

SAN DIEGO

MIRAMAR

COLLEGE

2012-2013 CATALOG

Fall 2012, Spring 2013, Summer 2013

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San Diego, California 92126
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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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Transfer Center Coordinator.....	Dr. Naomi Grisham
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President's Message

San Diego Miramar College, long known for its student centered campus climate and emphasis on quality teaching, learning, and service, offers a wide variety of transfer curriculum and vocational technical programs. Over the years, the college has continued to build and expand its state-of-the-art facilities to facilitate teaching and learning. The college's outstanding faculty and caring staff are committed to helping students succeed in pursuing their educational goals.

Thank you for choosing San Diego Miramar College as the place for your college education. The College looks forward to assisting you in maximizing your potential while achieving your goals.

Sincerely,

Patricia Hsieh

Patricia Hsieh, Ed.D.

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

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Academic Calendar 2012-2013

Fall Semester 2012

16-WEEK SEMESTER: Fall Classes August 20, 2012–December 17, 2012

SPECIAL DATES

June 21, 2012	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 date and time at the time of application.
July 27, 2012.....	Deadline to file an application for admission and receive a registration date and time for Fall. Students who file an application after the deadline will have open registration starting August 6 and will not receive priority for access to services.
August 19, 2012	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
September 17, 2012	Constitution Day (Classes are in session)
November 12, 2012	Holiday—Veterans Day**
November 15, 2012	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Spring or Summer 2013 completion in order to receive an evaluation prior to the beginning of the Spring semester.
November 15, 2012	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Fall 2012 completion.
November 19 - 21, 2012.....	Classes not in session--campus closed.
November 22 & 23, 2012	Holiday—Thanksgiving**
December 18, 2012–January 26, 2013.....	Winter Recess

Spring Semester 2013

16-WEEK SEMESTER: Spring Classes January 28, 2013–May 25, 2013

SPECIAL DATES

November 15, 2012	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 date and time at the time of application.
November 30, 2012	Deadline to file an application for admission and receive a registration date and time for Spring. Students who file an application after the deadline will have open registration starting January 7, 2013 and will not receive priority access to services.
January 27, 2013.....	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
February 15, 2013.....	Holiday—Lincoln's Day**
February 18, 2013.....	Holiday—Washington's Day**
March 31, 2013.....	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Spring 2013 completion.
March 25 - 28, 2013.....	Spring Recess--campus closed.
March 29, 2013.....	Holiday—Cesar Chavez Day**
May 27, 2013	Holiday—Memorial Day**

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

Note: Holidays apply to all sessions.

Summer Session 2013

Summer Classes: May 28–August 10, 2013

SPECIAL DATES

May 27, 2013 RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
July 4, 2013 Holiday—Independence Day**
July 31, 2013..... Last day to file a petition for graduation for an Associate Degree or
Certificate of Achievement for Summer 2013 completion.

** 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.

Institutional Student Learning Outcomes (ISLOs)

Communication

Students communicate effectively through reading, writing, speaking, and listening.

Critical Thinking and Problem Solving

Students use appropriate creative thinking, decision-making and problem-solving approaches, reasoning, analyses of numerical data, and learning strategies.

Global Environment

Students demonstrate an understanding of the physical, social, political, and cultural environments in which they live, including sensitivity to diversity, cultural differences, and community needs.

Information Management

Students can effectively collect and analyze information and/or demonstrate technological literacy.

Personal and Professional Abilities

Students can understand and manage themselves, change, personal responsibilities, their own wellness, as well as demonstrate teamwork and relationship maintenance, conflict resolution, and workplace skills.

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 for students from basic skills through college level.
- The preparation of students for degrees, jobs, careers and transfer, as well as personal growth and career advancement.
- 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.
- Sustainable practices in construction, curriculum and campus culture.
- Quality, flexibility, and innovation.

Vision

- Student learning and success will continue to be the focus of all we do.
- San Diego Miramar College will continue to 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 an inviting and accessible campus that attracts students.
- Miramar College will continue to be a hub of education, diversity, recreation and services to the community.

Strategic Goals

1. Focus college efforts on student learning and student success through quality education that is responsive to change.
2. Deliver instruction and services in formats and at sites that best meet student needs.
3. Enhance the college experience for students and the community by providing campus facilities, programs and co-curricular student-centered activities that celebrate diversity and sustainable practices.
4. Initiate and strengthen beneficial partnerships with business and industry, schools and community.
5. Refine the integration of Miramar College's internal planning processes and procedures.

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:

Step 1 - Admission

Step 2 - Assessment

Step 3 - Orientation

Step 4 - Educational planning with a counselor

Step 5 - Follow-up on 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.

1. 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 General Education Development (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. Enrollment may be limited due to budget reductions and extraordinary demand.

- c. High school students must satisfy course prerequisites and eligibility requirements.
- d. Enrollment in Physical Education classes will not be permitted.
- e. The course is advanced scholastic or technical (college degree applicable).
- f. The course is not available at the school of attendance.
- g. Students will be given college credit for all courses. Grades will be part of the student’s permanent college record.
- h. Students must maintain a 2.0 grade point average each semester in all college work.
- i. If the number of units of W, I and NP 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.

- Persons who are under 18 years of age who do not have a high school diploma and are not enrolled in a high school may be admitted as a special full-time student pursuant to Education Code §48800.5 subject to approval of the high school governing board and the college President where the student is planning to attend. Special full-time students will be admitted under provisional admission status.
- Persons who do not meet one of the admission criteria stated above will not be admitted under any circumstances.

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

Apply Online

Applications for admission to San Diego City, Mesa and Miramar Colleges are available online. 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.

2. 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 and 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.

Assessment-Placement Alternative Measures

The San Diego Community College district accepts select standardized test as an alternative measure for assessment skill levels. Students should bring or send official copies of their SAT, ACT, EAP, EPT and/or ELM report directly to District Student Services to determine readiness for English 101 or 105 and for courses with a Math 096 prerequisite. **All tests must have been completed within the past 2 years.**

Test	Minimum Score Required
SAT - ENGL	500
SAT - MATH	560
ACT - ENGL	22
ACT - MATH	23
EPT	151
ELM	50

EAP - *Ready for CSU College-Level English/Math Course*

Testing accommodations are available to students with disabilities. For assistance contact the Disability Support Programs and Services (DSPS) office on campus.

3. Orientation

The orientation provides important information to students about the programs and services available at the college as well as strategies for student success. Orientation includes assessment and program planning. Matriculating students who have

been admitted to the college are expected to attend an assessment/orientation session before registering for classes.

For additional information call or stop by the Testing Office on campus.

4. Educational Planning with a Counselor

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 informed choices concerning the programs and courses available.

The Student Education Plan (SEP) is an agreement which contains the official requirements for graduation and/or transfer. **All transcripts of prior college work must be on file and evaluated before an official education plan can be prepared.** See the Graduation section on page 82 for graduation filing requirements.

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

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

5. Follow-up on Student Progress

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.

Exemptions

Students who meet the following criteria are exempt from components of 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. Educational Planning with a Counselor

- Students with the following educational goals:
 - Preparation for a new career, advancement in their current job/career, maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students enrolled in an apprenticeship Program

- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students who have taken the placement tests in the last three years

5. Follow-up on Student Progress

- No exemptions

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.

A student can enroll in any available course offered at ECC, City, Mesa, or Miramar Colleges by using the combined schedule of classes and Reg-e. 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.

Responsibility for Maintaining Accurate Registration

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

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.

Class Schedules on Internet

Up-to-date class schedule information and course descriptions for each campus is available online at <http://schedule.sdccd.edu>. This website 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 shown 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 daily 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 who are waitlisted in a lecture & lab concurrently (Ex: CHEM 152 & 152L) will not be allowed to enroll in the lab class until they are enrolled in the lecture (Ex: CHEM 152), even if a space becomes available in the lab before the lecture. Additionally, if the wait list availability expires for the lab before the lecture is open, the student's name will be removed from the Wait List for the lab class.

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.”

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.

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 minimum 60-hour work load each week. Students working full-time are advised NOT to attempt a full-time college program.

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

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

Six units of credit is considered a minimum full-time during the summer session; four units is three-quarters time, and 3 units, half time.

Note: Study load requirements may vary at each college for financial aid purposes. Inquire at your college Financial Aid Office for detailed information.

Basic Skills Unit Limit

Title 5, 55035 states: “...no student shall receive more than 30 semester units of credit for basic skills coursework.” Registration will be blocked prior to students reaching this limit so that students can meet with a counselor to ensure that they are successful when this unit limit is met. Students with a verified learning disability are exempt from this limitation (contact the DSPS office for more information).

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.

Priority Groups

Group 1

- Active Duty Military & Veterans who meet the eligibility criteria*, EOPS/DSPS, and Foster Youth students.

