparation for a California Multiple Subject Teaching Credential. Most students pursue this credential with the goal of becoming an elementary school or special education teacher. Common university majors in this field include: Liberal Studies, Human Development, Interdisciplinary Studies, and Teacher Preparation.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

### Courses Required for the Major: Units

MATH 210A, Concepts of Elementary School Mathematics I .....	3
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### Complete at least one course from the following:

CHIL 101, Human Growth and Development	
EDUC 200, Teaching as a Profession	
EDUC 203, Service Learning for Prospective Teachers	
PHYE 240, Physical Education in the Elementary Schools	
MATH 210B, Concepts of Elementary School Mathematics II	

MATH 212, Children's Mathematical Thinking .....	1-13
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### Complete at least one course and the remainder of units needed to meet the minimum of 18 from the following:

ANTH 103, Introduction to Physical Anthropology	
ARAB 101, First Course in Arabic	
ARAB 102, Second Course in Arabic	
ARTF 100, Art Orientation	
ARTF 110, Art History	
ARTF 111, Art History	
ARTF 155A, Freehand Drawing I	
ASTR 101, Descriptive Astronomy	
ASTR 111, Astronomy Laboratory	

BIOL 107, General Biology-Lecture and Laboratory  
 BIOL 230, Human Anatomy  
 BIOL 235, Human Physiology  
 BLAS 140A, History of the U.S., Black Perspectives  
 BLAS 140B, History of the U.S., Black Perspectives  
 CHIL 141, The Child, Family and Community  
 ENGL 101, Reading and Composition  
 ENGL 105, Composition and Literature  
 ENGL 205, Critical Thinking and Intermediate  
 Composition  
 ENGL 208, Introduction to Literature  
 ENGL 209, Literary Approaches to Film  
 ENGL 210, American Literature I  
 ENGL 211, American Literature II  
 ENGL 215, English Literature I: 800-1799  
 ENGL 216, English Literature II: 1800-Present  
 ENGL 220, Masterpieces of World Literature I: 1500  
 BCE-1600 CE  
 ENGL 221, Masterpieces of World Literature II: 1600-  
 Present  
 ENGL 230, Asian American Literature  
 ENGL 237, Women in Literature  
 ENGL 249, Introduction to Creative Writing  
 GEOG 102, Cultural Geography  
 GEOG 104, World Regional Geography  
 GEOL 100, General Geology  
 GEOL 101, General Geology Laboratory  
 GEOL 104, Earth Science  
 HEAL 190, Health Education for Teachers  
 HIST 100, World History I  
 HIST 101, World History II  
 HIST 109, History of the United States I  
 HIST 110, History of the United States II  
 HIST 141, Women in United States History I  
 HIST 142, Women in United States History II  
 HIST 150, Native Americans in United States History  
 HIST 151, Native Americans in United States History  
 HUMA 101, Introduction to the Humanities  
 HUMA 102, Introduction to the Humanities II  
 JOUR 202, Introduction to Mass Communication  
 LIBS 101, Information Literacy and Research Skills  
 MATH 150, Calculus with Analytical Geometry I  
 MUSI 100, Introduction to Music  
 MUSI 110, Music for Elementary School Teachers  
 PHIL 100, Logic and Critical Thinking  
 PHIL 102A, Introduction to Philosophy: Reality and  
 Knowledge  
 PHIL 102B, Introduction to Philosophy: Values  
 PHIL 205, Critical Thinking and Writing in Philosophy  
 PHYN 100, Survey of Physical Science  
 PHYN 101, Survey of Physical Science Laboratory  
 PHYN 120, Physical Oceanography  
 POLI 102, The American Political System  
 POLI 103, Comparative Politics

PSYC 101, General Psychology  
 PSYC 230, Psychology of Lifespan Development  
 SOCO 101, Principles of Sociology  
 SPAN 101, First Course in Spanish  
 SPAN 102, Second Course in Spanish  
 SPAN 201, Third Course in Spanish  
 SPAN 202, Fourth Course in Spanish  
 SPAN 215, Spanish for Spanish Speakers I  
 SPAN 216, Spanish for Spanish Speakers II  
 SPEE 103, Oral Communication  
 SPEE 135, Interpersonal Communication  
 SPEE 160, Argumentation  
 TAGA 101, First Course in Tagalog  
 TAGA 102, Second Course in Tagalog  
 TAGA 201, Third Course in Tagalog.....2-14

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified***

*by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.*

## Engineering

(See "Pre-Engineering" on page 180.)

# English

	Units
<b>Certificate of Performance:</b>	
Advanced ESOL	15
<b>Associate in Arts Degree:</b>	
English	18*
English/Literature Studies	18*
*and electives as needed to meet minimum of 60 units required for the degree	

### Description

The English program provides a breadth of coursework that includes the study of the language and investigation of great works of literature, as well as the development of reading and writing expertise. It is devoted to advancing critical thinking and academic skills in the areas of reading, writing, and English for Speakers of Other Languages (ESOL). In reading, classes focus on vocabulary expansion, comprehension, and methods for long term learning. Writing classes cover grammar, composition, creative writing and research. ESOL classes cover academic English, including four levels of instruction in reading, writing, grammar, speaking, and listening. The English program also offers literature classes in British and American Literature, literature and film, women in literature, and world literature.

### Program Learning Outcomes

The English program serves four areas of study. First, it is designed to prepare students for advanced work in the major, as well as transfer to four-year institutions. For this goal, courses cover the freshmen, and sophomore requirements for English majors, many of the GE requirements, including critical thinking, and preparation for English competency tests. Second, the program supports majors across the entire college curriculum where English is recognized as key to student success and students are advised to have successfully completed English prior to beginning studies in those areas. Third, the program provides the necessary courses for the Associate of Arts Degree. And

fourth, the ESOL program provides training in English language development through the academic study of grammar, writing, listening and speaking, reading, and critical thinking, culminating in the award of an advanced ESOL Certificate of Performance.

Faculty	Office	Telephone
Allen Andersen	C-202E	619-388-7535
Adrian Arancibia	B-301A	619-388-7421
Clara Blenis	C-202C	619-388-7533
Sheryl Gobble	B-301D	619-388-7428
Rich Halliday	B-403H	619-388-7517
Carmen Jay	C-202B	619-388-7532
Linda Lee	C-202O	619-388-7512
Lisa Munoz	B-302C	619-388-7360
Cheryl Reed	C-202F	619-388-7536
Mark Manasse	B-302C	619-388-7237

### Career Options

English serves as essential preparation for individuals preparing for careers in teaching, law, medicine, and business. For teachers, English provides training in the very skills—reading, writing and thinking—that every student must use at any level and in every field. For law and medicine, English provides solid preparation for the professional tasks of reading comprehension, recognition and recall of ideas and details, and analysis of cases. For those who seek a career in business, English provides the thinking, writing, and analytical skills private industry is seeking and that small business success depends on. In addition, the field of English serves the “service professions” in government, health, and social work, as well as any field requiring the use of written communications and technical manuals. Lastly, English prepares students for such “words delivery” professions as journalism, writing, publishing, translating, media and broadcasting, theater, and librarianship.

### 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.

### Transfer Information

**Common university majors related to the field of English include:** Creative Writing, English, Language Studies, Linguistics, Literature.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an emphasis in English/Literature Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Performance: Advanced ESOL\*

The English for Speakers of Other Languages Program consists of four levels: L19 is a combined skills class in a lecture/lab format. The L20 and L30 levels are composed of three courses. The grammar-writing component is a six-unit course and the reading and listening/speaking components are three units each. Level 40 is a single course in reading and writing. Students who successfully work through the program and complete ESOL 40 can read and write at an advanced ESOL level.

Students must complete 15 units in ESOL with a grade of “C” or better. ESOL 40 (6 units) is required with at least 9 additional units in ESOL from level 30 courses. Students must complete ESOL 40 with a grade of “C” or better complete at least 9 units from ESOL 30, 31, or 32.

Courses:	Units
ESOL 040, Reading & Writing for Non-Native Speakers of English III .....	6
<b>Select nine-units from:</b>	
ESOL 030, Writing for Non-native Speakers of English II.....	6
ESOL 031, Reading for Non-native Speakers of English II <b>or</b>	
ESOL 032, Listening and Speaking for Non-Native Speakers of English II.....	3
	<b>Total Units = 15</b>

\*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: English

This degree is not intended for transfer.

Courses Required for the Major:	Units
ENGL 101, Reading and Composition <b>or</b>	
ENGL 105, Composition and Literature.....	3
*ENGL 205, Critical Thinking and Intermediate Composition .....	3
ENGL 215, English Literature I: 800-1799 .....	3
ENGL 216, English Literature II: 1800-Present .....	3
<b>**Select three units from:</b>	
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
<b>**Select three units from:</b>	
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
<b>Total Units = 18</b>	

\*Meets SDSU/CSU critical thinking requirement.

\*\*Recommended series for UC transfer.

Not all courses are offered at each campus.

For graduation requirements see **Associate Degree Requirements** on page 66.

**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.

**Note: Some courses are not currently offered at Miramar, but are offered at City and/or Mesa Colleges. Please see a counselor.**

## Associate in Arts Degree: English/Literature Studies

This degree is is intended for transfer.

The Associate in Arts degree with an area of emphasis in English/Literature Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in an English- or literature-related major. Common university majors in this field include: Creative Writing, English, Language Studies, Linguistics, and Literature.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

Courses Required for the Major:	Units
ENGL 101, Reading and Composition <b>or</b>	
ENGL 105, Composition and Literature.....	3
ENGL 205, Critical Thinking and Intermediate Composition.....	3

**Select twelve units from the following:**

BLAS 140A, History of the U.S., Black Perspectives	
CHIL 101, Human Growth and Development	
ENGL 208, Introduction to Literature	
ENGL 210, American Literature I	
ENGL 211, American Literature II	
ENGL 215, English Literature I: 800-1799	
ENGL 216, English Literature II: 1800-Present	
ENGL 220, Masterpieces of World Literature I: 1500 BCE-1600 CE	
ENGL 221, Masterpieces of World Literature II: 1600- Present	
ENGL 230, Asian American Literature	
ENGL 237, Women in Literature	
ENGL 249, Introduction to Creative Writing	
HIST 109, History of the United States I	
HIST 141, Women in the United States History I	
HUMA 201, Mythology	
JOUR 202, Introduction to Mass Communication	
POLI 102, The American Political System	
PSYC 101, General Psychology	
SPEE 103, Oral Communication .....	12
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is

also accepted by some private/independent or out of state universities.

- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

## **Exercise Science**

See "Physical Education" on page 174.

## **Filipino**

See "World Language Studies" on page 188.

# **Fire Protection Technology**

**Fire - Emergency Medical -Lifeguards**

	<b>Units</b>
<b>Certificate of Achievement:</b>	
Fire Prevention	30.5
Fire Protection	32.5
Fire Technology	33.5
Open Water Lifeguard Professional	30.5-32.5
<b>Associate in Science Degree:</b>	
Fire Prevention	30.5*
Fire Protection	32.5*
Fire Technology	33.5*
Open Water Lifeguard Professional	24.5-26.5*
Occupational/Technical Studies	18*
(see page 169)	
*and electives as needed to meet minimum of 60 units required for the degree.	

### **Description**

The Fire Protection Technology department offers programs in a wide range of subject areas related to careers in the fields associated with the technology of fire protection, rescue, and public safety employment. This program provides theory and training necessary for successful performance in a variety of settings and positions. Emphasis is placed on modern methods of fire prevention, fire suppression, fire service management, and public safety. Public and private fire protection systems, life safety of fire service personnel and civilians, protection of property through the application of code enforcement, and the increasing problems of hazardous materials, emergency medical services, rescue, urban interface, and arson are studied.

### **Program Learning Outcomes**

Program options in the Fire Protection Technology department include Certificates of Achievement and Associate Degrees in Fire Protection, Fire Prevention, and Open Water Lifeguard Professional. The students are required to complete 33.5 units of fire protection technology courses for the Associate Degree. Fire Protection Technology 100A, 101,102,103, 104, 105 and EMGM 105 are core courses for the certificate or

degree program. It is highly recommended that pre-employment students concentrate on taking 100 level courses. Students planning to complete the California State Board of Fire Services Certification for Fire Officer should take the following courses: Fire Protection Technology 200A, 200B, 200C, 201, 202A, 202B, 203A, 204A, 204B, 310A, and 310B.

Faculty	Office	Telephone
Darren Hall	479-4	(619) 221-2145
Marty Walsh	479-2	(619) 221-2146
Mary Kjartanson	479-3	(619) 221-2144

### Career Options

A number of career options are accessible in the Fire Protection Technology and Public Safety fields. These employment positions are primarily in the public sector. However, the private sector provides employment opportunities that include but are not limited to: Fire insurance inspectors and investigators, Fire protection systems installers, Emergency medical services providers, Hazardous materials mitigation, Lifeguarding, and Fire protection engineering. SAN DIEGO FIRE DEPARTMENT TRAINING ACADEMY: The San Diego City Fire Department trains firefighter recruits in a 14 week, 9 unit, Fire Academy (FIPT 381) that is operated in conjunction with Miramar College. In each Fire Academy, usually 4 to 6 recruits are chosen by a lottery system from a pool of Miramar College Students. These 'Open Enrollee' students earn no salary while in the Academy. To be eligible for the Open Enrollee lottery, students must be on the current San Diego Fire Department's eligibility list. Requirements may change with each series of Academy Classes. Details are available in the Fire Technology Department office.

### Academic Programs

Fire Protection Technology, Certificates of Achievement and Associate Degrees require completion of courses listed after each option. Additional general education and graduation requirements for the associate degree are listed in the catalog.

### San Diego Fire Department Training Academy

The San Diego City Fire Department trains firefighter recruits in a 14 week, 9 unit, Fire Academy (FIPT 381) that is operated in conjunction with Miramar College. In each Fire Academy, usually 4 to 6 recruits are chosen by a lottery system from a pool of Miramar College Students. These "Open Enrollee" students earn no salary while in the Academy. To be eligible for the Open Enrollee lottery, students must be on the current San Diego Fire Department's eligibility list.

Requirements may change with each series of Academy Classes. Details are available in the Fire Technology Department office.

### Transfer Information

#### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Achievement: Fire Protection Technology

#### Fire Prevention

Courses Required for the Major:	Units
ENGL 101, Reading and Composition .....	3
FIPT 101, Fire Protection Organization .....	3
FIPT 102, Fire Prevention Technology .....	3
FIPT 103, Fire Protection Equipment and Systems ....	3
FIPT 104, Building Construction for Fire Protection .....	3
FIPT 105, Fire Behavior and Combustion .....	3
FIPT 202A, Fire Prevention IA .....	2
FIPT 202B, Fire Prevention IB .....	2
FIPT 202C, Fire Prevention IC .....	2
FIPT 203A, Fire Investigation IA .....	2
FIPT 205, Public Education I .....	2
ADJU 356A, 832 PC Laws of Arrest .....	2.5
<b>Total Units = 30.5</b>	

### Certificate of Achievement: Fire Protection Technology

#### Fire Protection

Courses Required for the Major:	Units
FIPT 200A, Fire Command IA.....	2
FIPT 200B, Fire Command IB.....	2
FIPT 200C, Fire Command 1C.....	1.5
FIPT 201, Fire Management I .....	2
FIPT 202A, Fire Prevention IA .....	2
FIPT 202B, Fire Prevention IB .....	2

FIPT 203A, Fire Investigation IA .....	2
FIPT 204A, Instructor Training IA .....	2
FIPT 204B, Instructor Training IB .....	2
FIPT 381F, Basic Fire Fighter 1 Academy .....	9
EMGM 105, Emergency Medical Technician - National Registry or	
FIPT 130, Emergency Medical Technician-State Fire Marshal .....	6
<b>Total Units = 32.5</b>	

**Certificate of Achievement:  
Fire Protection Technology**

**Fire Technology**

<b>Courses Required for the Major:</b>	<b>Units</b>
FIPT 100A, Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning) .....	3.5
FIPT 101, Fire Protection Organization .....	3
FIPT 102, Fire Prevention Technology .....	3
FIPT 103, Fire Protection Equipment and Systems ....	3
FIPT 104, Building Construction for Fire Protection .	3
FIPT 105, Fire Behavior and Combustion .....	3
FIPT 107, Fire Fighting Tactics and Strategy .....	3
FIPT 109, Fire Service Hydraulics .....	3
FIPT 110, Wildland Fire Control .....	3
EMGM 105, Emergency Medical Technician - National Registry or	
FIPT 130, Emergency Medical Technician-State Fire Marshal .....	6

**Total Units =33.5**

**Certificate of Achievement:  
Fire Protection Technology**

**Open Water Lifeguard Professional**

<b>Courses Required for the Major:</b>	<b>Units</b>
FIPT 115, Low Angle Rescue .....	0.5
FIPT 121, Vertical Rescue .....	1
EMGM 105, Emergency Medical Technician- National Registry .....	6
FIPT 160, Introduction to Open Water Lifeguarding ..	3
FIPT 161, Inflatable Rescue Boat Operations .....	1.5
FIPT 163, Personal Watercraft Operations .....	1
FIPT 204A, Instructor Training 1A.....	2
FIPT 204B, Instructor Training 1B.....	2
FIPT 243, Rescue Systems I .....	1.5
FIPT 308A, Confined Space Operations.....	1

FIPT 311M, Swiftwater Rescue Technician I.....	1
ADJU 102, Criminal Law I.....	3
ADJU 167, Report Writing .....	3
ADJU 361, Current Issues for Advanced Officers .....	0.5-2.5
ADJU 356A, 832 PC Laws of Arrest.....	2.5
ADJU 356B, 832 PC Firearms.....	1
<b>Total Units = 30.5-32.5</b>	

**Associate in Science Degree:  
Fire Protection Technology**

**Fire Prevention**

<b>Courses Required for the Major:</b>	<b>Units</b>
ENGL 101, Reading and Composition .....	3
FIPT 101, Fire Protection Organization .....	3
FIPT 102, Fire Prevention Technology .....	3
FIPT 103, Fire Protection Equipment and Systems ...	3
FIPT 104, Building Construction for Fire Protection .	3
FIPT 105, Fire Behavior and Combustion .....	3
FIPT 202A, Fire Prevention IA .....	2
FIPT 202B, Fire Prevention IB .....	2
FIPT 202C, Fire Prevention IC .....	2
FIPT 203A, Fire Investigation IA .....	2
FIPT 205, Public Education I .....	2
ADJU 356A, 832 PC Laws of Arrest .....	2.5
<b>Total Units =30.5</b>	

**Associate in Science Degree:  
Fire Protection Technology**

**Fire Protection**

<b>Courses Required for the Major:</b>	<b>Units</b>
FIPT 200A, Fire Command IA.....	2
FIPT 200B, Fire Command IB.....	2
FIPT 200C, Fire Command 1C.....	1.5
FIPT 201, Fire Management I .....	2
FIPT 202A, Fire Prevention IA .....	2
FIPT 202B, Fire Prevention IB .....	2
FIPT 203A, Fire Investigation IA .....	2
FIPT 204A, Instructor Training IA .....	2
FIPT 204B, Instructor Training IB .....	2
FIPT 381F, Basic Fire Fighter 1 Academy .....	9
EMGM 105, Emergency Medical Technician - National Registry or	
FIPT 130, Emergency Medical Technician-State Fire Marshal .....	6
<b>Total Units = 32.5</b>	

## Associate in Science Degree: Fire Protection Technology

### Fire Technology

Courses Required for the Major:	Units
FIPT 100A, Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning) ..	3.5
FIPT 101, Fire Protection Organization .....	3
FIPT 102, Fire Prevention Technology .....	3
FIPT 103, Fire Protection Equipment and Systems ....	3
FIPT 104, Building Construction for Fire Protection .	3
FIPT 105, Fire Behavior and Combustion .....	3
FIPT 107, Fire Fighting Tactics and Strategy .....	3
FIPT 109, Fire Service Hydraulics .....	3
FIPT 110, Wildland Fire Control .....	3
EMGM 105, Emergency Medical Technician - National Registry <b>or</b>	
FIPT 130, Emergency Medical Technician-State Fire Marshal .....	6
<b>Total Units = 33.5</b>	

## Associate in Science Degree: Fire Protection Technology

### Open Water Lifeguard Professional

Courses Required for the Major:	Units
FIPT 115, Low Angle Rescue .....	0.5
FIPT 121, Vertical Rescue .....	1
EMGM 105, Emergency Medical Technician-National Registry .....	6
FIPT 160, Introduction to Open Water Lifeguarding ..	3
FIPT 204A, Instructor Training 1A.....	2
FIPT 204B, Instructor Training 1B.....	2
FIPT 311M, Swiftwater Rescue Technician I .....	1
ADJU 102, Criminal Law I.....	3
ADJU 167, Report Writing .....	3
ADJU 356A, 832 PC Laws of Arrest.....	2.5
ADJU 361, Current Issues for Advanced Officers .....	0.5-2.5
<b>Total Units = 24.5-26.5</b>	

# Geography

Associate in Arts Degree:	Units
Social and Behavioral Sciences (see page 184)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

**Description**

Geography is a discipline classified as a natural science. It generally involves living and non-living materials and the principles of fundamental relationships and laws governing man in relationship to environment.

**Program Learning Outcomes**

The curriculum prepares students with basic concepts in geography, which provide the foundation for a degree at a baccalaureate institution. These courses also satisfy general education requirements at both the two and four-year institutions.

Faculty	Office	Telephone
Thomas Schilz	B-302A	619-388-7500

**Career Options**

Most careers in this discipline require education beyond the associate degree level. Bachelor degrees in geography prepare students for careers such as: environmental and planning agencies, consulting and cartographic firms, and non-profit organizations.

**Transfer Information**

**Common university majors related to the field of Geography include:** Earth Studies and Sciences, Geographic Information Systems, Geography, Geology, Hydrologic Science, Meteorology and Oceanography, Physical Science.

**Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the

appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see page 184). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Geology

See "Physical Science" on page 176.

# History

	Units
<b>Associate in Arts Degree:</b>	
Social and Behavioral Sciences (see page 184)	18*
*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 four-year institutions, American Institutions requirements, Social Sciences, and preparation for transfer to a four-year institution.

## Program Learning Outcomes

The study of history develops cultural literacy, critical thinking, and other useful skills. The curriculum prepares students who wish to transfer into a baccalaureate degree program at a college or university. In addition, some of these courses fulfill requirements for general education and American Institutions at both the community and four-year colleges.

Faculty	Office	Telephone
Parvine Ghaffari	B-302E	619-388-7507
Daniel Igou	B-302-A2	619-388-7646
Thomas Schilz	B-302A	619-388-7500

## Career Options

Most careers related to this discipline require education beyond the associate degree level. A bachelor's degree in history is a common preparation for application to law school. With advanced specialized coursework students may enter careers such as: teaching, historical research, or museum work.

**Transfer Information**

**Common university majors related to the field of History include:** Art History, History

**Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see page 184). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

# Humanities

	<b>Units</b>
<b>Associate in Arts Degree:</b>	
Humanities Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

**Description**

The study of humanities offers students a broad, interdisciplinary understanding of humankind's cultural heritage. This study includes: history, literature, philosophy, religion, and the arts. The goal of this major is to provide an interdisciplinary understanding of ideas and forms of expression that exert a major influence on civilization. The humanities provide a broadly-based education for many careers.

**Program Learning Outcomes**

The curriculum is intended to prepare students for advanced degrees at a baccalaureate institution. In addition it may also meet requirements for general education at both the two and four-year colleges and universities.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Paula Carrier	B-403I	619-388-7518

**Career Options**

Most careers related to this discipline require education beyond the associate degree level. Humanities degrees are for students who wish to base their careers on broad knowledge of American and world cultures. This major is applicable to posts in government, business, education, and the arts. Additional specialized training can lead to careers in foreign career service, museum work or teaching.

**Transfer Information**

**Common university majors related to the field of Humanities include:** Art History, Classics, Creative Writing, English, Film Studies, Geography, Humanities,

Interdisciplinary Studies, Liberal Studies, Religious Studies.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Humanities Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Arts Degree: Humanities Studies

The Associate in Arts degree with an area of emphasis in Humanities Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a humanities-related major. Common university majors in this field include: American Studies, Classics, Ethics, Humanities, Philosophy, and Religious Studies.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

Courses Required for the Major:	Units
PHIL 205, Critical Thinking and Writing in Philosophy.....	3

#### Select at least 15 units from the following:

ANTH 103, Introduction to Cultural Anthropology  
 ARTF 113, African, Oceanic, and Native American Art  
 ARTF 125, History of Art: Far Eastern Art  
 BLAS 140A, History of the U.S., Black Perspectives  
 BLAS 140B, History of the U.S., Black Perspectives  
 ENGL 208, Introduction to Literature  
 ENGL 210, American Literature I  
 ENGL 211, American Literature II  
 ENGL 220, Masterpieces of World Literature I: 1500  
 BCE-1600 CE  
 ENGL 221, Masterpieces of World Literature II: 1600-  
 Present  
 HIST 100, World History I  
 HIST 101, World History II

HIST 105, Introduction to Western Civilization	
HIST 109, History of the United States I	
HIST 110, History of the United States II	
HIST 141, Women in the United States History I	
HIST 142, Women in the United States History II	
HUMA 101, Introduction to the Humanities	
HUMA 102, Introduction to the Humanities II	
HUMA 201, Mythology	
MUSI 100, Introduction to Music	
MUSI 109, World Music	
PHIL 100, Logic and Critical Thinking	
PHIL 101, Symbolic Logic	
PHIL 102A, Introduction to Philosophy: Reality and Knowledge	
PHIL 102B, Introduction to Philosophy: Values	
POLI 102, The American Political System .....	15
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### Transfer Information

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses

may be required to meet university lower-division requirements. *Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.*

## Human Development

See "Child Development" on page 132.

# Interdisciplinary Studies

	Units
<b>Certificate of Performance</b>	
Honors Global Competencies Certificate	15-17
<b>Certificate of Achievement:</b>	
CSU General Education-Breadth	39-40
Intersegmental General Education Transfer (IGETC)	37-40

### Description

Interdisciplinary Studies is a general term referring to instructional programs that incorporate coursework from a variety of different subject areas. The Interdisciplinary Studies program includes certificates designed to provide a broad exposure to a variety of subject areas.

### Program Learning Outcomes

The Interdisciplinary Studies program is designed to prepare students to transfer to a four-year university and/or to gain a broad exposure to a variety of subject areas.

## General Education Certificates

The Certificate of Achievement in CSU General Education - Breadth and the Certificate of Achievement in Intersegmental General Education Transfer (IGETC) are designed for students who intend to complete university general education requirements prior to transfer to a California State University (CSU) or University of California (UC) campus.

General education (GE) is a set of courses from a variety of different subject areas that every student must complete in order to earn a degree, regardless of major. The goal is to provide a well-rounded or "liberal" education and to develop the knowledge, skills, and

attitudes that together help make up an educated person. The completion of GE prior to transfer is not required for admission to most universities. However, it is usually in the students' best interest to complete an appropriate transfer GE pattern at the community college. This is because GE requirements that are not fulfilled prior to transfer must be completed later at the university, which often extends the time and expense of a university education.

**Certificate of Achievement:  
CSU General Education - Breadth**

The student will select courses that fulfill the CSU GE certification pattern detailed on page 93 of this catalog. CSU GE is accepted by all CSU campuses and some private / independent or out of state universities. CSU GE is not accepted by the UC system.

**Total units = 39-40**

**Certificate of Achievement:  
Intersegmental General Education  
Transfer (IGETC)**

The student will select courses that fulfill the IGETC certification pattern detailed on page 84 of this catalog. IGETC is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private / independent or out of state universities.

**Total units = 37-40**

**Transfer Information**

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. Additional courses may be required to meet university lower-division requirements. *Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.*

**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 Performance:  
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, Music 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
<b>Select 3 units from the following:</b>	
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.

## Legal Assistant

See "Paralegal" on page 172.

# Mathematics

### Associate in Arts Degree:

Mathematics Studies	18*
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\*and electives as needed to meet minimum 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 objects, 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 Learning Outcomes

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 this curriculum 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 as well as providing a firm foundation for students planning advanced study in mathematics, engineering, or physical sciences.

Faculty	Office	Telephone
Francois Bereaud	I-102E2	619-388-7503
Michael Charles	I-104C	619-388-7704
Tim Hempleman	I-102A	619-388-7688
Yolanda James	I-104B	619-388-7690
Carol Murphy	I-102B	619-388-7681
Crystal Rust	B-403B	619-388-7349
Wayne Sherman	I-102A	619-388-7689
Harvey Wilensky	B-403A	619-388-7510

### 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.

### Transfer Information

**Common university majors related to the field of Mathematics include:** Applied Mathematics, Cognitive Science, Mathematics, Statistics.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Mathematics Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Arts Degree: Mathematics Studies

The Associate in Arts degree with an area of emphasis in Mathematics Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a mathematics-related major. Common university majors in this field include: Applied Mathematics, Cognitive Science, Computer Science, Information Systems, Mathematics, Mathematics Education, and Statistics.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree

should be selected with the assistance of a Miramar College counselor.

### Courses Required for the Major: Units

MATH 150, Calculus with Analytic Geometry I.....	5
MATH 151, Calculus with Analytic Geometry II.....	4
MATH 252, Calculus with Analytic Geometry III .....	4

### Select at least five units from the following:

ACCT 116A, Financial Accounting	
ACCT 116B, Managerial Accounting	
BIOL 210A, Introduction to the Biological Sciences I	
BIOL 210B, Introduction to the Biological Sciences II	
CHEM 200, General Chemistry I Lecture	
CHEM 200L, General Chemistry I Laboratory	
CISC 181, Principles of Information Systems	
CISC 186, Visual Basic Programming	
CISC 189A, Introduction to Programming I	
CISC 189B, Introduction to Programming II	
CISC 190, Java Programming	
CISC 192, C/C++ Programming	
CISC 205, Object Oriented Programming Using C++	
CISC 210, System Analysis and Design	
ECON 120, Principles of Economics I	
ECON 121, Principles of Economics II	
GEOL 100, General Geology	
GEOL 101, General Geology Laboratory	
MATH 119, Elementary Statistics	
MATH 245, Discrete Mathematics	
MATH 254, Introduction to Linear Algebra	
MATH 255, Differential Equations	
PHIL 100, Logic and Critical Thinking	
PHIL 101, Symbolic Logic	
PHYN 100, Survey of Physical Science	
PHYS 195, Mechanics	
PHYS 196, Electricity and Magnetism	
PHYS 197, Waves, Optics, and Modern Physics	
PSYC 101, General Psychology	
PSYC 258, Behavioral Science Statistics	
SOCO 101, Principles of Sociology.....	5

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Military Studies

	Units
<b>Certificate of Achievement:</b>	
Military Leadership	18
<b>Associate in Science Degree:</b>	
Military Leadership	18*
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

**Description**

The Military Leadership program provides a broad, interdisciplinary foundation in leadership and management skills with a focus on application to the U.S. military (Army, Navy, Air Force, and Marine Corps). It is intended primarily for students seeking leadership skills applicable at the Senior Noncommissioned Officer (E-6 to E-9), Warrant Officer (W-1 to W-5), or Company Grade / Junior Officer (O-1 to O-3) levels. The program may also be useful preparation for students seeking supervisory or management positions in public service, security, aviation, or maritime career fields, or for those seeking a commission through the Reserve Officer Training Corps or other university-affiliated commissioning program. All of the courses in the major are transferable to the California State University (CSU) system, and some fulfill lower division university transfer or graduation requirements.

**Program Learning Outcomes**

The Military Leadership program provides a broad, interdisciplinary foundation in leadership and management skills with a focus on application to the U.S. military. Students gain knowledge and skills in the following areas:

- The structure, organization, and practices of the U.S. military
- Leadership theory and application
- Military law and ethics

- Analytical reading, research, and writing
- The U.S. Constitution, political system, and governmental institutions

In addition, students complete a course relevant to the application of leadership principles (such as team dynamics, supervision, or management) and a “capstone” educational experience.

### Career Options

The Associate in Science Degree in Military Leadership provides knowledge and skills applicable to careers in the U.S. military at the Senior Noncommissioned Officer (E-6 to E-9), Warrant Officer (W-1 to W-5), and Company Grade / Junior Officer (O-1 to O-3) levels. It may also be useful preparation for students seeking leadership positions in public service, security, aviation, or maritime career fields.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Achievement: Military Leadership

<b>Courses Required for the Major:</b>	<b>Units</b>
MILS 101, Introduction to Military Science.....	2
MILS 110, Leadership Theory and Practice.....	3
MILS 120, Military Justice, Ethics, and the Law of Armed Conflict.....	3
MILS 200, Applied Military Leadership.....	1
ENGL 101, Reading and Composition .....	3
POLI 102, The American Political System .....	3

#### Select Three Units From:

AVIA 125, Aviation and Airport Management .....	3
AVIA 128, Group Dynamics for High Risk Teams .....	3
AVIA 228, Group Dynamics II .....	3
BUSE 201, Business Organization and Management...	3

MILS 270, Work Experience in Military Leadership .....	1-4
SUPR 101, Introduction to Supervision .....	3
SUPR 115, Management and Organization for Supervisors .....	3

**Total Units = 18**

SUPR 101 and SUPR 115 are offered at San Diego City College.

### Associate in Science Degree: Military Leadership

<b>Courses Required for the Major:</b>	<b>Units</b>
MILS 101, Introduction to Military Science .....	2
MILS 110, Leadership Theory and Practice.....	3
MILS 120, Military Justice, Ethics, and the Law of Armed Conflict .....	3
MILS 200, Applied Military Leadership.....	1
ENGL 101, Reading and Composition .....	3
POLI 102, The American Political System .....	3

#### Select Three Units From:

	<b>Units</b>
AVIA 125, Aviation and Airport Management .....	3
AVIA 128, Group Dynamics for High Risk Teams .....	3
AVIA 228, Group Dynamics II .....	3
BUSE 201, Business Organization and Management .....	3
MILS 270, Work Experience in Military Leadership .....	1-4
SUPR 101, Introduction to Supervision .....	3
SUPR 115, Management and Organization for Supervisors .....	3

#### Recommended Communication And Analytical Thinking General Education Course:

	<b>Units</b>
CISC 181, Principles of Information Systems <b>or</b> SPEE 103, Oral Communication <b>or</b> SPEE 135, Interpersonal Communication .....	3-4

#### Recommended Natural Sciences General Education Course:

	<b>Units</b>
GEOG 101, Physical Geography <b>or</b> PHYN 120, Physical Oceanography .....	3

#### Recommended Humanities General Education Course:

	<b>Units</b>
ARAB 101, First Course in Arabic <b>or</b> HUMA 106, World Religions <b>or</b> SPAN 101, First Course in Spanish <b>or</b> SPAN 215, Spanish for Spanish Speakers I <b>or</b> TAGA 101, First Course in Tagalog.....	3-5

#### Recommended Social And Behavioral Sciences General Education Course:

	<b>Units</b>
BLAS 140A, History of the U.S., Black Perspectives <b>or</b> CHIC 141A, United States History from a Chicano Perspective <b>or</b> HIST 109, History of the United States I <b>or</b>	

HIST 115A, History of the Americas I or  
 HIST 141, Women in United States History I or  
 HIST 150, Native Americans in United States  
 History..... 3  
**Total Units = 18**

For graduation requirements see **Associate Degree Requirements** on page 66.

**Electives as needed to meet minimum of 60 units required for the degree.**

**Recommended Electives:** Geography 102, 104; History 130; Political Science 140; Sociology 223; Speech 180

# Music

	Units
<b>Certificate of Performance:</b>	
Music Production and Engineering	15
<b>Associate in Arts Degree:</b>	
Music Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

**Description**  
 The academic program in Music Production and Engineering has been designed to provide students with the basic skills for engineering, recording, mixing and producing music for various music and audio industry recording fields. The program also provides students with skills in basic musicianship, theory, ear training and music business.

**Program Learning Outcomes**  
 While the music curriculum is small, it offers course work that meets the humanities requirement for general education for both the associate degree and baccalaureate degrees. In addition, students can pursue the development of skills in basic musicianship and electronic music.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Channing Booth	B-403B	619-388-7511
Mark Hertica	B-302-B2	619-388-7531

**Program Emphasis**  
 The Music Production and Engineering Program prepares students for work in the music and audio recording and production industries. This program enables students to earn an Associate Degree and have the qualified skills necessary to find employment upon completion.

**Career Options**  
 Examples of entry level employment options after successful completion of the program include: recording, mixing, composition, and/or production of music for music CDs, film, video, music videos, jingles,

radio, television and multimedia projects. Other career options include audio visual technician, home theater audio consultant, designer and/or installer. 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.

**Transfer Information**

**Common university majors related to the field of Music include:** Creative Studies, Music, Music Business, Music Education, Music Performance, Musical Theater.

**Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Music Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

**Certificate of Performance:**

**Music Production and Engineering\***

The Certificate of Performance in Music Production and Engineering prepares students with a solid foundation in digital recording, mixing and mastering 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.

<b>Courses:</b>	<b>Units</b>
MUSI 190, The Electronic Music Studio .....	3
MUSI 201, Recording Arts .....	3
MUSI 202, Computer Music .....	3
MUSI 205A, Projects in Electronic Music .....	3
MUSI 205B, Projects in Electronic Music .....	3
<b>Total Units = 15</b>	

\*This is a department award in recognition of information on the transcript and does not imply that a graduation requirement has been met.

The Certificate of Performance in Music Production and Engineering includes only the core technology courses excluding the fundamental music skills courses and general education courses of the higher level programs.

**Associate in Arts Degree:  
Music Studies**

The Associate in Arts degree with an area of emphasis in Music Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in music-related major. Common university majors in this field include: Creative Arts, Music, Music Business, Music Education, and Music Performance.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

<b>Courses Required for the Major:</b>	<b>Units</b>
MUSI 100, Introduction to Music .....	3

**Select at least 15 units, including at least two MUSI courses, from the following:**

BUSE 140, Business Law and the Legal Environment	
ENGL 105, Composition and Literature	
ENGL 205, Critical Thinking and Intermediate Composition	
MUSI 108, The Business of Music	
MUSI 109, World Music	
MUSI 110, Music for Elementary School Teachers	
MUSI 111, Jazz-History and Development	
MUSI 120, Beginning Voice Class	
MUSI 150A, Basic Musicianship	
MUSI 158A, Music Theory I	
MUSI 190, The Electronic Music Studio	
MUSI 201, Recording Arts	
MUSI 202, Computer Music	
MUSI 252, Concert Jazz Band	
MUSI 268A, Beginning Ear Training Laboratory I	
PSYC 101, General Psychology .....	15

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

## Occupational/ Technical Studies

	Units
<b>Associate in Science Degree:</b>	
Occupational/Technical Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

### **Description**

The field of Occupational/Technical Studies encompasses a variety of subject areas that provide specialized skills applicable to transfer students entering an applied or technical field of study.

### **Program Learning Outcomes**

The Occupational/Technical Studies program is designed to prepare students to transfer to a four-year university in an applied or technical-related discipline.

### **Career Options**

This program is designed to prepare students for applied or technical education beyond the associate degree level.

### **Transfer Information**

Common university majors related to the field of Occupational/Technical Studies include: Aviation and Aerospace Engineering, Aviation Management, Criminal Justice/Justice Studies, Fire Protection Administration, Industrial Technology, Manufacturing Technology, Vocational Education.

### **Course Requirements for Transfer Students**

Students who plan to transfer to a four-year college or university in this field should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on

transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Science Degree: Occupational/Technical Studies

The Associate in Science degree with an area of emphasis in Occupational/Technical Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in an occupational- or technical-related major. Common university majors in this field include: Aviation and Aerospace Engineering, Aviation Management, Criminal Justice / Justice Studies, Fire Protection Administration, Industrial Technology, Manufacturing Technology, and Vocational Education.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

#### Courses Required for the Major: Units Select at least one course from the following occupational courses:

ACCT 120, Federal Income Tax  
ACCT 150, Computer Accounting Applications  
ADJU 101, Introduction to Administration of Justice  
ADJU 101A, Introduction to Administration of Justice I  
ADJU 101B, Introduction to Administration of Justice II  
ADJU 101C, Introduction to Administration of Justice III  
ADJU 102, Criminal Law I  
ADJU 106, Diversity and Community Relations  
ADJU 140, Patrol Procedures  
ADJU 160, Criminal Law II  
ADJU 161, Juvenile Procedures  
ADJU 162, Criminal Investigation  
ADJU 167, Report Writing  
ADJU 201, California Criminal Procedure  
ADJU 210, Rules of Evidence  
BANK 102, Mortgage Brokerage and Banking  
BANK 104, Principles of Loan Processing  
BANK 106, Loan Underwriting  
BANK 108, Principles of Loan Closing  
BUSE 101, Business Mathematics  
BUSE 102, Introduction to Customer Service  
BUSE 150, Human Relations in Business  
HEAL 131, First Aid  
LEGL 100A, Introduction to Paralegalism  
LEGL 100B, Legal Procedures

LEGL 105, Legal Research  
LEGL 110, Legal Writing and Communications  
LEGL 115, Civil Litigation I  
LEGL 120, Civil Litigation II-Torts  
LEGL 180, Contract Law  
MILS 101, Introduction to Military Science  
MILS 110, Leadership Theory and Practice  
MILS 120, Military Justice, Ethics, and the Law of Armed Conflict  
MILS 200, Applied Military Leadership  
PERG 130, Career-Life Planning  
PHYE 139, Lifeguard Training-Advanced Swimming  
PHYE 164, Water Safety Instructor  
REAL 101, Real Estate Principles  
REAL 105, Legal Aspects of Real Estate I  
REAL 110, Principles of Real Estate Appraisal I  
REAL 115, Real Estate Finance I  
REAL 120, Real Estate Practice  
REAL 125, Real Estate Economics  
REAL 130, Real Property Management  
REAL 140, Real Estate Appraisal II..... 1-17  
**Select at least one course and the remainder of units needed to meet the minimum of 18 from the following technical courses:**  
AVIA 101, Private Pilot Ground School  
AVIA 105, Introduction to Aviation and Aerospace  
AVIA 125, Aviation and Airport Management  
AVIA 128, Group Dynamics, Teams Under Stress  
AVIA 133, Human Factors in Aviation  
AVIA 151, Helicopter Pilot Ground School  
AVIA 228, Group Dynamics II  
AVIM 101G, General Aviation Technology Theory I  
AVIM 101H, General Aviation Technology Theory II  
AVIM 102G, General Aviation Maintenance Technology Practices I  
AVIM 102H, General Aviation Maintenance Technology Practices II  
AVIM 103B, Aircraft Welding and Sheetmetal Structures  
AVIM 103D, Aircraft Landing Gear Systems  
AVIM 104B, Applied Aircraft Welding and Sheetmetal Structures  
AVIM 104D, Applied Aircraft Landing Gear Systems  
AVIM 105A, Aircraft Cabin Atmosphere Control  
AVIM 106A, Aircraft Cabin Atmosphere Control  
AVIM 107B, Turbine Engines  
AVIM 108B, Turbine Engines Laboratory  
AVIM 109A, Airframe Electrical Systems  
AVIM 109B, Powerplant Ignition Systems  
AVIM 109D, Aircraft Fire Protection and Digital Logic  
AVIM 110A, Airframe Electrical Systems Laboratory  
AVIM 111C, Reciprocating Engines I  
AVIM 111D, Reciprocating Engines II  
AVIM 112C, Applied Reciprocating Engines I  
AVIM 112D, Applied Reciprocating Engines II

AVIM 120, Basic D.C. Electronics Theory	
AVIM 121A, Applied Basic D.C. Electronics	
AVIM 249, Induction and Fuel Metering	
BIOL 131, Introduction to Biotechnology	
BIOL 132, Applied Biotechnology I	
BIOL 133, Applied Biotechnology II	
BIOL 134, Introduction to the Biotechnology Lab	
CBTE 101, Keyboarding for Computers	
CBTE 114, Introduction to Microsoft Windows	
CBTE 120, Beginning Microsoft Word	
CBTE 122, Intermediate Microsoft Word	
CBTE 126, Document Processing	
CBTE 127, Introduction to PowerPoint	
CBTE 140, Microsoft Excel	
CBTE 153, Database Development with Access	
CBTE 162, Web Page Creation	
CBTE 164, Introduction to Microsoft Outlook	
CBTE 165, Webpage Creation with Dreamweaver	
CBTE 170, Desktop Publishing	
CBTE 173, Introduction to E-Commerce	
CBTE 180, Microsoft Office	
EMGM 105, Emergency Medical Technician-National Registry	
EMGM 106, Emergency Medical Technician-Defibrillation/Combitude	
FIPT 100A, Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning)	
FIPT 101, Fire Protection Organization	
FIPT 102, Fire Prevention Technology	
FIPT 103, Fire Protection Equipment and Systems	
FIPT 104, Building Construction for Fire Protection	
FIPT 105, Fire Behavior and Combustion	
FIPT 106, Truck Company Operations	
FIPT 107, Fire Fighting Tactics and Strategy	
FIPT 109, Fire Service Hydraulics	
FIPT 110, Wildland Fire Control	
FIPT 114A, Shipboard Fire Control	
FIPT 119, Aircraft Fire Control	
FIPT 160, Introduction to Open Water Lifeguarding .....	0.5-17
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Paralegal

## Legal Assistant

	Units
<b>Certificate of Achievement:</b>	
Paralegal	30-36
<b>Associate in Science Degree:</b>	
Paralegal	30-36*
Occupational/Technical Studies (see page 169)	18*
*and electives as needed to meet minimum of 60 units required for the degree.	

### Description

Approved by the American Bar Association (ABA), the Paralegal program provides professional training with an emphasis on occupational competency. "A legal assistant or paralegal is a person, qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible." Paralegals adhere to recognized ethical standards and rules of professional responsibility.

### Program Emphasis

The Paralegal program offers both an Associate in Science degree and a Certificate of Achievement in compliance with the American Bar Association (ABA).

### Objectives of Program

To provide students with a post-secondary level of education which will prepare them for transfer to a 4 year university to continue their studies [and]

To provide practical training to students to be employed or retained as a paralegal professional by an attorney, law office, governmental agency, or other entity in the private or public sectors throughout the various jurisdictions in the United States [or] perform the duties of a paralegal.

### Program Director

The Program Director's office is located in A224. Any questions regarding program contact Program Director:

P. Darrel Harrison

619-388 7892

dharriso@sdccd.edu

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Occupational/Technical Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Residency Requirements

The Paralegal Program has been extremely cautious in its acceptance of transfer specialty credit from other institutions. All students must complete 18 units of paralegal major on Miramar's campus. Accredited institutions that are ABA approved may transfer up to 12 credits toward their major. Legal courses taken more than 5 years ago may not meet the current curriculum requirements and/or the current laws and procedures and thus may not be accepted as credit towards the major.

### Legal Assistant Core Curriculum

Courses Required for the Major:	Units
LEGL 100A, Introduction to Paralegalism .....	1
LEGL 100B, Legal Procedures .....	2
LEGL 105, Legal Research .....	3
LEGL 110, Legal Writing & Communications.....	3
LEGL 115, Civil Litigation I.....	3
LEGL 120, Civil Litigation II-Torts.....	3
LEGL 180, Contract Law.....	3
<b>Total Units =</b>	<b>18</b>



# Physical Education

	Units
<b>Certificate of Achievement:</b>	
Fitness Specialist	18
<b>Associate in Science Degree:</b>	
Health and Physical Education Studies	18*
*and electives as needed to meet minimum 60 units required for the degree.	

## Description

Physical Education is a discipline focusing on the relationship between physical activity and physical, mental, emotional, and social health. Physical activity courses teach movement skills, enhance fitness, and engender a lifestyle consistent with optimal wellness.

## Program Learning Outcomes

The Department of Physical Education offers an ever-increasing variety of activity courses. Boasting facilities that include a 32-acre complex of fields for softball, soccer, sand volleyball, and tennis, the Department also offers classes in a state of the art three pool aquatic complex. The recent curricular addition of lower division theory courses now allows students to pursue the Transfer Studies degree in Physical Education.

Faculty	Office	Telephone
Sean Bowers		
Nicolas Gehler	P-103A	619-388-7715
Kevin Petti	S5-101A	619-388-7491
Rod Porter	B-301C1	619-388-7442

## Career Options

Most Physical Education career options require baccalaureate degrees and some may require graduate degrees. Some of the exciting fields open to physical educators include: athletic trainer, fitness specialist, physical therapist, health/fitness club manager, physical education instructor, coach, athletic administrator, recreation director, resort activities director, and sports journalist.

## Transfer Information

**Common university majors related to the field of Physical Education include:** Exercise Science, Health Administration, Health Education, Health Sciences, Kinesiology, Physical Education, Pre-Physical Therapy, Recreation.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Health and Physical Education Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog

## Associate in Science Degree: Health and Physical Education Studies

The Associate in Science degree with an area of emphasis in Health and Physical Education Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a health- or exercise science-related major. Common university majors in this field include: Exercise Science, Health Sciences/Public Health, Kinesiology, Nutrition and Food Science, Occupational Health, Physical Education, Pre-Physical Therapy.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

## Courses Required for the Major: Units

**Select at least two courses from the following:**

HEAL 101, Health and Lifestyle	
HEAL 131, First Aid	
NUTR 150, Nutrition	
NUTR 170, Nutrition and Fitness	
PHYE 164, Water Safety Instructor	
PHYE 241, Introduction to Exercise Science/Physical Education	
PHYE 242, Care and Prevention of Injuries .....	4-19

**Select at least one course from the following:**

BIOL 107, General Biology-Lecture and Laboratory or  
 BIOL 210A, Introduction to the Biological Sciences I  
 BIOL 230, Human Anatomy  
 BIOL 235, Human Physiology .....4-12

**Select at least one course and the remainder of units needed to meet the minimum of 18 from the following:**

BIOL 130, Human Heredity  
 BIOL 135, Biology of Human Nutrition  
 BIOL 160, Elements of Human Anatomy and Physiology  
 BIOL 205, General Microbiology  
 BIOL 210B, Introduction to the Biological Sciences II  
 CHEM 100, Fundamentals of Chemistry  
 CHEM 100L, Fundamentals of Chemistry Laboratory  
 CHEM 130, Introduction to Organic and Biological Chemistry  
 CHEM 130L, Introduction to Organic and Biological Chemistry Laboratory  
 CHEM 200, General Chemistry I Lecture  
 CHEM 200L, General Chemistry I Laboratory  
 CHEM 201, General Chemistry II Lecture  
 CHEM 201L, General Chemistry II Laboratory  
 HEAL 101, Health and Lifestyle  
 HEAL 131, First Aid  
 MATH 116, College and Matrix Algebra  
 MATH 119, Elementary Statistics  
 MATH 121, Basic Techniques of Applied Calculus I  
 MATH 141, Precalculus  
 MATH 150, Calculus with Analytic Geometry I  
 PHYE 103, Aerobic Dance  
 PHYE 106, Aquatic Fitness  
 PHYE 112, Basketball  
 PHYE 115, Bowling  
 PHYE 120, Fencing  
 PHYE 123, Fitness Activities  
 PHYE 126, Golf  
 PHYE 132, Individual Conditioning  
 PHYE 135, Jazz Dance  
 PHYE 139, Lifeguard Training-Advanced Swimming  
 PHYE 140, Modern Dance  
 PHYE 141, Over-the-Line  
 PHYE 149, Soccer  
 PHYE 151, Softball  
 PHYE 154, Fitness Walking  
 PHYE 155, Swimming  
 PHYE 156, Water Exercise  
 PHYE 159, Tennis  
 PHYE 161, Volleyball  
 PHYE 163, Water Polo  
 PHYE 166, Weight Training  
 PHYE 204, Intercollegiate Basketball I  
 PHYE 205, Intercollegiate Basketball II  
 PHYE 214, Intercollegiate Soccer I

PHYE 215, Intercollegiate Soccer II  
 PHYE 216, Intercollegiate Softball I  
 PHYE 218, Intercollegiate Swimming  
 PHYE 219, Intercollegiate Swimming II  
 PHYE 220, Intercollegiate Tennis I  
 PHYE 221, Intercollegiate Tennis II  
 PHYE 224, Intercollegiate Volleyball I  
 PHYE 225, Intercollegiate Volleyball II  
 PHYE 226, Intercollegiate Water Polo I  
 PHYE 227, Intercollegiate Water Polo II  
 PHYE 232, Martial Arts  
 PHYE 233, Kickboxing  
 PHYE 240, Physical Education in the Elementary Schools  
 PHYS 125, General Physics  
 PSYC 101, General Psychology  
 PSYC 258, Behavioral Science Statistics  
 PSYC 260, Introduction to Physiological Psychology  
 SOCO 101, Principles of Sociology..... 0.5-10

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.*****Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses

may be required to meet university lower-division requirements. **Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.**

## Fitness Specialist

### Description

Students in this program will be trained as 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 for establishing healthy behavior and designing personalized exercise prescriptions. Students will be able to develop safe and effective exercise plans for a variety of clients.

The Fitness Specialist certificate program trains students for positions, entry-level or higher, in the growing fitness industry. Program graduates will be qualified to be exercise testing technicians, fitness instructors, strength training instructors, aerobic instructors, and personal fitness trainers.

This program prepares candidates for National Academy of Sports Medicine (NASM), American Council on Exercise (ACE), Aerobics and Fitness Association of America (AFAA), and the National Strength & Conditioning Association Certified Personal Trainer (NSCA-CPT) certification exams.

### Certificate of Achievement: 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
<b>Total Units = 19</b>	

## Physical Science

	Units
<b>Associate in Science Degree:</b>	
Earth Science Studies	18*
Physics Studies	19*
*and electives as needed to meet minimum 60 units required for the degree.	

### Description

Physical Science is the study of the physical environment, material things, matter, and energy. Students learn the principles that form the foundations of non-living systems and gain an understanding and appreciation of the methodologies of science as investigative tools.

### Program Learning Outcomes

The Physical Science program is designed to prepare students to transfer to a four-year university in a physical science-related discipline.

Faculty	Office	Telephone
Regina Bochicchio	S5-101D	619-388-7496
Sadayoshi Okumoto	S5-101H	619-388-7540

### Career Options

Careers related to this discipline typically require education beyond the associate degree level.

### Transfer Information

**Common university majors related to the field of Physical Science include:** Astronomy, Astrophysics, Biophysics, Chemical Physics, Earth Sciences, Engineering Physics, Environmental Sciences, Geographic Information Science, Geology, Hydrologic Sciences, Meteorology, Natural Sciences, Oceanography, Physical Geography, Physical Sciences, Physics.

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the

appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Earth Science Studies or Physics Studies (see below). These degrees are designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Science Degree: Earth Science Studies

The Associate in Science degree with an area of emphasis in Earth Science Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a physical or earth science-related major. Common university majors in this field include: Earth Sciences, Environmental Sciences, Geographic Information Science, Geology, Hydrologic Sciences, Meteorology, Natural Sciences, Oceanography, Physical Geography, and Physical Sciences.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

<b>Courses Required for the Major:</b>	<b>Units</b>
CHEM 200, General Chemistry I Lecture.....	3
CHEM 200L, General Chemistry I Laboratory.....	2
PHYS 125, General Physics <b>or</b>	
PHYS 195, Mechanics.....	5

#### Select at least eight units from the following:

ASTR 101, Descriptive Astronomy  
 ASTR 111, Astronomy Laboratory  
 BIOL 107, General Biology-Lecture and Laboratory  
 BIOL 210A, Introduction to the Biological Sciences I  
 BIOL 210B, Introduction to the Biological Sciences II  
 BIOL 215, Introduction to Zoology  
 BIOL 250, Introduction to Botany  
 CHEM 201, General Chemistry II Lecture  
 CHEM 201L, General Chemistry II Laboratory  
 CHEM 231, Organic Chemistry I Lecture  
 CHEM 231L, Organic Chemistry I Laboratory  
 CISC 186, Visual Basic Programming  
 CISC 189A, Introduction to Programming I  
 CISC 189B, Introduction to Programming II

CISC 190, Java Programming	
ECON 121, Principles of Economics II	
GEOG 101, Physical Geography	
GEOG 101L, Physical Geography Laboratory	
GEOG 102, Cultural Geography	
GEOL 100, General Geology	
GEOL 101, General Geology Laboratory	
GEOL 104, Earth Science	
MATH 116, College and Matrix Algebra	
MATH 119, Elementary Statistics	
MATH 121, Basic Techniques of Applied Calculus I	
MATH 122, Basic Techniques of Applied Calculus II	
MATH 141, Precalculus	
MATH 150, Calculus with Analytic Geometry I	
MATH 151, Calculus with Analytic Geometry II	
PHYN 100, Survey of Physical Science	
PHYN 101, Survey of Physical Science Laboratory	
PHYN 120, Physical Oceanography	
PHYS 126, General Physics II	
PHYS 196, Electricity and Magnetism	
PHYS 197, Waves, Optics, and Modern Physics	
PSYC 258, Behavioral Science Statistics	
SPEE 103, Oral Communication.....	8
<b>Total Units =</b>	<b>18</b>

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

## Transfer Information

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. **Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.**

### Associate in Science Degree: Physics Studies

The Associate in Science degree with an area of emphasis in Physics Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a physics-related major. Common university majors in this field include: Astronomy, Astrophysics, Biophysics, Chemical Physics, Engineering Physics, and Physics.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, additional elective courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

Courses Required for the Major:	Units
MATH 150, Calculus with Analytic Geometry I.....	5
MATH 151, Calculus with Analytic Geometry II.....	4
PHYS 195, Mechanics.....	5
PHYS 196, Electricity and Magnetism .....	5
<b>Total Units = 19</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.

- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

## Transfer Information

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. **Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.**

# Political Science

## Associate in Arts Degree:

Social and Behavioral Sciences  
(see page 184)

\*and electives as needed to meet minimum of 60 units required for the degree.

### Units

18\*

## Description

The primary objectives of the Political Science program are: to meet general education requirements for four-year institutions, American Institutions requirements, Social Sciences, and preparation for transfer to a four-year institution. The study of political science develops cultural literacy, critical thinking, and other useful skills. 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.

## Program Learning Outcomes

The curriculum offers four courses in Political Science: Political Science 101, 102, 103, and 140. These courses prepare students for transfer and advanced study at baccalaureate institutions. In addition, courses may

fulfill requirements for general education and as well as American Institutions.

Faculty	Office	Telephone
Steven Coons	B-302D	619-388-7505
Angela Romero	B-301B	619-388-7413

## Career Options

Career preparation in political science generally requires training beyond the associate and often the bachelor's degree. This field is commonly chosen as preparation for law school. In addition, an advanced degree prepares students for work such as: public administration, city planning, diplomatic corps, legislative aide, lobbyist, political scientist, and teacher.

## 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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see page 184). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

# Pre-Engineering

## Associate in Science Degree:

Pre-Engineering Studies

### Units

18\*

\*and electives as needed to meet minimum 60 units required for the degree.

## Description

The engineering curriculum gives students both the understanding of fundamental principles of engineering as an applied science and the practical expertise to apply these principles to actual situations. There is a heavy emphasis on basic science, mathematics and engineering science. Engineering is a field that incorporates a variety of disciplines-aerospace, chemical, civil, electrical, industrial manufacturing, material, mechanical, and electronics and computer.

## Program Learning Outcomes

The Pre-Engineering curriculum provides the chemistry, mathematics and physics required for pre-engineering majors planning to transfer to four-year engineering programs. Engineering courses required for specific engineering majors may be taken at San Diego City or Mesa College.

## Career Options

The transfer studies associate degree in Pre-Engineering provides a solid academic base for transferring into an engineering program, or a number of other science-based programs such as biology, physics, or computer sciences. The bachelor's degree in engineering incorporates a variety of disciplines - aerospace, chemical, civil, electrical, industrial manufacturing, material, mechanical, and electronics and computer.

## Faculty

Gina Bochicchio

## Office

B-301E

## Telephone/email

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Sadayoshi Okumoto S5-101H

619-388-7540

sokumoto@sdccd.edu

## 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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Science degree with an area of emphasis in Pre-Engineering Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Associate in Science Degree: Pre-Engineering Studies

The Associate in Science degree with an area of emphasis in Pre-Engineering Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in an engineering-related major. Common university majors in this field include: Aerospace Engineering, Civil Engineering, Computer Engineering, Construction Engineering, Electrical Engineering, Engineering, Engineering Physics, Engineering Technology, Environmental Engineering, Industrial Engineering / Technology, Manufacturing Engineering, Materials Science, Mechanical Engineering, Nuclear Engineering, and Structural Engineering.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer

institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

**Courses Required for the Major: Units**

CHEM 200, General Chemistry I Lecture..... 3  
MATH 150, Calculus with Analytic Geometry I ..... 5

**Select ten units from the following:**

ACCT 116A, Financial Accounting  
BIOL 205, General Microbiology  
BIOL 210A, Introduction to the Biological Sciences I  
BIOL 210B, Introduction to the Biological Sciences II  
BIOL 215, Introduction to Zoology  
BIOL 250, Introduction to Botany  
BUSE 140, Business Law and the Legal Environment  
CHEM 130, Introduction to Organic and Biological Chemistry  
CHEM 200L, General Chemistry I Laboratory  
CHEM 201, General Chemistry II Lecture  
CHEM 201L, General Chemistry II Laboratory  
CISC 189A, Introduction to Programming I  
CISC 189B, Introduction to Programming II  
CISC 190, Java Programming  
CISC 192, C/C++ Programming  
ECON 121, Principles to Economics II  
GEOL 100, General Geology  
GEOL 101, General Geology Laboratory  
MATH 119, Elementary Statistics  
MATH 151, Calculus with Analytic Geometry II  
MATH 245, Discrete Mathematics  
MATH 252, Calculus with Analytic Geometry III  
MATH 254, Introduction to Linear Algebra  
MATH 255, Differential Equations  
PHYS 125, General Physics  
PHYS 126, General Physics II  
PHYS 195, Mechanics  
PHYS 196, Electricity and Magnetism  
PHYS 197, Waves, Optics, and Modern Physics  
PSYC 258, Behavioral Science Statistics .....10  
**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Psychology

	Units
<b>Associate in Arts Degree:</b>	
Psychology	18*
*and electives as needed to meet minimum 60 units required for the degree.	

## 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 persons and 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 Learning Outcomes

The psychology program has two primary goals. The first is to provide the basic 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 the community and college students or are applications of psychological principles.

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Mary Lee Meiners	F-401	619-388-7463 mmeiners@sdccd.edu

## 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 additional preparation in this major beyond the associate degree: advertising researcher, school counselor, drug abuse counselor, employment counselor, manager, marriage and family counselor, mental health worker, personnel analyst, probation officer, police officer, psychometrist, and research. An undergraduate degree in psychology may be an important asset to majors in other fields.

## Transfer Information

### Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Psychology (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Arts Degree: Psychology

The Associate in Arts degree with an area of emphasis in Psychology is intended for students who plan to complete a bachelor's degree at a transfer institution in a psychology-related major. Common university majors in this field include: Behavioral Science, Cognitive Science, Social Work, Psychobiology, and Psychology.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

Courses Required for the Major:	Units
PSYC 101, General Psychology .....	3
MATH 119, Elementary Statistics <b>or</b>	
PSYC 258, Behavioral Science and Statistics .....	3

### Select twelve units from the following:

ASTR 101, Descriptive Astronomy
BIOL 107, General Biology-Lecture and Laboratory
BIOL 130, Human Heredity
BIOL 210A, Introduction to the Biological Sciences I
BIOL 210B, Introduction to the Biological Sciences II

BIOL 230, Human Anatomy  
 CHEM 100, Fundamentals of Chemistry  
 CHEM 100L, Fundamentals of Chemistry Laboratory  
 CHEM 130, Introduction to Organic and Biological Chemistry  
 CHEM 130L, Introduction to Organic and Biological Chemistry Laboratory  
 CHEM 152, Introduction to General Chemistry  
 CHEM 152L, Introduction to General Chemistry Laboratory  
 CISC 190, Java Programming  
 CISC 192, C/C++ Programming  
 ECON 120, Principles of Economics I  
 MATH 121, Basic Techniques of Applied Calculus I  
 MATH 122, Basic Techniques of Applied Calculus II  
 MATH 141, Precalculus  
 MATH 150, Calculus with Analytic Geometry I  
 MATH 151, Calculus with Analytic Geometry II  
 MATH 252, Calculus with Analytic Geometry III  
 PHIL 100, Logic and Critical Thinking  
 PHIL 101, Symbolic Logic  
 PHYS 125, General Physics  
 PHYS 126, General Physics II  
 PHYS 195, Mechanics  
 PHYS 196, Electricity and Magnetism  
 PHYS 197, Waves, Optics, and Modern Physics  
 PSYC 121, Introduction to Child Psychology  
 PSYC 123, Adolescent Psychology  
 PSYC 133, Psychology of Women  
 PSYC 135, Marriage and Family Relations  
 PSYC 137, Human Sexual Behavior  
 PSYC 155, Introduction to Personality  
 PSYC 166, Introduction to Social Psychology  
 PSYC 211, Learning  
 PSYC 230, Psychology of Lifespan Development  
 PSYC 245, Abnormal Psychology  
 PSYC 255, Introduction to Psychological Research  
 PSYC 260, Introduction to Physiological Psychology  
 SOCO 101, Principles of Sociology.....12

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

## 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 Degree Curricula and Certificate Programs 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 **Associate Degree Requirements** on page 66. 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 institution.

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 students located in this catalog.

## Social and Behavioral Sciences

	Units
<b>Associate in Arts Degree:</b>	
Social and Behavioral Sciences	18*
*and electives as needed to meet minimum 60 units required for the degree.	

#### Description

Social Science is a multidisciplinary field that encompasses the study of human behavior in social settings. Students in these disciplines examine and analyze human societies; the institutions, organizations, and groups that comprise them; and the ways in which individuals and groups relate to one another. Students also develop an appreciation of the various approaches and methodologies used to study human social behavior. Social Science incorporates a variety of subject areas such as Anthropology, Ethnic Studies, Geography, History, Political Science, and Sociology.

#### Program Learning Outcomes

The Social and Behavioral Sciences program is designed to prepare students to transfer to a four-year university in a social science-related discipline.

#### Career Options

Careers related to this field typically require education beyond the associate degree level.

#### Transfer Information

**Common university majors related to the field of Social Science include:** Anthropology, Archeology, Community Studies, Criminal Justice / Justice Studies, Developmental Studies, Ethnic Studies, Global Studies, Geography, Gerontology, History, International Relations, Law, Peace and Conflict Studies, Policy Analysis, Political Science, Public Administration, Social Ecology, Social Science, Sociology, Urban Studies, and Women's Studies.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this field should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Associate in Arts Degree: Social and Behavioral Sciences

The Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences is intended for students who plan to complete a bachelor's degree at a transfer institution in a social science-related major. Common university majors in this field include: Anthropology, Archeology, Community Studies, Criminal Justice / Justice Studies, Developmental Studies, Ethnic Studies, Global Studies, Geography, Gerontology, History, International Relations, Law, Peace and Conflict Studies, Policy Analysis, Political Science, Public Administration, Social Ecology, Social Science, Sociology, Urban Studies, and Women's Studies.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

#### Courses Required for the Major: Units

**Select at least 12 units from the following social and behavioral sciences core courses:**

ADJU 101, Introduction to Administration of Justice  
ADJU 102, Criminal Law I  
ADJU 162, Criminal Investigation  
ADJU 210, Rules of Evidence  
ANTH 102, Introduction to Physical Anthropology  
ANTH 103, Introduction to Cultural Anthropology  
ANTH 104, Laboratory in Anthropology  
ANTH 107, Introduction to Archaeology  
BLAS 140A, History of the U.S., Black Perspectives  
BLAS 140B, History of the U.S., Black Perspectives  
ECON 120, Principles of Economics I  
ECON 121, Principles of Economics II

FILI 100, Filipino American Experience  
GEOG 101, Physical Geography  
GEOG 101L, Physical Geography Laboratory  
GEOG 102, Cultural Geography  
GEOG 104, World Regional Geography  
HIST 100, World History I  
HIST 101, World History II  
HIST 105, Introduction to Western Civilization I  
HIST 106, Introduction to Western Civilization II  
HIST 109, History of the United States I  
HIST 110, History of the United States II  
HIST 120, Introduction to Asian Civilization  
HIST 121, Asian Civilization in Modern Times  
HIST 141, Women in United States History I  
HIST 142, Women in United States History II  
HIST 150, Native Americans in United States History  
HIST 151, Native Americans in United States History  
POLI 101, Introduction to Political Science  
POLI 102, The American Political System  
POLI 103, Comparative Politics  
POLI 140, Contemporary International Politics  
PSYC 101, General Psychology  
PSYC 133, Psychology of Women  
PSYC 135, Marriage and Family Relations  
PSYC 166, Introduction to Social Psychology  
PSYC 255, Introduction to Psychological Research  
PSYC 258, Behavioral Science Statistics  
SOCO 101, Principle of Sociology  
SOCO 110, Contemporary Social Problems  
SOCO 201, Advanced Principles of Sociology  
SOCO 223, Globalization and Social Change ..... 12-17  
**Select at least one course and the remainder of units needed to meet the minimum of 18 from the following:**  
ACCT 116A, Financial Accounting  
BIOL 107, General Biology-Lecture and Laboratory  
BUSE 140, Business Law and the Legal Environment  
CBTE 120, Beginning Microsoft Word  
CBTE 127, Introduction to PowerPoint  
CBTE 140, Microsoft Excel  
CBTE 151, Introduction to Microsoft Access  
CBTE 161, Learning the Internet  
CBTE 162, Web Page Creation  
CHEM 100, Fundamentals of Chemistry  
CHEM 100L, Fundamentals of Chemistry Laboratory  
CISC 181, Principles of Information Systems  
CISC 186, Visual Basic Programming  
CISC 189A, Introduction to Programming I  
CISC 189B, Introduction to Programming II  
CISC 190, Java Programming  
ENGL 105, Composition and Literature  
ENGL 205, Critical Thinking and Intermediate Composition  
ENGL 237, Women in Literature

HUMA 106, World Religions	
LIBS 101, Information Literacy and Research Skills	
MATH 119, Elementary Statistics	
MATH 121, Basic Techniques of Applied Calculus I	
MATH 150, Calculus with Analytic Geometry I	
PHIL 100, Logic and Critical Thinking	
PHIL 101, Symbolic Logic	
PHIL 102B, Introduction to Philosophy: Values	
PHIL 205, Critical Thinking and Writing in Philosophy	
PHYN 100, Survey of Physical Science.....	1-6
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.
- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major.

Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

### ***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Sociology

## Associate in Arts Degree:

Social and Behavioral Sciences  
(see page 184)

\*and electives as needed to meet minimum of 60 units required for the degree.

## Units

18\*

## Description

Sociologists study the behavior of humans as they interact in varied groups: families, communities, sports, industrial organizations, and institutions such as schools, hospitals, and social service agencies. They explore social issues, such as social stratification, deviant behavior, cultural differences, effects of mass media, urban organization, educational systems and mental health. The focus is on how behavior is influenced by societal structures and how consensus and conflict among groups affects society.

## Program Learning Outcomes

The curriculum prepares students to transfer to baccalaureate Institutions. In addition, courses maybe applied to meet the requirements for general education at both the two and four-year colleges.