Group 2

- Continuing Students

Group 3

- New matriculating students

Group 4

- Fully matriculated CE Advantage students

Group 5

- New and returning students

Group 6

- Students possessing a baccalaureate or higher degree who are not matriculating.

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

- 50.0–72.0 units
- 30.0–49.9 units
- 15.0–29.9 units
- 00.0–14.9 units
- 72.1–89.9 units
- 90+ units

* Students who are Active Duty Military, or Veterans discharged within the past four 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.

Enrollment priorities are currently under review and subject to change.

Change of Name, Mailing or E-mail Address

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

Prerequisites, Corequisites, Limitations on Registration and Advisories

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

Note: Unofficial transcripts are accepted for prerequisite clearance.

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

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

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

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

ADVISORIES are departmental recommendations to be completed prior to enrolling in the course. Advisories do not prevent a student from enrolling,

but are strongly encouraged by the department for a student's academic success.

Challenge Procedures

Students who believe they have sufficient grounds may challenge a prerequisite, corequisite, or limitation on enrollment in a specific course (the student does not get units for a challenged class). A student may obtain a Petition to Challenge in the Admissions Office. The completed petition with supporting documentation must be filed in the Admissions Office **AT LEAST** 10 working days prior to the start of the primary term/semester. Contact the Admissions Office for additional information. For credit by examination, please refer to page 45.

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 age 18 or older and under no legal restriction may establish residence. Certain minors may also establish residence.

- A California "resident" is a person who has resided in the state for more than one year prior to the residence determination date and shows "intent" to make the state of California their permanent residence.
- An undocumented student is precluded from establishing residency. Restrictions also apply to some visas; please see the Residency Office.
- The residence determination date is the day immediately preceding the first day of classes for each semester.

Factors Considered to Determine Residency

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

- Filing California state and federal tax returns with W-2 form (required)
- Possessing a California driver's license and a vehicle registered in California
- Voting in California
- Owning residential property in California for personal use
- Being licensed to practice a profession in California
- Having an active checking and/or savings account in a California bank
- Showing California on military records (Leave and Earnings Statement)
- Possessing a marriage license or a divorce decree issued in California
- Having paid nonresident tuition in another state

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
- Active military and dependents previously stationed in California, who are currently enrolled, and subsequently receive orders to change their duty station to out-of-state
- 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, 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;

Students who meet the criteria must file an affidavit with the college stating that he or she has filed an application to legalize his or her immigration status.

Incorrect Classification

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

Reclassification

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

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

Appeals

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

Limitation of Residency Rules

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

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

False Information

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

International Students

(F-1 Visa Students)

San Diego 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

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. Restriction on Aviation Program The Federal government prohibits all F-visa (F-1, F-2 and F-3) students from enrolling in any Aviation Maintenance Technology (AVIM) and/or Aviation Operations (AVIA) classes and programs. No exceptions will be made. Student enrollment is monitored and students will be administratively dropped.
5. A transfer student from another accredited United States college or university must:
 - a. Follow set transfer procedures of the U.S. Citizenship and Immigration Services (formerly INS); and
 - b. Have pursued a full-time course of study with a minimum GPA of 2.0 ("C") at the college the student was last authorized to attend (an official transcript must be filed).

Admission Requirements

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

Admission for Fall Semester: Students must complete all admissions requirements no later than May 1 to be admitted for the fall semester. Since the processing of an application normally requires a minimum of three to five months, students are strongly encouraged to file an application by March 1 of the current year. Students who meet the May 1 deadline will be notified as soon as possible of their admission status.

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

Academic Achievement

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

English Proficiency Requirements

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

1. completion of a transfer level college English composition course at an accredited United States institution with a grade of "C" or higher;
2. completion of ESL assessment and placement at a level of English 40 (formerly English 62) or higher; in addition, the student must take the prescribed course work at the level of assessment; or
3. a minimum ACT English 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 Miramar 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 \$18,000 a school year for two semesters).
2. An international student attending the college must pay all mandatory fees, including nonresident tuition, enrollment fees and health services fees.
3. Financial aid is not available to F-1 visa international students.
4. An international student may not accept off-campus employment while attending

college unless approval is granted by the U.S. Citizenship and Immigration Services (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. **Mandatory Health Insurance:** Each student is required to provide a notarized letter (in English) certifying that he/she has secured health insurance coverage in the United States for the duration of their studies.

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/.

Email: housing@alliant.edu

Visa Students (other than F-1)

All other visa categories or immigrant classifications must see the Residency Office.

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

Fees

Community College Enrollment Fee

The **enrollment fee** is assessed of all students, including nonresidents. The fee is currently \$46.00 per unit. Enrollment fees 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 for assistance.

Health Services Fee

All students are assessed a mandatory fee for health services and accident insurance, whether or not they choose to use the health services available to them. The health services fee is currently \$18.00 per semester for Fall and Spring semesters, and \$15.00 for the Summer session. The following students are exempt from the health fee:

- Students who meet the income standards for the Board of Governor's Waiver (**BOGW-A Only**). Contact the Financial Aid Office for eligibility determination.
- Students attending under an approved apprenticeship program.
- Students who depend on prayer for healing, in accordance with the teachings of a 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.

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 2012-2013 non-resident tuition fee is \$183.00 per unit.

Liability Insurance

Students enrolled in occupational courses that require directed 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.

Library

Overdue fines and fees apply to late and lost library materials.

Additional Fees

Automobile permits per semester (hanger included)	\$35.00
Carpool permits per semester	\$30.00
Motorcycle permits per semester	\$17.50
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	\$46.00/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 \$20.00.

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)—Beginning Monday of second week
 - Primary Session (16 weeks or more)—Beginning Monday of third week
1. Students who are administratively dropped when a Petition to Challenge is denied will receive a full refund of the class(es) petitioned.
2. Students who are academically disqualified and administratively dropped will receive a full refund.

No refund is given for classes dropped after the deadline.

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

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

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.). For specific criteria and other information, please consult the schedule of classes or contact one of your campus Honors Coordinators Carmen Jay, at 619-388-7532, or via email at cjay@sdccd.edu or Adrian Arancibia, at 619-388-7421 or via email at aarancib@sdccd.edu.

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. Petitions for Honors credit after the course has been completed will not be permitted.

Dean's List

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

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 B-203, by phone (619) 388-7532, or by email at 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	Standard	Grade Points per Unit
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing — Less than satisfactory	1
F	Fail	0
P	Pass	Units earned not counted in GPA
NP	No Pass	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: P/NP—Pass/No Pass; I—Incomplete; W—Withdrawal; IP—In Progress; RD—Report Delayed. Administrative symbols are

not used in the computation of GPA. See below for further explanation.

Pass/No Pass (P/NP) 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 Pass/No Pass Policy on page 27.

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

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

The following conditions apply to official withdrawal:

1. No record of the class will be entered on the student's permanent record if the official withdrawal is made by the deadline to drop without a "W" being recorded as published in the schedule of classes.
2. If the withdrawal is made after the deadline for withdrawing without a "W" and prior to the deadline for withdrawal published in the class schedule for that session, a "W" will be recorded on the student's permanent record. No exceptions to this policy will be made. Petitions will not be accepted for exception to policy.
3. A student attending a session after the deadline for withdrawal will not be eligible to receive a "W" and must be assigned an academic grade or other administrative symbol by the instructor. Exceptions to this policy will be made only upon verification of extreme circumstances beyond

the control of the student. Petitions requesting exception must be filed in the Admissions Office.

4. Withdrawal (W) symbols will be used in the calculation of lack of progress probation and disqualification status.
5. Students on active duty or reserve duty may petition for a "military" withdrawal. This withdrawal is not calculated in the determination of academic progress and is noted on the student's academic record.
6. Students will be allowed a maximum of four withdrawals in any course.

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

Grade Challenge

Final grades will be issued at the end of each semester. In the absence of mistake, fraud, incompetence, or bad faith, the determination of the student's grade by the instructor shall be final once it has been recorded by the Registrar's Office. A student may challenge a grade or request a change to his/her academic record within two years from the date of issuance. Requests beyond two years will not be accepted. Students wishing to challenge a grade should first attempt to resolve the challenge informally with the instructor. Grade challenges must be processed under District Procedure 3001.2, Grade Challenge Procedure.

Copies of Procedure 3001.2 are available in the Office of the Vice President, Instruction.

Pass/No Pass Grading Policy

Consistent with District policy, a student in good standing may elect to be graded on a Pass/No Pass basis in a course. A grade of "Pass" (P) 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 Pass" (NP). The units earned will be counted in satisfaction of program requirements, but will be disregarded in determining a student's grade point average.

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

Limitations:

1. No course required in the student's major may be taken for Pass/No Pass. 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 Pass/No Pass basis.