## Faculty

Marilyn Espitia  
Corrie D. Ort

## Office

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## Telephone

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## Career Options

Most career options for majors require graduate level degrees. Graduates with advanced degrees enter careers such as: advertising, research, college teaching, community organizing, criminology, probation officer, public administration, social scientist, social work, and urban and regional planning.

## 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 in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences (see page 184). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog

## Spanish

See "World Language Studies" on page 188.

## Speech Communications

See "Communication Studies" on page 138.

## Tagalog

See "World Language Studies" on page 188.

# World Language Studies

## Associate in Arts Degree:

World Language Studies

### Units

18\*

\*and electives as needed to meet minimum 60 units required for the degree.

## Description

The study of world languages builds communication skills, provides exposure to the richness of cultural variety; meets baccalaureate degree language requirements; broadens career opportunities enriches global travel; provides personal enrichment, and prepares students for upper division work in a baccalaureate institution.

## Program Learning Outcomes

Students develop skills of understanding, speaking, reading, and writing. They also become acquainted with the culture, literature, history and current events of foreign countries. The curriculum focuses on preparing students for transfer to baccalaureate institutions and for proficiency in several world languages in a variety of settings.

## Faculty

April Koch

Virginia Naters

## Office

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619-388-7538

## Career Options

Many students pursue an associate degree in world languages to add language skills in their field of work. Degrees beyond the associate level lead to careers such as: working in local and state agencies, multinational companies, international marketing and consulting firms, international banking, advertising, journalism, media and entertainment, travel and tourism, hotel and restaurant industries, and health care.

## Transfer Information

**Common university majors related to the field of world languages include:** Comparative Literature, Foreign Languages (all), Regional Studies (all), World Languages, and World Literature.

## Course Requirements for Transfer Students

Students who plan to transfer to a four-year college or university in this discipline should consult with a counselor or visit the Transfer Center to determine the appropriate major preparation courses for their specific transfer institution and major. Transfer students may also earn an Associate in Arts degree with an area of emphasis in World Language Studies (see below). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

## Associate in Arts Degree: World Language Studies

The Associate in Arts degree with an area of emphasis in World Language Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a world language-related major. Common university majors in this field include: Comparative Literature, Foreign Languages (all), Regional Studies (all), World Languages, and World Literature.

This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each transfer institution, courses used to complete this degree should be selected with the assistance of a Miramar College counselor.

## Courses Required for the Major:

### Units

### Select one language course sequence:

ARAB 101, First Course in Arabic **and**

ARAB 102, Second Course in Arabic

**or**

SPAN 101, First Course in Spanish **and**

SPAN 102, Second Course in Spanish **and**

SPAN 201, Third Course in Spanish **and**

SPAN 202, Fourth Course in Spanish

**or**

SPAN 101, First Course in Spanish **and**

SPAN 102, Second Course in Spanish **and**

SPAN 215, Spanish for Spanish Speakers I **and**

SPAN 216, Spanish for Spanish Speakers II

**or**

TAGA 101, First Course in Tagalog **and**

TAGA 102, Second Course in Tagalog **and**

TAGA 201, Third Course in Tagalog..... 10-20\*

**Select the remainder of units needed to meet the minimum of 18 from the following:**

ANTH 103, Introduction to Cultural Anthropology	
ECON 120, Principles of Economics I	
ECON 121, Principles of Economics II	
ENGL 208, Introduction to Literature	
ENGL 220, Masterpiece of Literature I: 1500 BCE-1600 CE	
ENGL 221, Masterpiece of Literature II: 1600 BCE-Present	
ENGL 230, Asian American Literature	
FILI 100, Filipino American Experience	
GEOG 102, Cultural Geography	
HIST 100, World History I	
HIST 101, World History II	
HIST 105, Introduction to Western Civilization I	
HIST 106, Introduction to Western Civilization II	
HIST 120, Introduction to Asian Civilization	
HIST 121, Asian Civilization in Modern Times	
POLI 101, Introduction to Political Science	
POLI 103, Comparative Politics	
SPAN 210, Conversation and Composition Spanish I	
SPAN 211, Conversation and Composition Spanish II .....	0-8
	<b>Total Units = 18</b>

\*NOTE: Students who place out of one or more language courses through prerequisite challenge exams or other methods that do not bear college-level credit must fulfill the remainder of the 18 units required for the major through coursework taken from the list of restricted electives.

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 66:

- The IGETC pattern (page 85) is accepted by all CSU campuses and most UC campuses and majors. It is also accepted by some private/independent or out of state universities.

- The CSU GE pattern (page 93) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.
- The San Diego Community College District General Education pattern (page 72) may be appropriate for students transferring to a private/independent or out of state university or to a high-unit major. Students selecting this option should meet with a counselor to determine the appropriate General Education courses for their individual transfer goals.

It is strongly recommended that students consult with a counselor to determine which general education option is most appropriate for their individual educational goals.

**Electives as needed to meet minimum of 60 units required for the degree.**

***Transfer Information***

Students planning to transfer to a four-year college or university should complete courses required for the university major and the general education pattern required by that transfer institution. See catalog TRANSFER INFORMATION section. Additional courses may be required to meet university lower-division requirements. ***Course requirements at the transfer institution are subject to change and may be verified by a counselor or by consulting the current university catalog. Many Baccalaureate in Arts degrees require a third semester competency in a foreign language. Consult the current catalog of the transfer institution and consult with a counselor.***

# Apprenticeship

	Units
<b>Certificate of Achievement</b>	
San Diego Civil Service Equipment Mechanic Apprenticeship	42
<b>Associate in Science Degree</b>	
San Diego Civil Service Equipment Mechanic Apprenticeship	42*
*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.

**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.

## San Diego City Civil Service Equipment Mechanic Apprenticeship

A four-year apprenticeship program in equipment mechanic trades at the City of San Diego. Applications accepted at the City Administration Building, Community Concourse, 202 C Street, San Diego, CA 92101.

### Certificate of Achievement: San Diego City Civil Service Equipment Mechanic Apprenticeship

Courses Required for the Major:	Units
AUTO 078, Suspension and Steering Systems .....	4
AUTO 054, Engine and Related Systems .....	3
DIES 100, Introduction to Diesel Tech .....	2
DIES 135, Applied Failure Analysis.....	3
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 138, Electrical Systems .....	3
DIES 155, Air Brake Systems .....	3
DIES 160, H.D. Transmission .....	3
DIES 170, Truck Drive Axles and Specifications.....	3
SDCS 349I, Equipment Mechanic Apprentice Work Experience .....	16
<b>Total Units = 42</b>	

**Associate in Science Degree:  
San Diego City Civil Service  
Equipment Mechanic Apprenticeship**

<b>Courses Required for the Major:</b>	<b>Units</b>
AUTO 078, Suspension and Steering Systems .....	4
AUTO 054, Engine and Related Systems .....	3
DIES 100, Introduction to Diesel Tech .....	2
DIES 135, Applied Failure Analysis .....	3
DIES 137, Diesel Fuel Injection Systems .....	2
DIES 138, Electrical Systems .....	3
DIES 155, Air Brake Systems .....	3
DIES 160, H.D. Transmission .....	3
DIES 170, Truck Drive Axles and Specifications.....	3
SDCS 349I, Equipment Mechanic Apprentice Work Experience .....	16
<b>Total Units = 42</b>	

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:** Diesel Technology 105, 144, Automotive Technology 64, 76, 195.



# Course Descriptions



# General Course Information

Not all courses listed will be offered each semester, and San Diego Miramar 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 (Exception: English 51 and 56 no longer apply as Associate Degree credit).
- **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.
- **300-391** Apprenticeship and in-service courses. See Catalog course description to determine credit for Associate Degree or Transfer.
- **392-399** Special Topics courses that employ a consistent disciplinary framework as described by a complete course outline of record, but utilize a specific focus area that may change from term to term may be offered in some disciplines. See the class schedule for specific titles and course details.

Apprenticeship 345, 349, 349-D, DSPS 065, Field Experience/Internship 275, Independent Study 290, Individualized Instruction 296, Experimental Topics 18, 23, 63, 265, Tutoring 44, and Work Experience courses 270 and 272 have Districtwide designated numbers.

## Prerequisites, Corequisites, Limitations on Enrollment, and 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 19.

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

Students may challenge a prerequisite, corequisite or limitation on enrollment. Contact the Admissions 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 (44)

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.

### Experimental Topics (265)

Experimental topics courses that examine an immediate specialized need or focused academic inquiry may be offered in some disciplines. See the class schedule for specific titles and course details.

### **Special Topics Courses (392–399)**

Special topics courses that employ a consistent disciplinary framework as described by a complete course outline of record, but utilize a specific focus area that may change from term to term 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. Students may enroll in a maximum of 16 units of work experience in a lifetime, including a maximum of 6 units from General Work experience. Students may enroll in a maximum of 8 units per semester of Occupational 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 107).*

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](http://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 (ACCT)

### 102 Basic Accounting

**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.

This course is a study in the theory and practice of the accounting process. Emphasis is placed on accounting transactions and bookkeeping. Topics include business documents, journals and ledgers, opening, adjusting and closing entries, and payroll. This course is designed for students who want a practical approach to accounting. It can be used as preparation for the Certified Public Accountant (CPA) exam. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 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, R5 and M40.

This introductory course shows students what financial accounting is, why it is important, and how it is used by investors and creditors to make decisions. It covers the accounting information system, and the recording and reporting of business transactions with a focus on the accounting cycle, the applications of generally accepted accounting principles, the classified financial statements, and statement analysis. This course also includes issues related to asset, liability, and equity valuation; revenue and expense recognition; cash flows; internal controls; and ethics. (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 is a study of how managers use accounting information in decision-making, planning, directing operations, and controlling. The course focuses on cost terms and concepts, cost behavior, cost structure, and cost-volume-profit analysis. It examines profit planning, standard costs, operations and capital budgeting, cost control, and accounting for costs in manufacturing organizations. This course is for students who desire to look at accounting from a management perspective. (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.

## 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.

## 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## ADMINISTRATION OF JUSTICE (ADJU)

*Due to safety concerns, as well as minimum requirement by regulatory agencies, potential students should be aware that these courses may require participants to demonstrate physically demanding skills, along with both verbal and nonverbal communication skills. If you have any concerns as to your ability to safely participate in these courses, please contact the Dean of Public Safety at 619-388-7860.*

## 85 Public Safety Program

6.25 hours lecture, 5.5 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 provides high school students an overview of the criminal justice system. It emphasizes law enforcement procedures and techniques. Students learn about the principles and components that affect modern law enforcement, such as criminal law, juvenile law, search and seizure, laws of arrest, evidence, first aid, narcotics, gangs, and report writing. (FT) Associate Degree Credit only and not Transferable.

## 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 101A and/or 101B and/or 101C. 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. This course is intended for students majoring in Administration of Justice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List. (CAN AJ 2).

**101A Introduction to Administration of Justice I****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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 101.

This first of three courses in a series introduces students to the philosophy and history of administration of justice. Topics include the nature of crime and victimization; the criminal justice system; police history, organization, role, and function; and the juvenile justice system. This course is intended for students majoring in Administration of Justice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**101B Introduction to Administration of Justice II****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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 101.

This second course in a three course series provides an overview of crime and police problems in the field of administration of justice. Topics include the substance and procedure of criminal law and various issues in the profession of policing. This course is intended for students majoring in Administration of Justice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**101C Introduction to Administration of Justice III****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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 101.

This third course in a three course series introduces students to the organization and jurisdiction of law

enforcement agencies. Topics include the rule of law; the role of courts and court procedures; the corrections system; and prison life. This course is intended for students majoring in Administration of Justice. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**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. (CAN AJ 4).

**106 Diversity and Community Relations****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 offers students the opportunity to analyze and effectively manage face-to-face street contact between peace officers and the public. Subject matter emphasizes the major cultural groups in California and the community relations problems facing law enforcement personnel. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**140 Patrol Procedures****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 covers techniques and methods used by peace officers while on patrol. Subject matter includes observation skills, perception, and recollection of facts. Students develop insight into prioritization of calls for service, crimes in progress, officer survival techniques, and handling of unusual incidents. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**147 Physical Conditioning****3 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.

This course provides a balanced physical conditioning program for Administration of Justice and Fire Technology students. It prepares students for employment in their respective occupational fields. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**148 Defensive Tactics****3 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.

This course develops skills relating to protection against persons armed with dangerous weapons. It provides demonstration and drill in a limited number of control holds and take downs. Topics also include the restraint of prisoners and the use of the police baton. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**149 Firearms****3 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.

This course covers the moral aspects, legal provisions, safety precautions, and restrictions covering the use of firearms including firing the sidearm and shotgun. It meets state requirements for carrying and using firearms as described in 699 of the Administrative Code, 7514.1 of the Business and Professions Code, and 12033 of the Penal Code. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer

employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**160 Criminal Law 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 course educates students about dangerous weapons control laws and specific crimes. Topics include homicide, false imprisonment, kidnapping, sex crimes, public safety and morals, burglary, robbery and extortion, theft and embezzlement, controlled substance and alcohol abuse, forgery, arson, and Alcohol Beverage Control (ABC) laws. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**161 Juvenile Procedures****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 history and development of the juvenile justice system in the U.S. Topics include the organization, functions, and jurisdiction of juvenile agencies, the processing and detention of juveniles, and juvenile dispositions, statutes, and court procedures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**162 Criminal Investigation****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 crime scene investigative procedures including those used for domestic and foreign computer crimes and terrorist acts. Topics include how to collect and preserve physical evidence, gather information, and prepare cases. Students also learn how to identify, collect, and

**167 Report Writing****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.

Students learn how written communications are used in both civil and criminal areas of law enforcement. Students prepare written reports relative to crime scene investigation, evidence preservation, chain of evidence continuity, case history, case prosecution, preparation for data processing, criminal records, and other types of law enforcement statistical material utilized in case preparation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**180 Drug Abuse and Law Enforcement****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 Administration of Justice 265: Drug Abuse and Law Enforcement. This course offers students the opportunity to analyze and effectively address drug abuse issues that are encountered in law enforcement. The course emphasizes understanding drug laws and recognizing the major drug categories, their effects, and associated types of paraphernalia. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**181 Vice and Organized Crime****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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 265: Vice and Organized Crime. This course introduces students to the symptoms and enforcement of organized crime. Topics include the legal system's role in investigating and prosecuting organized crime, the legal and moral issues involved with various vice crimes, techniques employed to investigate white-collar crimes, and national terrorist activities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**182 Street Gangs and Law Enforcement****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 Administration of Justice 265: Street Gangs and Law Enforcement. This course presents an overview of street gang issues. It introduces students to the history of gangs, gang dynamics, criminal activities, differences among gangs, narcotics involvement, and gang philosophy. The course emphasizes the law enforcement perspective for involvement, intervention, prosecution, and intelligence gathering. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**190 Legal Aspects of Corrections****3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Administration of Justice 194 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 covers the historical framework, concepts, and precedents that guide correctional practice. Topics include the corrections environment, prisoners' civil rights, and responsibilities and liabilities of corrections staff. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**191 Control and Supervision in Corrections****3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Administration of Justice 194 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 introduces the methods, practices, and theory related to the custodial supervision of incarcerated persons in federal, state, and local correctional facilities. It also introduces issues of custodial control on a continuum from day-to-day institutional living through crisis situations. Students analyze the interaction between the offender and correctional employee and examine the skills related to effective communication and crisis intervention. Topics include the effects of violence, overcrowding, gangs, substance abuse, legislation, and other factors

that impact the offender, employee, and facility. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**192 Correctional Interviewing and Counseling**  
**3 hours lecture, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Administration of Justice 194 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 introduces students to counseling and interviewing techniques available to practitioners in the field of corrections. Topics include how to collect, organize, and document pertinent information as well as how to plan, design, and conduct interviews. This course is intended for current or prospective correctional officers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**193 Concepts of Criminal Law**  
**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 provides an overview of criminal law and its relationship to the administration of justice system. Students examine criminal statutes and criminal law in the correctional setting. They also explore crimes against persons, property, and the state. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**194 Introduction to Correctional Science**  
**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:* Health and Safety. CPOST certification required.

This course introduces students to the history and development of corrections. It emphasizes legal issues, general laws, and general operations in correctional institutions. Topics include the relationship between corrections and other components of the criminal justice system as well as employment opportunities within the field. This course is intended for current or prospective correctional officers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**201 California Criminal Procedure**  
**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 origin, development, philosophy, and legal basis of criminal procedures in California. Students examine procedural statute law, case law, the California court system, the California grand jury system, pre-trial court procedures, adult trial procedures, juvenile court procedures, sentencing, and the appellate process. Topics include laws governing arrest, use of force, motions, rules of discovery, and applicable rules of evidence. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**210 Rules of Evidence**  
**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 covers the origin, development, philosophy, and legal basis of evidence. Topics include judicial decisions and statutory rules of evidence that govern the admissibility of testimony, writings, and material objects at a criminal trial. Students also learn how constitutional and procedural considerations affect searches and seizures, admissions, confessions, and methods of identification. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**220 Law Enforcement Forensics**  
**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 provides an overview of how to evaluate, process, and testify about evidence found at crime scenes. Students learn the difference between forensic and clinical biology in order to analyze physical and/or autopsy evidence. The course emphasizes law enforcement/crime laboratory involvement in the documentation, collection, and analysis of evidence including blood spatter, blood typing, DNA typing, drug/alcohol effects, wounds, trace evidence, documents, footprints, fingerprints, missile trajectory, and scene reconstruction. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**230 Constitutional 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 sources and limitations of government power contained in the U. S. Constitution. Students examine the contemporary interpretation and application of the Constitution as well as the historical underpinnings. The course explores how the U.S. Supreme Court has interpreted and applied the Constitution in the on-going effort to balance power in the following arenas: among branches of the federal government, between the federal government and states, and between the government and individual citizen. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities

**270 Work Experience****Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

Investigation of a special area in the field of Administration of Justice. 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.

**300 First Aid****8 hours lecture (total), .5 unit  
Grade Only**

This course is designated for personnel who need first aid training as outlined by the State of California regulations. The instruction will include communication, terminology, situation assessment, environmental emergencies, (including cardiopulmonary resuscitation) medical emergency childbirth, and the emotionally disturbed. This course may be repeated as

necessary to meet a legally mandated training requirement as a condition of continued of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

**304 Intermediate Traffic Accident Investigation****36 hours lecture (total),  
12 hours lab (total), 1.5 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.

*Limitation on Enrollment:* Student must be a current employee of a law enforcement agency or public entity whose duties include the investigation of traffic collisions.

This P.O.S.T. certified course provides students with the skills and knowledge to identify and analyze tire marks. Topics include tire mark documentation, measurements, terms, definitions relating to tire mark investigations, case preparation, courtroom testimony, determination of coefficient of friction, drag factor and speed estimates using various equations. (FT) Associate Degree Credit only and not Transferable.

**305 Advanced Traffic Accident Investigation****64 hours lecture (total),  
23 hours lab (total), 3.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 304, 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This P.O.S.T. certified course provides students with advanced traffic accident investigative skills and knowledge. Students learn how to determine the sequence of events that result in a traffic collision and how to document a collision. (FT) Associate Degree Credit only and not Transferable.

**307 Traffic Enforcement Radar Certification****24 hours lecture (total), 1.5 units  
Grade Only**

*Limitation on Enrollment:* Student must be a current employee of a law enforcement agency or public entity whose duties include enforcing traffic laws and/or conducting speed surveys.

This is a P.O.S.T. certified course designed to provide the necessary skills and knowledge of the legal and technical uses of moving and stationary radar, setting up and calibrating of equipment, target identification, and detecting anomalous and spurious readings. Associate Degree Credit only and not Transferable.

**312 Basic Supervisory Course**

**46 hours lecture (total),  
34 hours lab (total), 3 units  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course introduces law enforcement supervisors to the duties and responsibilities of the first-line supervisor. Students learn theories of supervision as well as practical skills and techniques. The course consists of lecture, demonstration, breakout groups, and role-playing. (FT) Associate Degree Credit only and not Transferable.

**313 Public Safety Dispatcher's Basic Course**

**96 hours lecture (total),  
24 hours lab (total), 6.5 units  
Grade Only**

This course will provide the student with entry-level skills and knowledge relevant to public safety dispatchers whose duty is providing dispatch service for law enforcement personnel in agencies participating in the P.O.S.T. Public Safety Dispatcher Program. (FT) Associate Degree Credit only and not Transferable.

**314 Officer Safety and Field Tactics**

**16 hours lecture (total),  
24 hours lab (total), 1.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course is designed to provide and train officers in the areas of advanced retention, defensive tactics, recognition of new laws, advanced weaponry, current trends in officer survival in field situations, high-risk vehicle stops using approved methods, and increased shooting proficiency. (FT) Associate Degree Credit only and not Transferable.

**316 Baton Instructor Course**

**48 hours lab (total), 1 unit  
Grade Only**

*Limitation on Enrollment:* A Law Enforcement or P.O.S.T. Peace Officers Standard and Training basic baton certification or equivalent training determined by the Regional D-Tac/Baton Core Instructor.

This is a P.O.S.T. certified course designed to develop baton instructor skills. Students will become familiar with teaching techniques of an all-encompassing impact weapon/control device program. This program will enable the student to give basic baton training

with one set of techniques that are good for use with a variety of impact weapons/control devices. This course includes side handle baton, straight baton, expandable batons, OPN Nunchaku, flashlight, and the Sap. This course fulfills requirements for application as a regional baton instructor. Associate Degree Credit only and not Transferable.

**320 Semi-Automatic Pistol Training**

**4 hours lecture (total),  
24 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

Introduction to the fundamental characteristics of the self-loading semi-automatic pistol. This course includes firearms safety, use of force decision making, marksmanship skills, pistol operation and pistol maintenance. Training occurs in both daylight and low light conditions. Range firing exercises are basic and combat oriented. (FT) Associate Degree Credit only and not Transferable.

**322 Basic Traffic Accident Investigation**

**32 hours lecture (total),  
8 hours lab (total), 2 units  
Grade Only**

*Prerequisite:* Administration of Justice 381 and 382 and 383 and 384, each with a grade of "C" or better, or equivalent.

This is a P.O.S.T. certified course designed to provide the student with skills and knowledge to properly investigate and document traffic collisions. This course completes peace officer requirements to write traffic collision-related notices of violations based on reasonable cause per California Vehicle Code Section 40600. Associate Degree Credit only and not Transferable.

**323 S.T.C. Certified Corrections Officer Core Course**

**153 hours lecture (total),  
459 hours lab (total), 15 units  
Grade Only**

This course provides entry-level training for correctional officers. It exceeds the minimum mandates of the California State Board of Corrections and is designed to introduce the student to the role of corrections in today's society. The course emphasizes facility operations, criminal law, ethics, inmate supervision, defensive tactics, and physical training. (FT) Associate Degree Credit only and not Transferable.

**324 S.T.C. Certified Supplement Core Course**  
**56 hours lecture (total), 3 units**  
**Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course provides entry-level training for corrections officers who are peace officers and have completed the P.O.S.T. Basic Course. This course meets the mandates of the California State Board of Corrections. It is designed to introduce the student to the role of corrections in today's society. Emphasis is on facility operations, inmate supervision and management, facility security, booking and releasing inmates and emergency procedures. (FT) Associate Degree Credit only and not Transferable.

**327 Advanced Patrol Strategies**  
**23 hours lecture (total),**  
**27 hours lab (total), 1.5 units**  
**Grade Only**

This is an intense and vigorous 40-hour course that provides updated training in the areas of Advanced Officer Safety, Field Tactics, Performance Driving, Survival Firearms, Officer Involved Shootings, and Advanced Patrol Procedure for members of law enforcement agencies currently assigned to patrol duties. Participation includes working under varied weather and lighting conditions and required moderate physical exertion during firearms training and practical exercises. Associate Degree Credit only and not Transferable.

**330 P.O.S.T. Certified Field Training Officer Course**  
**16 hours lecture (total),**  
**24 hours lab (total), 1.5 units**  
**Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course is designed for recently appointed Field Training Officers from Law Enforcement agencies. This course will provide training in the area of the FTO role, ethics, civil liability, teaching techniques, sexual harassment, leadership, documentation, officer safety issues for the FTO and trainee, override and intervention, adult learning theory and other related subjects. Associate Degree Credit only and not Transferable.

**332 P.O.S.T. Certified Driving Under the Influence Course**  
**16 hours lecture (total),**  
**8 hours lab (total), 1 unit**  
**Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course is designed to provide the necessary instruction on technical and legal issues involved in the detection, apprehension and prosecution of the "under the influence" driver. Emphasis is on the physical symptoms of drivers under the influence, including testing using the current standardized sobriety tests. Also covered are the legal aspects, officer safety, and the California Department of Motor Vehicle requirements concerning legal sanctions of D.U.I. drivers. Associate Degree Credit only and not Transferable.

**333 P.O.S.T Certified Firearms Instructors Course**  
**20 hours lecture (total),**  
**20 hours lab (total), 1.5 units**  
**Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* Student must complete a P.O.S.T. firearms qualification class with a score of 80% or better, prior to enrollment.

This course is designed to train the participants to be firearms instructors and to provide them with the skills and knowledge to identify, define and work with officers having problems with firearms. Instruction will include firearms safety, liability encountered during training, basic firearms knowledge, course design, method of instruction, writing lesson plans and presentation strategies. Additionally, students will receive a special weapons orientation and preview new firearms accessories and equipment. Associate Degree Credit only and not Transferable.

**334 Law Enforcement Emergency Vehicle Operation**  
**1.5 hours lab, .5 unit**  
**Grade Only**

*Corequisite:* Administration of Justice 381, 382, 383, and 384, 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.

This course provides law enforcement officers with a general knowledge of driving principles and vehicle dynamics. Students learn how to operate emergency vehicles safely during non-emergency, emergency, and pursuit driving situations. Topics include defensive driving and vehicle control principles, emergency driving and vehicle pursuit operations, and legal issues and liabilities. (FT) Associate Degree Credit only and not Transferable.

### **335 P.O.S.T. Certified Tactical Communications Course**

**8 hours lecture (total), .5 unit  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course is designed to provide law enforcement officers with verbal skills and effective intervention techniques to avoid physical confrontations. This course also focuses on topics relating to stress management and stress reduction. Associate Degree Credit only and not Transferable.

### **343 Peace Officer's Guide to Internal Affairs**

**8 hours lecture (total), .5 unit  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course is designed to provide law enforcement officers with a thorough working knowledge of department Internal Affairs investigative procedures. Associate Degree Credit only and not Transferable.

### **344 Strategies for Advanced Officers**

**24 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course provides law enforcement officers with the three basic principles of tactical training: (1) Shooting principles and combat shooting scenarios where officers are faced with "shoot or no shoot" deadly force decision making. (2) Driving principles and vehicle dynamics to safely operate emergency vehicles during routine and emergency driving situations and (3) Arrest and control combative techniques that emphasize hand- to-hand fighting in the control of suspects who

resist arrest. This course includes the use of impact weapons. Associate Degree Credit only and not Transferable.

### **346 Juvenile Counselor Basic Core Course**

**144 hours lecture (total),  
44 hours lab (total), 10 units  
Grade Only**

This course is designed to meet the training requirements regulated by the Department of Corrections. Completion of this course certifies that the student has completed the entry-level training requirements for juvenile institution staff. Course content includes limited duty peace officer training, CPR and First Aid. (FT) Associate Degree Credit only and not Transferable. Associate Degree Credit only and not Transferable.

### **348 Essentials of Investigation**

**40 hours lecture (total), 2.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course refines and enhances the investigation skills of the law enforcement officer newly assigned to an investigative position or anticipating a transfer to investigations. Emphasis is on investigative techniques, legal issues affecting investigation, and officer safety. Associate Degree Credit only and not Transferable.

### **350 Weapons and Safety Training for Probation Officers**

**48 hours lecture (total),  
116 hours lab (total), 4 units  
Grade Only**

*Prerequisite:* Administration of Justice 356A with a grade of "C" or better, or equivalent.

This course is designed for armed Probation staff assigned to special operations, intensive supervision, or home supervision. Students must have successfully completed a P.O.S.T. approved P.C. Laws of Arrest course. Subjects covered will include legal update liability, shooting skills, deadly force, survival skills and chemical agents. Students who successfully complete the course will satisfy the firearms requirement for peace officers pursuant to Penal Code section 832. Associate Degree Credit only and not Transferable.

**351 Chemical Agents Training for Peace Officers**  
**8 hours lecture (total), .5 unit**  
**Grade Only**

This course is designed to instruct peace officers in the use of liquid aerosol chemical agents. Topics will include chemistry, how to disperse, effects, use of force, tactics, liability, plus policies and procedures. All Peace Officers Standards and Training (P.O.S.T.) mandated performance objectives are addressed. Associate Degree Credit only and not Transferable.

**356A 832 PC Laws of Arrest**  
**40 hours lecture (total), 2.5 units**  
**Grade Only**

This course meets the Police Officers Standards and Training (P.O.S.T.) requirements of 832 P.C., which includes professional orientation, ethics, Administration of Justice components, California court system, discretionary decision making, community relations, introduction to law, laws of arrest, laws of evidence, communications, investigations, arrest and control. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

**356B 832 PC Firearms**  
**12 hours lecture (total),**  
**12 hours lab (total), 1 unit**  
**Grade Only**

This course meets the Police Officers Standards and Training (P.O.S.T.) requirements for 832 P.C. Firearms course. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

**361 Current Issues for Advanced Officers**  
**.25 - 2.5 hours lecture (8 - 45 total),**  
**.25 - .75 hours lab (8 - 45 total),**  
**.5 - 2.5 units**  
**Grade Only**

*Prerequisite:* Successful completion of the Basic P.O.S.T. Certified Academy or S.T.C. Certified Correctional Officer Core Course Academy.

This course is designed for peace officers and correctional personnel below the rank of middle management. It meets the requirements of P.O.S.T., Title 15, Minimum Standards of Training for Local Corrections and Probation Officers (STC) and the California Legislature requiring special technical and skill proficiency training as specified in Section 13510,

6030-6043 of the California Penal Code and SB-924. Course work includes subjects such as new legislation and legal update, special technical subjects addressing social issues and skill proficiency training in emergency medical techniques, vehicle operations, firearms and defensive tactics, pre-assignment jail training officer issues, jail management, jail operations, inmate disturbances, advanced training for detention supervisors, and advanced correctional officer issues. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit.

**365 Assessment Tools Used on Adult Offender Populations**  
**18 hours lecture (total),**  
**1 unit**  
**Grade Only**

This course is designed for probation officers and other law enforcement officers, as well as treatment providers, court personnel, and victim advocates interested in learning how to identify and assess levels of risk and levels of criminogenic needs in offender populations. It will teach participants how to administer Federal Salient Factor Score (FSFS), the Level of Service Inventory (LSI) and Adult Substance User Survey (ASUS) instruments while using motivational interviewing techniques. Associate Degree Credit only and not Transferable.

**371 P.O.S.T. Certified Regular Basic Course**  
**Module Format, Level I**  
**274 hours lecture (total),**  
**70 hours lab (total), 18.5 units**  
**Grade Only**

*Prerequisite:* Level II and III Modules, current (within last three years) in First Aid and CPR training, current PC 832 training and successfully passing the P.O.S.T.-constructed Level I Entrance Examination.

This course is designed for current Level II reserve peace officers. Upon successful completion of this course, Level II reserve peace officers will have met P.O.S.T. minimum standards of training and will be eligible for full-time peace officer employment. Course work will include subjects addressing social issues and skill proficiency training in vehicle operations, firearms, chemical agents, defensive tactics, investigative report writing, traffic accident investigations, physical fitness, patrol techniques, and responding to crimes in progress. (FT) Associate Degree Credit only and not Transferable.

**372 P.O.S.T. Certified Regular Basic Course  
Module Format, Level II****178 hours lecture (total),  
46 hours lab (total), 12 units  
Grade Only**

*Prerequisite:* Level III Module, current (within last three years) in First Aid and CPR training, and current PC 832 training.

This course prepares the student to become a back-up officer in the field. Emphasis is placed on the subjects of investigative report writing, arrest and control/baton, firearms, chemical agents patrol procedures, cultural diversity/discrimination. Completion of this course meets P.O.S.T. requirements for Level II Reserve status. (FT) Associate Degree Credit only and not Transferable.

**373 P.O.S.T. Certified Regular Basic Course  
Module Format, Level III, P.C. 832 (Part 1)****70 hours lecture (total), 3.5 units  
Grade Only**

This course meets the P.O.S.T. requirements of 832 PC, which include professional orientation, ethics, criminal justice system, community relations, introduction to criminal law, laws of arrest, search and seizure, presentation of evidence, investigative report writing, use of force, preliminary investigation, arrest and control, firearms and justice system crimes. (FT) Associate Degree Credit only and not Transferable.

**374 P.O.S.T. Certified Regular Basic Course  
Module Format, Level III, P.C. 832 (Part 2)****108 hours lecture (total),  
54 hours lab (total), 7 units  
Grade Only**

*Prerequisite:* Arrest and Firearms components of the PC 832 course. Current P.C. 832 training.

This course prepares the student to become a second partner in a patrol assignment capacity. Police authority only for the duration of the person's specific assignment. Emphasis of the course is on the subjects of arrest and control, first aid and CPR, vehicle operations, patrol procedures and report writing. Completion of the course meets P.O.S.T. requirements for Level III Reserve status. (FT) Associate Degree Credit only and not Transferable.

**375 Community Service Officer Academy****80 hours lecture (total),  
240 hours lab (total), 10 units  
Grade Only**

This course of instruction is designed for students planning public safety careers as community service officers. The course will be delivered in a non-traditional manner where students are expected to attend forty hours per week for eight weeks. Among the areas of emphasis provided are Administration of Justice System, Ethics, Introduction to Criminal Law, Drug Identification and Impairment Recognition, Laws of Evidence, Report Writing, Vehicle Operations, Traffic Accident Investigation, First Aid/CPR, and Courtroom Procedures. Upon successful completion of the academy program, students may petition for waiver of Administration of Justice 101. (FT) Associate Degree Credit only and not Transferable.

**381 P.O.S.T. Certified Regional Academy  
Module 1****8 hours lecture, 9 hours lab, 15 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 first module of a 4-phase modular instructional program introduces students to the current role of law enforcement in society. Module 1 exceeds the minimum peace officer training requirements of Section 832 of the California Penal Code. Students must complete the 4-modular instructional program in succession. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

**382 P.O.S.T. Certified Regional Academy  
Module 2****2.5 hours lecture, 6.25 hours lab, 4.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 381 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 peace officer orientation program module provides for the continued development of law enforcement skills and concepts acquired in Module 1. It introduces students to controlled substances, civil crisis management, arrest and control techniques, custody, hazardous materials, and information systems. Students must complete the 4-module instructional

program in succession. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

### **383 P.O.S.T. Certified Regional Academy Module 3**

**1.44 hours lecture, 2.75 hours lab, 2 units  
Grade Only**

*Prerequisite:* Administration of Justice 382 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 peace officer orientation program module provides for the continued development of law enforcement skills and concepts acquired in Modules 1 and 2. It introduces students to Welfare and Institutions (W&I) classifications, Alcoholic Beverage Control (ABC) laws, unusual occurrences, missing persons, and weapons violations. Students must complete the 4-module instructional program in succession. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

### **384 P.O.S.T. Certified Regional Academy Module 4**

**3.75 hours lecture, 2.75 hours lab, 4 units  
Grade Only**

*Prerequisite:* Administration of Justice 383 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 peace officer orientation program module provides for the continued development of law enforcement skills and concepts acquired in Modules 1, 2, and 3. It emphasizes topics related to officer survival, crimes in progress, combat situations, and preliminary investigations of missing persons and death cases. Students must complete the 4-module instructional program in succession. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit only and not Transferable.

### **385 Law Enforcement Specialist/Master at Arms 9 hours lecture, 4.5 hours lab, 10.5 units Grade Only**

This overview of law enforcement provides current military police with the basic knowledge needed to perform their duties in an appropriate and effective manner. Local, state, and federal law will be identified and defined. (FT) Credit for this course does not apply to the associate degree.

### **386 Leadership Theory and Practice**

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6/W6.

*Limitation on Enrollment:* This course is not open to students with previous credit for Military Science 110. This course provides an interdisciplinary foundation in the field of leadership theory and practice. Students study the foundational principles, definitions, and various models of leadership. Topics include leadership traits, skills, styles, and processes; contingency, path-goal, and leader-member exchange theory; psychological, social, and cultural aspects of leadership; and ethics. Students also develop a personal philosophy of leadership and its application to the workplace and everyday life. This course is designed for current or future leaders in public safety organizations, the armed forces, government, business, academia, and non-profit organizations. This course is cross-listed as Military Studies (MILS) 110. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

## 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 Skills 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).

## 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

## 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.

### 107 Contemporary Art

**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; and Art-Fine Art 109 & Art-Fine Art 111, each with a grade of "C" or better, or equivalent.

This course provides a survey of contemporary art, examining issues and cultural influences. The emphasis is on the major movements, styles, artists and works of the late 20th and early 21st centuries within the historical context of this period. The course is designed for students interested in contemporary art, as well as for art majors, especially those who are focusing on design, painting, sculpture or ceramics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 109 History of Modern 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. Art-Fine Art 110 and 111, each with a grade of "C" or better, or equivalent.

This survey course introduces modern art and its relevance to the development of western civilization. It emphasizes the Modernist period and covers major monuments and representative art works from Europe, Russia, and the Americas. This course is intended not only for art students but also for those who are

interested in history, humanities, teaching, travel, and cultural enrichment. (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).

### **113 African, Oceanic, and Native American 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 an introduction to the art of selected peoples of Africa, Oceania, and Native North America, stressing their cultural wealth and diversity. The course introduces specific groups from each of these areas of the world and focuses on the differing roles of the visual arts within each culture. The historical depth and religious, economic, or political orientation of each art tradition is explored so that the student is introduced to the complexity of this field of study. This course is designed for art majors who are interested in non-western cultures as well as for students from a variety of backgrounds and disciplines, including history, ethnic studies, humanities, and education. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Fine Art (ARTF) 113 and 120 combined: maximum credit, one course.

### **125 History of Art: Far Eastern 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 provides a survey of paintings, sculpture, architecture, and allied fine arts from India, China, Japan, and other Far Eastern countries. It emphasizes the social, religious, and political highlights of each culture and their effects on art forms from prehistoric to modern times. (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-Fine 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 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:* English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; and Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better, or equivalent.

This course continues the introduction to oil/acrylic painting methods begun in Art-Fine 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:* English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; and Art-Fine Art 150A and 155A, each with a grade of "C" or better, or equivalent.

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 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.

### **170C Contemporary Crafts III**

**1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option**

A continuation of Art-Fine Art 170A and 170B. Provides advanced studies in two areas with structured development of the media. (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 hand built 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 and B. This course is an advanced level ceramics course in which students design and construct wheel thrown and hand built 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.

**198A Introduction to Printmaking I****1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option***Advisory:* Art-Fine Art 150A and 155A, each with a grade of "C" or better, or equivalent.

This course is an introduction to the basic printmaking media of intaglio, relief, and monoprinting and is designed for art students and anyone interested in printmaking. Students study techniques to create and print plates; investigate papers and select for properties; analyze, formulate and compare aesthetic strategies for image-making; and practice principles of editioning and conservation of prints. This course satisfies requirements for the major in art with a two-

dimensional or design emphasis. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**198B Introduction to Printmaking II****1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option***Advisory:* Art-Fine Art 198A with a grade of "C" or better, or equivalent.

This course builds on basic skills learned in Fine Arts 198A. More complex processes such as photo intaglio, collagraph, and reduction color relief will be introduced. Students apply aesthetic criteria in analyzing their creative choices and examine contemporary printmaking in world cultures. This course is a recommended elective for students preparing to major in fine art with an emphasis on two-dimensional and graphic design. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**198C Introduction to Printmaking III****1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option***Prerequisite:* Art-Fine Art 198B with a grade of "C" or better, or equivalent.

This course focuses on developing a personal visual language using the knowledge gained from 198A and 198B. Print processes of advanced complexity such as multiple-plate intaglio, double drop printing, mezzotint, and white ground are addressed. Students experiment with combining print media, investigate U.S. print houses, and create a cohesive body of artwork for presentation. This course is intended for students who are preparing for a major in art as well as others who wish to develop their knowledge of printmaking. (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:* 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 155A, each with a grade of "C" or better, or equivalent.

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:* 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 155A, each with a grade of "C" or better, or equivalent.

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

### 220A Life 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 is an introduction to the naturalistic and dynamic representation of the human body. Students sculpt from observation of live, nude models in poses of extended duration. In the process, students come to understand seeing as a learned skill. This course is intended for transfer students planning to major in art and for all students interested in the problems inherent in representing what they see. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 220B Life Sculpture II

**1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option**

*Prerequisite:* Art-Fine Art 220A with a grade of "C" or better, or equivalent.

This course continues the introduction to naturalistic and dynamic representation of the human body (done from observation of live models in poses of extended duration) begun in Art 220A. This course is intended for transfer students planning to major in art and for all students interested in developing skills of naturalistic representation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 220C Life Sculpture III

**1.5 hours lecture, 4.5 hours lab, 3 units  
Letter Grade or Credit/No Credit Option**

*Prerequisite:* Art-Fine Art 220B with a grade of "C" or better, or equivalent.

In this course students learn to extend their skill in representing the human figure convincingly in three dimensions (developed in Art-Fine Art 220A and Art-Fine Art 220B) to naturalistic representation in more than one style. This course is intended for transfer students planning to major in art and for all students interested in developing sophisticated skills of naturalistic representation. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

### 282 Open Studio

**3-6 hours lab, 1-2 units  
Letter Grade or Credit/No Credit Option**

*Corequisite:* Completion of or concurrent enrollment in Art-Fine Art 150B or 155A or 165A or 170A or 195A or 210A or Music 190 or Music 202, with a grade of "C" or better, or equivalent.

This workshop reinforces the student's aesthetic awareness and technical skills introduced in his or her studio art or music courses. These courses include painting, ceramics, graphic design, life drawing, drawing, crafts, electronic music, and computer music. This course may be taken four times for credit. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Art—Graphic Design (ARTG)

### 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.

### 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 56, 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 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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

### 111 Astronomy Laboratory

**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 features exercises and experiments covering topics ranging across the spectrum of astronomy. The course deals with the foundations of astronomy, and may include telescopes, planetary astronomy, stellar astronomy and galactic astronomy. Indoor exercises may involve computer simulations. Outdoor exercises may be required. 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 Limitation: Astronomy (ASTR) 109 and 111 combined: maximum credit, one course.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on*

page 194. Please refer to the class schedule and/or see the dean or department chair for availability.

## AUTOMOTIVE TECHNOLOGY (AUTO)

### 32 Orientation to Basic Automotive Components, Tools and Safety Procedures

1-3 hours lecture, 1-3 units  
Grade Only

*Advisory:* English 51 and English 56 and Math 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5, R5 and M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive Technology 52.

This course introduces students to the basic automotive components, tools, and safety procedures commonly used in the industry today. Students overview the entire basic automobile in order to identify and use the basic tools found in the automotive shop. This course uses Honda, Toyota, and/or Chrysler products. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

### 34 Introduction to Automotive Engines and Related Systems

1-3 hours lecture, 1-3 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for AUTO 54A.

This course introduces students to the automotive internal combustion engine. Course content includes an introduction of internal combustion systems such as fuel, electrical, cooling, and lubrication systems. (FT) Credit for this course does not apply to the associate degree.

### 35 Introduction to Automotive Electricity and Electrical Systems

1-3 hours lecture, 1-3 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 54B. This course introduces students to basic automotive electricity and electrical systems. Topics include automotive wiring systems and functions of electrical components. (FT) Credit for this course does not apply to the associate degree.

### 37 Auto Tech Skills and Career Opportunities

1-3 hours lecture, 1-3 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 57. This course introduces students to the Automotive Technology program at Miramar college. Students also learn about Miramar's relationship with automotive manufacturers, which provides training opportunities within the automotive industry. Students identify the personal skills necessary for successful entry into the program as well as the career opportunities that exist with a certificate and/or degree. (FT) Credit for this course does not apply to the associate degree.

### 50 Vehicle Detailing

2 hours lecture, 3-4 hours lab, 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 provides students with an overview of automotive detailing. It covers exterior finish cleaning, polishing, and sealing as well as interior cleaning, stain removal, and sealing. Students prepare and calculate a written estimate. They learn how to inspect and evaluate exterior and interior condition and how to determine correct repair procedures. Students also learn how to identify and operate different products and tools associated with automotive detailing. (FT) Associate Degree Credit only and not Transferable.

### 51 Quick Service Lube, Pre-Delivery Inspection Technician

2 hours lecture, 3-4 hours lab, 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 provides students with an overview of automotive quick services and new/used vehicle preparation. It covers vehicle inspections, preparing estimates, changing fluids and filters, proper hazardous waste disposal, minor electrical repairs, and road-testing techniques. Students learn how to inspect and evaluate vehicle systems to determine if advanced levels of repairs are needed. They also learn how to identify and operate necessary equipment and tools. (FT) Associate Degree Credit only and not Transferable.

### 53 Automotive Introductory and Safety

3 hours lecture, 3 units  
Grade Only

*Advisory:* English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive 112.

This course provides students with an overview of the automotive industry and a basic understanding of how each system within an automobile works. Students learn how to operate basic hand, power, and lifting tools as well as the major measuring instruments and devices used by automotive technicians. This course is intended as a first course for automotive students or as a basic core course for the entire automotive program. (FT) Associate Degree Credit only and not Transferable.

### 54 Engine and Related Systems

1.5 hours lecture, 4.5 hours lab, 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 114A.

This course provides a detailed study of the internal combustion engine. Students learn how to disassemble engines, identify and measure parts, and reassemble engines properly. Students also review engine systems related to fuel, electrical cooling, and lubrication. The course uses Toyota, Chrysler, or Honda specific class materials as well as other current materials. (FT) Associate Degree Credit only and not Transferable.

### 55 Basic Electricity and Electrical Systems Fundamentals

1.5 hours lecture, 4.5 hours lab, 3 units  
Grade Only

*Advisory:* English 51 or 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:* This course is not open to students with previous credit for Automotive 114B. Students learn about basic electrical principles, body wiring, and starting and charging systems. Topics include the construction, operation, and function of electrical components for Toyotas, Chryslers, Hondas, and/or other manufacturers. (FT) Associate Degree Credit only and not Transferable.

### 62 Electrical Mastery

3 hours lecture, 3 hours lab, 4 units  
Grade Only

*Advisory:* Automotive 55 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive 122.

This course prepares students to diagnose and repair basic-to-complex electrical systems used in modern automobiles. It includes a review of the principles of electrical circuits, the study of electrical devices, the use of test equipment to diagnose malfunctions, and the examination of various computerized control systems. The course emphasizes the development of a systematic diagnostic and repair procedure. Students use Toyota, Chrysler, or Honda-specific materials; they may also use electric vehicles or components designed by other companies. (FT) Associate Degree Credit only and not Transferable.

### 64 Advanced Fuel and Emissions Systems

1 hour lecture, 3 hours lab, 2 units  
Grade Only

*Advisory:* Automotive 62 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive 124.

This course prepares students to diagnose and repair carbureted, fuel injected, and electronically controlled fuel systems. Topics include automotive fuel characteristics, fuel delivery, emission control, and engine performance. This course may include Toyota, Chrysler, or Honda-specific class materials. (FT) Associate Degree Credit only and not Transferable.

**66 Drivability****1 hour lecture, 3 hours lab, 2 units  
Grade Only**

*Advisory:* Automotive 64 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive 126. Students learn how to diagnose and troubleshoot automotive power-train systems. The course emphasizes the development of a systematic troubleshooting process that uses diagnostic test equipment. It may incorporate Toyota, Chrysler, or Honda-specific class materials as well as up-to-date materials from other manufacturers. (FT) Associate Degree Credit only and not Transferable.

**68 Climate Control Systems****1.5 hours lecture, 3 hours lab, 2.5 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 138. This course introduces students to climate control systems and focuses on heating and air conditioning systems and related components. Students diagnose and repair common problems with climate control systems, including electrical and pneumatic controls, evacuation and recharging of air conditioning, and system installation. The course includes Chrysler, Toyota, and/or Honda-specific class materials or other up-to-date materials. (FT) Associate Degree Credit only and not Transferable.

**72 Manual Transmissions Drive Lines****2 hours lecture, 6 hours lab, 4 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 142. Students learn about the principles of automotive power transmissions. Topics include how to systematically approach the diagnosis and repair of common malfunctions. Students practice removing and disassembling/reassembling manual transmissions, transaxles, and differentials. The course utilizes Toyota, Chrysler, or Honda-specific materials as well as other up-to-date materials. (FT) Associate Degree Credit only and not Transferable.

**74 Automatic Transmissions/Axles****2 hours lecture, 6 hours lab, 4 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 144. Students learn about the principles and operation of hydraulically and electronically controlled transmissions and transaxles. Topics include hydraulics, components, powerflow, and the development of a systematic approach to diagnosis and repair. Students remove, disassemble, inspect, and rebuild hydraulically and electronically controlled transmissions/transaxles. The course uses Honda, Toyota, or Chrysler-specific class materials as well as other up-to-date materials. (FT) Associate Degree Credit only and not Transferable.

**76 Automotive Brake Systems****2 hours lecture, 6 hours lab, 4 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for AUTO 152. Students learn about brake system rebuilding and replacement procedures. Topics include examining and measuring components; machining brake drums and disc rotors; rebuilding wheel cylinders, disc calipers, and master cylinders; bleeding brakes; relining drum/disc brakes; repairing power assist units; and diagnosing automotive brake systems. The course uses Toyota, Honda, or Chrysler-specific class materials as well as other up-to-date materials. This course prepares students for the California Brake Adjuster C license. (FT) Associate Degree Credit only and not Transferable.

**78 Suspension and Steering Systems****2 hours lecture, 6 hours lab, 4 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Auto Technology 154. Students learn about the theory and repair of automotive suspension and steering systems. The course covers the design and operation of all components of suspension, steering, four-wheel steering, and four-wheel alignment systems of late-model automobiles and light-duty trucks. The course uses Toyota, Honda, or Chrysler-specific materials as

well as other up-to-date materials. (FT) Associate Degree Credit only and not Transferable.

### **80A Toyota Manual Transmission and Transaxles 302**

**1 hour lecture, 1 unit  
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; and Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with Toyota manual transmissions and transaxles. Topics include clutch assemblies, manual transmissions, manual transaxles, transfer cases, and sequential manual transmissions. Students use factory manuals and receive instruction through lecture and demonstration of the proper application of tools and related components. This course is equivalent to Toyota's course code T302. (FT) Associate Degree Credit only and not Transferable.

### **80B Toyota Suspension, Steering and Handling 452**

**1 hour lecture, 1 unit  
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; and Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with Toyota suspension, steering, and handling systems. Students use Toyota factory manuals and receive instruction through lecture and demonstration of the proper application of tools and related components. Topics include tire and wheel service, vehicle dynamics and handling, and advanced diagnostic techniques. This course is equivalent to Toyota's course code T453. (FT) Associate Degree Credit only and not Transferable.

### **80C Toyota Brake Systems 552**

**1 hour lecture, 1 unit  
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; and Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with Toyota brake systems. Topics include master cylinders, drum and disc brake systems, brake boosters, parking

brake systems, Anti-Lock Braking Systems (ABS), and Traction Control Systems (TRAC). Students use Toyota factory manuals and receive instruction through lecture and demonstration of proper application of tools and related components. This course is equivalent to Toyota's course code T552. (FT) Associate Degree Credit only and not Transferable.

### **80D Toyota Electrical Circuit Diagnosis 623**

**2 hours lecture, 2 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; Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with Toyota electrical circuit operation and electrical wiring systems. Topics include electrical concepts, circuits, automotive batteries, starting systems, charging systems, and electrical signals. Students use factory manuals and receive instruction through lecture and demonstration of tools and related components. This course qualifies for Toyota's course code T623. (FT) Associate Degree Credit only and not Transferable.

### **80E Toyota Body Electrical Diagnosis 652**

**1 hour lecture, 1 unit  
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; Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with Toyota body electrical diagnosis. Topics include electrical concepts, Toyota electrical wiring diagrams, electrical diagnostic tools, troubleshooting plans, and diagnosis of body electrical malfunctions. Students use Toyota factory manuals and receive instruction through lecture and demonstration of the proper application of tools and related components. This course qualifies for Toyota's course code T652. (FT) Associate Degree Credit only and not Transferable.

### **80F Toyota Electronic & Computer Systems 672**

**2 hours lecture, 2 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; Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with an understanding of theory, operation, diagnosis, and troubleshooting of Toyota electronic devices and engine control systems. Topics include electrical diagnosis, analog and digital meters, semiconductors, transistors, sensors and actuators, and Toyota computers and logic circuits. Students use Toyota factory manuals and receive instruction through lecture and demonstration of tools and related components. This course qualifies for Toyota's course code T852. (FT)

Associate Degree Credit only and not Transferable.

### **80G Toyota Air Conditioning and Climate Control 752**

**1 hour lecture, 1 unit  
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; Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes the technician with automotive air conditioning and climate control systems on Toyota vehicles including hybrid vehicles. Topics include safety practices, air conditioning components, system controls, automatic temperature controls diagnosis, and repair procedures. Students use factory manuals and receive instruction through lecture and demonstration of the proper application of tools and related components. This course qualifies for Toyota's course code T752. (FT) Associate Degree Credit only and not Transferable.

### **80H Toyota Automatic Transmissions 262**

**2 hours lecture, 2 units  
Letter Grade or Credit/No Credit Option**

*Advisory:* English 51, English 56 and Mathematics 32, each with a grade of "C" or better, or equivalent or Assessment Skill Level W5, R5 and M20; and Automotive Technology 53 with a grade of "C" or better, or equivalent.

This advanced course familiarizes technicians with the operation of Toyota automatic transmissions, transaxles, and transfer unit. Topics include the torque converters, Simpson Planetary Gear Unit, power flow, automatic transmission fluid, transmission oil pumps, valve body circuits, electrical controls, shift lock systems, transmission checks, adjustments, and diagnosis. Students use Toyota Factory manuals and receive instruction through lecture and demonstration of tools and related components. The course qualifies for Toyota's course code T262. (FT) Associate Degree Credit only and not Transferable.

### **81 Introduction to Alternative Fuels and Electric Hybrid Vehicles**

**2 hours lecture, 2 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for AUTO 189.

This course introduces students to the technology of alternative fuels, electric hybrid vehicles, and fuel cells. Students learn how alternative fuels influence changes in vehicle engine and electrical systems, emission systems, and components. The course utilizes Toyota, Honda, or Chrysler-specific materials as well as other current materials. (FT) Associate Degree Credit only and not Transferable.

### **84 The Clean Air Car**

**5 hours lecture, 5 units  
Grade Only**

*Prerequisite:* Automotive Technology 64 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for AUTO 195.

Students review the content, regulations, and procedures of the smog license state certification examination. The course uses Toyota, Honda, or Chrysler-specific materials as well as other current materials. Students spend 80 hours preparing for the smog license examination. (FT) Associate Degree Credit only and not Transferable.

### **85 Advanced Emission Specialist Exam Qualification Course**

**5 hours lecture, 3 hours lab, 6 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.

The Bureau of Automotive Repair (BAR) requires students to complete 120 hours of preparation to qualify for the Smog Check Technician Licensing Examinations. This course includes the following BAR-certified modules: Basic Clean Air Car Course, Smog Check Program 2003 Update Course, Advanced Clean Air Car Course, and Smog Check Program 2005 Update Course. The course uses Asian and Chrysler manufacturer-specific materials in conjunction with

standard BAR materials. (FT) Associate Degree Credit only and not Transferable.

### 95 Automotive Technology Internship

**Hours by Arrangement, 1 - 2 units  
Grade Only**

*Limitation on Enrollment:* Must obtain an Add Code from Work Experience Coordinator for enrollment.

This course provides on-the-job experience in students' current course of study. Students receive pay for work in an industrial setting equivalent to 320 hours for each unit earned. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. This course, in combination with Automotive 275, may be taken four times for credit. (FT) Associate Degree Credit only and not Transferable.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## AVIATION (AVIA)

### 101 Private Pilot Ground School

**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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 140.

This course provides an introduction to basic aeronautical science and the field of aviation. Instruction includes aerodynamics and the principles of flight; airplane instruments, engines, and systems; airports; air traffic control and airspace; Federal Aviation Regulations; aircraft performance; aeromedical

factors and decision making; weather and weather services; navigation; and cross country planning. This course, combined with Aviation 133 (Human Factors in Aviation), fulfills all requirements for the FAA Private Pilot Knowledge Test. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 105 Introduction to Aviation and Aerospace

**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.

Students learn about the development of aviation and space flight. Topics include the effect of research and development on the aviation and aerospace industry, the evolution of modern aircraft, aircraft design in the future, and flight physiology. Students also learn about careers in aviation and aerospace. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 125 Aviation and Airport 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 120. This course introduces students to the major aspects of aviation and airport management. Topics include the airport-airway system, airport planning and development, aviation operations and management, community relations, governing regulations, security and careers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 128 Group Dynamics for High Risk Teams

**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 fundamentals of Team Resource Management (TRM), an error management strategy now applied in a wide array of high-risk industries that is designed for technical teams operating in high-stress environments. In this course, students become familiar with TRM processes as a way to expose and manage team errors as they shape authority relations in a dynamic context thereby honing skills of observation, analytic problem solving, and

critical thinking. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 133 Human Factors in Aviation

**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 Aviation 130. Research shows that more than 70% of aviation accidents are caused by human failures--miscommunication or misinterpretation by people during critical phases of flight. This course provides an overview of the aeromedical, physiological, psychological, and group dynamics that can lead to these human failures. To better understand these pressures, small groups of students analyze case studies of selected aircraft accidents and incidents and present their findings for large group discussion. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 151 Helicopter Pilot Ground School

**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 provides an introduction to helicopter operations and careers. Topics include the aerodynamic principles of helicopter flight; helicopter instruments, engines, and systems; helicopter performance and operating characteristics; and airports, airspace, weather, weather services, and navigation (as it pertains to helicopter operations). (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 195 Basic Instrument Flight Procedures

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation 101 with a grade of "C" or better or equivalent. Private Pilot Certificate satisfies the Aviation 101 prerequisite.

*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; and concurrent enrollment in Aviation 196.

This course provides an introduction to basic instrument flight rules (IFR) procedures, regulations, and techniques. Designed for the beginning pilot, this course provides an introduction to airplane instruments

and instrument flying techniques, IFR airspace and air traffic control procedures, pertinent Federal Aviation Regulations, IFR weather and weather services, aeromedical factors and decision making in instrument conditions, and IFR flight planning. Students should enroll concurrently in AVIA 196, Basic Instrument Flight Lab. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 196 Basic Instrument Flight Lab

**3 hours lab, 1 unit  
Credit/No Credit Only**

*Prerequisite:* Aviation 101 with a grade of "C" or better or equivalent. Private Pilot Certificate satisfies the Aviation 101 prerequisite.

*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; and completion of or concurrent enrollment in Aviation 195, with a grade of "C" or better, or equivalent.

This lab provides an introduction to basic instrument flight rules (IFR) procedures, regulations, and techniques through the use of an airplane flight simulator at the beginning, intermediate, and advanced levels. Designed for the Private Pilot, this course provides an introduction to airplane instruments and instrument flying techniques, flight into IFR airspace and air traffic control procedures, pertinent Federal Aviation Regulations, IFR weather and weather services, aeromedical factors and decision making in instrument conditions, and IFR flight planning. Students should complete or enroll concurrently in AVIA 195 Basic Instrument Flight Procedures. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 199 Instrument Ground School

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Prerequisite:* Aviation 195 and 196, each 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 201.

This course provides an overview of the aeronautical knowledge required to successfully take the Federal Aviation Administration's (FAA's) pilot knowledge test for the instrument rating and flight training using an airplane flight simulator. Instruction includes basic instrument flight techniques, airplane instruments and systems, airspace and air traffic control, Federal Aviation Regulations, aeromedical factors and decision

making, weather and weather services, basic instrument flight techniques, navigational aids, charts, and publications, instrument flight rules, procedures, and planning. This course, combined with AVIA 133 (Human Factors in Aviation), fulfills all requirements for the FAA Instrument Rating knowledge test. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 201 Commercial Airline Pilot Instruction

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 200. This course provides an overview of the aeronautical knowledge and job requirements for a commercial airline pilot. Instruction includes advanced study of aerodynamics, large and multi-engine aircraft systems, performance and weight and balance, air traffic control and airspace, Federal Aviation Regulations, aeromedical factors and decision making, weather and weather services, and international flight planning, navigation, and procedures. This course, combined with AVIA 133, Human Factors in Aviation, fulfills all requirements for the FAA commercial pilot knowledge test. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 212 Flight Instructor Ground School

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Prerequisite:* Aviation 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. Aviation 128, 133, 199 and 201, each with a grade of "C" or better, or equivalent. A Commercial Pilot Certificate satisfies the Aviation advisories.

This course provides an introduction to methods of flight instruction by integrating learning theory with an in depth study of aeronautical science. The course includes a flight simulator lab in which students practice flight instruction techniques. Course topics include creating an optimum adult learning environment and teaching the principles of flight, airplane systems and performance, Federal Aviation Regulations, aeromedical factors, weather, and navigation. Combined with AVIA 133 (Human Factors in

Aviation), this course fulfills all requirements for the FAA fundamentals of instruction (FOI), flight instructor (CFI), and/or ground instructor (AGI) pilot knowledge tests. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 228 Group Dynamics II

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation 128 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 aviation course offers students the opportunity to continue developing "reflective-practitioner" skills, building on learning experienced in Aviation 128. Emphasizing an error management strategy called Team Resource Management, students explore further the nature of "roles" and the impact of group processes as a way to expose and manage team errors. The course also addresses how professionals in high-risk fields such as aviation might increase their awareness of the dynamics of authority relations, factors affecting the act of authorizing, and the interdependent nature of leadership in aviation while assisting participants to learn how to manage anxiety and continue to think and function in stressful situations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

### 301 Private Pilot Knowledge Test Prep

**1 hour lecture, 1 unit  
Credit/No Credit Only**

*Prerequisite:* Aviation 101 and Aviation 133 each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* Must have earned a Miramar College Private Pilot Certificate of Completion or must provide proof of eligibility to test for the FAA Private Pilot Knowledge Test.

This course offers students the opportunity to review Private Pilot written examination material to prepare

for the FAA Private Pilot Knowledge Test. Instruction includes a review of aerodynamics and the principles of flight; airplane instruments, engines, and systems; airports; air traffic control and airspace; Federal Aviation Regulations; aircraft performance; aeromedical factors and decision making; weather and weather services; navigation; and cross country planning. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

**312 Flight Instructor Refresher Clinic (FIRC)**  
**1 hour lecture, 1 unit**  
**Credit/No Credit Only**

*Limitation on Enrollment:* Must have an unexpired flight instructor certificate.

This course provides instructors the opportunity to renew their unexpired FAA flight instructor certificates through classroom study. In accordance with Federal Aviation Regulations, topics include aerodynamics, flight information publications, human factors, weather, regulations, airspace, collision avoidance procedures, professional responsibilities, fundamentals of instruction, flight maneuvers and procedures, flight safety, transition training, recurrency training, and additional selected areas that are applicable to the needs of flight instructors. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**AVIATION MAINTENANCE  
TECHNOLOGY (AVIM)**

**52 Survey of Aviation Industry**  
**1 hour lecture, 2 hours lab, 1.5 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 course introduces students to the aviation and aerospace industry and provides them with fundamental knowledge for further study in the field. Students learn about the evolution, history, and structure of the

aviation and aerospace industry as well as the rules and regulations governing aviation operations. They review the current state of the industry, future directions in the field, and career options and training requirements. The course also provides students with a hands-on introduction to basic aviation maintenance skills. (FT) Associate Degree Credit only and not Transferable.

**75 Basic Avionics Theory**  
**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 51 or English 56; and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 or R5; and M20.

This course utilizes classroom instruction in the field of aviation communication, navigation, and auto-pilot systems. It provides students interested in aviation electronics with valuable basic information concerning the identification of components and theory and operation of the following systems: Voice communication radio systems, VHF navigation radio systems (ILS, VOR, and ADF), UHF navigation radio systems (ILS, DME, GPS, and Transponders), and auto-pilot systems (Flight Directors and Automatic Flight Guidance Systems). (FT) Associate Degree Credit only and not Transferable.

**100 General Aviation Technology Theory**  
**12 hours lecture, 12 units**  
**Grade Only**

*Advisory:* English 42 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and M20.

*Limitation on Enrollment:* This course is not open to students with credit for Aviation Maintenance Technology 101A, 101B, 101C, or 101D.

This course taken in conjunction with AVIM 100S is the recommended first semester course load for students who want a Mechanic's Certificate with Airframe and Power plant ratings. Students learn about the atmosphere, aerodynamic theory, aircraft structures, and flight controls. The course also introduces students to Federal Aviation Regulations, maintenance forms and publications, weight and balance procedures, aircraft fuel and instrument systems, fluid lines and fittings, corrosion control, aircraft hardware identification, materials and processes, non-destructive testing, and precision measuring devices. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 100S General Aviation Maintenance Technology Practices

**12 hours lab, 4 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 100 with a grade of "C" or better, or equivalent.

*Advisory:* English 42 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 50, 100L, 102A, 102B, 102C, 102D, or 102E.

This course provides practical training in the use of basic hand and power tools, safety wiring techniques, identification and sharpening of twist drills, proper torque methods, Federal Aviation Administration (FAA) forms and publications, performance of aircraft weight and balance, aircraft fuel and instrument systems, materials and processes, aircraft hardware, corrosion control, drafting and blueprint reading, applied mathematics, and applied physics. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147; Appendix B; Subjects B, C, D, E, F, G, H, I, J, K, and L. FAR Part 147, Appendix C, Section II, Subjects D and F. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 101G General Aviation Technology Theory I

**6 hours lecture, 6 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 100, 101A, or 101B.

This course introduces students to the theory of basic aerodynamics. Students learn about aircraft nomenclature and structure, stability, primary and secondary flight controls, and fixed and rotary wing principles of operation. Topics include Federal Aviation Administration (FAA) and manufacturers' aircraft specifications, data sheets, manuals, publications, and related Federal Aviation Regulations, forms, and records. The course also covers weight and balance theory and ground operation and servicing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 101H General Aviation Technology Theory II

**6 hours lecture, 6 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 101G 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 100, 101C, 101D.

This course introduces students to the theory of aircraft fuel systems and components, instrumentation, and aircraft materials and processes. Topics include fuel management, fueling and defueling systems, dump systems, fluid lines and fittings, airframe instrument systems, corrosion control, aircraft hardware identification, materials and processes, and non-destructive testing. Students also practice documenting aircraft inspections and repairs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 102G General Aviation Maintenance Technology Practices I

**6 hours lab, 2 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Aviation Maintenance Technology 101G 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 50, 100L, 100S, 102A, 102B, or 102E.

This course provides practical training in the use of basic aviation maintenance hand and power tools. Students learn about safety wiring, twist drills, torque methods, Federal Aviation Administration (FAA) forms and publications, and aircraft weight and balance. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147; Appendix B; Subjects C, F, H, I, J, K, and L. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 102H General Aviation Maintenance Technology Practices II

**6 hours lab, 2 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Aviation Maintenance Technology 101H and Aviation Maintenance Technology 102G, each 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for AVIM 50, 100L, 100S, 102C, 102D, or 102E.

This course provides practical training in aircraft fuel and instrument systems, materials, and blueprints. Topics include materials and processes, aircraft hardware, corrosion control, and drafting and blueprint reading. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147; Appendix B; Subjects B, D, E, and G and Part 147; Appendix C, Section II, Subjects D and F. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 103A Aircraft Wood, Fabric, Finishing and Composite Structures

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. Students learn about the design, inspection, servicing, testing, and repair of aircraft wood, composite, plastic enclosures, interior furnishings, and seatbelts. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 103B Aircraft Welding and Sheetmetal Structures

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. Students learn about designing, inspecting, servicing, testing, and repairing aircraft sheet metal and welded structures. Subjects include identifying and selecting specific aluminum and steel alloys, selecting appropriate fasteners, and using gas and electric arc welding equipment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 103C Aircraft Hydraulic Systems

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. Students learn about designing, inspecting, servicing, testing, and repairing aircraft hydraulic and pneumatic components and systems. Subjects include safety considerations, fluid types, seal types, component parts, and troubleshooting issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 103D Aircraft Landing Gear Systems

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. This course is a study of how to inspect, check, service, and repair landing gear retraction systems shock struts, brakes, wheels, tires and steering systems. It includes how to inspect, check, service, and repair speed and take-off warning systems, electrical brake controls, anti-skid systems, landing gear position indicating and warning systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 104A Applied Aircraft Wood, Fabric, Finishing and Composite Structures

**4.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. *Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 103A with a grade of "C" or better, or equivalent. Students learn about designing, inspecting, servicing, testing, and repairing aircraft wood, composite, and plastic structures. They also learn about aircraft interior furnishings and seatbelts. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 104B Applied Aircraft Welding and Sheetmetal Structures

**4.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. *Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 103B with a grade of "C" or better, or equivalent.

Students learn about designing, inspecting, servicing, testing, and repairing aircraft sheet metal and welded structures. Subjects include gas and electric arc welding, sheet metal layout, bending, and assembly techniques, and conventional and special fasteners. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**104C Applied Aircraft Hydraulic Systems**  
**3 hours lab, 1 unit**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.  
*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 103C with a grade of "C" or better, or equivalent.

Students learn about designing, inspecting, servicing, testing, and repairing aircraft hydraulic and pneumatic components and systems. Subjects include safety considerations, fluid types, seal types, component parts, and troubleshooting issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**104D Applied Aircraft Landing Gear Systems**  
**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 103D 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 hands-on course allows students to operate, inspect, check, service, and repair landing gear retraction systems, shock struts, brakes, wheels, tires, and steering systems. Students also learn how to inspect, check, service, and repair speed and take-off warning systems and components, electrical brake controls, anti-skid systems, and landing gear position and warning systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**105A Aircraft Cabin Atmosphere Control**  
**1.5 hours lecture, 1.5 units**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. Students learn about the design of cabin atmosphere control systems and aircraft protection systems, and they learn how to inspect, maintain, and repair these systems. Subjects include heating, cooling,

pressurization, oxygen, and ice and rain systems and components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**105B Aircraft Assembly, Rigging and Inspection**  
**1.5 hours lecture, 1.5 units**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. This course is a study of fixed wing and rotary wing aircraft assembly techniques, to include: checking aircraft alignment, balance and rigging of movable surfaces, jacking of aircraft, and inspecting aircraft for conformity and airworthiness. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**106A Aircraft Cabin Atmosphere Control**  
**1.5 hours lab, .5 unit**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.  
*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 105A with a grade of "C" or better, or equivalent.