Conditions:

1. Students who wish to be graded on a Pass/No Pass basis must submit a petition to the Admissions Office by the deadline date listed in the schedule of classes. **No exceptions to the deadline will be made.**
2. An evaluation on a Pass/No Pass 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 Pass/No Pass grades are used exclusively; these are designated in the catalog course description by the statement "Pass/No Pass Only." In addition, there are courses which cannot be taken on a Pass/No Pass basis; these are designated in the course description by the statement "Letter Grade Only."

Effective Fall 2009, the Credit/No Credit (CR/NC) grading option changed to Pass/No Pass (P/NP).

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 the 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. A student on academic probation will return to good standing once his/her cumulative grade point average reaches or exceeds 2.0.

Academic Disqualification

A student on academic probation status will be 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 shall be placed on lack of progress probation when the percentage of all (cumulative) units for which entries of "W," "I," and "NP" 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 "NP" 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 full year. 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.

• Readmission after disqualification

Students who have been disqualified three or more times may file a Petition for Readmission **after** the one year sit out period. Students must provide supporting documentation of how circumstances have changed to allow for academic success. If the Petition is accepted for consideration, the student will be invited to present his/her case to a hearing panel. Information is available in Student Web Services under Standards of Academic Progress at <http://studentweb.sdccd.edu/index.cfm?action=keyresources>.

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 BP 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 in I-422.

Course Repetition Policy

- No course in which a "C" or better grade has been earned may be repeated.
- Students will not be allowed more than four enrollments in any activity course, regardless of grade or symbol earned.
- Each course in which an unsatisfactory grade ("D," "F," or "NP") has been earned may be repeated twice without a petition. 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.
- Students will not be allowed more than three enrollments in a non-activity course, regardless of grade or symbol earned.

Academic Renewal Without Course Repetition

A student with substandard academic performance (GPA below 2.00) that is not reflective of present demonstrated ability may petition to have a maximum of 12 units or one full semester, whichever is greater, of substandard performance disregarded in computation of grade point average.

The following conditions apply:

1. To be eligible for academic renewal without course repetition a student must:
 - a. have transcripts from all institutions attended officially on file,

- b. successfully complete, in an accredited college or university, 15 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 15 unit minimum will be used in computing the 2.0 grade point average.
 - c. have one year elapsed since the semester/session to be disregarded was completed.
- 2. Students with degrees or certificates: Semester/session(s) prior to earning a degree or certificate are not eligible for academic renewal.
- 3. A maximum of 12 units or one semester 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 the Spring semester. 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 academic record.
- 4. If grade alleviation has already been applied two times for a course included in the semester to be disregarded, the course will not be eligible for academic renewal without repetition and will remain on the academic record.
- 5. If previous action for academic renewal has been applied to coursework included in the semester to be disregarded, the course will not be eligible for academic renewal without repetition and will remain on the academic record.
- 6. Academic renewal without course repetition may be applied to substandard semester(s) from another accredited institution.
- 7. 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.
- 8. Recalculation of the grade point average will be used toward qualification for graduation with honors.
- 9. Academic standing for the semester/session(s) will not be adjusted.

- 10. Once the petition is approved, the action is not reversible.

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, P) 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.

Transcripts of Record

A student may order an official transcript of record online, in person, by mail or via fax.

To order an official transcript online, visit: <https://studentweb.sdccd.edu/transcript/>.

Transcripts ordered online will be mailed within 1-2 business days.

To order a transcript in person, a student may complete a request at the Admissions Office at the college, or in person at the Office of the Registrar, San Diego Community College District, Administrative Office, 3375 Camino del Rio South, San Diego, CA 92108.

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 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 \$10.00 special handling fee will be charged for all "RUSH" order transcript requests, including hand carried transcript requests ordered at the District Office. Rushed transcripts are processed within 24-48 hours of receipt. The special handling fee will be charged per request.

Requests will not be processed if students have outstanding holds preventing the release of the official transcript.

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.

More information on ordering transcripts is available at: <http://studentweb.sdccd.edu/docs/transcript.pdf>

Transcripts of Prior Academic Credit

Students with credit from other colleges and universities must have official transcripts on file with the college.

- 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 not in an official, sealed envelope will be considered unofficial.
- Transcripts are required even if prior credits do not appear relevant or if units were taken years ago.
- Students receiving 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: Students may elect to waive the requirement of a foreign transcript. Contact the college Evaluations office for further information. 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 evaluators. San Diego Miramar College **will not** accept the transfer credits from another institution if the evaluation by the District 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:

- Advanced Placement Examinations (AP).
- College-Level Examination Program (CLEP).
- Defense Activity for Non-Traditional Education Support (DANTES).
- International Baccalaureate (IB).

To obtain credit, students must meet the requirements below and complete the Transcript Evaluation form in the Counseling Office, and meet the following criteria:

- All official transcripts must be on file
- Official copies of test scores must be submitted

- Students must be currently enrolled.

Limitations on credit by standardized examination:

- AP and CLEP examinations may be used to partially clear the American Institutions requirement. See following charts regarding nontraditional education for details.
- The English composition requirement can be met by the AP exam.
- 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.
- A maximum of 30 cumulative units may be granted for acceptable scores on any combination of AP, CLEP, DANTEs, or IB.

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

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Art History 3, 4, or 5	ARTF 110 or 111 Area C 6 semester units (3 units GE credit)	Area C1 or C2 3 semester units	6 semester units	Area 3A or 3B 3 semester units	8 quarter/5.3 semester units
Biology 3, 4, or 5	Area B 6 semester units (4 units GE credit)	Area B2 & B3 4 semester units	6 semester units	Area 5B (with lab) 4 semester units	8 quarter/5.3 semester units
Calculus AB or BC/AB subscore¹ 3, 4, or 5	Area A2 & Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	Area 2A 3 semester units	4 quarter/2.6 semester units
Calculus BC¹ 3, 4, or 5	Area A2 & Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	Area 2A 3 semester units	8 quarter/5.3 semester units
Chemistry 3 <i>Exam taken prior to Fall 2009</i>	CHEM 200 Area B 6 semester units (6 units GE credit)	Area B1 & B3 6 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 4 or 5 <i>Exam taken prior to Fall 2009</i>	CHEM 200 & 201 Area B 6 semester units (6 units GE credit)	Area B1 & B3 6 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 3 <i>Exam taken Fall 2009 or later</i>	CHEM 200 Area B 6 semester units (4 units GE credit)	Area B1 & B3 4 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units
Chemistry 4 or 5 <i>Exam taken Fall 2009 or later</i>	CHEM 200 & 201 Area B 6 semester units (4 units GE credit)	Area B1 & B3 4 semester units	6 semester units	Area 5A (with lab) 4 semester units	8 quarter/5.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Chinese Language & Culture 3, 4, or 5	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Comparative Government & Politics 3, 4, or 5	POLI 103 Area D 3 semester units (3 units GE credit)	Area D8 3 semester units	3 semester units	Area 4H 3 semester units	4 quarter/2.6 semester units
Computer Science A¹ 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	2 quarter/1.3 semester units
Computer Science AB¹ 3, 4, or 5	6 semester units	N/A	6 semester units	N/A	4 quarter/2.6 semester units
English Language 3, 4, or 5	ENGL 101 Area A1 6 semester units (3 units GE credit)	Area A2 3 semester units	6 semester units	Area 1A 3 semester units	8 quarter/5.3 semester units ²
English Literature 3, 4, or 5	ENGL 101 Area A1 & C 6 semester units (6 units GE credit)	Area A2 & C2 6 semester units	6 semester units	Area 1A or 3B 3 semester units	8 quarter/5.3 semester units ²
Environmental Science 3 <i>Exam taken prior to Fall 2009</i>	Area B 4 semester units (4 units GE credit)	Area B1 & B3 or Area B2 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 4 or 5 <i>Exam taken prior to Fall 2009</i>	BIOL 120 Area B 4 semester units (4 units GE credit)	Area B1 & B3 or Area B2 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 3 <i>Exam taken Fall 2009 or later</i>	Area B 4 semester units (4 units GE credit)	Area B1 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
Environmental Science 4 or 5 <i>Exam taken Fall 2009 or later</i>	BIOL 120 Area B 4 semester units (4 units GE credit)	Area B1 & B3 4 semester units	4 semester units	Area 5A (with lab) 3 semester units	4 quarter/2.6 semester units
European History 3, 4, or 5	Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
French Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
French Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
French Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
German Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
German Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Human Geography 3, 4, or 5	GEOG 102 Area D 3 semester units (3 units GE credit)	Area D5 3 semester units	3 semester units	Area 4E 3 semester units	4 quarter/2.6 semester units
Italian Language and Culture 3	ITAL 101 Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Italian Language and Culture 4 or 5	ITAL 102 Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Japanese Language and Culture 3, 4, or 5	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Latin Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	4 quarter/2.6 semester units
Latin: Vergil 3, 4, or 5	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	Area 3B & 6A 3 semester units	4 quarter/2.6 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Macroeconomics 3, 4, or 5	ECON 120 Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	Area 4B 3 semester units	4 quarter/2.6 semester units
Microeconomics 3, 4, or 5	ECON 121 Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	Area 4B 3 semester units	4 quarter/2.6 semester units
Music Theory 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	N/A	8 quarter/5.3 semester units
Physics B 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area B³ 6 semester units (6 units GE credit)	Area B1 & B3³ 6 semester units	6 semester units ³	Area 5A (with lab)⁴ 4 semester units	8 quarter/5.3 semester units ⁵
Physics B 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area B³ 6 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	6 semester units ³	Area 5A (with lab)⁴ 4 semester units	8 quarter/5.3 semester units ⁵
Physics C (electricity / magnetism) 3, 4, or 5	Area B³ 4 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	4 semester units ³	Area 5A (with lab)⁴ 3 semester units	4 quarter/2.6 semester units ⁵
Physics C (mechanics) 3, 4, or 5	Area B³ 4 semester units (4 units GE credit)	Area B1 & B3³ 4 semester units	4 semester units ³	Area 5A (with lab)⁴ 3 semester units	4 quarter/2.6 semester units ⁵
Psychology 3, 4, or 5	PSYC 101 Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	Area 4I 3 semester units	4 quarter/2.6 semester units
Spanish Language 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Spanish Language 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Spanish Literature 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	Area C 6 semester units (6 units GE credit)	Area C2 6 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units

Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Spanish Literature 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B & 6A 3 semester units	8 quarter/5.3 semester units
Statistics 3, 4, or 5	MATH 119 Area A2 & Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	Area 2A 3 semester units	4 quarter/2.6 semester units
Studio Art: Drawing 3, 4, or 5	ARTF 150A & 155A 3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶
Studio Art: 2-D Design 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶
Studio Art: 3-D Design 3, 4, or 5	3 semester units	N/A	3 semester units	N/A	8 quarter/5.3 semester units ⁶
U.S. Government & Politics 3, 4, or 5	POLI 101 Area D & US-2 3 semester units (3 units GE credit)	Area D8 & US-2 3 semester units	3 semester units	Area 4H & US-2 3 semester units	4 quarter/2.6 semester units
U.S. History 3, 4, or 5	HIST 109 Area C or D & US-1 6 semester units (3 units GE credit)	Area C2 & US-1 or Area D6 & US-1 3 semester units	6 semester units	Area 3B & US-1 or Area 4F & US-1 3 semester units	8 quarter/5.3 semester units
World History 3, 4, or 5	HIST 101 Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units

* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.

1. If a student passes more than one exam in calculus or computer science, only one exam may be applied to UC / CSU baccalaureate or SDCCD associate degree / certificate requirements.
2. Students passing both English AP exams will receive a maximum of 8 quarter units / 5.3 semester units toward UC baccalaureate degree requirements.
3. Students passing more than one AP exam in physics will receive a maximum of 6 units of credit toward CSU baccalaureate or SDCCD associate degree / certificate requirements and a maximum of 4 units of credit toward CSU GE certification or SDCCD associate degree GE requirements.
4. Students passing either of the Physics C exams will be required to complete at least 4 additional semester units in IGETC Area 5 coursework to meet the IGETC Area 5 unit requirement.
5. Students passing more than one physics AP exam will receive a maximum of 8 quarter units / 5.3 semester units toward UC baccalaureate degree requirements.
6. Students passing more than one AP exam in studio art will receive a maximum of 8 quarter units / 5.3 semester units of credit toward UC baccalaureate degree requirements.

To request an official transcript, write to: PSAT/NMSQT Office, P.O. Box 6720, Princeton, NJ, 08541-6720

International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Biology 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B2 3 semester units	6 semester units	Area 5B (without lab) 3 semester units	8 quarter/5.3 semester units
Chemistry 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B1 3 semester units	6 semester units	Area 5A (without lab) 3 semester units	8 quarter/5.3 semester units
Economics 5-7 Higher Level	ECON 120 & 121 Area D 6 semester units (3 units GE credit)	Area D2 3 semester units	6 semester units	Area 4B 3 semester units	8 quarter/5.3 semester units
Geography 5-7 Higher Level	Area D 6 semester units (3 units GE credit)	Area D5 3 semester units	6 semester units	Area 4E 3 semester units	8 quarter/5.3 semester units
History (any region) 5-7 Higher Level	Area C or D 6 semester units (3 units GE credit)	Area C2 or D6 3 semester units	6 semester units	Area 3B or 4F 3 semester units	8 quarter/5.3 semester units
Language A1 (any language) 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	N/A	N/A
Language A1 (any language) 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B¹ 3 semester units	8 quarter/5.3 semester units
Language A2 (any language) 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	N/A	N/A
Language A2 (any language) 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C2 3 semester units	6 semester units	Area 3B¹ 3 semester units	8 quarter/5.3 semester units
Language B (any language)² 4 Higher Level	6 semester units	N/A	6 semester units	N/A	N/A
Language B (any language)² 5-7 Higher Level	6 semester units	N/A	6 semester units	Area 6A	8 quarter/5.3 semester units
Mathematics 4 Higher Level	Area A2 and Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	N/A	N/A

International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Mathematics 5-7 Higher Level	Area A2 and Mathematics Competency 6 semester units (3 units GE credit)	Area B4 3 semester units	6 semester units	Area 2A 3 semester units	8 quarter/5.3 semester units
Physics 5-7 Higher Level	Area B 6 semester units (3 units GE credit)	Area B1 3 semester units	6 semester units	Area 5A (without lab) 3 semester units	8 quarter/5.3 semester units
Psychology 5-7 Higher Level	Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	Area 4I 3 semester units	8 quarter/5.3 semester units
Theatre 4 Higher Level	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	N/A	N/A
Theatre 5-7 Higher Level	Area C 6 semester units (3 units GE credit)	Area C1 3 semester units	6 semester units	Area 3A 3 semester units	8 quarter/5.3 semester units
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.					
1. Students who pass the Language A1 or A2 Higher Level exam in a language other than English with a score of 5 or higher will also receive credit for IGETC area 6A.					
2. If a student passes more than one test in the same language other than English (e.g., two exams in French) then only one examination may be applied.					
Credit is not awarded for the following exams: Art..					
IB transcripts may be requested from your high school..					

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
American Government 50 or higher	Area D 3 semester units (3 units GE credit)	Area D8 3 semester units	3 semester units	N/A	N/A
American Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Analyzing and Interpreting Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Biology 50 or higher	Area B 3 semester units (3 units GE credit)	Area B2 3 semester units	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Calculus 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Chemistry 50 or higher	Area B 3 semester units (3 units GE credit)	Area B1 3 semester units	3 semester units	N/A	N/A
College Algebra 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
College Algebra - Trigonometry 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
English Literature 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A
Financial Accounting 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
French – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
French – Level II 59 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
German – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
German – Level II 60 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
History of the United States I 50 or higher	Area D & US-1 3 semester units (3 units GE credit)	Area D6 & US-1 3 semester units	3 semester units	N/A	N/A
History of the United States II 50 or higher	Area D & US-1 3 semester units (3 units GE credit)	Area D6 & US-1 3 semester units	3 semester units	N/A	N/A
Human Growth and Development 50 or higher	3 semester units	Area E 3 semester units	3 semester units	N/A	N/A
Humanities 50 or higher	Area C 3 semester units (3 units GE credit)	Area C2 3 semester units	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Information Systems and Computer Applications 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Introduction to Educational Psychology 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Introductory Business Law 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Introductory Psychology 50 or higher	Area D 3 semester units (3 units GE credit)	Area D9 3 semester units	3 semester units	N/A	N/A
Introductory Sociology 50 or higher	Area D 3 semester units (3 units GE credit)	Area D0 3 semester units	3 semester units	N/A	N/A
Natural Sciences 50 or higher	Area B 3 semester units (3 units GE credit)	Area B1 or B2 3 semester units	3 semester units	N/A	N/A
Pre-Calculus 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Principles of Accounting 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Macroeconomics 50 or higher	Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	N/A	N/A
Principles of Management 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Marketing 50 or higher	3 semester units	N/A	3 semester units	N/A	N/A
Principles of Microeconomics 50 or higher	Area D 3 semester units (3 units GE credit)	Area D2 3 semester units	3 semester units	N/A	N/A

College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Spanish – Level I 50 or higher	6 semester units ¹	N/A	6 semester units ¹	N/A	N/A
Spanish – Level II 63 or higher	Area C 12 semester units ¹ (3 units GE credit)	Area C2 3 semester units	12 semester units ¹	N/A	N/A
Trigonometry 50 or higher	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	Area B4 3 semester units	3 semester units	N/A	N/A
Western Civilization I 50 or higher	Area C or D 3 semester units (3 units GE credit)	Area C2 or D6 3 semester units	3 semester units	N/A	N/A
Western Civilization II 50 or higher	Area D 3 semester units (3 units GE credit)	Area D6 3 semester units	3 semester units	N/A	N/A
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.					
1. If a student passes more than one exam in the same language other than English (e.g. two exams in French), then only one examination may be applied toward CSU baccalaureate degree requirements.					
Credit is not awarded for the following exams: College Mathematics, English Composition (with or without Essay), Freshman College Composition and Social Sciences and History.					
To request an official CLEP transcript, write to: Educational Testing Service, P.O. Box 6600, Princeton, NJ 08541-6600					

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Fundamental College Algebra 50 or higher <i>Exam taken prior to Spring 2008</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Fundamental College Algebra 400 or higher <i>Exam taken Spring 2008 or after</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Principles of Statistics 50 or higher <i>Exam taken prior to Spring 2008</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Principles of Statistics 400 or higher <i>Exam taken Spring 2008 or after</i>	Area A2 and Mathematics Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Art of the Western World 50 or higher	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Western Europe Since 1945 50 or higher	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
An Introduction to the Modern Middle East 50 or higher	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Human / Cultural Geography 50 or higher	3 semester units	N/A	N/A	N/A	N/A
A History of the Vietnam War 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Foundations of Education 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Lifespan Developmental Psychology 50 or higher	3 semester units	N/A	N/A	N/A	N/A
General Anthropology 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Introduction to Law Enforcement 50 or higher	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Criminal Justice 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Criminal Justice 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Fundamentals of Counseling 50 or higher	3 semester units	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Principles of Finance 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Human Resource Management 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Organizational Behavior 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Principles of Supervision 50 or higher <i>Exam taken prior to Fall 2009</i>	3 semester units	N/A	N/A	N/A	N/A
Principles of Supervision 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Computing 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Computing 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to Business 50 or higher <i>Exam taken prior to Fall 2009</i>	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Introduction to Business 400 or higher <i>Exam taken Fall 2009 or after</i>	Area D 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Personal Finance 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Personal Finance 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Business Mathematics 50 or higher <i>Exam taken prior to Fall 2009</i>	Area A2 & Math Competency 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Business Mathematics 400 or higher <i>Exam taken Fall 2009 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Astronomy 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Here's to Your Health 50 or higher	Health Education 3 semester units	N/A	N/A	N/A	N/A
Environment and Humanity: The Race to Save the Planet 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Principles of Physical Science I 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Physical Geology 50 or higher	Area B 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Technical Writing 50 or higher	3 semester units	N/A	N/A	N/A	N/A
Ethics in America 50 or higher <i>Exam taken prior to Spring 2008</i>	3 semester units	N/A	N/A	N/A	N/A
Ethics in America 400 or higher <i>Exam taken Spring 2008 or after</i>	3 semester units	N/A	N/A	N/A	N/A
Introduction to World Religions 50 or higher <i>Exam taken prior to Spring 2008</i>	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
Introduction to World Religions 400 or higher <i>Exam taken Spring 2008 or after</i>	Area C 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A

DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	CITY, MESA, MIRAMAR DEGREE (MAJOR / GE)*	CSU GE CERTIFICATION	CSU - UNITS TOWARD TRANSFER	IGETC CERTIFICATION	UC - UNITS TOWARD TRANSFER
Principles of Public Speaking 50 or higher	Area A2 3 semester units (3 units GE credit)	N/A	N/A	N/A	N/A
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.					
To request an official DANTES transcript, write to: PROMETRIC ATTN: DSST Program, 1260 Energy Lane, St. Paul, MN 55108 Phone: 877-471-9860 (toll free) or 651-603-3011 or request transcripts at http://getcollegecredit.com/resources					

Credit by Examination designed and approved by individual disciplines

The term “examination” means any written, oral or performance standards determined by the individual departments. Students must meet specific criteria to be eligible for credit by examination. Approved list of courses and forms are available in the College 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.

Academic Information For Veterans And Military Servicemembers

Acceptance and Application of Military Credit

San Diego City, Mesa, and Miramar Colleges apply credit for educational experience completed during military service toward the associate degree in accordance with the associate/baccalaureate credit recommendations contained in “A Guide to the Evaluation of Educational Experiences in the Armed Services” published by the American Council on Education (ACE). Students must submit documentation of educational experiences during military service. Acceptable documents include:

- AARTS or SMART Transcript
- DD-214
- DD-295
- NAV/PERS 1070/604
- DD-2586
- National Guard Bureau (NGB) Form 22E
- Coast Guard Institute
- Community College of the Air Force (CCAF)

Students who have completed at least six months of continuous active U.S. military service have fulfilled the following degree requirements:

- 4 units of credit towards the associate degree
 - The Health Education requirement
 - The Physical Education requirement (both courses)
- The California State University General Education-Breadth Pattern (CSU GE) Area E requirement.

Other educational experiences during military service may also fulfill additional major, general education, or elective degree requirements. More specific information is available in the San Diego Community College District Evaluations Office.

Service Members Opportunity Colleges System (SOC)

San Diego City, Mesa, and Miramar Colleges are members of the Service members Opportunity Colleges (SOC) Consortium. As members, the colleges provide educational assistance to active duty service members and agree to accept credit for educational experiences during military service as recommended by the American Council on Education (ACE). In addition, the colleges accept credit from other non-traditional sources such as DANTES and CLEP examinations. The San Diego Community College District is committed to military

personnel who may choose to participate in the SOCNAV/SOCMAR Program network through the campuses of San Diego City and San Diego Miramar Colleges. SOCNAV/SOCMAR was established to better serve highly mobile service members and their families. For more information on these programs, contact the Military Education advisor at the following locations:

Naval Base San Diego (32nd St.)	619-233-5617
Marine Corps Recruit Depot (MCRD)	619-295-9974
Marine Corp Air Station Miramar (MCAS)	858-536-4329

U.S. Air Force and U.S. Army ROTC Programs

Under the provisions of a special agreement, students may participate in the Army or Air Force Reserve Officers Training Program (ROTC) at SDSU. San Diego City, Mesa and Miramar College students may enroll and attend ROTC classes at SDSU by contacting the SDSU Military Science Department 619-594-5545. Financial assistance may also be available. The credits earned in these classes may be transferred as electives to meet the degree requirements of City, Mesa and Miramar Colleges.

Responsibility for Meeting Requirements

Each student must assume responsibility for compliance with the regulations of the college set forth in this catalog, for satisfying prerequisites for any course, and for selecting courses which will facilitate attainment of educational objectives. The college does not assume responsibility for misinterpretation of policies and procedures as presented in this catalog. Counselors and advisors are available to assist in planning students' programs. Any questions or doubts concerning this catalog material should be referred to the Office of the Vice President, Student Services.

Petition for Exceptions

Petitions for exceptions to graduation requirements, substitutions, or waiver of requirements are filed with the Counseling 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 Accomodation for Students with Disabilities

(Board of Trustees Policy - BP 3105)

The San Diego Community College District (SDCCD) is committed to all provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and Section 508 of the Rehabilitation Act of 1973.[1] The fundamental principles of nondiscrimination and accommodation in academic programs provide that:

1. No student with a qualified disability shall, on the basis of the disability, be excluded from participation in, be denied the benefit of, or otherwise be subjected to discrimination under any post-secondary education activity or program[2]; and
2. Reasonable accomodations to academic activities or requirements shall be made as are necessary to ensure that such requirements do not discriminate or have the effect of discrimination on a student with a qualified disability; and
3. The institution shall create an educational environment where students with disabilities have equal access to instruction without compromising the essential components of the course, educational program or degree.

The intent of this policy is to insure compliance with state and federal laws. SDCCD Procedure 3105.1 is intended to provide consistent and fair review of all academic adjustments requests and dispute resolution.

Students with verified disabilities who may require academic adjustments or auxiliary aids are strongly recommended to contact the Disability Support Programs and Services (DSPS) Department and complete orientation procedures well before classes begin. Contact DSPS early to ensure timely provision of services. Students are encouraged to identify themselves to the appropriate instructors to discuss

the details and timelines necessary to provide appropriate accommodations. Students enrolled in online courses are encouraged to contact the college DSPS Office to request academic accommodation. Questions regarding academic accommodations may also be directed to the college 504 Officer, Vice President of Student Services, 619-388-7810, Room A-105.

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.

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 BP 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.