This course utilizes practical application in the techniques used to operate, maintain, and repair heating, cooling, air conditioning, pressurization, oxygen, and ice and rain control systems and components. (Reference FAR 147, Appendix C, Section II: Subjects C., I.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**106B Applied Aircraft Assembly, Rigging and Inspection**  
**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 105B 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 practical hands-on course teaches students to apply fixed wing and rotary wing aircraft assembly techniques. It covers checking aircraft alignment, balancing and rigging movable surfaces, applying aircraft jacking procedures, and inspecting aircraft for conformity and airworthiness. (Reference: FAR 147 Appendix C; Section I: Subjects F., G.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 107B Turbine Engines

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. This course is a study of the theory of operation, design, overhaul, inspection, servicing, repair and troubleshooting of turbine engines including turbo-jet, turbo-fan, turbo-prop, and turbo-shaft aircraft powerplants and their related subsystems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 108B Turbine Engines Laboratory

**3 hours lab, 1 unit  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 107B with a grade of "C" or better, or equivalent.

This course is the practical application of the theory of operation, design, overhaul, inspection, servicing, repair and troubleshooting of turbine engines including turbo-jet, turbo-fan, turbo-prop, and turbo-shaft aircraft powerplants and their related subsystems. Reference: (FAR 147, Appendix D; Section 2: Subjects F., 20., 21., 22., G., 24., 25., Subjects H., 26., 27., 28.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 109A Airframe Electrical Systems

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100, 100S, 120, and 121A, each with a grade of "C" or better, or equivalent.

Students learn about the design, installation, and operation of alternating and direct current systems. Subjects include communication and navigation systems, wiring, control circuits, switches, indicators, electrical power generation and control, circuit protection devices, and other electronic systems likely to be encountered by an aircraft technician. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 109B Powerplant Ignition Systems

**2 hours lecture, 2 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. Students learn about the design, installation, and operation of powerplant ignition systems. Subjects include magnetos, spark plug harnesses, spark plugs, solid-state exciters, turbine igniters, and other ignition

systems likely encountered by an aircraft maintenance technician. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 109C Powerplant Electrical Systems

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100, 100S, 120 and 121A, each with a grade of "C" or better, or equivalent.

Students learn about the design, installation, and operation of both direct and alternating powerplant electrical current systems. Subjects include lead acid and nickel cadmium batteries, wiring, control circuits, switches, indicators, electrical power generation and control, circuit protection devices, and other electrical systems likely encountered by an aircraft maintenance technician. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 109D Aircraft Fire Protection and Digital Logic

**1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each 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 airframe and powerplant course covers all aspects of fire protection systems. It includes system design and how to inspect, check, service, troubleshoot, and repair detection and extinguishing systems. It also covers digital logic systems and basic computer applications used in the aircraft industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 110A Airframe Electrical Systems Laboratory

**3 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100, 100S, 120, 121A, each with a grade of "C" or better, or equivalent.

*Corequisite:* Aviation Maintenance Technology 109A. Students learn practical applications in the design, installation, troubleshooting, repair, and operation of both direct and alternating current systems. Subjects include communication and navigation systems, wiring, control circuits, switches, indicators, electrical power generation and control, circuit protection devices, and other electronic systems likely encountered by an aircraft maintenance technician. Meets the requirements of FAR 147 appendix C; Section II: Subjects E & G. (FT) Associate Degree Credit & transfer

to CSU and/or private colleges and universities and F.A.A. approved private institutions.

**110B Applied Powerplant Ignition Systems**  
1.5 hours lab, .5 unit  
Grade Only

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.  
*Corequisite:* Aviation Maintenance Technology 109B. Students learn practical applications in the design, installation, servicing, troubleshooting, repair, and operation of powerplant ignition systems. Subjects include magnetos, spark plug harnesses, spark plugs, solid-state exciters, turbine igniters, and other ignition systems likely encountered by an aircraft maintenance technician. This course meets the requirements of FAR 147, Appendix D, Section II: Subject E. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**110C Powerplant Electrical Systems Laboratory**  
1.5 hours lab, .5 unit  
Grade Only

*Prerequisite:* Aviation Maintenance Technology 100, 100S, 120 and 121A, each with a grade of "C" or better, or equivalent.  
*Corequisite:* Aviation Maintenance Technology 109C. Students learn about the design, installation, troubleshooting, repair, and operation of both direct and alternating current systems. Subjects include lead acid and nickel cadmium battery maintenance, wiring, control circuits, switches, indicators, electrical power generation and control, circuit protection devices, and other electrical systems likely encountered by an aircraft maintenance technician. This course meets the requirements of FAR 147 appendix D; Section II: Subjects A and C. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**111C Reciprocating Engines I**  
3 hours lecture, 3 units  
Grade Only

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each 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 focuses on the theory of operation, design, overhaul, inspection, and repair of aircraft reciprocating powerplants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**111D Reciprocating Engines II**  
3 hours lecture, 3 units  
Grade Only

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent. This course focuses on aircraft reciprocating powerplant systems and operations. Students learn how to check, repair, service, install, remove, and inspect aircraft reciprocating powerplants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**112C Applied Reciprocating Engines I**  
6 hours lab, 2 units  
Grade Only

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 111C 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 practical hands-on course allows students to apply the theory of operation, overhaul, inspection, and repair of aircraft reciprocating powerplants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**112D Applied Reciprocating Engines II**  
3 hours lab, 1 unit  
Grade Only

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 111D with a grade of "C" or better, or equivalent. This course provides students with the practical application of powerplant systems and operations. Students practice operating, installing, removing, inspecting, repairing, servicing, checking, and troubleshooting powerplant installations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**120 Basic D.C. Electronics Theory**  
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.  
*Limitation on Enrollment:* This course is not open to students with previous credit for Electronic Systems 124 or 124L or Electronics 120 or 120A or Electricity 111 or 111L. This course provides instruction in direct current electronics theory. Topics include atomic theory, direct current concepts, series, parallel, and circuit analysis,

magnetism, and electromagnetism. The course emphasizes the theoretical application of Ohm's and Kirchoff's laws. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**121A Applied Basic D.C. Electronics**  
**4.5 hours lab, 1.5 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Electronic Systems 124 or 124L or Electronics 121 or 121A or 123, or Electricity 111 or 111L.

This course utilizes practical applications of direct current electronics theory. Topics include atomic theory, direct current concepts, series, parallel, and circuit analysis, magnetism, and electromagnetism. The course emphasizes the proper use of multimeters and the troubleshooting of direct current circuits. This course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix B, Subject A. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**203 Advanced Composites**  
**3 hours lecture, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 204 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 advanced composite aircraft maintenance and fabrication. Topics include how reinforcements, resins, and core materials are used in bonded structures. Students learn about repair strategies and post-cure inspection. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**204 Advanced Composites Laboratory**  
**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 203 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 provides an application of composite aircraft component maintenance and fabrication. Topics

include how reinforcements, resins, and core materials are used in bonded structures. Students perform post-cure inspection and use approved fasteners. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**205 Advanced Aircraft Metal Forming and Welding**  
**3 hours lecture, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 206 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 traditional hand and machine forming of aircraft sheetmetal. It covers welding of various aircraft metals using traditional and modern welding techniques and strategies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**206 Advanced Sheetmetal Forming and Welding Laboratory**  
**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 205 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 provides a practical application of traditional hand and machine forming of aircraft sheetmetal. It encompasses the application of various welding techniques based on different aircraft metals. Students perform post-weld inspection. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**241 Aircraft Propeller Systems Lecture**  
**3 hours lecture, 3 units**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Aviation Maintenance Technology 107A.

A study of aircraft propellers, propeller aerodynamics, theory of operation, inspection, checks, troubleshooting, and maintenance of reciprocating and turboprop controllable-pitch propellers, and propeller

components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**242 Aircraft Propeller Systems Laboratory**  
**3 hours lab, 1 unit**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Aviation Maintenance Technology 108A.

The practical application of the installation, removal, inspection, repairs, servicing, and troubleshooting of propellers and propeller system components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**249 Induction and Fuel Metering**  
**3 hours lecture, 3 units**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 111A.

This course provides instruction in aircraft induction systems. Topics include theory of operation, design, overhaul, inspection, servicing, repair, and troubleshooting of normally aspirated, turbo-charged, and supercharged induction systems, fuel metering systems, anti-detonation systems, and fuel controls in aircraft powerplants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**250 Applied Induction and Fuel Metering**  
**3 hours lab, 1 unit**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Corequisite:* Aviation Maintenance Technology 249.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 112A.

This course utilizes practical applications of aircraft induction system theory. Topics include theory of operation, design, overhaul, inspection, servicing, repair, and troubleshooting of normally aspirated, turbo-charged, and supercharged induction systems, fuel metering systems, anti-detonation systems, and fuel controls in aircraft powerplants. (Reference FAR 147, Appendix D, Section II: Subjects F., 20., 21., 22., G., 24., 25., Subjects H., 26., 27., 28.) (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**253 Lubrication, Cooling, and Exhaust**  
**3 hours lecture, 3 units**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 111B.

This course provides instruction in the theory of operation of aircraft lubrication, cooling, and exhaust systems. Topics include inspection, checks, service, repair, and maintenance of aircraft wet and dry sump oil systems, liquid and air powerplant cooling systems, open and collected exhaust powerplant systems, and the identification and selection of lubricants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**254 Applied Lubrication, Cooling, and Exhaust**  
**3 hours lab, 1 unit**  
**Grade Only**

*Prerequisite:* Aviation Maintenance Technology 100 and 100S, each with a grade of "C" or better, or equivalent.

*Corequisite:* Aviation Maintenance Technology 253.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 112B.

This course utilizes practical applications of aircraft lubrication, cooling, and exhaust system theory. Topics include inspection, checks, service, repair, and maintenance of aircraft wet and dry sump oil systems, liquid and air powerplant cooling systems, open and collected exhaust powerplant systems, and the identification and selection of lubricants. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**270 Work Experience**  
**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units**  
**Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience*

(270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.

## BANKING AND FINANCE (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. (FT) 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 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.

***This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

## BIOLOGY (BIOL)

### **100 Natural History - Environmental Biology** **3 hours lecture, 3 hours lab, 4 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.

Lecture topics include basic principles of ecology, the nature of the physical environment, the aquatic environments, the terrestrial environments and population dynamics. This is a community approach, fitting organisms into their proper role in nature. The laboratory is coordinated with lectures emphasizing the plant and animal communities of Southern California. Several field trips will be required, some may be on the weekend. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Biology (BIOL) 100 and 120 combined: maximum credit, one course.

### **107 General Biology-Lecture and Laboratory** **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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Biology 103, 104, 105 & 106, 210A, or 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) 105, 106 or 107 if taken after 210A, 210B. (CAN BIOL SEQ A = BIOL 107 + 215 + 250) (BIOL 2).

### **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.

### **131 Introduction to Biotechnology** **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 intended for students in Applied Biology and Allied Health tracks. This course is a general examination of biology as it relates to the field of biotechnology. Topics that are emphasized include the fundamental chemical processes common in prokaryotic and eukaryotic biology, chemistry of bio-molecules (proteins, enzymes, nucleic acids, and lipids), cellular and molecular biology, basic immunology, and classical and molecular genetics with an emphasis on gene expression and genetic engineering. The laboratory addresses basic skills and techniques common to the biotechnology industry including measuring activity

and quantity of proteins, growth and manipulation of bacteria, genetic engineering and antibody methods. Field trips may be taken during laboratory periods. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 132 Applied Biotechnology I

**2 hours lecture, 6 hours lab, 4 units**  
**Letter Grade or Credit/No Credit Option**

*Advisory:* English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5; and Chemistry 152 and 152L; or Chemistry 100 and 100L, each with a grade of "C" or better, or equivalent.

Students learn entry-level skills common to the biotechnology industry, such as aseptic techniques, laboratory safety, and biological media and solution preparation. Students also learn about microbial growth, solutions, buffers, separation of cellular components, and macromolecules. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 133 Applied Biotechnology II

**2 hours lecture, 6 hours lab, 4 units**  
**Letter Grade or Credit/No Credit Option**

*Advisory:* Biology 132 and Biology 210A and Chemistry 100 and 100L, each with a grade of "C" or better, or equivalent.

In this advanced biotechnology training course, students learn about transformation, restriction analysis of DNA, protein analysis, and immunological applications. In the lab, students practice mastering current techniques used in the biotechnology industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 134 Introduction to the Biotechnology Lab

**3-4 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Biology 131 Introduction to Biotechnology.

This course examines biology laboratory technology as it relates to the field of Biotechnology. The laboratory addresses basic skills and techniques common to the biotechnology industry including measuring activity and quantity of proteins, growth and manipulation of bacteria, genetic engineering, polymerase chain reaction and antibody methods. In addition to hands on skills, the course will provide context for how and

why these techniques are used in the industry. This course enhances the laboratory skills of students wishing to be employed by the biotechnology industry. It is intended as an elective and for students in Applied Biology (Biotechnology) and Allied Health Tracks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 135 Biology of Human Nutrition

**3 hours lecture, 3 units**  
**Letter Grade or Credit/No Credit Option**

*Advisory:* English 51 with a grade of "C" or better, or equivalent, or Assessment Skill Level W5.

A course which relates biological concepts and principles to human nutrition. Lecture and discussion topics will include food composition, carbohydrates, proteins, lipids, vitamins, and minerals; food absorption and utilization; food fads and diets; malnutrition and mental retardation; food value and cost; food processing, food additives, world food and population problems; nutrition and pregnancy, and other topics. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 160 Elements of Human Anatomy and Physiology

**3 hours lecture, 3 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 Biology 230 or 235. This introductory course in human body structure and functions helps students prepare for health occupations such as radiological technician, physical therapy assistant, medical records technician, and medical laboratory technician. Students learn about the following systems: integumentary, skeletal, muscular, nervous, endocrine, reproductive, cardiovascular, lymphatic, respiratory, excretory, and digestive. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 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 180, 215 or 250 if taken after 210A and 210B.

### 205 General Microbiology

**3 hours lecture, 6 hours lab, 5 units**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* Biology 107, 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.

### 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.

### 215 Introduction to Zoology

**2 hours lecture, 6 hours lab, 4 units**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* Biology 107 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) 215 or 250 if taken after 210A and 210B (CAN BIOL 4) (CAN BIOL SEQ A = BIOL 105 + 106 + 215 + 250).

### 230 Human Anatomy

**2 hours lecture, 6 hours lab, 4 units**

**Grade Only**

*Prerequisite:* Biology 107 or 160, each 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*).

### 231 Media Experiences in Human Anatomy

**1 hour lecture, 1 unit  
Credit/No Credit Only**

*Corequisite:* Biology 230.

Independent study of computer software, CD-ROMs, photomicrographs, videotapes, microscope slides, anatomical models, and graphics to further informational background in human anatomy. 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. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 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 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*).

### 250 Introduction to Botany

**2 hours lecture, 6 hours lab, 4 units**

**Letter Grade or Credit/No Credit Option**

*Advisory:* English 51 and English 56 with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This course is an introduction to the fundamental principles of the anatomy, development, physiology, reproductive biology, ecology and evolution of the major plant groups, with emphasis on the flowering plants. The course is targeted towards students with no previous college level biology, but is also appropriate as a lower division course for biology majors. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: No credit for Biology (BIOL) 215 or 250 if taken after 210A and 210B (CAN BIOL 6) (*CAN BIOL SEQ A = BIOL 105 + 106 + 215 + 250*).

### 285 Tropical Biology Field Experience

**3 hours lab, 1 unit**

**Letter Grade or Credit/No Credit Option**

*Advisory:* Completion of or concurrent enrollment in Biology 100 or 107 with a grade of "C" or better, or equivalent.

This field-oriented survey of plant and animal life in the tropics provides practical experience in scientific observation and emphasizes identification and ecology. This course is designed for students with little field experience in biology and an interest in tropical forest ecology. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 290 Independent Study

**Hours by Arrangement, 1-3 units**

*Limitation on Enrollment:* Must obtain an Add Code from instructor for registration.

This course may be taken four times with different content for a maximum of six units. A student may sign up for 1 to 3 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. 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), Experimental Topics (265),***

*Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## BLACK STUDIES (BLAS)

### 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 140A, 140B or HIST 109, 110 or 141, 142 or 150, 151 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 140A, 140B or HIST 109, 110 or 141, 142 or 150, 151 combined: maximum credit, one series.

*Class sections of the following courses utilize a variety of reading and/or research materials from a*

*Black perspective. See page 268 for complete English course descriptions and page 329 for complete Speech Communications course descriptions. Refer to the class schedule under the particular subject listing for designated sections.*

## English

- 43 English Review
- 51 Basic Composition (This course is no longer degree applicable)
- 101 Reading and Composition
- 105 Composition and Literature
- 205 Critical Thinking and Intermediate Composition

## Speech Communications

- 103 Oral Communication

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## BUSINESS (BUSE)

### 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 Studies 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.

### **102 Introduction to Customer 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 provides students with basic knowledge of customer service by examining customer service from the provider's and customer's perspectives. It takes a pragmatic approach to applying the principles of service within an organization. Topics include leadership in customer service, customer retention and satisfaction, classifications of service organizations, and principles and practices of internal service. (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; or Business 92 with a grade of "C" or better, or equivalent.

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.

### **201 Business Organization and 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; or Business 92 with a grade of "C" or better, or equivalent.

Essentials of business organization and management; internal organization; operation; finance; marketing; and forms of ownership. Introduces students to techniques of decision-making with emphasis on recent advances in areas directly related to management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **270 Work Experience**

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. 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 Math 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 or concurrent enrollment in Chemistry 200. A beginning course to acquaint the student with the language and tools of chemistry. Includes elementary principles of inorganic and physical chemistry. Valuable as a foundation course for further work in chemistry. Students planning to transfer this course to a four-year institution must also complete Chemistry 100L. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. Engineering Technology (ENGN) 110, Chemistry (CHEM) 100, and Physics (PHYS) 100 combined: maximum credit, one course. No credit for 100, 100L or 152, 152L if taken after CHEM 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, 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 Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit for 100, 100L or 152, 152L if taken after CHEM 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 Limitation: 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 Limitation: 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 Limitation: Chemistry (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit for 100, 100L or 152, 152L if taken after CHEM 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 Limitation: CHEMISTRY (CHEM) 100, 100L and 152, 152L combined: maximum credit, four units. No credit for 100, 100L or 152, 152L if taken after CHEM 200.

### 200 General Chemistry I Lecture

**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 Chemistry 152 and 152L (formerly Chemistry 151), each with a grade of "C" or better, or equivalent.

*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 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 with some organic chemistry in terms of laboratory experiments. Topics include techniques of data analysis, chemical kinetics, chemical equilibrium, acid, base, and salt, 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 Limitation: 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 Limitation: 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 or English 105 with a grade of "C" or better, or equivalent, or Assessment Skill Level R6 and W6.

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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**CHILD DEVELOPMENT (CHIL)**

**89 Childcare as a Business**  
**1 hour lecture, 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 students and child development professionals with an analysis of appropriate record

keeping and business practices necessary to effectively run a daycare business. The course focuses on the enrollment of children, parent-caregiver relationships, contracts and legal considerations, collection of fees, budgets, and reimbursement of food costs. Students explore a variety of business settings including family daycare, franchise, and individual ownership. (FT) Associate Degree Credit only and not Transferable.

### 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 Limitation: Child Development (CHIL) 101 and 103 combined: maximum credit, one course. (CAN FCS 14).

### 103 Lifespan 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 provides students and child development professionals with the study of human development from conception to death. This course emphasizes theories of human development, including the physical, socio-emotional, and cognitive stages from prenatal through adulthood and aging. Students explore the interrelationship of the family's role and its influences throughout life. They also perform behavioral observations of various life stages. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Child Development (CHIL) 101 and 103 combined: maximum credit, one course.

### 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.

**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.

**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:* 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.

### **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.  
*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 Child Development 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 (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

**280 Environmental Rating Scale**

**1 hour lecture, 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 & W4.

This course provides students with an introduction to the Environmental Rating Scale administration, scoring system, profile, and improvement plan. The course focuses on environmental evaluation and program improvement. Students learn how to evaluate the quality of child care programs and how to increase the quality of care through practical improvements. This course is intended for child development professionals currently working in the field as well as those seeking professional development, child development permits, employment opportunities, or anyone with general interest in working with children. (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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on*

*page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**COMPUTER AND INFORMATION  
SCIENCES (CISC)**

**71 Intro to Embedded Computer Programming  
and Design**  
**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 introduces students to programming and interfacing microcontrollers to the world around them. Topics include programming a microcontroller to respond to inputs and to control various devices, such as LEDs, fans, servos, and relays. (FT) Associate Degree Credit only and not Transferable.

**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 W4.

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.

**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 and 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 Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to CISC 190. No credit for 189A or 189B if taken after 190.

**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 Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to CISC 190. No credit for 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).

**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.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

## COMPUTER BUSINESS TECHNOLOGY (CBTE)

### Formerly Office Information Systems (OFCE)

Note: CBTE course numbers differ from the OFCE course numbers.

### 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. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 111 Introduction to Windows 95

**.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; 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 152B.

This basic course presents an overview of the features of the Microsoft Windows 95 operating system and the components of the Windows 95 desktop. In this hands-on course, students learn to start programs; execute commands; open data files; manage files, disks, and folders; and customize the desktop. 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.

### 114 Introduction to Microsoft Windows

**.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; and Computer Business Technology

101 and 103, each 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. (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 101 and 103, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Computer Business Technology 120A or 120B.

This course introduces students to the text editing features in Microsoft Word. Topics include insert, delete, find and replace, move and copy, headers and footers, pagination, character and document formatting, spell check, tables, and mail merge basics. (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.

### **126 Document Processing**

**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 with a grade of "C" or better, or equivalent. This course is designed to give students hands-on experience creating a variety of computer-based documents. This course covers the use of computer software to create business, technical, medical and/or legal documents and to create forms, presentation documents, and documents for electronic publishing. It may include independent projects. 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 PowerPoint**

**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 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 PowerPoint slide shows. Students apply and modify both text and graphics. They use current software to integrate other programs with PowerPoint. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **130 Beginning Corel WordPerfect**

**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 130A or 130B.

This course is an introduction to text editing features in Corel WordPerfect including insert, delete, search and replace, move and copy, headers and footers, pagination, character and document formatting, spell check, and the writing tools. 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.

**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 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; 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.

**153 Database Development with Access****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 Levels W5 and R5; Computer Business Technology 101 and 114, each with a grade of "C" or better, or equivalent.

This course is designed for individuals seeking to develop skills in a relational database management system on a personal computer. Topics include designing relational databases; creating tables, queries, forms and reports; entering data; finding and modifying records; importing from and exporting to other programs and to HTML pages; using field properties; understanding the use of Server Query Language (SQL) in Access; creating and running macros for automating tasks; and planning and designing user interfaces. 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 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 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; 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 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; 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: 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; Computer Business Technology 101, 114 and 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.

**173 Introduction to E-Commerce**  
**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 101 or 102 and 162, each with a grade of "C" or better, or equivalent.

This is an introduction to current and emerging e-commerce technologies. Topics include Internet technology for business advantage; managing e-commerce funds transfer; reinventing the future of business through e-commerce; business opportunities in e-commerce; e-commerce web site design; social, political, and ethical issues associated with e-commerce; and business plans for technology ventures. Students are involved in creating an e-commerce marketing plan as well as a web site based on that plan. This course is intended for students seeking knowledge and experience in the realities of and potential for e-commerce. (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.

### 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.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction*

(296), *Service Learning (277)*, or *Work Experience (270)*. Detailed course descriptions are listed on page 194. 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 planning are also 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.

## DIGITAL FILM PRODUCTION (DFLM)

### 101 Introduction to Film

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 narrative, thematic, and aesthetic aspects of cinema. It examines a wide variety of films and emphasizes styles of directors as well as aspects of characterization and themes. Topics include the artistic quality of film and the development of technical methods used by filmmakers to present their ideas. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 102 The American 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.

This introductory film studies course brings Hollywood film making into clear focus as a unique economic, industrial, aesthetic, and cultural institution. This course explores how American Films work technically, artistically, and culturally through encounters with the works of such director as John Ford, Howard Hawks, and Martin Scorsese. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

## DIESEL TECHNOLOGY (DIES)

### 90 Forklift Operation

.5 hours lecture, 1.5 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.

Students learn the classroom theory and principles and operational instruction in general forklift safety, use and operation of forklifts, handling loads, preventive maintenance and upkeep, identification of operational problems and preparation and testing for OSHA Forklift Certification. (FT) Associate Degree Credit only and not Transferable.

### 100 Introduction to Diesel Technology

2 hours lecture, 2 units  
Grade Only

This beginning class introduces students to the field of diesel-powered trucks and equipment maintenance and service. Students learn about the common types of diesel powered trucks and equipment, shop safety, industrial fasteners, hydraulic fittings, technician tool requirements, service shop organization and procedures, and shop measuring tools. Students also receive an overview of the Miramar College Diesel Technology program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 105 Measuring Tools and Applied Mathematics

1 hours lecture, 3 hours lab, 2 units  
Grade Only

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 110 or 120.

Students learn how to care for and use precision measuring tools and common shop measuring tools. They also learn industry- standard mathematical

concepts and applications as related to the diesel maintenance industry. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 121 Diesel Engines A

**4 hours lecture, 9 hours lab, 7 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 110.

Students learn the fundamental skills necessary to perform major overhaul operations on Detroit Diesel engines. Subjects include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 122 Diesel Engines B

**4 hours lecture, 9 hours lab, 7 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 120.

Students learn the fundamental skills necessary to perform major overhaul operations on Caterpillar diesel engines. Subjects include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 123 Diesel Engines C

**1 hours lecture, 3 hours lab, 2 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 127.

Students learn the fundamental skills necessary to evaluate and repair engine components and accessories including cylinder blocks. Students also learn how to remove and install engines. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 124 Diesel Engines D

**4 hours lecture, 9 hours lab, 7 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

Students learn the fundamental skills necessary to perform major overhaul operations on Cummins diesel engines. Subjects include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 125 Diesel Engines I

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 121.

Students learn the fundamental skills necessary to perform major overhaul operations on Detroit Diesel engines. Subjects include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 126 Diesel Engines II

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 120 or 201A, or 122.

Students learn the fundamental skills necessary to perform major overhaul operations on Caterpillar diesel engines. Subjects include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 128 Diesel Engines III

**3 lecture, 3 hours lab, 4 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in DIES 100 with a grade of "C" or better, or equivalent.

Students learn the fundamental skills necessary to perform major overhaul operations on Cummins diesel

engines. Subjects include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 135 Applied Failure Analysis

**3 hours lecture, 3 units  
Grade Only**

Students learn about the fundamental principles involved in failure analysis of heavy duty diesel engine components. They also learn problem solving based on basic metallurgy concepts, different types of metals, metal forming processes, analysis of fractures, and identification of component wear characteristics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 137 Diesel Fuel Injection Systems

**1 hour lecture, 3 hours lab, 2 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

Students learn the basic skills necessary to understand and service diesel fuel injection systems. They learn which industry-based procedures are used to disassemble, assemble, and test fuel pumps, nozzles, and injectors. Students also learn how industry-based standards are used for maintaining, repairing, and adjusting fuel pumps, governors, and injectors on live diesel engines. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 137A Advanced Diesel Fuel Injection Systems

**1 hour lecture, 3 hours lab, 2 units  
Grade Only**

*Prerequisite:* Diesel Technology 137 and 144, each with a grade of "C" or better, or equivalent.

This course concentrates on the electronically controlled fuel injection systems of Caterpillar, Cummins, and Detroit Diesel engines. Students perform independently while learning system design, analysis, and mechanical adjustments. Students learn how to use electronic service tools to access and set programmable system features and electronic diagnostic tools to troubleshoot system malfunctions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 138 Electrical Systems

**2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 130 or 215. Students learn the principles and practices in operating and servicing diesel truck and equipment electrical systems. These systems include cab and chassis wiring, American Trucking Association (ATA) trailer wiring, and the starting and charging system including troubleshooting with the use of wiring diagrams and diagnostic tools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 144 Electronics for Diesel Technology

**3 hours lecture, 3 units  
Grade Only**

Students learn the basic principles of electronics related to heavy duty diesel powered equipment. Topics include basic electrical theory, series circuits, parallel circuits, circuit testing, and component identification. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 155 Air Brake Systems

**2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 140 or 214.

Students learn principles and practices of the operation and servicing of heavy duty transportation and equipment air brake systems. Topics include S-cam brakes, wedge brakes, disc brakes, air compressors, air reservoir systems, piping, control valves, switches, and actuators used in heavy duty transportation and equipment air systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 160 H.D. Transmissions

**2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 130 or 211A.

This course covers the principles of operation, overhaul, maintenance, and troubleshooting of heavy duty transmissions. This includes main, auxiliary, and twin countershaft manual transmissions and air shift systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**165 Truck Automatic Transmissions**  
**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

Students learn how to maintain, overhaul, and troubleshoot automatic transmissions for heavy duty transportation (HDT) using accepted industry standards and procedures. The course includes theory and laboratory practice. Students also learn how to prepare written records of HDT repairs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**170 Truck Drive Axles and Specifications**  
**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 140 or 211B.

Students learn about the theory and practices involved in disassembling and rebuilding common heavy duty drive axles. They also learn about failure analyses and basic specification procedures for Class 6 through Class 8 trucks. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**175 Truck Chassis R&R**  
**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 130 or 140. Students learn how to use specialized and general shop equipment and hand tools for removing and replacing components of heavy duty transportation units. Students also learn how to install and troubleshoot clutches. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**180 Steering, Suspension, and Driveline Systems**

**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

This Heavy Duty Transportation (HDT) course covers the principles and practices involved in operating and servicing HDT steering systems, suspension systems, and drivelines. Students also learn common industry methods to perform vibration analyses of steering, suspension, and driveline systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**185 Power Trains A (HDT)**  
**4 hours lecture, 6 hours lab, 6 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 160 or 175. Students learn the principles of operation, installation, and troubleshooting of single and double disc clutches. They also learn how to overhaul, maintain, and troubleshoot main, auxiliary, and twin countershaft manual transmissions and air shift systems. Topics include how to use specialized and general shop equipment and hand tools for removing and replacing components in general shop repairs of heavy duty transportation units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**190 Power Trains B (HDT)**  
**4 hours lecture, 6 hours lab, 6 units**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel 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 Diesel Technology 165 or 200.

This Heavy Duty Transportation (HDT) course covers the principles and practices involved in operating and servicing mobile hydraulic systems and components. These systems and components include reservoirs, pumps, actuators, valves, piping, and fittings. Students also learn how to maintain, overhaul, and troubleshoot HDT automatic transmissions using accepted industry standards and procedures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**200 Mobile Hydraulic Systems****2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

This Heavy Duty Transportation (HDT) and Heavy Equipment Technology (HET) course covers the principles and practices involved in operating and servicing mobile hydraulic systems and components. These systems and components include reservoirs, pumps, actuators, valves, piping, and fittings. Students learn how to use standard industry procedures, hydraulic schematics, and test equipment for diagnosing, analyzing, and repairing HDT mobile hydraulic systems and components. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**210 Brakes, Final Drives and Steering Systems****2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

Students learn the principles and practices in the operation and servicing of heavy equipment brakes, final drive systems, and steering systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**220 Undercarriage****2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

Students learn the fundamentals of operation, wear analysis, preventive maintenance, and major service of track-type undercarriages. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**230 Heavy Equipment Transmissions****2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100 with a grade of "C" or better, or equivalent.

This Heavy Equipment Technology (HET) course covers the principles and practices involved in operating and servicing heavy equipment torque converters and power-shift transmissions. Students also learn how to prepare written records of repairs using accepted industry specifications. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**235 Power Trains C (HET)****4 hours lecture, 6 hours lab, 6 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 160 and 240. Students learn the principles of operation, installation, and troubleshooting of single and double disc clutches. They also learn how to overhaul, maintain, and troubleshoot main, auxiliary, and twin countershaft manual transmissions and air shift systems. Topics include how to use specialized and general shop equipment and hand tools for removing and replacing components in general shop repairs of heavy equipment units. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**240 Equipment Chassis R&R****2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

Students learn how to use specialized and general shop equipment and hand tools for removing and replacing components in general shop repairs of heavy equipment units. They also learn how to operate, install, and troubleshoot single and multiple disc clutches. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**245 Power Trains D (HET)****4 hours lecture, 6 hours lab, 6 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Diesel Technology 100, with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Diesel Technology 200 or 230. Students learn about the operation and servicing of mobile hydraulic systems and components including reservoirs, pumps, actuators, valves, piping, and fittings. They also learn how to use common recommended shop procedures, hydraulic schematics, and test equipment for diagnosis, failure analysis, and system and component repair. Topics include how to operate and service heavy equipment hydraulic transmissions including power-shift transmissions. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

<p align="center"><b>DISABILITY SUPPORT PROGRAMS AND SERVICES (DSPS)</b></p>
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Courses listed under DSPS have been designed for students with disabilities. Additional classes offered at City and Mesa Campuses. See appropriate catalog.

**20 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.

**21 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.

**38 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 math. It is taught as a lecture class that can be taken independently or in conjunction with Math 32/Math 35.

This class utilizes a strategies oriented approach for developing competency with fundamental mathematical operations and pre-algebra concepts. This course, in combination with Disability Support Programs and Services (DSPS) 73, may be taken four times for credit. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

**40 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 will not apply to the associate degree.

**43 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. Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

#### **48 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. Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

#### **49 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. Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## **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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

### 203 Service Learning for Prospective Teachers

**1 hour lecture, 1 unit  
Letter Grade or Credit/No Credit Option**

*Limitation on Enrollment:* Student must meet safety and health clearance standards for public school volunteer experience placement.

This course is designed for students considering teaching as a profession, and for prospective tutors. The purpose of this class is to provide early, supervised experience to pre-service teachers in the form of service

learning. The lectures provide for orientation, review, reflection and problem solving; in addition, a minimum of 30 hours of volunteer service work is required. Experiential learning activities include observing and/or tutoring at various educational levels. Through this service learning, students are made aware of skills needed in the teaching profession. Additionally, they are mentored in the application of classroom management techniques and routine teaching skills required in the public schools. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

## EMERGENCY MEDICAL TECHNICIAN (EMGM)

### 50 CPR for Health Care Providers

**.5 hours lecture, .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.

This course covers basic cardio-pulmonary resuscitation (CPR) based on current American Heart Association standards. It teaches one-person, two-person, child, and infant CPR as well as foreign body airway obstruction, bag-valve-mask and mouth-to-mask ventilation, and automated external defibrillator (AED) use. (FT) Associate Degree Credit only and not Transferable.

### 105 Emergency Medical Technician - National Registry

**5 hours lecture, 3 hours lab, 6 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 130 Health and Safety. Students must have Basic Life Saving (BLS) for Healthcare Provider certificate.

This course covers the techniques of emergency medical care and transportation of the sick and injured within the responsibilities of the Emergency Medical Technician. The course content is based upon the State of California Emergency Medical Services Authority requirements referenced in Title 22, Division 9, Chapter 2, Article L of the California Administrative Code. Course approval is with the San Diego County Emergency Medical Services. Upon successful completion, the student will be eligible to take the San Diego County Emergency Medical Services Certification Examination for Emergency Medical Technician-1. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 106 Emergency Medical Technician-Defibrillation/Combitude

**8 hours lecture (total),  
8 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105 or Fire Protection Technology 130 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* The student must be currently certified as an Emergency Medical Technician or approved Public Safety First Aid Course and also possess a current BLS-C level certification in CPR approved by the American Heart Association or the American Red Cross per San Diego County Division of Emergency Medical Services Policy/Procedures/Protocol D-320, current edition. This course is not open to students with credit for Fire Protection 136. This twelve-hour lecture/lab course covers all techniques required of the certified Emergency Medical Technician 1 Basic to perform the optional skill of prehospital defibrillation and insertion of the esophageal tracheal airway device (ETAD) for victims of cardiac arrest. Course content includes student demonstration of skill proficiency in basic life support, airway management including placement of the ETAD and recognition/ management of patients requiring pre-hospital defibrillation. Upon successful completion, the student will receive a course completion certificate. This course may be repeated as needed for certification as mandated by the State of California Emergency Medical Services Authority. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 142 Special Problems in Field Internship

**9-15 hours lab, 3-5 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:* Must obtain an Add Code from the instructor for enrollment. Health and safety. Student must have previously enrolled in Emergency Medical Technician 166 or 168, and be participating in a field or clinical internship.

This course provides students with the skills and knowledge they need to complete the clinical or field internship of paramedic training. It provides an extension for the field or clinical internship and allows a maximum of ten shifts. This extension fulfills the 166 and 168 course obligations and requires an individual

student-specific contract. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 350 Recertification Course for San Diego County EMT-B

**14 hours lecture (total),  
18 hours lab (total), 1 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105 or Fire Protection Technology 130, 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.

*Limitation on Enrollment:* Health and Safety. Students must possess a current Basic Life Support card for Healthcare Provider.

This 32-hour non-associate degree course provides San Diego County certified Emergency Medical Technician-1 Basic students a review of didactic knowledge and practical skills required to re-certify, in compliance with State of California regulations. The course includes a review of current San Diego Emergency Medical Service (EMS) treatment guidelines, anatomy, patient assessment, recognition and treatment of life threatening emergencies, emergency childbirth, behavioral emergencies, ambulance operations, triage, and disaster scene management and environmental emergencies. Upon successful completion, students are eligible to take the San Diego County EMS Re-certification Examination. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Not Applicable to Associate Degree and not a basic skills course.

### 351 Advanced Cardiac Life Support In-service

**1 hour lecture, 1 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.

This course provides inservice training in advanced cardiac life support. It is intended for M.D., R.N., EMT-P, or EMT-B students with a current BLS for Healthcare Provider card. It covers early treatment for cardiopulmonary arrest based on current American Heart Association guidelines. This course may be taken as necessary to meet a legally mandated training requirement as a condition of employment or volunteer employment. (FT) Credit does not apply to the Associate Degree.

### 352 Pediatric Advanced Life Support Inservice 1 hour lecture, 1 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.

This course provides inservice training in pediatric advanced life support. It is intended for M.D., R.N., EMT-P, or EMT-B students with a current BLS for Healthcare Provider card. It covers appropriate early treatment for pediatric emergencies based on current American Heart Association guidelines. This course may be taken as necessary to meet a legally mandated training requirement as a condition of employment or volunteer employment. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

### 353 Pre-hospital Trauma Life Support Inservice

1 hour lecture, 1 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.

This course provides inservice training in prehospital trauma life support based on current National Association of Emergency Medical Technicians guidelines. It is intended for M.D., R.N., EMT-P, or EMT-B students with a current BLS for Healthcare Provider card. Students learn appropriate early treatment for trauma patients. This course may be taken as necessary to meet a legally mandated training requirement as a condition of employment or volunteer employment. (FT) Credit does not apply to the Associate Degree.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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 ESOL level. They are prepared to take English courses one level below transfer (ENGL 51 & 56).

### 19 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 of 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 for this course is not applicable to the associate degree.

### 20 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.

### 21 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.

### 22 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.

### 30 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.

### 31 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.

### 32 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.

#### 40 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 English 56. (FT) Credit does not apply to the associate degree.

### 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

##### 42 College Reading and Study Skills I (formerly English 55)

**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.

##### 55 College Reading and Study Skills I

(see English 042 on page 268)

##### 56 College Reading and Study Skills II

**3 hours lecture, 3 units**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* English as a Second Language 40 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. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills.

#### Writing

##### 43 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. ESL students should enroll in ESOL 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.

### 50 English Review

(see English 043 on page 268)

## 51 Basic Composition

3 hours lecture, 3 units

Letter Grade or Credit/No Credit Option

*Advisory:* English as a Second Language 40 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 the 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 section 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. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills.

### English Courses

(Also see Humanities)

## 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 37A or English 37B 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 37A or English 37B 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*).

## 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 21st 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.

## **230 Asian American Literature**

**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 Asian American literature from the 1900's to the present that includes representative works by early immigrants, as well as the writing of contemporary Asian American writers. Students read and discuss the authors and major works, while addressing relevant social, political, cultural, religious, and sociolinguistic issues. The students critically analyze these issues and other topics addressed in specific works in assigned essays and research papers. Selected representative readings are required. This course is designed for students transferring with a literature or history major as well as those with an interest in this field. (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.

### 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).

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## FILIPINO STUDIES (FILI)

### 100 Filipino American Experience

**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 sociological overviews of Filipino Americans. Students analyze

current Filipino American perspectives by discussing the history of the Philippines, factors contributing to immigration to the United States, and aspects of the integration experiences that may be unique to Filipino Americans. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## FIRE PROTECTION TECHNOLOGY (FIPT)

### 100A Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning)

**2 hours lecture,**

**5 hours lab, 3.5 units**

**Grade Only**

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 100A.

Practical application of basic rescue, fire suppression, apparatus, and equipment operation and maintenance procedures. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 100B Introduction to Fire Suppression and Maintenance Manipulative Tasks (Intermediate)

**2 hours lecture,**

**5 hours lab, 3.5 units**

**Grade Only**

*Prerequisite:* Fire Protection Technology 100A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 100B. Training and operation of fire service equipment: Extinguishers and protective equipment, hose, nozzles, fittings, hose evolutions, fire service ladders, salvage and overhaul procedures, at an intermediate level within the guidelines of training for Firefighter I certification as specified by the California Fire Service Training and Education Division of the Office of the state Fire Marshal. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**100C Introduction to Fire Suppression and Maintenance Manipulative Tasks (Advanced)**

**2 hours lecture,  
5 hours lab, 3.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 100B with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 100C.

Operation and training with fire apparatus and equipment at an advanced level to qualify for the manipulative training portion for Firefighter I as specified by the California Fire Service Training and Education Division of the State Fire Marshals Office. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**100D Candidate Physical Ability Test Preparation**

**16 hours lecture (total),  
48 hours lab (total), 1.5 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 provides information relating to the preparation and successful completion of a valid Candidate Physical Ability Test (CPAT), Biddle, and other firefighter physical ability examinations. This course may be taken four times for credit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**101 Fire Protection Organization**

**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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Science 101.

This course introduces students to the philosophy and history of fire protection as well as to career opportunities in fire protection and related fields. Topics include fire loss analysis, the organization and function of public and private fire protection services and systems, the fire department as part of local government, laws and regulations affecting the fire service, fire service nomenclature, basic fire chemistry and physics, and fire strategy and tactics. (FT)

Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**102 Fire Prevention Technology**

**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 Fire Science 202. This course provides fundamental information about the history and philosophy of fire prevention and the organization and operation of fire prevention bureaus. Students learn how to use fire codes and identify and correct fire hazards. They also learn about the relationships among fire prevention, fire safety education, and fire detection and suppression systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**103 Fire Protection Equipment and Systems**

**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 Fire Science 154. Students learn about design and operational features of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**104 Building Construction for Fire Protection**

**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.

Students learn about building-construction components that relate to fire safety. They learn how construction and structure design are key factors when inspecting buildings, pre-planning fire operations, and operating at fires. Topics include how the development and evolution of building and fire codes relate to past fires in residential, commercial, and industrial occupancies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 105 Fire Behavior and Combustion

**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 Fire Science 104. This course introduces students to the theory and fundamentals of fire behavior including how fires start, how and why they spread, and how they are controlled. The course emphasizes fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 106 Truck Company Operations

**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 Fire Science 153. This course introduces students to the planning and operation of truck companies at fires and other emergencies. Students learn about truck company equipment, personnel requirements, and truck company responsibilities that relate to the strategies, tactics, and specialized skills required for truck company operations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 107 Fire Fighting Tactics and Strategy

**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 Fire Science 155. This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, pre-planning fire problems, and extinguishing agents on the fire ground. Topics include a review of fire chemistry, methods of fire attack, and basic fire fighting tactics and strategy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 109 Fire Service Hydraulics

**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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Science 151. This course introduces students to hydraulics laws and formulas as they relate to fire service. Students perform calculations to assure adequate water pressures and volumes at fire department operations. The course also emphasizes principles of fluid pressure, fire pump operation and design, hose line construction and capability, and community water supply capabilities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 110 Wildland Fire Control

**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 Fire Science 217.

This course provides students with a fundamental knowledge of the factors affecting wildland fires including fuel, weather, topography, prevention, fire behavior, and public education. Students also learn about control techniques common to all agencies involved in wildland fire control. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 111 Fire Apparatus and Equipment

**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 specifications, design, construction features, and operational capabilities of mobile and fixed firefighting apparatus. It emphasizes the effective deployment, utilization, and performance of pumpers, ladder trucks, and related specialized equipment under emergency conditions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 113 Fire Mechanics

**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 Fire Science 156 or Fire Protection Technology 156.

This course introduces students to the mechanics of fire apparatus. Topics include fire pumpers, aerial devices, and support equipment and vehicles. The course emphasizes the operation of vehicle components including preventive maintenance, troubleshooting, and minor repairs. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 114A Shipboard Fire Control

**.5-2.5 hours lecture, 2.5 hours lab, 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; Fire Protection Technology 101 or Administration of Justice 101, with a grade of "C" or better, or equivalent.

This course satisfies requirements for the San Diego Harbor Police Marine firefighting basic course. Topics include fire chemistry and fire science, marina fire environment, fire equipment and extrication tools, the use of self-contained breathing apparatus, search and rescue operations, portable fire extinguishers, fire boat familiarization and operations, use of foam and light water, and strategy and tactics, including live fire training evolutions. Students who take the course for 3 units complete all the learning objectives; those who take the course for 1 unit practice only the manipulative skills objectives. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 115 Low Angle Rope Rescue

**1.15 - 1.69 hours lab, .5 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 100A 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 Fire Science 115.

This California Fire Training and Education System course equips students with the information, techniques, and methods for utilizing rope, webbing, hardware friction devices, and litters in low angle rescue situations. Topics include rappelling, rope and related equipment, anchor systems, safety lines, stretcher lashing and rigging, mechanical advantage systems, and single line/tow line rescue systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 119 Aircraft Fire Control

**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 provides students with a fundamental knowledge of factors that affect procedures for fires and other emergencies at airports or other locations involving private, commercial passenger, or military aircraft. Topics include pre-planning techniques, emergency standby procedures, analysis of factors common to emergencies involving aircraft on land or water, post-accident investigations, emergency procedures, aircraft accident reports, and legal aspects of aircraft rescue and fire protection. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 121 Vertical Rescue

**16 hours lecture (total),  
24 hours lab (total), 1 unit,  
Grade Only**

*Prerequisite:* Fire Protection Technology 100A and Fire Protection Technology 100B, 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 121.

This course offers advanced training in making vertical rescues. Students learn about current methods of rappelling, cliff rescue, raising and lowering victims, and high-rise rope rescue. Students practice at various locations within the community. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 130 Emergency Medical Technician-State Fire Marshal

**5 hours lecture, 3 hours lab, 6 units  
Grade Only**

*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 Fire Science 102 Health and Safety. Students must have Basic Life Saving (BLS) for Healthcare Provider certificate. This Emergency Medical Technician-1 Training and Certification program is designed to prepare fire science and other public safety personnel to render basic life support to the sick and/or injured in the pre-hospital environment. The course content meets the requirements as set forth by the State of California Emergency Medical Services and the California Health and Safety Code, Section 1797.173 CAC, T-22, Chapter 2, 100060(b). Upon successful completion, the student is eligible to take the California State Fire Marshal Emergency Medical Technician-1 Certification Examination. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 138 Recertification Course for State Fire Marshal EMT-1

**0.7 hours lecture, 1 hour lab, 1 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105 or Fire Protection Technology 130 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 Fire Technology 138 or 238. Health and Safety. Students must possess a current Basic Life Support (BLS) card for Healthcare Provider.

This 32-hour non-associate degree course provides State Fire Marshals a review of didactic knowledge and practical skills required for Emergency Medical Technician-1 recertification (in compliance with State of California regulations). The course includes a review of current San Diego Emergency Medical Service (EMS) treatment guidelines, anatomy, patient assessment, recognition and treatment of life threatening emergencies, emergency childbirth, behavioral emergencies, ambulance operations, triage, and disaster scene management and environmental emergencies. Upon successful completion, students are eligible to take the San Diego County EMS Re-certification Examination. This course may be repeated as necessary

to meet a legally mandated training requirement as a condition of continued employment. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 160 Introduction to Open Water Lifeguarding 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:* Health and Safety. Must pass the minimum swimming standard as established by the City of San Diego Lifeguard Service.

This introductory level course provides foundations in the theoretical background, procedures, and manipulative skills necessary for service as an ocean and inland beach lifeguard. Topics include lifeguarding history, training, education, standardized procedures, environmental protection, ethics, physical and biological characteristics of the beach environment, rescue techniques, facilities and equipment, recordkeeping, public relations, and legal issues. The content of the course follows United States Lifesaving Association standards. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 160R Refresher, Open Water Lifeguard 16 hours lecture (total), 24 hours lab (total), .5 unit Credit/No Credit Only

*Prerequisite:* Fire Protection Technology 160 and 309A, each with a grade of "C" or better, or equivalent.

This refresher course covers the basic skills of returning lifeguards and builds on those skills in preparation for the upcoming season. The course also covers the requirements for lifeguard recertification in Open Water Emergency Medical training. This course may be taken 4 times for credit. (FT) Credit for this course does not apply to the associate degree.

### 162 Seamanship - Rescue Boat Handling 16 hours lecture (total), 24 hours lab (total), 1 unit Grade Only

*Prerequisite:* Fire Protection Technology 160 with a grade of "C" or better, or equivalent.

*Advisory:* English 51 and English 56, each with a grade or better, or equivalent, or Assessment Skill Levels W5 and R5.

*Limitation on Enrollment:* To be eligible for this class, students must pass a San Diego City Lifeguard Service swim test, 500-meter swim in ten (10) minutes or less,

and be employed as an ocean lifeguard or have a need to operate a rescue boat.

This 40-hour California Department of Boating and Waterways course provides manipulative training in handling emergency rescue boats under varying conditions. These conditions include emergency response operations, towing, offshore operations, and search and rescue. (FT) Associate Degree Credit only and not Transferable.

### **163 Personal Watercraft Operations**

**16 hours lecture (total),  
24 hours lab (total), 1 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 160 with a grade of "C" or better, or equivalent.

This is a course to train open water lifeguards in the operation and crew responsibilities of the Personal Water Craft vessel. The class is a lecture and laboratory format with subject matter ranging from terminology, maintenance, historical background, and operation of the boat known as the Personal Water Craft. (FT) Associate Degree Credit only and not Transferable.

### **164 Marine Firefighting**

**16 hours lecture (total),  
24 hours lab (total), 1 unit  
Grade Only**

*Limitation on Enrollment:* Students must have passed the San Diego Regional Lifeguard Training program and be employed as ocean lifeguards or the equivalent. This 40-hour California Department of Boating and Waterways course involves lecture and manipulative training designed to give students first-hand knowledge of the hazards of marine fire fighting. Students receive the basic information from lectures and the experience of actual conditions from fighting fires under controlled conditions. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **167A Scuba for Emergency Services I**

**1 hour lecture, 3 hours lab, 2 units  
Grade Only**

Students with open-water lifeguard experience learn how to use the Self-Contained Underwater Breathing Apparatus (SCUBA). Students also learn about scuba history, equipment, physics, physiology, environment, and safety. Students experience six pool training sessions and six open-water scuba dives. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **167B Scuba for Emergency Services II**

**0.5 hour lecture, 2 hours lab, 1 unit  
Grade Only**

Students with open-water lifeguard and Self-Contained Underwater Breathing Apparatus (SCUBA) experience (Scuba for Emergency Services I training or equivalent) learn how to become part of a dive rescue team. Students also learn about advanced search and rescue theory, evidence handling, information gathering, and treatment of divers needing medical aid. Students experience one pool-dive training session and six open-water scuba dives. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **200A Fire Command IA**

**40 hours lecture (total), 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 Fire Science 222A or Fire Protection Technology 222A.

This course provides the fire company officer with information and experience in command and control techniques at the scene of an emergency. The course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, pre-planning fire problems, and extinguishing agents on the fire ground. This course reviews fire chemistry, methods of fire attack, and basic fire fighting tactics and strategy. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **200B Fire Command IB**

**40 hours lecture (total), 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 200A 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 Fire Science 222B or Fire Protection Technology 222B.

This course provides an in-depth analysis of the tactics and strategies and scene management principles for incidents involving hazardous materials. It covers identification and hazard mitigation, decontamination, protective clothing, environmental concerns, and legal issues. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**200C Fire Command 1C**

**28 hours lecture (total),  
12 hours lab (total) 1.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 200A and 310A each 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 introduces I-Zone company officers to the urban/interface wildland fire fighting environment. Topics include I-zone operation principles, safety and survival, and I-zone incident operations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**201 Fire Management I**

**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:* This course is not open to students with previous credit for Fire Science 229 or Fire Protection Technology 229.

This course prepares or enhances the first line supervisor's ability to supervise subordinates. It introduces key management concepts and practices utilized in the California Fire Service. The course includes discussions about decision making, time management, leadership styles, personnel evaluations, and counseling guidelines. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**202A Fire Prevention IA**

**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:* This course is not open to students with previous credit for Fire Science 227 or Fire Protection Technology 227.

This course provides a broad, technical overview of fire prevention codes and ordinances, inspection practices, and key hazards. Topics include flammable and combustible liquids and gases, explosives, fireworks, and extinguishing systems. This course is part of the California State Fire Academy curriculum. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**202B Fire Prevention IB**

**40 hours lecture (total), 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 202A 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 Fire Science 228 or Fire Protection Technology 228.

This course focuses on the codes and statutes that pertain to fire prevention practices in California. Topics include building construction and occupancy, evacuation procedure, inspection reports, and processing plans. This course is part of the California State Fire Academy curriculum. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**202C Fire Prevention IC**

**1.75 hours lecture, .75 hours lab, 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 202B 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 Fire Science 248 or Fire Protection Technology 248.

This course focuses on the special hazards associated with flammable and combustible liquids and gases. Topics include bulk handling and storage, transportation of flammable gases and liquids, regional and national codes, and methods of control and enforcement. This course is part of the California State Fire Academy curriculum. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**203A Fire Investigation IA**

**1.75 hours lecture, .25 hours lab, 2 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 224 or Fire Protection Technology 224.

This course is an introduction to arson investigation. This is an intensive course in the principles of determining fire cause, recognizing and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures, and giving court testimony. This course is part of the California State Fire Academy curriculum. (FT) Associate Degree

Credit & transfer to CSU and/or private colleges and universities.

### 203B Fire Investigation IB

**1.75 hours lecture, .25 hours lab, 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 203A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 244 or Fire Protection Technology 244.

This course provides the participants with information to achieve a deeper understanding of fire investigation. It builds on Investigation IA and adds topics of discussion including the juvenile fire setter, report writing, and evidence collection and preservation procedures. This course is part of the California State Fire Academy curriculum. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 204A Instructor Training IA

**1.75 hours lecture, .75 hours lab, 2 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Science 225 or Fire Protection Technology 225.

This California State Fire Academy course prepares students to provide training within their fire departments or to teach community college fire technology courses. The course covers identification of training needs, identification of course objectives and content, establishment of levels of instruction, measurable student objectives, development of levels of instruction, the psychology of learning, and the evaluation of effectiveness. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 204B Instructor Training IB

**1.75 hours lecture, .75 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 previous credit for Fire Science 226 or Fire Protection Technology 226.

This course provides training for prospective instructors within the fire technology field. Students learn how to identify training needs, establish course objectives and content, identify levels of instruction, measure student objectives, develop technical lesson plans, and teach technical subjects. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 205 Public Education I

**2 hours lecture, 2 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 251 or Fire Protection Technology 251.

This is a California State Fire Marshal course with the key topics being systematic planning process for public education; use of CFIRS to analyze local fire problems; communication skills; program evaluation; working with the media; integrating programs into school; gaining community support; fire safety for children; interviewing and counseling juvenile fire setters; creating and using audio/visual resources; and idea and resource sharing. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 210A Driver Operator - Driving

**28 hours lecture (total),  
12 hours lab (total), 1.5 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 110 or 210A.

This course meets the technical and driving requirements established by the State Fire Marshall for fire emergency vehicles. Topics include state code requirements for emergency vehicles, fire apparatus specifications and design, construction features, performance factors, basic inspection and maintenance of fire apparatus, and driving and placement exercises of pumpers. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 210B Driver Operator - Pumping

**28 hours lecture (total),  
12 hours lab (total), 1.5 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 110 or 210B.

This course meets the technical and practical requirements for using fire department pumpers. Topics include fire apparatus pumping specifications, testing, design and construction features, performance factors,

and field hydraulics. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **239A Current Issues and Skills Update for EMT-1NA/FS**

**9 hours lecture (total),  
7 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105 or Fire Protection Technology 130 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 239A.

This first course is designed to introduce the firefighting student to the role and responsibility as a professional EMT/first responder at the basic life support level. Curriculum will inform the student on trends, technology and methods of application of techniques used in the field as a firefighter EMT/first responder in an area serviced by an advanced life support (ALS) pre-hospital emergency medical service program. An update on scope of practice, protocols and basic skills will be included. This course in conjunction with FS 239B will qualify the student to take the EMT-1NFS Recertification Exam through the California State Fire Marshal's office. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. Credit units earned in this course will not apply to the associate degree.

### **239B Current Issues and Skills Update for EMT-1NA/FS**

**9 hours lecture (total),  
11 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 239A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 239B.

This second course is designed for the professional firefighter/EMT first responder to maintain proficiency at the basic life support (BLS) level. Curriculum will keep the student current in changes, trends, technology and methods of application of techniques used in the field as a firefighter EMT/first responder to an advanced life support (ALS) pre-hospital emergency medical service program. Update in scope of practice, protocols, and basic skills will be included. This course in conjunction with FS 238 meets the requirements as set by the California State Fire Marshal for recertification as an EMT-1NA/FS. Upon successful completion, the student is eligible to take the EMT-1NA/FS Recertification Exam. This course may be repeated as

necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. Credit units earned in this course will not apply to the associate degree.

### **243 Rescue Systems I - Fundamentals of Heavy Rescue**

**1 hour lecture, 1.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 380F or 381F with a grade of "C" or better, or equivalent, or a basic P.O.S.T. Academy.

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 243.

This course is intended for the training of fire service and other emergency personnel in heavy rescue techniques, to include: Use of rescue equipment; Constructing rescue systems; Packaging rescuers; Rappelling; Spar lashing and use; Gin pole construction and use; A-Frame, tripod and block and tackle systems construction and use; Cribbing and wedges, shores construction and use; and Rescue scene management. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **247 Refresher, Rescue Systems I**

**.25 hour lecture, .75 hour lab, .5 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 243 with a grade of "C" or better, or equivalent.

This 16 hour course enables students who have taken Rescue Systems I to review and update information pertaining to rescue operations which often follow earthquakes, flooding, and other large scale emergencies. The review of the hands-on operation of specialized rigging systems, rescue drills and saws, working in confined spaces, and the removal of victims is required to maintain a suitable skill level. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **249 Rescue Systems II**

**1 hour lecture, 1.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 243 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Science 249.

This course builds upon and expands the knowledge and skills acquired in Rescue Systems I. Training focuses on developing teams of rescue workers to operate in rescue situations following earthquakes, flooding, and other large scale emergencies. Much of the course content includes information and recommendations developed

by agencies involved in the 1989 San Francisco earthquake, 1993 floods, and 1994 Los Angeles earthquake. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **250 Structure Collapse Technician**

**12 hours lecture (total),  
51 hours lab (total), 1.5 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 Federal Emergency Management Agency (FEMA) Structure Collapse Technician course prepares firefighters and other rescue personnel to perform search and rescue at collapsed structure incidents. Through lecture and hands-on manipulative lessons, this class covers safety issues, structural engineering systems, interior and exterior shoring systems, moving and lifting of heavy objects, and breaking, breaching, and burning operations. (FT) Associate Degree Credit only and not Transferable.

### **253 Heavy Rescue Instructor Training**

**16 hours lecture (total),  
20 hours lab (total), 1.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 243 with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with credit for Fire Science 253. This is a training course for the training of instructors to teach courses at a Heavy Rescue Facility as typified by the Miramar College facility at Camp Elliott. This specialized training includes the normal techniques of instruction as well as methods to simulate unusual situations encountered following earthquakes, flooding, and other large scale emergencies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **254 EMT-1 Instructor Update**

**8 hours lecture (total), .5 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105 or Fire Protection Technology 130 with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with credit for Fire Science 254. This is an-8-hour course mandated by the Office of the State Fire Marshal for all EMT-1, State Fire Marshal registered instructors. Course will provide instructors

with the changes that have recently been adopted by the national emergency medical professional organizations and the California legislature. Associate Degree Credit only and not Transferable.

### **255 Instructor Orientation, State Fire Marshal**

**8 hours lecture (total), .5 unit  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 255 or 265: Instructor Orientation, State Fire Marshal. This course is mandatory for instructors' eligibility to teach California Fire Marshal courses in community colleges. The instructor orientation is designed to prepare instructors to deliver the following Level 1 regional programs: Fire Command 1A and B, Fire Investigation 1A and 1B, Fire Management 1, Fire Prevention 1A, 1B and 1C, Driver Operator 1A & 1B, and Public Education 1. Topics of discussion include overview of CFSTES, instructor accreditation requirements, how to set up and return course paperwork, certification tracts, instructor responsibilities and curriculum development. Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **256 Fire Command 2D Planning for Large Scale Disasters**

**40 hours lecture (total), 2 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with credit for Fire Science 256. Instruction in this course is designed for fire officers and others training for incident command leadership. Course involves the history, components, management principles, and operational techniques required for the implementation of a command system for large scale disasters: earthquakes, floods, and conflagrations. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **260 Advanced Open Water Lifeguard Training**

**80 hours lecture (total),  
110 hours lab (total), 6.5 units  
Credit/No Credit Only**

*Limitation on Enrollment:* Students must be sponsored by a San Diego Regional Lifeguard agency. This is an advanced level course for current seasonal lifeguards to be trained to qualify for year-around positions. Course content follows the standards of the United States Lifesaving Association. (FT) Associate Degree Credit only and not Transferable.

### 270 Work Experience

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

### 300A Commanding Multiple Alarms or Large Fire Suppression Forces, Fire Command 2A

**1.75 hours lecture, .75 hours lab, 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 200B with a grade of "C" or better, or equivalent.

This California Fire Service Training and Education System certified course prepares the fire officer to use management techniques and incident command systems when commanding multiple alarms or large fire suppression force. Topics include fire fighter safety, major incident strategical and tactical considerations, and pre-planning building surveys. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 300B Management of Major Hazardous Materials Incidents, Fire Command 2B

**1.75 hours lecture, .75 hours lab, 2 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 300A with a grade of "C" or better, or equivalent.

This California Fire Service Training and Education System certified course prepares fire officers to command major hazardous-materials incidents. Students learn to recognize the warning signs, clues, risks, and potential outcomes associated with hazardous-material incidents. Key elements of the course include incident command system techniques for isolating hazardous materials, decontamination considerations, making required notifications, protecting the public, and recognizing cooperating agencies' roles and responsibilities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 300C Fire Command 2C, High Rise Fire Tactics

**2 hours lecture, 2 units  
Grade Only**

*Prerequisite:* Fire Command 2A.

This 40-hour course is for chief and company officers and covers the techniques of using a systems approach as applied to fighting fires in both small and large high rise structures and is applicable to both large and small fire departments. Topics include prefire planning, building inventory, problem identification, ventilation methods, water supply, elevators, life safety, strategy and tactics, application of the Incident Command System, and specific responsibilities of officers. Case studies and simulation are used. Upon successful completion, the student will receive a State Fire Marshal course completion certificate which applies to the Chief Officer Certification. (FT) Associate Degree Credit only and not Transferable.

### 300E Fire Command 2E, Wildland Fire Tactics

**2 hours lecture, 2 units  
Grade Only**

This 40-hour course is for fire officers and others training for incident command leadership. This course includes California's wildland fire problems, wildland fire safety, weather effects, wildland fuels, wildland fire behavior, initial attack methods, strategy and tactics, and air attack operations. This course involves class participation and fire simulation. (FT) Associate Degree Credit only and not Transferable.

### 301L Fire Company Officer Training

**32 hours lecture (total),  
24 hours lab (total), 2.5 units  
Grade Only**

This course prepares or enhances the first line supervisor's ability to supervise subordinates. It introduces key management concepts and practices utilized in the California Fire Service. The course includes discussions about the role of the Company Officer, oral and written communications, decision-making, time management, leadership styles, personnel evaluations, Emergency Scene Incident Command, operational responsibilities, discipline and counseling guidelines. (FT) Associate Degree Credit only and not Transferable.

### 301M C.D.F. Company Officer Academy

**30 hours lecture (total),  
15 hours lab (total), 2 units  
Grade Only**

This course is designed for California Department of Forestry personnel from Firefighter to Unit Chief. This course meets State and federal guidelines for

recertification of various skills. It also incorporates those requirements for OSHA and CALOSHA regarding safety and documentation. This course is designed to help refresh employees in various subject material such as: Hazardous Materials, Equal Employment Opportunity, Fire Tactics and Strategy, Environmental Hazards, Administration, Accountability, Incident Command System, Emergency Medical Care, and Rescue. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of employment or volunteer employment. Associate Degree Credit only and not Transferable.

### **303A Fire Investigation 2A, Criminal and Legal Procedures**

**1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 203A and 203B, each with a grade of "C" or better, or equivalent. *Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 303C.

As part of the California Department of Forestry (CDF) State Fire Training Investigator Certification track, this course provides students with up-to-date legal procedures, information, and training. It also provides a basis for new investigators to document fire scenes, prepare written reports, and properly supply information leading to criminal complaints filed with the District Attorney. The course familiarizes new investigators with procedures for dealing with persons in custody and the legal issues surrounding search and seizure. This training prepares the investigator for the courtroom. Student teams examine and document actual fire scenes. (FT) Associate Degree Credit only and not Transferable.

### **303B Fire Investigation 2B, Field Case Studies**

**1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 303A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 303D.

As part of the California Department of Forestry (CDF) State Fire Investigator Certification track, this course provides participants with practical, hands-on fire investigation experience. Participants conduct victim and witness interviews, prepare written reports of victim/witness contacts, and determine a course of action to legally conclude a fire investigation. Participants also attempt to qualify as experts in determining where fires originate and how they are

caused. They present qualifications after practice in front of attorneys and judges in court, and participants prepare and revise a curriculum vitae. (FT) Associate Degree Credit only and not Transferable.

### **304A Train the Trainer, Confined Space Operations**

**10 hours lecture (total),  
22 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 308A with a grade of "C" or better, or equivalent.

A 32-hour course to prepare "Confined Space" trained personnel to instruct others in "Confined Space Operations." Instructional methods, demonstration procedures, operational safety factors, development of training scenarios, instructional resource use and management, motivational strategies, evaluation methods, and requirements for record keeping will be included in the course to meet the recommendations of the California State Fire Marshal's curriculum and the United States Urban Rescue Teams of the United States Fire Administration. (FT) Associate Degree Credit only and not Transferable.

### **306A Haz Mat Emergency Response First Responder Operational**

**1 hour lecture, 1 unit  
Grade Only**

This course provides the students with a fundamental knowledge of the factors affecting operating procedures at a Hazardous Material Incident. This course will improve the capabilities of the first responder to respond to a Haz Mat event in a safe and competent manner, within the typical resource and capability limits at the "operational" level. This course meets the First Responder Operational Haz Mat Emergency Response certified course requirements of California Code of Regulations (CCR) Title 19, Division 2, Chapter 1, Subchapter 2, Sections 2510-2560. (FT) Associate Degree Credit only and not Transferable.

### **308A Confined Space Operations**

**1.75 hours lecture, .25 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 243 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 advanced rescue system course focuses on removing victims trapped in exceedingly difficult and/or large-scale entrapments. Students learn how to use specialized equipment and follow proper operating

procedures. The course emphasizes the history, philosophy, organization, and operation of a confined space rescue, code reference, identification and correction of confined space rescue hazards, and the relationship of fire rescue safety education and monitoring systems. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### **308B Current Special Issues (Confined Space Awareness)**

**8 hours lecture (total), .5 unit  
Grade Only**

This course is designed for personnel with confined spaces within their areas of responsibility. Students are introduced to the hazards, equipment, and operational positions of safe and legal confined space entry. This course also includes a review of CAL/OSHA regulations with regard to Permit-Required Confined Space. (FT) Associate Degree Credit only and not Transferable.

### **309A Emergency Medical Care of the Sick and Injured**

**1 hour lecture, 2 hours lab, 1.5 units  
Grade Only**

Students learn the emergency medical skills needed by public safety personnel. Topics include emergency care procedures such as examining the victim, observing surroundings, determining case histories, maintaining an airway, performing resuscitation and cardiopulmonary resuscitation, controlling bleeding, and treating cerebrovascular injuries, shock, and seizures. Students also learn about childbirth, manual lifts and carries, and improvising and providing transportation. This course meets present public safety emergency care requirements. (FT) Associate Degree Credit only and not Transferable.

### **309R Refresher, Emergency Medical Aid**

**.5 hour lecture, 1.5 hours lab, 1 unit  
Credit/No Credit Only**

*Prerequisite:* Fire Protection Technology 309A with a grade of "C" or better, or equivalent.

This refresher course for public safety personnel updates and refines emergency medical skills. Students review emergency medical care procedures including examining the victim, observing surroundings, maintaining an airway, performing resuscitation and cardiopulmonary resuscitation, controlling bleeding, treating shock and seizures, assisting with childbirth emergencies, performing manual lifts and carries, and preparing patients for transportation. This course meets present public safety emergency care refresher requirements only. (FT) Associate Degree Credit only and not Transferable.

### **310A Basic Incident Command System I-200**

**1 hour lecture, 1 unit  
Grade Only**

This course is designed for all emergency response personnel (police, fire, and EMS). This course consists of the Incident Command System (ICS) Modules 2 - 6 and meets the training needs of wildland fire personnel and other emergency response personnel. Participants are introduced to the principles associated with the ICS and Standardized Emergency Management System (SEMS). Topics provide an introduction to and overview of the ICS. The topics also introduce the participant to the interagency incident management system being adopted by the fire service and emergency response organizations across the country. (FT) Associate Degree Credit only and not Transferable.

### **310B Intermediate Incident Command System I-300 Standardized Emergency Management System**

**16 -26 hours lecture (total), .5 - 1 unit  
Grade Only**

*Prerequisite:* Basic Incident Command System I-200 or Fire Protection Technology 310A with a grade of "C" or better, or equivalent.

This course is for all emergency response personnel, as defined in Governmental Code S8607. This course consists of Modules 7-11 and expands on the Basic Incident Command System (ICS) and Standardized Emergency Management System (SEMS) by providing more description and detail of the organization and operation of the ICS. Topics include management of resources, duties of all positions, and examples of how the essential principles are used in incident or event planning. (FT) Associate Degree Credit only and not Transferable.

### **310C Advanced Incident Command System I-400 Standardized Emergency Management System**

**1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Intermediate Incident Command System I-300 or Fire Protection Technology 310B with a grade of "C" or better, or equivalent.

This course is for all emergency personnel (police, fire, and EMS). This course consists of Modules 12-15 and expands on the Intermediate Command System (ICS) and Standardized Emergency Management System (SEMS) by providing more description and detail of the organization and operation of the ICS. Topics include large scale organization development, roles and relationships of primary staff, considerations related to

large and complex incident or event management, area command, and the importance of interagency coordination. (FT) Associate Degree Credit only and not Transferable.