Student Right to Know

In compliance with the Student-Right-to-Know and Campus Security Act of 1990, it is the policy of the college district to make available completion and transfer rates for all certificate, degree and transfer seeking first-time, full-time students who began in Fall 2008. 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:

	Completion Rates	Transfer-Out Rates
City	12.04%	13.59%
Mesa	22.49%	17.64%
Miramar	24.65%	17.55%

Nondiscrimination Policy (Board of Trustees Policy-BP 3410)

San Diego Community College District Board of Trustees Policy BP 3410 prohibits discrimination in accordance with state and federal laws. Students wishing to file complaints based upon discrimination should contact the campus Site Compliance Officer (SCO). 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 Site Compliance Officer (SCO).

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 BP 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 non-smoking 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 rights of the smoking/non-smoking public.

The posting of NO SMOKING signs without the corresponding designation of smoking permitted areas is not in consonance with the intent of the procedure.

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, and Continuing Education Centers

will not permit smoking within 20 feet (25 feet at Miramar College) of main entrances to buildings, exits, or any operable windows. City and Mesa College are smoke-free campuses. Hourglass Park at Miramar, including the pool and Field House, is a smoke-free facility. 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.

- Smoking is not permitted in District facilities which are open to the public and used as: Classrooms, Meetings Rooms, Theatres, Restrooms, Libraries, Cafeterias, Bookstores, Service Lines, Elevators, and 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 non-smoking 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 (I-422) 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 who 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 restricts 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 Administrative Due Process (Board of Trustees Policy—BP 3100)

This policy enumerates the rights and responsibilities of all San Diego Community College District students. All 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 acts committed on District-owned or controlled property or the District-sponsored activities as specified in the policy.

You may view a full copy of the policy by accessing the following website:
<http://www.sdccd.edu/public/district/policies/>

Student Grievance Procedure

The purpose of this procedure is to provide a prompt and equitable means for resolving student grievances. The procedures enumerated in Student Grievance Administrative Procedures AP 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, BP 3100, Section *a* through *i*. Note that grades are not grievable under this policy. Refer to the Grade Challenge section, page 27, of this catalog.

Academic Freedom & Freedom of Expression

(Board of Trustees Policy—BP4030)

The San Diego Community College District is committed to an academic environment that embraces the principles of academic freedom and freedom of expression. This commitment is based upon the value that free expression is essential to

excellence in teaching, learning, critical inquiry and service to the community.

1. ACADEMIC FREEDOM

- a. Academic freedom affords the faculty the right to speak freely and write, without unreasonable restrictions or prejudices.
- b. In accordance with the doctrine of academic freedom, faculty have the following fundamental rights:
 1. Collective primacy in designing and approving curriculum and instructional methods;
 2. Individual faculty determination of instructional materials, course content, and student evaluation methods, in concert with colleagues, so as to assure coherence in instruction and the maintenance of academic standards;
 3. Individual faculty freedom to discuss subject matter of the course, as appropriate to the standards of the discipline and academic community, even when that material is controversial;
 4. Individual faculty authority to evaluate enrolled students on the basis of the academic merit of the students' performance;
 5. Individual faculty choice of research topics and methods of investigation—subject to professional and peer-determined standards—as well as unconditional freedom to publish results; and
 6. Faculty participation in shared governance, curriculum review, and accreditation processes.

2. FREEDOM OF EXPRESSION

- a. Freedom of expression affords the faculty, staff and students the right to speak and write freely in accordance with the constitutional protections of free speech.
- b. Faculty, staff and students have the following responsibilities:
 1. The District shall protect the rights of faculty to express their views in the classroom that pertain to class content.

While it is understood that controversy is often at the core of inquiry, such controversy should be addressed in a mutually respectful manner.

2. The District shall protect the rights of faculty, staff and students to speak freely on matters of public concern.
3. Faculty, staff and students are free to explore a wide range of views and judge on matters of public concern.
4. As outlined in District policies and procedures, faculty, staff and students have responsibilities which are based upon principles of fairness, integrity, confidentiality, safety, professionalism, and respect for others.
5. Members of the academic community have the right to participate in governance and to join or form organizations without fear of retaliation.

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.

Student Records, Release, Correction and Challenge (Administrative Procedure-AP3001.1)

San Diego Community College District strictly adheres to the Family Education Rights and Privacy (FERPA). This procedure specifies limitations on

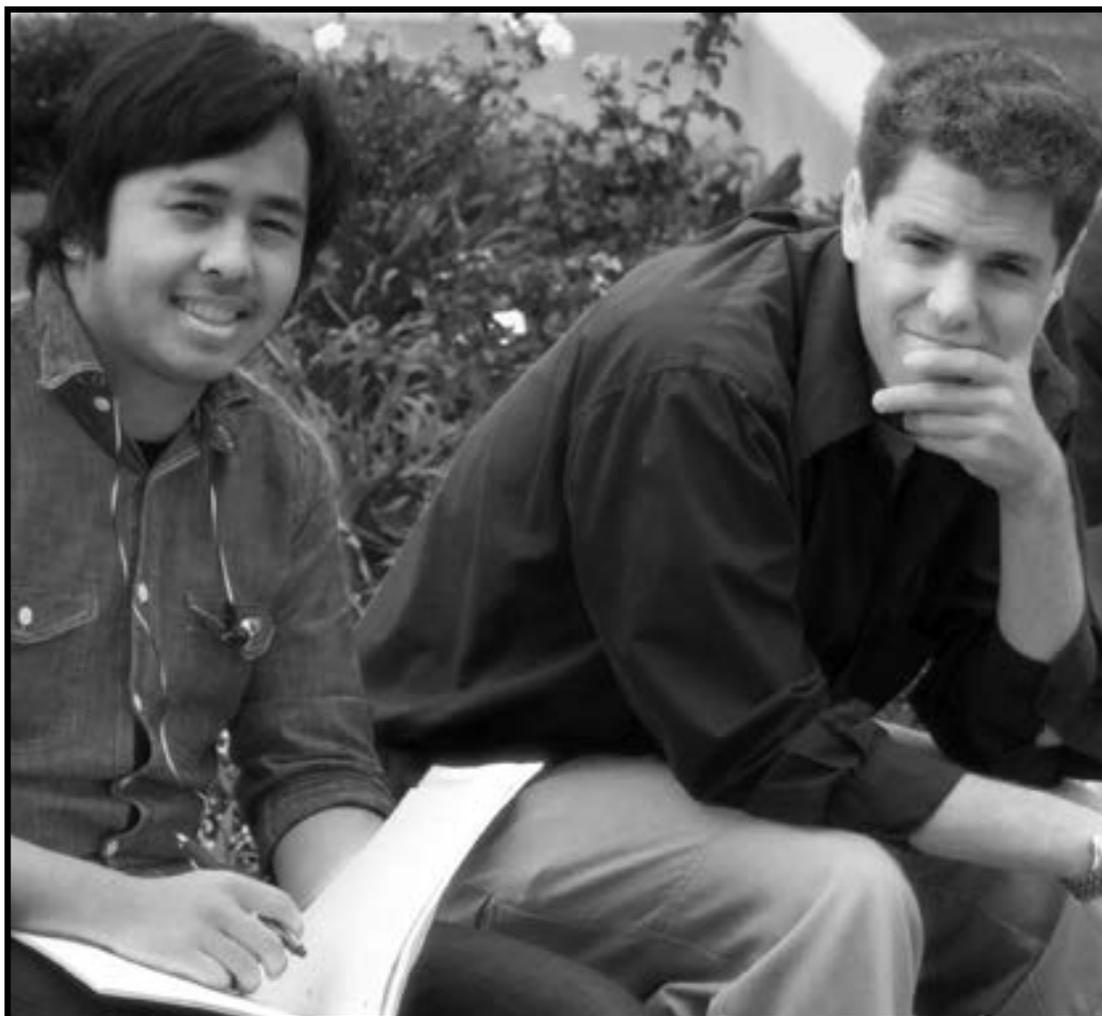
Federal and State law, and ensures that appropriate record maintenance and destruction systems are in place.

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 his/her 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, except under very specific conditions:

You may view a full copy of the policy by accessing the following website:
<http://www.sdccd.edu/public/district/policies/>.