### **310E Strike Team Leader-Engine I-334**

**1 hour lecture, 1 unit  
Grade Only**

This 12 - 16 hour course orients the participant to the basic responsibilities of an Engine Strike Team Leader. Subjects covered include strike team concept, types of strike teams, pre-incident responsibilities, assembly and travel, incident arrival and check-in, assigned/available status, out-of-service and demobilization/release. (FT) Associate Degree Credit only and not Transferable.

### **310F Division/Group Supervisor I-339**

**16 hours lecture (total), 1 unit  
Grade Only**

This course covers the aspects of the management skills necessary to fill the position of Division/Group Supervisor within the framework of the Incident Command System. The course references wildland fire tactics and strategies to exemplify management and supervision techniques, but the techniques may be utilized at other emergency incidents. (FT) Credit for the course does not apply to the associate degree.

### **310G Incident Safety Officer S-401**

**8 hours lecture (total),  
16 hours lab (total), 1 unit  
Grade Only**

This 24 hour course delivers information needed to operate in the position of Safety Officer within the Incident Command System at a large scale incident. This course fulfills the training needs of wildland fire personnel, police, EMS, and other emergency response personnel. (FT) Associate Degree Credit only and not Transferable.

### **310H Introduction to Wildland Fire Behavior Calculations S-390**

**8 hours lecture (total),  
16 hours lab (total), .5 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 310A 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.

*Limitation on Enrollment:* Experienced personnel must meet training and experience requirements for the position as established by the NWCG Wildland Fire Qualifications Subsystem Guide 310-1. Must be Task Force/Strike Team Leader qualified.

This third course in a five-course sequence develops the concepts required in determining wildland fire behavior for safe and effective fire management operations. Students learn about local and regional fire behavior issues that are critical to wildland fire fighting. They also compare the effects of daytime solar radiation and nighttime heat losses from various sources. Topics include the effects of terrain, vegetation, clouds, and wind on relative humidity, types of inversions, and their effects on wildland fire behavior. The course also explores the relationship among general, local (convective), 20-foot, and mid-flame winds and how topography affects fuels and their availability for combustion. (FT) Associate Degree Credit only and not Transferable.

### **310J Fire Operations in the Urban Interface S-215**

**8 hours lecture (total),  
24 hours lab (total), 1 unit  
Grade Only**

This is a 24-32 hour course designed to meet the training needs for initial attack incident commanders and company officers confronting wildland fire that threatens life, property, and improvements. Wildland Urban Interface is a zone where man-made improvements intermix with wildland fuels. (FT) Associate Degree Credit only and not Transferable.

### **310K Basic Air Operations S-270**

**1 hour lecture, 1 unit  
Grade Only**

This 16-hour course is designed to meet the training needs for personnel who may be exposed to any aircraft. Emphasis is placed on the basic knowledge the student needs to function safely around aircraft used in fire suppression. This course is required training for those personnel serving at the single resource boss level and higher in the operations section under the Incident Command System (ICS). Basic Air Operations was developed under the direction of the National Wildfire Coordination Group (NWCG) and meets all the requirements as prescribed by the National Interagency Incident Management System (NIIMS). (FT) Associate Degree Credit only and not Transferable.

### **310L Leadership and Organizational Development SH-301**

**12 hours lecture (total),  
12 hours lab (total), 1 unit  
Grade Only**

This 24-hour course provides the trainee with the communication and supervision skills necessary to perform as a unit leader on a wildland fire. This course presents the selected communication and supervision techniques and concepts which apply to incident management. The student learns these skills through a pre-course assignment and classroom discussions, group activities, brainstorming, role playing, and problem solving. Associate Degree Credit only and not Transferable.

### **310M Fire Suppression Tactics S-336**

**2 hours lecture, 2 units  
Grade Only**

Fire Suppression Tactics is a 32-hour course meeting the training requirements outlined in the Operations Section of the Incident Command System. This course is designed primarily to instruct experienced single resource bosses and initial attack incident commanders in the wildland fire fighting tactics necessary at the strike team leader or task force leader level. This course is also recommended for operations supervisors qualified at higher management levels who have not received training in wildfire suppression tactics. (FT) Associate Degree Credit only and not Transferable.

### **310N Intermediate Air Operations S-370**

**2 hours lecture, 2 units  
Grade Only**

This is a 32-hour course to meet the training needs of personnel who may be exposed to any aircraft. Emphasis is placed on the intermediate knowledge the student needs to function safely around aircraft used in fire suppression. This course is required training for those personnel serving at the single resource boss level and higher in the operations section under the Incident Command system (ICS). Intermediate Air Operations was developed under the direction of the National Wildfire Coordination Group (NWCG) and meets all requirements as prescribed by the National Interagency Incident Management System (NIMS). Associate Degree Credit only and not Transferable. (FT)

### **310O Intermediate Wildland Fire Behavior S-290**

**1.5 hours lecture, 1.5 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 classroom-based skills course prepares prospective supervisors to undertake safe and effective fire management operations. This second course in a series continues developing fire behavior prediction knowledge and skills. Students also focus on fire environment differences and local conditions. (FT) Associate Degree Credit only and not Transferable.

### **310S Operations Section Chief I-430**

**28 hours lecture (total),  
12 hours lab (total), 1.5 units  
Grade Only**

The primary purpose of this course is to provide the student with the management skills needed to perform a specific function within the Incident Command system. This course will present the selected communication and supervision techniques and concepts which apply to incident management. The student will learn these skills through a pre-course assignment and classroom discussions, group activities, brainstorming, role playing, and problem solving. The student is expected to have the appropriate tactical background and demonstrated skills before taking the class. (FT) Associate Degree Credit only and not Transferable.

### **311M Swiftwater Rescue Technician I**

**8 hours lecture (total),  
22 hours lab (total), 1 unit  
Grade Only**

This course is an intensive three-day, 30-hour training session. It has one day of classroom instruction followed by two days of developing and practicing water rescue skills. The initial emphasis is on developing self-rescue skills in swift moving water. Other objectives include an in-depth look at such subjects as: understanding water dynamics, handling hazards and obstacles, using basic rescue equipment, setting up technical rope systems, and controlling in-water contact rescue. (FT) Associate Degree Credit only and not Transferable.

**312A Auto Extrication****24 hours lab, .5 unit  
Credit/No Credit Only**

This course provides students with hands-on experience in the procedures and systems utilized during automobile extrication. Topics covered include auto extrication, types of hand and power tools, removing windows, opening doors, removing roofs, pulling seats, stabilization of vehicles, and simulated rescues of victims. (FT) Associate Degree Credit only and not Transferable.

**361 Current Issues and Skills Maintenance for Professional Firefighters****4 to 40 hours lecture (total),  
12 to 40 hours lab (total), .5 - 2.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 380F or Fire Protection Technology 381F with a grade of "C" or better, or equivalent.

This course assesses, updates, and improves the knowledge, skills, and abilities of individual fire fighters and fire crews. It meets the requirements of the International Fire Service Training Association, Occupational Safety and Health Association, California Title 22, California State Fire Marshall, and San Diego Fire Department Training Division. Subjects include recent legislation and legal updates; technical subjects addressing social issues and skill proficiency training in fire ground and rescue operations; emergency vehicle operations; hazardous materials training; and the Incident Command System. (FT) Not Applicable to Associate Degree.

**362A In-service Fire Training Modules****240 lab hours (total), 4 units  
Credit/No Credit Only**

*Prerequisite:* Fire Protection Technology 380F and 381F, each with a grade of "C" or better, or equivalent, or Firefighter I card.

This in-service fire training course updates, improves, and assesses the knowledge, skills, and abilities of fire crews. It includes EMT-1 recertification and wildland/urban interface training. It also reviews hazmat/hazmed, weapons of mass destruction, MVI/MCI, and incident command position responsibilities. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

**370A Firehouse World Hands-on Training****24 hours lab, .5 unit  
Credit/No Credit Only**

*Advisory:* Fire Protection Technology 100A with a grade of "C" or better, or equivalent, or equivalent to Fire Protection Technology 100A; English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This annual one-week seminar updates, improves, and assesses the skills, knowledge, and ability of fire crews. Each course repetition includes a variety of topics, such as rapid intervention training, vehicle extrication, safety and survival in fire attacks, fire attack tactics, and hazardous materials decontamination, many of which meet California State Fire Marshal Certification. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Not Applicable to Associate Degree and not a basic skills course.

**371 Firehouse World Seminar Training****16 hours lab, .5 unit  
Credit/No Credit Only**

*Advisory:* Fire Protection Technology 100A with a grade of "C" or better, or equivalent, or equivalent to Fire Protection Technology 100A; English 51 and English 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W5 and R5.

This annual one-week seminar provides training in management and command, operations, training, emergency medical procedures, and rescue. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. Each course repetition includes a variety of topics, such as wildland, structural, and high-rise firefighting, engine and truck company operations, and driver's training, many of which meet California State Fire Marshal Certification. Students also learn about liability issues and professional development. (FT) Not Applicable to Associate Degree, Occupational/Vocational basic skills.

**380W Basic Wildland Firefighter Academy****16 hours lecture (total), 116 hours lab (total),  
2.5 units  
Grade Only**

This CDF/USFS Firefighter I Basic Academy course introduces students to the basic knowledge of wildland fire control. The course teaches students how to perform safely and efficiently the tasks of wildland firefighters. (FT) Associate Degree Credit only and not Transferable.

### 381F Basic Fire Fighter 1 Academy 486 hours lab (total), 9 units Grade Only

*Prerequisite:* Fire Protection Technology 100A, 101, 102, 103, 104, and 105; and Fire Protection Technology 130 or Emergency Medical Technician 105, each with a grade of "C" or better, or equivalent.

This course provides students with the theory, techniques, and psychomotor skills needed to be a firefighter. Students learn about the fire service's role in society. The course emphasizes the requirements of the California State Board of Fire Services Certified Firefighter 1 training. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. 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 Level 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), (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 Math 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 or English 105, with a grade of "C" or better, or equivalent or Assessment Skill Levels W6 and R6.

This course provides students with a survey of the physical, cultural, political, and economic characteristics of the world's major geographical regions. These regions include Europe, North America, Latin America, Africa, Australia, Oceania, and South, East, and Southeast Asia. The course focuses on historical, environmental, cultural, economic, and technological factors that impact the world's main geographical areas. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. 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 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 GEOL 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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

### 131 First Aid

**3 hours lecture, 3 units**

**Letter Grade or Credit/No Credit Option**

This course satisfies the requirements of the American Red Cross and trains individuals who respond in emergency situations with the knowledge and skills necessary to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until more advanced medical help arrives. Students who successfully complete the course receive the following American Red Cross Certification: Emergency Response certification is valid for three years and CPR for the Professional Rescuer certification is valid for one year. Emergency Response certification is consistent with the U.S. Department of Transportation First Responder curriculum and exceeds the requirement of the California Health and Safety Code (Title 22). This course may be repeated as needed to update certification and skills. (FT) Associate Degree Credit &

transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### 190 Health Education For Teachers

**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 overviews health-related issues and problems in the kindergarten through 12th grade. Topic areas include behavior modification, stress symptoms and management, physical activity, nutrition, cardiovascular disease, pregnancy and sexually transmitted diseases, illicit substance abuse, alcohol and nicotine use and misuse, violence and gang issues, school and home safety issues. This course satisfies the State of California Health Education requirement for the K-12 Teaching Credential. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

### 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.

### 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.

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. 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 may satisfy the CSU graduation requirements in United States History, Constitution, and American Institutions and the requirement in California state and local government. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110, 141, 142, 150, 151, and/or Black Studies (BLAS) 140A, 140B 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.

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. History 110 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; or Chicano Studies 141A satisfies the District and may satisfy CSU requirements in United States History, Constitution, and American Institutions and the requirement in California state and local government. 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. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110, 141, 142, 150, 151 and/or Black Studies (BLAS) 140A, 140B combined: maximum credit, one series. (CAN HIST 10) (CAN HIST SEQ B = HIST 109 + 110).

### 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.

### 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. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110 or 141, 142 or 150, 151 or BLAS 140A, 140B combined: maximum credit, one series.

**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. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110 or 141, 142 or 150, 151 or BLAS 140A, 140B combined: maximum credit, one series.

**150 Native Americans in United States 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 covers the history of the United States from the Pre-contact Colonial Period to the mid-nineteenth century, with an emphasis on the history of Native American Indians, the development of United States Indian policy, and the interaction of divergent cultures. This course requires students to analyze a variety of materials, think critically, and develop thesis-based essays. History 150 taken in conjunction with History 151, 110, 115B, 123, 142; 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 or 141, 142 or 150, 151, or Black Studies (BLAS) 140A, 140B combined: maximum credit, one series.

**151 Native Americans in United States 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 covers the history of the United States from the Civil War to the present, with an emphasis on the history of Native American Indians, changing United

States Indian policy, and the interaction of divergent cultures. This course requires students to analyze a variety of materials, think critically, and write thesis-based essays. History 151 taken in conjunction with HIST 150, 109, 115A, 141, BLAS 140A, or CHIC 141A, satisfies the District and CSU graduation requirements in United States History, Constitution, and American Institutions, and the requirement in California state and local government. This course also fulfills the District's multicultural requirement. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List: History (HIST) 109, 110 or 141, 142 or 150, 151 or Black Studies (BLAS) 140A, 140B combined: maximum credit, one series.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**HUMANITIES (HUMA)**

**101 Introduction to the Humanities 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 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.

## 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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## JOURNALISM (JOUR)

## 202 Introduction to Mass Communication

**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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Radio and Television 200.

This course provides a survey of mass communication and the interrelationships of media with society, including history, structure, and trends. Discussion focuses on analysis of the impact of the media on society and culture as well as on ways that social institutions shape the media. Problems and issues are examined in light of social and cultural constructs, economics, technology, law and ethics, and social issues, including gender and cultural diversity. This course is designed for transfer students in the social sciences, for journalism majors, and any student

interested in how society and mass media are interrelated. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

## 210A Newspaper Production

**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 Newspaper Production 2

**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 Newspaper Production 3

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 Newspaper Production 4

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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## LEARNING SKILLS (LERG)

### 47 College Writing and Learning Skills for Developmental Students

3 hours lab, 1 unit  
Credit/No Credit Only

Learning Skills 47 is an individualized course designed to assist developmental students with basic college writing and learning skills necessary for success in academic settings. In this course, students practice the writing process, reading to respond, listening and discussing as well as study and research skills. Multi-media materials assigned to assist individual students are determined by diagnostics and instructor-student interviews. Students work at their own pace and meet periodically with the instructor in support of continuing progress and course completion. Students must complete a minimum of 48 hours of work; a passing grade cannot be given unless the minimum number of hours are met. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

### 48 College Reading and Learning Skills for Developmental Students

3 hours lab, 1 unit  
Credit/No Credit Only

Learning Skills 48 is an individualized course designed to assist developmental students with basic college reading and learning skills necessary for meeting college-level requirements. The course includes practice with the reading process, active reading and vocabulary learning strategies as well as with listening, research and study skills. Multi-media materials assigned to

assist individual students are determined by diagnostics and instructor-student interviews. Students work at their own pace and meet periodically with the instructor in support of continuing progress and course completion. Students must complete a minimum of 48 hours of work; a passing grade cannot be given unless the minimum number of hours are met. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

#### 49 College Learning Skills for ESL Students

**3 hours lab, 1 unit  
Credit/No Credit Only**

Learning Skills 49 is an individualized course designed to assist ESL students with various areas of language development such as writing and grammar, reading and vocabulary, and listening and speaking necessary for college success. Multi-media materials assigned to assist individual students are determined by diagnostics and instructor-student interviews. Students work at their own pace and meet periodically with the instructor in support of continuing progress and course completion. Students must complete a minimum of 48 hours of work. A passing grade cannot be given unless the minimum number of hours are met. (FT) Not Applicable to Associate Degree, pre-collegiate basic skills, English as a Second Language.

### 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

### LIBRARY SCIENCE (LIBS)

#### **101 Information Literacy and Research Skills** **1 hour lecture, 1 unit**

*Advisory:* English 51 or English 56, each 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194.***

### 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.

#### **270 Work Experience** **Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units** **Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

### 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.

#### **15A 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 basis 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.

### **15B Elementary Algebra and Geometry 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 geometry) and wish to improve their placement level; students who have successfully completed Math 15A; students who have successfully completed Math 95 but need more review; or students who unsuccessfully attempted Math 96 and need review of beginning algebra and geometry skills. The course will consist of personalized computer assisted instruction 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 Math 95. This course will not replace a failing grade in Math 95. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

### **15C Intermediate Algebra and Geometry 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 geometry) and wish to improve their placement level; students who have successfully completed Math 15B; students who have successfully completed Math 96 but need more review; or students who unsuccessfully attempted Math 104, 116, 141 or 210A and need review of intermediate algebra and geometry skills. The course will consist of personalized computer assisted instruction 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 Math 96. This course will not replace a failing grade in Math 96. Not Applicable to Associate Degree, pre-collegiate basic skills - reading, writing, computation.

### **15D 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.

### **32 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.

### **35 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.

### 41 Math Study Skills

**1 hour lecture, 1 unit  
Credit/No Credit**

*Limitation on Enrollment:* This course is not open to students with credit for Mathematics 265: *Math Study Skills*.

This course is designed to assist students in learning mathematics through the development of successful study skills and exam taking methods. This course addresses learning styles, how to read a math book, completing homework assignments, how to take notes and exams, basics of calculator operations and techniques for overcoming math anxiety. Credit for this course does not apply to the associate degree. (FT) Credit for this course will not apply to the associate degree.

## Associate Degree Courses

### 95 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 Levels W4 and R5.

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.

### 96 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).

### 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.

### 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 Limitation: 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.)

**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.

## 245 Discrete Mathematics

**3 hours lecture, 3 units  
Letter Grade or Credit/No Credit Option**

*Prerequisite:* Mathematics 122 or Mathematics 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 Levels 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.

## 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. (FT) 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).

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**MILITARY STUDIES (MILS)****101 Introduction to Military Science****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 introduces students to the structure, organization, and practices of the U.S. military. Students examine the historical foundations, intergovernmental structure, and general organization of the military and its component service branches. Other topics include the military chain of command,

rank structure, job categories and classification, customs and courtesies, and personnel policies. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**110 Leadership Theory and Practice****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level W6 and R6.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 386.

This course provides an interdisciplinary foundation in the field of leadership theory and practice. Students study the foundational principles, definitions, and various models of leadership. Topics include leadership traits, skills, styles, and processes; contingency, path-goal, and leader-member exchange theory; psychological, social, and cultural aspects of leadership; and ethics. Students also develop a personal philosophy of leadership and its application to the workplace and everyday life. This course is designed for current or future leaders in public safety organizations, the armed forces, government, business, academia, and non-profit organizations. This course is cross-listed as Administration of Justice (ADJU) 386. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**120 Military Justice, Ethics, and the Law of Armed Conflict****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course introduces students to the military justice system, ethics, and the laws pertaining to organized warfare. The course covers a broad overview of military law, including rules of evidence, legal procedure, criminal law, civil law, legal services, and the Law of Armed Conflict. Other topics include means of entry into the military, the rights of service members, ethical theory, and government standards of conduct. This course emphasizes the practical application of legal and ethical concepts to common types of decisions made by military leaders. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**200 Applied Military Leadership****1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Military Studies 101 with a grade of "C" or better, or equivalent.

*Corequisite:* Completion of or concurrent enrollment in Military Studies 110 with a grade of "C" or better, or equivalent.

This course integrates the knowledge, skills, and concepts developed in Military Science courses with practical experience in the field. It emphasizes the practical application of leadership skills in a real-world military-related setting, such as a leadership position in the armed forces, volunteer work with military families, or service with a military-affiliated organization (such as the USO or veterans organizations). The course uses lecture hours for orientation, review, feedback, self-assessment, and problem solving. In addition, students must spend at least 30 hours gaining practical field experience. This "capstone course" is intended for students completing the Military Leadership degree or certificate program. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**270 Work Experience in Military Leadership****Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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.

**MOTORCYCLE MAINTENANCE (MCLE)****90 Introduction to Motorcycle Design and Maintenance Theory****3 hours lecture, 1 hour lab, 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 introduces students to the history of motorcycles as well as modern machines. It provides an overview of the theory of operation and design principles involved in motorcycle maintenance. Topics include diagnostic procedures, troubleshooting, and corrective repair. (FT) Associate Degree Credit only and not Transferable.

**91A Motorcycle Engine Theory****3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 can be challenged by exam by students who have previous training and/or experience.

*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 covers motorcycle engine theory. It provides a comprehensive view of how two- and four-stroke motorcycle engines work and covers the technical principles involved in converting fuel to motion. Students also learn how to apply service manual information to identify internal combustion engine components and their maintenance requirements. (FT) Associate Degree Credit only and not Transferable.

**91B Motorcycle Engine Overhaul****3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers the parameters, methods, and techniques of motorcycle engine overhaul, including post-overhaul adjustments and operations checks. Topics include the use of service and parts manuals. (FT) Associate Degree Credit only and not Transferable.

**93 Motorcycle Power Transmission System****3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers motorcycle power transmission systems and the theory of operation including lubrication requirements, gear ratios, and the design and function of the primary drive, clutch, transmission, and final drive. The power transmission systems include engine crankshaft through clutch and transmission as well as the final drive system to the rear wheel. Students learn how to remove,

disassemble, clean, inspect, measure, rebuild, reinstall, and check clutches, transmissions, and drive systems. (FT) Associate Degree Credit only and not Transferable.

### **94 Motorcycle Exhaust, Frame, Suspension, Tires, Wheels, and Brakes**

**3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers the theory, design, and function of motorcycles. Topics include exhaust systems, various frame and suspension designs, tires, cast and spoked wheels, and both disk and drum brakes. Students also learn how to apply theory, design, and service manual information to select correct tire and wheel combinations, frame and suspension modifications, and exhaust and intake combinations for enhanced performance. (FT) Associate Degree Credit only and not Transferable.

### **96 Motorcycle Electrical Systems**

**3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers motorcycle electrical principles, components, and systems. Topics include circuits, wiring diagrams, charging systems, and ignition systems. Students learn how to service, maintain, diagnose, and repair motorcycle electrical components and systems. (FT) Associate Degree Credit only and not Transferable.

### **97 Motorcycle Fuel, Lubrication, and Cooling Systems**

**3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers the principles, theory of operation, design, and function of motorcycle fuel systems including fuel injection, engine control, lubrication, and cooling systems. Students learn how to disassemble, clean, measure, and rebuild components in these systems. (FT) Associate Degree Credit only and not Transferable.

### **98A Motorcycle Tune-up and General Service**

**3.5 hours lecture, 1.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 covers motorcycle tune-up and general service including ignition and valve adjustment, lubrication, and oil and filter changes. Students learn how to use specialized tools, service and parts books, micro-fiche records, and computerized manuals. (FT) Associate Degree Credit only and not Transferable.

### **98B Motorcycle Dynamometer Operation and Data Acquisition**

**1 hour lecture, 1.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Motorcycle Maintenance 90 with a grade of "C" or better, or equivalent. MCLE 090 may be challenged by exam by students who have previous training and/or experience.

*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 relates motorcycle engine and component theory and function to dynamometer operation. It covers how dynamometers are used to diagnose and solve motorcycle maintenance discrepancies on various types of motorcycles. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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.

**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.

**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.

**158A Music Theory I****4 hours lecture, 4 units  
Letter Grade or Credit/No Credit Option**

*Prerequisite:* Music 150A with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in Music 268A.

This course is an intensive study of diatonic harmony in major and minor modes and includes structural and stylistic analysis of music from the period 1600-1750. The emphasis is on development of four-part writing skills within the context of functional diatonic tonality; the interpretation of figured bass symbols, melodic construction and its interaction with harmony, rhythm and structure. This course is designed for the student pursuing music as a major or for the student interested in enhancing technical knowledge of music. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**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.

### **252 Concert Jazz Band**

**3-9 hours lab, 1-3 units**

**Letter Grade or Credit/No Credit Option**

*Limitation on Enrollment:* Audition/Try Out

A selected group of limited membership devoted to the preparation and performance of the best contemporary jazz and stage band literature. Designed to meet the needs of the student desiring to enter the field of professional stage band work, but open to qualified students of any department of the college. The group gives public concerts and supplies music for college functions. Attendance at rehearsals and performances is an integral part of this course. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### **268A Beginning Ear Training Laboratory I**

**3 hours lab, 1 unit**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* Music 150A with a grade of "C" or better, or equivalent.

This course consists of laboratory work in sight singing, melodic dictation, harmonic identification and rhythmic dictation designed to provide students with a "hearing eye" and "seeing ear" that can perceive and identify patterns both large and small in music. The emphasis is on the development of basic skills in sight singing short scale wise melodies containing seconds, thirds, fourths, fifths and octaves, melodic dictation containing seconds, thirds, fourths, fifths and octaves, harmonic identification/dictation of primary triads in major keys, rhythmic dictation with duple and triple subdivisions of the beat. This course is designed for the student pursuing music as a major or for the student interested in enhancing technical knowledge and skills. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

**NUTRITION (NUTR)****150 Nutrition****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 examines the scientific concepts of nutrition relating to the functioning of nutrients within the human body. Emphasis is placed on nutritional needs throughout the life cycle, food sources of nutrients, and current nutritional issues. Students utilize computer technology to analyze dietary intake and evaluate nutritional status. This course meets the Natural Sciences general education requirement for the associate degree at the San Diego Community College District. It also meets Area E requirement for transfer to California State Universities. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: Nutrition (NUTR) 150 and 155 combined: maximum credit, one course. (CAN FCS 2).

**170 Nutrition and Fitness****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 is designed for the physically active person interested in the role nutrition plays to increase energy and enhance performance. Nutrient needs before, during, and after exercise are evaluated for their effect on optimal performance. Carbohydrate loading and a variety of supplements are discussed. Underwater weighing to determine body fat composition is available. This course is designed for both the recreational and competitive athlete and may be applied to the major or used as a transfer course. It may also be of interest to those with an interest in health and fitness. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

**180 Nutrition and Diet Therapy****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 emphasizes concepts of nutrition relating to the functioning of nutrients within the human body and food sources of these nutrients, with special

emphasis on nutritional assessment in specific disease conditions and therapeutic diets relevant to given conditions. An introduction to drug/nutrient interactions is also given. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**OFFICE INFORMATION SYSTEMS (OFCE)**

See "COMPUTER BUSINESS TECHNOLOGY (CBTE)" on page 252.

**PERSONAL GROWTH (PERG)****30 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.

**65 Orientation to College****.5 - 1 hour lecture, .5 - 1 unit****Credit/No Credit Only**

This course is designed to assist the new student in a successful transition to college. Topics include campus resources and services, time management, and educational planning. Students are also acquainted with Policy 3100, which enumerates the rights and responsibilities of all San Diego Community College District students. (FT) Associate Degree Credit only and not Transferable.

**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. UC Transfer Course List.

### 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.

### 130 Career-Life Planning

**3 hours lecture, 3 units**

**Letter Grade or Credit/No Credit Option**

*Advisory:* Completion of or concurrent enrollment in 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 Personal Growth 30.

This course is designed to assist students with self-exploration, career transitions and career-life planning in order to achieve success in a diverse society. Critical thinking skills will be utilized through a systematic

approach to career development by examining values, interests, skills, life roles, personality type, personal self-management, decision-making and goal setting throughout the life span. The course is designed for new and re-entry students and others who can benefit. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities.

### 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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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).

**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.

**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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on*

page 194. Please refer to the class schedule and/or see the dean or department chair for availability.

## PHYSICAL EDUCATION (PHYE)

### 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.

Physical Education classes are offered at the beginning, intermediate and advanced levels.

### Aquatic Activities

#### 106 Aquatic Fitness

**2 - 3 hours lab, .5 - 1 unit**

**Letter Grade or Credit/No Credit Option**

This course covers instruction and conditioning in the four competitive swimming strokes through interval training stressing cardiovascular respiratory fitness in aquatic activities. The swimming program is set up to attain desired levels of cardiovascular efficiency. 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.

#### 139 Lifeguard Training - Advanced Swimming

**2.5 hours lecture, 1.5 hours lab, 3 units**

**Letter Grade or Credit/No Credit Option**

This course gives the most current instruction in the American Red Cross lifeguard training techniques and first aid and CPR skills required to gain eligibility for a lifeguarding position. Upon successful completion, a student will earn certifications in both American Red Cross Lifeguard Training and CPR for the Professional

Rescuer. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued of continued or volunteer employment. Adequate swimming skills are necessary. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

#### 155 Swimming

**2 - 3 hours lab, .5 - 1 unit**

**Letter Grade or Credit/No Credit Option**

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**

**Letter Grade or Credit/No Credit Option**

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.

#### 163 Water Polo

**2 - 3 hours lab, .5 - 1 unit**

**Letter Grade or Credit/No Credit Option**

This course is designed to emphasize the fundamental skill development related to the aquatic sport of water polo. Progressive skill development includes picking up a ball in the water, passing, receiving, shooting, dribbling, and playing in a game. Discussion includes proper offensive and defensive positioning, team strategies, and rules of play. 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.

#### 164 Water Safety Instructor

**2.5 hours lecture, 1.5 hours lab, 3 units**

**Letter Grade or Credit/No Credit Option**

This course gives the most current instruction in the American Red Cross (ARC) Water Safety Instructor (WSI) course. Upon successful completion, students earn WSI

certification, which enables them to teach the Learn to Swim programs of the American Red Cross. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. Adequate swimming skills are necessary. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

### Dance

A program which offers the student instruction in a variety of dance forms. Classes range from the beginning level through the performance level.

#### 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.

#### 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. This course, in combination with Dance 135, may be taken 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, video tapes and concert critiques. This course, in combination with Dance 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.

### 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.

#### 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.

#### 120 Fencing

2 - 3 hours lab, .5 - 1 unit

##### Grade Only

Basic techniques of fencing with French foil are taught. Techniques such as on guard, advance, retreat, attack and parries (simple and compound), and basic rules are covered. Simple and compound attacks, secondary attacks, counter attacks, circular parries and bouting are stressed in intermediate and advanced classes. Judging and directing of bouts are taught and implemented in the form of tournament matches. Fencing etiquette and proper technique are stressed. Students who are looking for a lifetime sport, rich in tradition and gamesmanship find this course intriguing and challenging, both mentally and physically. 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 advanced skills and techniques. (FT) 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.

**154 Fitness Walking****2 - 3 hours lab, .5 - 1 unit****Letter Grade or Credit/No Credit Option**

This course covers the skills necessary to improve aerobic fitness and cardiovascular health through walking, with comprehensive instruction in fitness principles and walking techniques. Topics include general fitness information, stretching and principles of warm-up, walking techniques, principles of conditioning, training zones, and cool-down periods. 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.

**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. 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. The course is geared toward International Okanawan Goju-Ryu Karate-Do Federation (IOGKF), and Tae Kwon Do Federation, with phrases and terms from

other styles for general information 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 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.

### 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

### 204 Intercollegiate Basketball I

**Spring/Fall, 5 - 10 hours lab, 1 - 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 Basketball 112 class. This course may be taken two times for credit. 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.

### 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, and/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, and/or previous competitive soccer experience; and concurrent enrollment in Physical Education 257B.

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

**10 hours lab, 2 units**

**Letter Grade or Credit/No Credit Option**

Spring, This is a course in which students competing in their first 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. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitations. See a Counselor.

### 218 Intercollegiate Swimming I

**10 hours lab, 2 units**

**Letter Grade or Credit/No Credit Option**

This course is designed for students to compete in men's and women's intercollegiate varsity swimming and diving competition. 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.

**219 Intercollegiate Swimming II****Spring, 10 hours lab, 2 units****Letter Grade or Credit/No Credit Option**

This course is designed for students to compete in a second semester of men's and women's intercollegiate varsity swimming and diving competition. 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.

**220 Intercollegiate Tennis I****10 hours lab, 2 units****Letter Grade or Credit/No Credit Option**

Spring, 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.

**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.

**226 Intercollegiate Water Polo I****Fall, 10 hours lab, 2 units****Letter Grade or Credit/No Credit Option**

This course is designed for men and women to compete in Intercollegiate water polo competition. 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.

**227 Intercollegiate Water Polo II****Fall, 10 hours lab, 2 units****Letter Grade or Credit/No Credit Option**

This course is designed for men and women to participate in intercollegiate varsity water polo competition. 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.

**Team Sports****112 Basketball****2 - 3 hours lab, .5 - 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.

**141 Over-the-Line****3 hours lab, 1 unit****Letter Grade or Credit/No Credit Option**

This course provides instruction in the skills of over-the-line including pitching, catching, and proper styles of batting. Rules of play, strategy, and game situations are introduced through various types of tournaments and contests 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.

### **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. UC Transfer Limitations. See a Counselor.

### **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 Limitations. See a Counselor.

### **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 Limitations. See a Counselor.

### **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 Limitations. See a Counselor.

### **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 Limitations. See a Counselor.

## Fitness Specialist Certificate

### 280 Applied Exercise Physiology

**2 hours lecture, 2 units  
Grade Only**

*Advisory:* Mathematics 95 with a grade of "C" or better or equivalent or M50.

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. (FT) Associate Degree Credit only and not Transferable.

### 283 Exercise and Fitness Assessment

**1.75 hours lecture, .75 hours 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 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. (FT) 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 hours 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.

## 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).

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## PHYSICAL SCIENCE (PHYN)

### 100 Survey of Physical Science

**3 hours lecture, 3 units**  
**Letter Grade or Credit/No Credit Option**

*Advisory:* Concurrent enrollment in Physical Science 101.

*Advisory:* English 42 and Mathematics 32, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and M20.

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 for Physical Science (PHYN) 100 or 101 if taken after a college 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 Assessment Skill Level 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 for Physical Science (PHYN) 100 or 101 if taken after a college course in Chemistry or Physics.

## 120 Physical Oceanography

**3 hours lecture, 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 course allows students to pursue an understanding of the major features and processes of the world's oceans. Students learn about the origin and history of ocean basins, atmospheric and ocean circulation, and the dynamics of waves, tides, and coastlines. They explore the oceans as a resource for people and analyze and evaluate human impacts on marine environments. (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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## PHYSICS (PHYS)

### 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 Limitations: Physics (PHYS) 120A/121A-120B/121B, 124A-124B, 125-126, 180A/121A-180B/121B, and/or 195-196-197 combined: maximum credit, one series.

### 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 Limitations: Physics (PHYS) 120A/121A-120B/121B, 124A-124B, 125-126, 180A/121A-180B/121B, and/or 195-196-197 combined: maximum credit, one series.

### 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 Limitations: Physics (PHYS) 120A/121A-120B/121B, 124A-124B, 125-126, 180A/121A-180B/121B, and/or 195-196-197 combined: maximum credit, one series.

**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 Limitations: Physics (PHYS) 120A/121A-120B/121B, 124A-124B, 125-126, 180A/121A-180B/121B, and/or 195-196-197 combined: maximum credit, one series.

**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 Limitations: Physics (PHYS) 120A/121A-120B/121B, 124A-124B, 125-126, 180A/121A-180B/121B, and/or 195-196-197 combined: maximum credit, one series.

***This discipline may offer specialized instruction in one or more of the following areas: Supervised***

***Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.***

**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. 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:* Political Science 101 with a grade of "C" or better, or equivalent.

*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), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## 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 Limitation: Psychology (PSYC) 101 and Black Studies (BLAS 104) combined: maximum credit, one course. (CAN PSY 2).

### 121 Introduction to Child Psychology

3 hours Lecture, 3 units

Letter Grade or Credit/No Credit Option

An examination of child growth and development from conception through adolescence, including environmental management and interpersonal relations with special emphasis on the pre-school years. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: No Credit for Psychology (PSYC) 121 or 123 if taken after 230.

### 123 Adolescent Psychology

3 hours Lecture, 3 units

Letter Grade or Credit/No Credit Option

An exploration of an explosive period in human development. Major goals of this course are to understand the stresses experienced during the teenage years, and to investigate methods of coping with the individual adolescent. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: No Credit for Psychology (PSYC) 121 or 123 if taken after 230.

### 133 Psychology of Women

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 Skills Levels W5 and R5.

Psychology of Women is designed for students seeking an associate degree or those seeking elective credit for transferring to the CSU or UC systems or any student interested in women's issues. The course explores the nature of women's lives and the various roles that women play during their lives and takes an historical, ethnic and cross-cultural look at the treatment of women in the United States and abroad. Students examine women's sexuality, health, life span development and socio-political status in the world today. Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**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 Limitation: 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.

**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 Levels 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. UC Transfer Course List.

**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. UC Transfer Course List.

**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 Levels 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 Limitation: Mathematics (MATH) 119, Biology (BIOL) 200, and Psychology (PSYC) 258 combined: maximum credit, one course.

**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).

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. 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 a study of basic appraisal principles, market analysis and highest and best use. Emphasis is placed on providing students with an overview of real property concepts and characteristics, legal consideration, value influences, real estate finance,

types of value, economic principles, real estate markets and analysis, and ethics in appraisal practice. Course content also includes the tools needed to properly collect and analyze market data including market segmentation and disaggregation, supply side analysis, demand analysis and highest and best use. This course applies toward the new 2008 basic educational requirements of the Office of Real Estate Appraisers for the California Real Estate Appraisal license and is structured to comply with the 2008 curriculum requirements of the Appraisal Qualifications Board. (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.

### **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.

## **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. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Limitation: 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).

### **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 Levels 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. UC Transfer Course List.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

## **SPANISH (SPAN)**

### **86A 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 Limitation: Spanish (SPAN) 100, 101, and/or 102

combined: maximum credit, 10 units. (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 Limitation: Spanish (SPAN) 100, 101, and/or 102 combined: maximum credit, 10 units. (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 Limitation: 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 or concurrent enrollment in 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 Limitation: 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.

### 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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

### Special Education

(See Disability Support Programs and Services on page 262)

## SPEECH COMMUNICATIONS (SPEE)

### 99 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).

**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).

**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.

***This discipline may offer specialized instruction in one or more of the following areas: Supervised***

*Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**TAGALOG (TAGA)**

**101 First Course in Tagalog**

**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.

This course in Tagalog is the first in its language sequence. This is an entry-level course to the Filipino language and culture. In this interactive course, students use the language through speaking, listening, reading, and writing at the novice level. Basic language structures, appropriate forms of address, 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.

**102 Second Course in Tagalog**

**5 hours lecture, 5 units**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* Tagalog 101 with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in TAGA 296.

This course in Tagalog is the second in its language sequence. This course reinforces Filipino culture and Tagalog language concepts studied in the first semester course and introduces additional Filipino cultural and language structures at the low- intermediate level. This interactive course builds on the basic Tagalog language structures and adds new structures through speaking, listening, reading, and writing at the low- intermediate level of grammar mastery. (FT) Associate Degree Credit & transfer to CSU and/or private colleges and universities. UC Transfer Course List.

**201 Third Course in Tagalog**

**5 hours lecture, 5 units**

**Letter Grade or Credit/No Credit Option**

*Prerequisite:* Tagalog 102 with a grade of "C" or better, or equivalent.

This is an intermediate course and is the third in its language sequence. 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.

*This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265), Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 194. Please refer to the class schedule and/or see the dean or department chair for availability.*

**WORK EXPERIENCE, COOPERATIVE (WORK)**

OCCUPATIONAL WORK EXPERIENCE is a program of on-the-job learning experiences for students employed in jobs 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.

**270 Occupational Work Experience**

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-4 units  
Grade Only**

A program of on-the-job learning experiences for students employed in a job related to their major or their educational goals. 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**

**Hours by Arrangement (One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work.), 1-3 units  
Grade Only**

*Limitation on Enrollment:* Must obtain an Add Code from Work Experience Coordinator for enrollment.

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. This course may be taken 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—SAN DIEGO CITY CIVIL SERVICE (SDCS)**

**349I Equipment Mechanic Work Experience**

**Hours by arrangement, 300 hours total, 4 units**

**Credit/No Credit**

*Corequisite:* Diesel Technology 100.

*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 equipment mechanics.

Student must be an indentured equipment mechanic apprentice and 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.

# San Diego Miramar College Faculty



**ANDERSEN, Allen S.**

English

A.A., Mesa College

B.A., M.A., San Diego State University

**ARANCIBIA, Adrian E.**

English

B.A., M.A., University of California, San Diego

**ASCIONE, Louis**

Dean of School of Liberal Arts

B.A., William Paterson College

Ph.D., Temple University

**BEITEY, George**

Dean of School of Public Safety

A.A., San Diego Mesa College

B.A., San Diego State University

M.P.A., National University

**BEREAUD, Francois**

Mathematics

B.A., Cornell University

M.A., State University of New York (SUNY), Cortland

**BETTENDORF, Richard**

Dean of School of Technical Careers and Workforce Initiatives

B.V.E., M.A., California State University, Los Angeles

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English/ESL

B.A., University of California, San Diego

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Physical Science

Coursework at Universite d' Aix-Marseilles, Aix-en-Provence, France

B.A., McGill University, Montreal, PQ

B.S., M.S., Colorado School of Mines

**BOOTH, Channing**

Music

B.A., Berklee College of Music

M.A., Boston Conservatory and Berklee College of Music

**BOSELMAN, Lonny**

Aviation

**BOWERS, Sean Patrick**

Exercise Science

Head Women's Soccer Coach

B.S., Quincy College, Illinois

M.S., University of California Pennsylvania

**BOWERS-GENTRY, Rebecca**

Biology/Chemistry

B.S., San Diego State University

Ph.D., University of Colorado

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Counselor

B.S., Southwest Missouri State University

M.S., San Diego State University

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Speech Communications

B.A., University of San Francisco

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Ph.D., Capella University

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Computer and Information Sciences

B.S., San Diego State University

M.S., National University

M.Ed., Ed.S., Georgia State University

**BURGESS, Dawn**

Child Development

A.S., Community College of Rhode Island

B.S., M.Ed., Rhode Island College

Ed.D., Nova Southeastern College

**BUSER, David**

Aviation Maintenance Technology

A.A., Mesa College

A.S., Miramar College

B.V.E., San Diego State University

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English, Humanities

B.A., Occidental College

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B.A., University of Michigan

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Mathematics

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B.A., M.A., San Diego State University

M.B.A., National University

**CHLAPECKA, Paul**

Aviation Maintenance Technology

B.S., M.B.A., Lewis University

**COONS, Steven**

Political Science/Black Studies

B.A., San Diego State University

M.A., Bowling Green State University

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Fine Art

A.A., San Diego City College

B.A., M.A., Otis Art Institute

**COUTURE, John J.**

Computer and Information Sciences

B.B.A., M.B.A., National University

**DINGER, Mark**

Automotive Technology

A.A., Washtenaw Community College

B.S., University of Michigan  
Master ASE Technician**DOBRE, Octavian (Otto)**

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M.A., M.B.A., San Diego State University

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M.A., Fresno Pacific University**ELIAS, Peter John**

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B.A., Cornell University  
M.A., Ph.D., University of Texas, Austin
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Chemistry/Physical Science  
B.A., Pt. Loma College  
M.S., University of California, San Diego  
Ph.D., Claremont Graduate University and San Diego State University
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B.A., University of Colorado  
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Ed.D. University of San Diego
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Art/Computer Graphics  
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B.S., San Diego State University  
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Health Exercise Science/Athletic Director  
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M.A., University of Bridgeport  
Ph.D., University of Connecticut  
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A.A., College of the Canyons  
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Auto Mechanics  
A.A., San Diego City College  
8 years experience
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Anthropology  
B.A., M.A., University of California, San Diego
- HAIDAR, Buran**  
Biology  
B.S., M.S., Ph.D., American University of Beirut
- HALL, Darren**  
Fire Technology  
B.S., San Diego State University
- HALLIDAY, Rich**  
English  
B.A., Miami University  
M.A., University of Michigan  
M.A., San Diego State University
- HAMIDY, Wahid**  
Computer Business Technology  
A.S., San Diego Mesa College  
B.S., Excelsior College  
M.A., University of Idaho
- HARRISON, Prince Darrel**  
Paralegal Studies  
L.A., University of San Diego  
B.B.A., M.B.A., National University  
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- HART, Mary**  
Librarian/Library Science  
A.A., Grossmont College  
Paralegal Certificate, University of San Diego  
B.S., San Diego State University  
M.L.I.S., San Jose State University
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Art-Graphics  
B.A., UC Berkeley  
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Mathematics  
B.S., Montana State University  
M.S., West Virginia University
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EMT Program Director  
ADN (Associate Degree in Nursing), Pasadena City College
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B.A., Boston College  
M.A., Indiana University  
Ph.D., University of Minnesota
- KOCH, April**  
Spanish  
B.A., M.A.T., University of California, Irvine
- LEE, Linda**  
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B.A., University of Maryland  
M.A., Georgetown University  
M.A., San Diego State University  
Ph.D., San Diego State University/Claremont Graduate School
- LEWIS, Clarence (Jim)**  
Diesel Technology  
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M.A., Monterey Institute of International Studies
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B.S., Ph.D., Flinders University of Southern Australia
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Ph.D., University for Humanistic Studies
- MEINERS, Mary Lee**  
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MS., National University
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Project Manager of Advanced Transportation

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Mathematics

B.S., M.A., University of California, Santa Barbara

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Certificate in Online Teaching, Cerro Coso Community College

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University College of Law

M.Ed., National University

J.D., Cabrillo Pacific University College of Law

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Biology/Biotechnology

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 M.S. San Diego State University  
 Ph.D. University of California  
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 M.Ed., San Diego State  
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 College  
 B.S., State University of New  
 York (SUNY) Empire State  
 College  
 National Certified Fire  
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 Graduate of the National Fire  
 Academy Leadership Program

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 M.A., San Diego State  
 University

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 B.S., Southern Utah State  
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 M.S., Azusa Pacific University  
 Multiple Specialized Training  
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 B.V.E., San Diego State  
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 M.S., Ph.D., University of  
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 Volvo Expert Technician

**ADMINISTRATION &  
EMERITUS**

Steve Adams

Joe Annino

Robert Arend

Robert C. Bacon

Ray Bowling

James Cargill

Eugene Chamberlin

Norris A. Charles

William Charman

Larry Cooke

Robert Crosby

Fredrick Deutsch

Daniel Dramer

Gisella Duarte-Cosman

Kenneth Fawcett

Fran Fehlman

S.M. Franklin

Gin Gee

Rex Gorton

Ruth Gray

Stephen Greene

Robert D. Henderson

Eldon Hoover

Ralph Jacobs

Jerry LaFrance

Morris W. Magoski

Ray McFarlane

Dale Mathews

Joan Messenger

Arashmidos Monjabez

Ronald Page

James Palmer

William S. Puett

Rayley Quon

Jay Root

David Sanderlin

June Scopinich

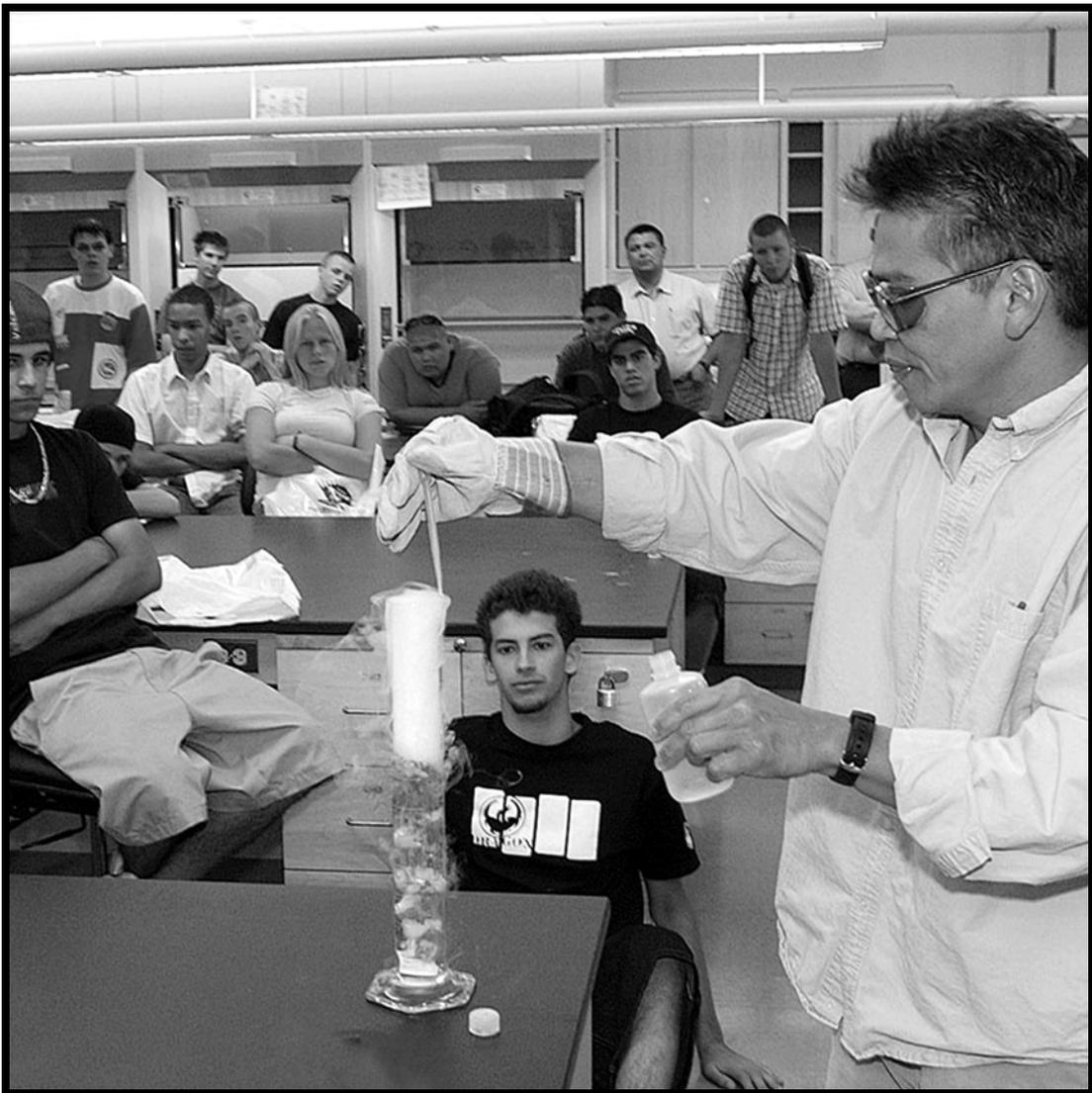
Susan Scott

John S. Shablow  
Richard Shultz  
Donald Taylor  
Terry Truitt

Helen Webb  
James L. Weber



# San Diego Miramar College Classified Employees



<b>Name</b>	<b>Position</b>	<b>Department</b>
AGONAFER, Sara	Executive Assistant to the President	President's Office
AGUILAR, Jessica	Student Services Assistant	Admissions & Records
ALLEN, Joyce	Senior Secretary	Arts & Humanities
ALSTON, Kevin	Administrative Secretary	Vice President of Instruction
AFAN, Virgilio	Accounting Specialist	Student Accounting
ALFUENTE, Anthony	Senior Account Clerk	Student Accounting
AQUINO, Dennis	Production Services Assistant	Reprographics
AQUINO, Kyle	Senior Student Services Assistant	Financial Aid
AQUINO, Mark	Athletic Equipment Attendant	Park & Aquatic Center
ARTEAGA, Eduardo	Custodian I	Facilities Services
ATKINSON, Ellie	Student Services Assistant	Counseling
BARENO, Leticia	Senior Secretary	Business, Math, & Science
BARLOLONG, Christine	Senior Student Services Assistant	Veterans Affairs
BARTOLOMEI, Juli	Clerical Assistant	Academic Senate
BATENGA, Ray	Stock Clerk II	Bookstore
BENTON, Robert	Custodian I	Facilities Services
BERNAL, Jaime	Custodian I	Facilities Services
BODNAR, Johanna	Student Services Assistant	TRIO/Student Support Services
BOYD, Reginald	Evaluator	Evaluations
BUCKNER, Jeffrey	Instructional Lab Tech/Auto Mechanics	Auto Technology
BUENAVISTA, Alfredo	Custodian I	Facilities Services
BURKE, Kathy	Senior Student Services Assistant	Admissions & Records
CABRERA, Reylyn	Instructional Lab Tech/Learning Resources	The PLACe
CAMPBELL, Lynne	Senior Clerical Assistant	Facilities Services
CARVER, Brian	Athletic Groundskeeper	Park & Aquatic Center
CASTILLEJOS, Yolanda	Instructional Lab Tech/Learning Resources	AV Media Center
CAVA, Lily	Bookstore Sales Clerk	Bookstore
CEJA, Juan	Gardener/Groundskeeper	Gardening
CHAU, Van	Instructional Assistant/Office Systems	Independent Learning Center
CHESHIRE, Zack	Gardener/Groundskeeper	Gardening
CLARK, Jacqueline	Senior Secretary	Student Affairs & Matriculation
CONIGLIO, Carmencita	Accounting Supervisor	Student Accounting
CONTRERAS, Miguel	Custodian I	Facilities Services
COVERT, Rick	Facilities Supervisor Landscaping	Groundskeeping
DARDEN, Glenn	Utility Worker	Facilities Services
DAVENPORT, Tom	Senior Clerical Assistant	Office of Instruction
DAVENPORT-ALLEN, Leslie	Nursing Center Supervisor	Student Health Services
DAVIS, Arthur	Instructional Assistant/Aviation	Aviation Maintenance Technology
DAVIS, Glenn	College Service Officer	College Police
DAVIS, Rachell	Clerical Assistant	College Police
De LOS REYES, Edgar	Student Services Assistant	Financial Aid
De LOZIER, Annette	Clerical Supervisor	Business Office
De PERALTA, Cliff	Athletic Equipment Attendant	Aquatics
DIMAYUGA, Pocholo	Custodian I	Facilities Services
DYE, David	Instructional Lab Technician LR	Audio Visual Media Center
ELMONE, Shauna	Administrative Technician	Business Office
EROEN, Benjamin	Instructional Lab Technician/Biology	Biology
EMERY, Christoph	Gardener/Groundskeeper	Groundskeeping
ESCAMARILLA-RIOS, Teresita	Food Service Worker I	Food Services
ESTRADA, Sylvia	Senior Account Clerk	Student Accounting
FERIA, Adam	Accounting Technician	Student Accounting
FERRELL, Richard	Police Officer	College Police

FURMAN, Karen  
 GALVAZ, Danny  
 GRAVETT, Brandy  
 GUTOWSKI, Dan  
 HANKINSON, Joseph  
 HAYES, Alana  
 HENDERSON, Bill  
 HERMANN, Jack  
 HERNANDEZ, Rey  
 HILL, Kurt  
 HODGES, Margaret  
 HOULLLION, Helen  
 HUBBARD, Terrie  
 HUNT, Margaret  
 HUTSON, Hazel  
 HUYNH, An  
 IDANO, Tito  
 IRINGAN, Lina  
 JOBE, Trine  
 JOHNSTON, Toniann  
 KAPLAN, Laura (Beth)  
 KASINCAK, Angelica  
 KELETA, Aster  
 KING, Jenny  
 KINLEY, Roy  
 KNUDTSON, Knute  
 LATIF, Maryam  
 LE, Dam Van  
 LIM, Nancy  
 LINDSAY, Dane  
 LONGFELLOW, Tom  
 MAGPURI, Glenn  
 MARQUEZ, Cynthia  
 MATA, Gloria  
 McCORKEILL, Francine  
 McGEE, Betty  
 McMULLIN, Carla  
 MILGAR, Lucas  
 MIZE, Joan  
 MORA, Dante  
 MORAN, Kieran  
 MORFORD, Charlene  
 MORITA, Miguel (Mo)  
 NAJIMY, Temmy  
 NEAL, Marcia  
 NELSON, Alice

NGUYEN, Tam Quy  
 NGUYEN, Thu Anh  
 NGUYEN, Tien  
 NGUYEN, Truongson (Sonny)  
 NGUYEN, Vuong Tung  
 NICKLES, Jennifer  
 NOVAK, Antonia

Student Services Supervisor I  
 Custodian I  
 Senior Student Services Assistant  
 Hourglass Park Coordinator  
 Placement Officer  
 Athletic Equipment Attendant  
 Food Service Supervisor  
 Custodial Crew Leader  
 Custodian I  
 Microspecialist Supervisor  
 Administrative Technician  
 Senior Student Services Assistant  
 Administrative Technician  
 Clerical Supervisor  
 Senior Student Services Assistant  
 Gardener/Groundskeeper  
 Gardener/Groundskeeper  
 Food Service Worker I  
 Instructional Lab Technician/Biology  
 Senior Student Services Assistant  
 Clerical Assistant  
 Police Officer  
 Senior Clerical Assistant  
 Senior Student Services Assistant  
 Grounds Crew Leader  
 Athletics Groundskeeper  
 Student Services Assistant  
 Instructional Lab Technician/Chemistry  
 Accounting Technician  
 Regional Facilities Officer  
 Lead Production Services Assistant  
 Instructional Support Supervisor  
 Instructional Lab Tech/Child Development  
 Student Services Assistant  
 Instructional Support Supervisor  
 Bookstore Location Supervisor II  
 Instructional Lab Technician  
 Custodian I  
 Graphic Artist/Photographer  
 Stock Clerk I  
 Instructional Assistant  
 Clerical Assistant  
 College Service Officer  
 Senior Secretary  
 Custodian I  
 Student Services Supervisor I

Media Clerk  
 Evaluator  
 Instructional Lab Technician/Chemistry  
 Outreach Coordinator  
 Instructional Support Supervisor  
 Accounting Supervisor  
 Senior Student Services Assistant

Admissions & Records  
 Facilities Services  
 DSPS  
 Park & Aquatic Center  
 Career/Employment  
 Park & Aquatic Center  
 Food Services  
 Facilities Services  
 Facilities Services  
 Instructional Computer Support  
 Public Services  
 Evaluations  
 Office of Instruction  
 Public Services  
 Veterans Affairs  
 Gardening  
 Gardening  
 Food Services  
 Biology  
 Testing/Assessment/Career Services  
 V.P. of Student Services/Outreach  
 College Police  
 President's Office  
 Financial Aid  
 Facilities Services  
 Aquatics  
 Admissions & Records  
 Chemistry  
 Business Office  
 Facilities Services  
 Reprographics  
 Library/LRC  
 Child Development  
 Admissions & Records  
 Independent Learning Center  
 Bookstore  
 Child Development  
 Facilities Services  
 Communications  
 Receiving/Stockroom  
 Auto Mechanics  
 College Police  
 College Police  
 Library & Technology  
 Facilities Services  
 Counseling, EOPS & Evaluations,  
 DSPS  
 Library/LRC  
 Evaluations  
 Chemistry  
 Outreach Office  
 Natural Sciences  
 Business Office  
 Admissions & Records

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PADRIQUE, Eli	Custodian I	Facilities Services
PAPA, Ben	Custodial Crew Leader	Facilities Services
PARENT, Christine	Production Services Assistant	Reprographics
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PHAM, Lonnie	Student Assistance Technician	Financial Aid
PHAYMANY, Pamela	Media Clerk	Library/LRC
PICOU, Cynthia	Senior Clerical Assistant	Office of Instruction
POLLACK, Edith	Administrative Secretary	Vice President of Student Services
REAGAN, Carol	Media Technician	Library/LRC
REDONDO, Josephine	Food Service Worker	Food Services
RICO, Maria	Student Assistance Technician	Financial Aid
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ROSAS, Herminio	Gardener/Groundskeeper	Groundskeeping
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SHOOSHTARY, Sam	Instructional Assistant	Independent Learning Center
SMITH, Carol	Instructional Lab Technician/Biology	Biology
SORIANO, Anna Liza	Hourglass Park Supervisor	Park & Aquatics Center
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STOUT, Mark	Instructional Lab Technician/Aviation	Aviation Maintenance Technology
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TODD, Katinea	Senior Secretary	Technical Careers & Work- force Initiatives
TRAN, Phuc	Media Clerk	AV Media Center
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TRINH, Minh	Student Services Assistant	Counseling
TUAZON, Ricardo	Custodian I	Facilities Services
UM, Minh Chon (Stephen)	Word Processing/Duplicating Support Services Supervisor	Reprographics
VALDEZ, Robert	Stock Clerk II	Receiving/Stockroom
VOLIN, Steven	Instructional Lab Technician	Physical Science
VILLASENOR, Freddy	Gardener/Groundskeeper	Facilities Services
VO, Lynna	Student Assistance Technician	Financial Aid
VOLIN, Steven	Instructional Lab Tech/Physical Science	Physical Science
VU, Diep Mong	Instructional Lab Technician/Chemistry	Chemistry
WAN, Kwai Chee (Alice)	Student Services Technician	Admissions & Records
WILKINS, Carlotta	Instructional Assistant	Auto Technology
WILLIAMS, Phillip	Network Specialist	Instructional Computer Support
WIMS, Victor	Custodian I	Facilities Services
WURANGIAN, Amanda	Student Services Assistant	Veterans Affairs
YOUNG, Sean	Instructional Assistant/Auto Mechanics	Auto Technology

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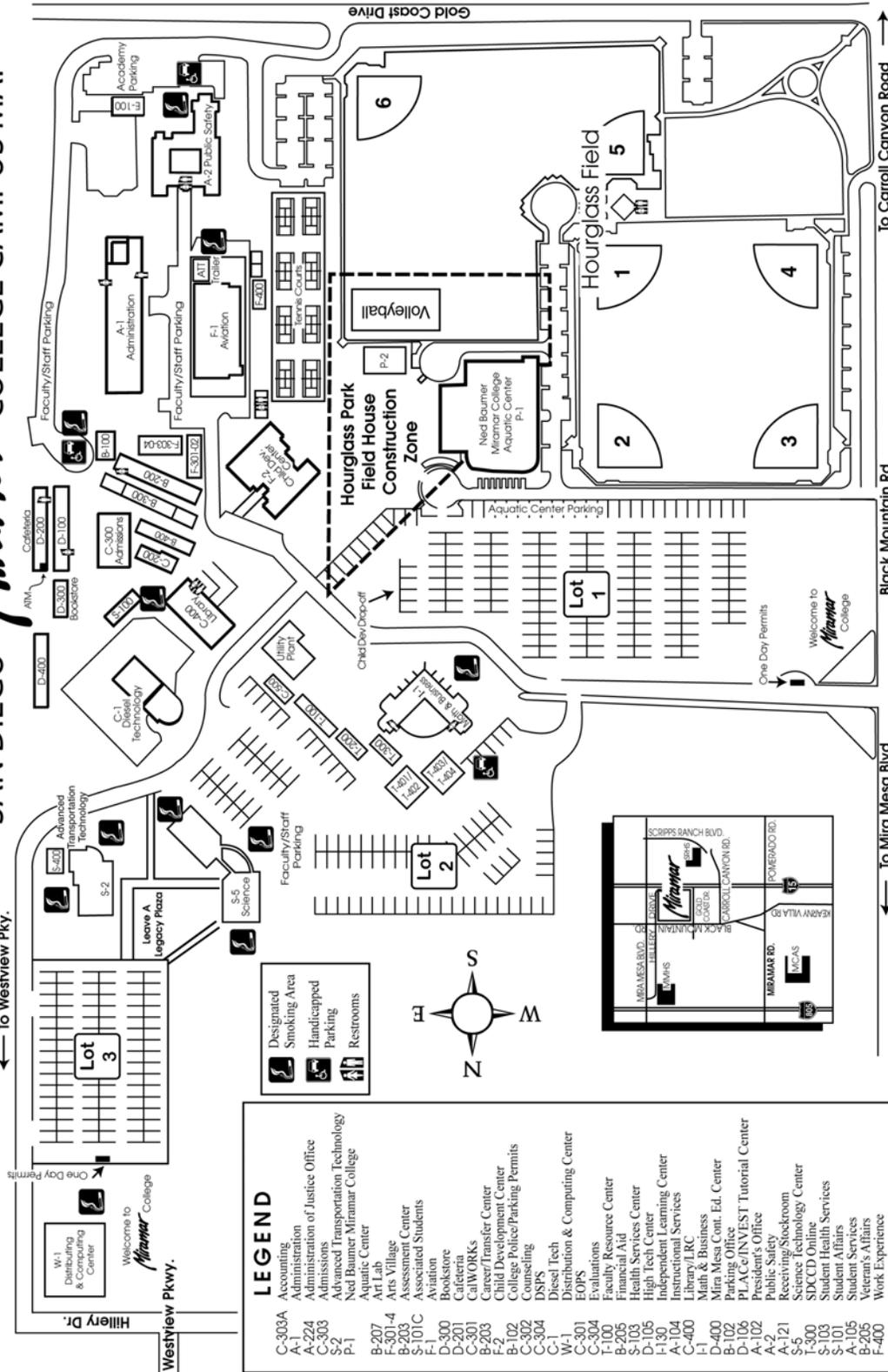
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# MIRAMAR COLLEGE CAMPUS MAP

SAN DIEGO



**LEGEND**

- C-303A Accounting
- A-1 Administration
- A-224 Administration of Justice Office
- C-303 Admissions
- Advanced Transportation Technology
- S-2 Ned Baumer Miramar College
- P-1 Aquatic Center
- Art Lab
- B-207 Arts Village
- F-301-4 Assessment Center
- B-203 Associated Students
- F-101C Aviation
- F-300 Bookstore
- D-201 Call Center
- C-301 CalWORKS
- B-203 Child Development Center
- F-2 Child Development Center
- B-102 College Police/Parking Permits
- C-302 Computing
- C-304 DSPS
- C-1 Diesel Tech
- W-1 Distribution & Computing Center
- C-301 EOPS
- C-304 Evaluations
- T-100 Faculty Resource Center
- B-205 Financial Aid
- S-103 Health Services Center
- D-105 High Tech Center
- I-130 Independent Learning Center
- A-104 Instructional Services
- A-104 Library/LRC
- I-1 Math & Business
- D-400 Mira Mesa Cont. Ed. Center
- B-102 Parking Office
- D-106 PLACe/INVEST Tutorial Center
- A-102 President's Office
- A-2 Public Safety
- A-121 Receiving/Stockroom
- S-5 Science Technology Center
- T-300 SDCCD Online
- S-103 Student Health Services
- S-101 Student Affairs
- A-105 Student Services
- B-205 Veteran's Affairs
- F-400 Work Experience

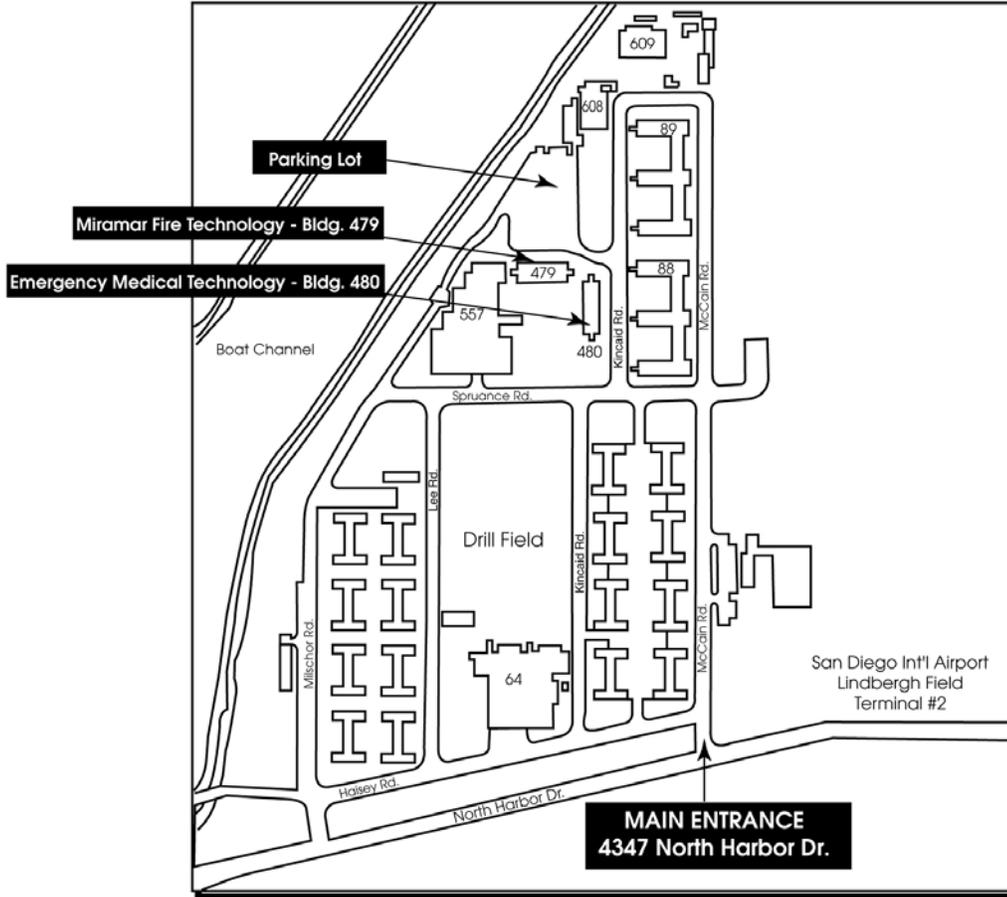
**858-536-7800 • 619-388-7800**  
**10440 Black Mountain Road, San Diego, CA 92126**  
 Conveniently located west of I-15 in Mira Mesa. From downtown San Diego, take Hwy 163 north (becomes I-15); exit Carroll Canyon Road west; turn right on Black Mountain Road. • From Orange County, take I-5 south to 805; exit Mira Mesa Blvd. east; right on Black Mountain Rd. From Imperial County, take I-8 west to I-15 north (then follow above directions). • From Riverside County, take I-15 south (then follow directions above)

**DIRECTIONS**

**Fire Technology Training Center at Camp Nimitz, Naval Training Center (NTC) 4347 North Harbor Drive**  
 From I-8 west: Exit Rossmore. Proceed west to Nimitz Blvd., turn left. Continue to North Harbor Dr., turn left. Make u-turn on North Harbor Dr. at Airport Terminal #2 entrance. Watch for signs to Camp Nimitz, right turn. • From I-5 south: Exit Sassafras St./Airport turn right on Laurel St. Stay right and merge onto North Harbor Dr. Watch for signs to Camp Nimitz, right turn. • From I-5 north: Exit Hawthorn St./Airport to North Harbor Dr., right turn. Watch for signs to Camp Nimitz (right lane).

**Automotive Technology Center at Mira Mesa High School**  
 Room 415, 10510 Reigan Road, off Mira Mesa Blvd.

# San Diego Regional Public Safety Training Institute (PSTI) Camp Nimitz/NTC



## Directions

**From I-8, West:** Exit Rosecrans. Proceed west to Nimitz Blvd., turn left. Continue to North Harbor Dr., Make U-turn on North Harbor Dr. at Airport Terminal #2 entrance. Watch for signs to Camp Nimitz, right turn.

**From I-5, South:** Exit Sassafras St./Airport turn right on Laurel St. Stay right and merge onto North Harbor Dr. Watch for signs to Camp Nimitz, right turn.

**From I-5, North:** Exit Hawthorn St./Airport to North Harbor Dr., right turn. Watch for signs to Camp Nimitz (right lane).



**4347 North Harbor Drive, San Diego, CA**