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	C-303	619-388-7326	College Police	T-100	858-536-7353 619-388-7353
Admissions	C-303	858-536-7844	Counseling Department	C-302	858-536-7840 619-388-7840
(General Inquiries, Applications/Enrollment) Adds/Drops/Student Petitions		619-388-7844	Disability Support Programs & Services	C-304	858-536-7212 619-388-7312 tty# 858-536-4301 619-388-7301
Help Line		858-536-4300 619-388-7300	EOPS	C-301	858-536-7869 619-388-7869
Enrollment Verifications Reg-e	C-303	858-536-7844 http://studentweb.sdccd.edu 619-388-7844	Evaluations	D-203	858-536-7371 619-388-7371
Residency	C-303	858-536-7844 619-388-7844	Financial Aid	B-205	858-536-7864 619-388-7864
Special Programs	C-303	858-536-7848 619-388-7848	Health Services	S-103	858-536-7881 619-388-7881
Student Records	C-303	858-536-7844 619-388-7844	High Tech Center	LLRC	858-536-4303 619-388-7303
Assessment	B-203	858-536-7379 619-388-7379	International Student Information	C-303	858-536-7844 619-388-7844
Associated Students	S-101B	858-536-7877 619-388-7877	Journalism (The Sage) Library	LLRC	858-536-7694 858-536-7310 619-388-7310
Bookstore	D-301	858-536-7866 619-388-7866	Matriculation Office	S-101	858-536-4313 619-388-7313
CalWORKS	C-301	858-388-7378 619-388-7378	Outreach	B-304	858-536-7367 619-388-7357
Career/Student Employment Center	B-203	858-536-7235 619-388-7335	Records Office	C-303	858-536-7844 619-388-7844
Child Development Center	F-200	858-536-7851 619-388-7851	SDCCD Online at Miramar Student Affairs	T-300 S-101	619-388-7330 858-536-4313 619-388-7313
			Transfer Center	B-203	858-536-7380 619-388-7380
			Tutoring (The PLACe)	LLRC	858-536-7852 619-388-7852
			Veterans Affairs	D-203	858-536-7862 619-388-7862
			V. P., Student Services	A-105	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 courses listed in the schedule of classes.

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.

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 and 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) and Americans with Disabilities Amendments Act (ADAA). 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 may be 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.

Animals on Campus

Animals are not permitted on campus with the exception of authorized service animals for persons with disabilities. Refer to Administrative Procedure (AP 3105.1) *Service Animals*.

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.

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, stop by C301, or email miracw@sdccd.edu.

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.

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 6 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 6 semesters or 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 Math courses required for your degree objective.
 - b. You have not fulfilled the requirements for a high school diploma or General Educational Development (GED).
 - c. Upon graduation from high school your high school grade point average (GPA) was less than 2.5 on a 4.0 scale.
 - d. You have been enrolled in an English or Math course, or program that is considered 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 disadvantaged.

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) or the Board of Governors Grant Waiver. These applications are available in the EOPS and Financial Aid Offices. They are also available online or in the EOPS Office located in C301. 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, 2013.

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. 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.

You must have a high school diploma, General Education Diploma (GED) or a State approved High School equivalency. With the elimination of the Ability to Benefit (ATB) regulations, students will no longer have the option to pass an ATB test or to successfully complete 6 core/degree applicable units to qualify for aid.

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’s budget may be offered.**

Financial aid checks are usually ready for disbursement approximately four or five weeks after the start of classes. Pell Grant and Cal Grant disbursements are based on enrollment levels at the time of payment and will not be adjusted. However, SEOG 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 58).

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 of 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 **WORK STUDY** 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 \$46.00 per unit.

The college offers the Board of Governors Waiver (BOGW), a state-funded program which will waive the enrollment fee for all eligible applicants.

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, which demonstrates that you have need as determined by Federal Methodology.
- You, or your parents in the case of a dependent student, 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, 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 2011 (adjusted gross income and/or untaxed income)
1	\$16,335 or less
2	\$22,065 or less
3	\$27,795 or less
4	\$33,525 or less
5	\$39,255 or less
6	\$44,985 or less
7	\$50,715 or less
8	\$56,445 or less
Each Additional Family Member	\$5,730

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

- You do not live with your parents or your parent's registered domestic partner
- You were not claimed as an exemption on any federal income tax filed by your parents or your parent's registered domestic partner in 2011

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.

As of July 1, 2011, Pell Grant recipients are subject to Pell Grant eligibility for a maximum of 12 semesters of grant disbursed as a full-time student. If you have a bachelor's degree, you are not eligible for a Pell Grant.

Federal Supplemental Educational Opportunity Grant (FSEOG)

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

Cal Grants

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

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

Chafee Grant Program

The Chafee Grant is a federal program that is administered by the California Student Aid Commission to provide financial assistance to prior Foster Youth. The applicant must be certified by the State Department of Social Services of their Foster Youth status prior to reaching age 16. The grant has no citizenship requirement; however, non-citizens

without a valid Social Security Number must call the CSAC for additional steps and information. The program awards a maximum of \$5,000 per academic year. Renewal applicants must maintain satisfactory academic progress as defined by the school.

Federal Work Study

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

William D. Ford Federal Direct Loan Program

The Federal Direct Loan is a federal loan program where you borrow directly from the Federal Government. The interest rate for new loans is a fixed rate which is currently 6.8% for loans disbursed from July 1, 2012 to June 30, 2013. New Federal regulations require schools to disburse loans only after the signed Promissory Note has been accepted. You are required to pay the Department of Education loan processing fees that are currently 1%. The fees are deducted from the proceeds of your loan.

To qualify, a student must be enrolled in at least six units, demonstrate Satisfactory Academic Progress for aid recipients and must demonstrate financial need through the federal methodology using the FAFSA Application. To apply for a Federal Direct Loan, students must 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. If a student has attended a Direct Loan workshop at San Diego City, or Miramar Colleges in the past, it will not be necessary to conduct another entrance counseling session. Students must contact the Financial Aid Office or visit the College website for application procedures. You may complete the entrance counseling session online at: www.studentloans.gov.

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. You must complete an online multi-year Master Promissory Note at: www.studentloans.gov.

You may also be required to submit an Educational Plan and be enrolled at the campus of your declared major. Please ask your Financial Aid Office for more information. The actual loan amount for which you are eligible will be determined by the Financial Aid Office. Checks will be disbursed twice per loan period. If you are a first-time student or borrower, your check will not be disbursed until at least 30 days after the start of the semester. If you have "Late Start" classes, of loan funds to be disbursed, you must be actively attending classes in at least six units.

For additional information, please refer to the Financial Aid Bulletin or call the Financial Aid Office at 619-388-7864.

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 full disbursement of the loan. The interest rate is a fixed rate. Borrower must meet all other financial aid eligibility requirements, including completing the FAFSA.

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 Financial Aid Office, located in B-205.

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 include: 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 858-536-7235 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 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.

Students on active duty and veterans who have been discharged within the past 4 years may be eligible to receive priority registration. Check with the college Admissions/Residency Office for eligibility. An Active Duty Military ID card or DD214 are required for verification.

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

Disabled Veterans

Veterans who qualify for educational benefits as disabled veterans may be entitled to special educational benefits. Veterans with disabilities are encouraged to pursue services offered through Disability Support Programs and Services. 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 Veterans Affairs Office after enrollment **every semester** to continue their benefits. **In addition, a Student Educational Plan (SEP) must be on file by the end of the first semester;** otherwise, certification of VA benefits will be delayed for the second semester. This plan must be developed and reviewed by a counselor.

Number of Units Required

For students enrolled in a degree program under CH: 30, 31, 34, 35, 1606/1607, 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.

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 in a subsequent semester. 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.

Readmission After Termination Status

Students who wish to be considered for readmissions after the VA termination will be required to meet with a Counselor and develop a Student Success Plan prior to being readmitted.

Repeated Classes

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

Work Experience

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, Smart Transcripts, or DD2685 covering all

periods of military service, **must be on file in the Records Office by the end of the first semester of attendance at this college.** Certification for benefits for the second semester will be withheld if transcripts are not received. Visit the Veterans Affairs Office for necessary forms.

Library/Learning Resources

Audiovisual Department

Located on the first floor of the LLRC, the Audiovisual Department serves faculty, students, and staff. The Audiovisual staff assists students with viewing videos, audio and video production, and cd listening stations. For department information and hours, please check the website online: www.sdmiramar.edu. Click "Students" then "Audiovisual Services".

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 first floor of the L-Building (L-104). 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.

Library

Located on the second floor of the LLRC, the library serves faculty, students, and staff. The librarians assist students who need information to complete class assignments or wish to improve their research skills. Faculty members can use library resources for classroom instruction and can house instructional material on reserve 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 325).

A few of the services the library provides include: reference materials and assistance, library orientations, Internet access, WiFi, a local area network of electronic databases, e-books,

periodicals, interlibrary loans, quiet study areas, and photocopiers. The library also provides a special law library collection that supports the paralegal program.

For additional information call 858-536-7310 or 619-388-7310. For hours of operation, please log on to the Library web site at: www.sdmiramar.edu/instruction/libr/index.asp.

Computer Services

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

Wireless Access

Wireless Access is available at designated areas on campus. Access code available in Library.

Tutoring—The PLACe

The Personal Learning Assistance Center (The PLACe) is located in the LLRC and provides students with academic support in a number of areas: math, writing, college reading/study skills as well as various subjects.

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.

Please call The PLACe at 619-388-7852 for a tutoring appointment. For further information stop by L-101 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.

Get ready for online learning success! Visit www.sdccdonline.net/students/training/.

Online students receive 24/7 Technical Support at: <https://www.sdccdonline.net/help>, or by calling toll free 866-271-8794. For login instructions visit: 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 accredited by NAEYC (National Association for the Education of Young Children) and is also licensed by the State of California.

The Center is located in F-200. For additional information call 858-536-7851 or 619-388-7851.

Student Health Services

The Student Health Services supports the success of students by attending to their physical and psychological 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, initial assessment, and referrals

Services with Nominal Fees:

- 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 develop and contribute to the College and the community, as well as, to develop leadership experiences and connect with other students.

Office of Student Affairs

Located in the S-100 building, the Office of Student Affairs can provide guidance in certifying a club or organization and information on leadership development. It serves as a focal point for service and leadership resources. For more information contact the Office of Student Affairs at 619-388-7313 or 858-536-4313.

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
- 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 partial list of clubs and organizations that have been active at Miramar College:

- Amnesty International
- Child Development Professionals
- EOPS Student Association
- Filipino American Student Association (FASA)
- Food and Culture Club
- Parent Student Advisory Board
- Paralegal Club
- Phi Theta Kappa
- Science Club
- Student Veterans Organization (SVO)
- U.S. Tennis Association
- Filipino American Student Association (FASA)

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.

Campus Bookstore

D-301

(619) 388-7866

San Diego Miramar College Bookstore stocks textbooks and supplies required for classes. The Bookstore provides study aids, snacks, school supplies, clothing, backpacks, gift items, greeting cards, emblematic items and general books. The bookstore also buys back textbooks for cash.

Extended hours are offered at the beginning of each semester. Textbooks can also be purchased online at: <http://www.bookstore.sdccd.edu/miramar>. For additional information or special Bookstore hours, please contact the bookstore or visit our website listed above.

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

T-100, Miramar College Substation

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

The police business office is located in T-100. For information and general assistance, call 619-388-7353 or 858-536-7353. For police assistance, call 619-388-6405. Emergency services are provided 24 hours a day, 7 days a week. Learn more about College Police at: <http://police.sdccd.edu>.

Emergency Messages

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

Police and Parking Services

The college police are available to provide escort, vehicle battery jumps, and vehicle lockout services during regular hours of operation. Students who wish to use these services should call College Police Dispatch at 619-388-6405 or go to any of the College Police Offices at the following locations for assistance:

City College (V-100)	619-388-3461
Mesa College (Q-100)	619-388-2749
Miramar College (T-100)	619-388-7353 or 858-536-7353
College Police Dispatch	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 at the College Police office (T-100). Parking permits are required the first day of each semester. Check in College Police for parking permits not received in the mail. Parking permits are required from 7am-10pm. They are not required on Saturday, Sunday 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 and/or time-limited visitor parking at each campus. Students may not utilize. All meters require deposit of coins. Permits are not valid at meters. All campuses have pay and display machines for visitor and student use. Pay and display permits are only valid in student parking spaces.

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

Parking permits are required Monday through Friday, 7:00 am to 10:00 pm. Parking between the hours of 11:00 pm and 6:00 am requires an overnight Permit issued by College Police.

Bicycles must be parked only in designated bicycle racks. Students are not allowed to ride bicycles or motorized bikes on campus. Violators are subject to disciplinary action.

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 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.

Transportation for Disabled Students

Paratransit (curb-to-curb) service is available for a fee to persons with disabilities who cannot use public transportation. ADA certification is required. Please contact DSPS for additional information or forms for certification. Students may also contact MTS (Metropolitan Transit System) at 888-517-9627.

Academic Requirements



The Associate Degree

On the recommendation of the faculty, the colleges of the San Diego Community College District award the Associate in Arts degree or the Associate in Science degree.

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

Proactive Award Degree

Students who have an official education plan on file and meet degree requirements may be awarded an associate degree.

All Degrees Have the Following Requirements in Common

Minimum Units in Residence

A minimum of 12 degree applicable units must be completed in residence at the college granting the degree.

The 12-unit in residence requirement is effective for all degrees awarded regardless of catalog year.

Major/Area of Emphasis Requirements

- Eighteen semester units or more are required.
- Six semester units 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's general education requirements with the exception of Liberal Arts and Sciences degrees.

Recency of Coursework Limitation:

Academic departments may require that courses for the major be completed within a specified period of time 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.

Associate in Arts for Transfer (AA-T) or Associate in Science for Transfer (AS-T) California State University (CSU)

The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Each AA-T or AS-T is accepted by some but not all CSU campuses. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree in that major. Please see a counselor and www.cccco.edu/1440 for more information.

Students intending to transfer to a CSU should consult a counselor and visit www.assist.org for guidance on appropriate transfer coursework.

AA-T/AS-T Majors

- Communication Studies for Transfer (page 155)
- Sociology for Transfer (page 200)

Degree Requirements

The following is required for all AA-T or AS-T degrees:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some CSU campuses and majors may require a higher GPA. Please see a counselor for more information.
3. Completion of a minimum of 18 semester units in an "AA-T" or "AS-T" major (see list above). All courses in the major must be completed with a

grade of C or better or a "P" if the course is taken on a "pass-no pass" basis.

4. Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 100 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 92 for more information).

Associate in Arts and Associate in Science Degree Requirements

Minimum 60 Units Required

All degrees require a minimum of 60 semester units.

Grade Point Average (GPA) and Minimum Grade Requirements

- Effective 2009-2010 catalog year (and each year thereafter), students must earn a grade of "C" or better in courses required for the major.
- A grade point average of at least 2.0 (a "C" average) is required in the curriculum upon which the degree is based.

District Competencies

District competencies in reading, written expression, and mathematics (See Miramar College catalog page 71).

Select One of the Following Four General Education Options:

- **Option 1**—San Diego Community College District General Education **AND** District Requirements. (See Miramar College Catalog page 71)
- **Option 2**—CSU General Education Breadth (CSU GE Pattern). (See Miramar College Catalog page 100)
- **Option 3**—Intersegmental General Education Transfer Curriculum (IGETC) pattern. (See Miramar College Catalog page 92)
- **Option 4**—San Diego Community College District General Education Requirements. (See Miramar College Catalog page 76) 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 College degrees designed for transfer students:

Areas of emphasis:

- Art/Visual Studies (see page 125)
- Biology Studies (see page 141)
- Chemistry Studies (see page 148)
- Earth Science Studies (see page 195)
- Elementary Education (see page 180)
- English/Literature Studies (see page 169)
- Health and Physical Education Studies (see page 171)
- Human Development Studies (see page 153)
- Humanities Studies (see page 177)
- Mathematics Studies (see page 185)
- Music Studies (see page 191)
- Occupational/Technical Studies (see page 182)
- Physics Studies (see page 196)
- Pre-Engineering Studies (see page 197)
- Psychology (see page 199)
- Social and Behavioral Sciences (see page 201)
- World Language Studies (see page 203)

Students who plan to transfer to a four-year institution should review the Transfer Requirements section of this catalog.

District Requirements (Option 1)

-
- () 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 effective for students graduating under the 2009-2010 catalog year or each term thereafter 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. Assessment skill level M45 or higher

OR

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

- MATH 84* Practical Geometry (M)
- MATH 85* Practical Career Mathematics (C,M)
- MATH 92** Applied Beginning and Intermediate Algebra (M)
- MATH 96 Intermediate Algebra and Geometry (C,M,MMR)
- MATH 98* Technical Intermediate Algebra and Geometry (C)

OR

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

listed courses is a prerequisite or any math course with a number higher than 100.

* These courses cannot be used to meet the prerequisite for any transfer-level mathematics course.

** This course may only be used to meet the prerequisite for MATH 119; it cannot be used to meet the prerequisite for any other transfer-level mathematics course.

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 US-3: 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 Perspective (C,M)	✓	✓	
^CHIC 141B U.S. History from a Chicano Perspective (C,M)	✓		✓
HIST 109 History of the United States I (C,M,MMR)	✓	✓	
HIST 110 History of the United States II (C,M,MMR)	✓		✓
^HIST 115A History of the Americas I (C,M)	✓	✓	
^HIST 115B History of the Americas II (C,M)	✓		✓
^HIST 123 U.S. History from the Asian Pacific American Perspective (C,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 U.S. History (M,MMR)	✓	✓	
^HIST 151 Native Americans in U.S. History (M,MMR)	✓		✓
HIST 175 California History (M)			✓

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US-3: California State & Local Governments
POLI 102 The American Political System (C,M,MMR)		✓	✓
NOTES:			
<ul style="list-style-type: none"> • Three units of coursework used to fulfill the American Institutions/California Government requirement may also be used to fulfill a general education requirement. However, if a six-unit sequence or combination is selected to fulfill the American Institutions requirement, only three (3) units may be used for general education credit. • 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 and Physical Therapist Assistant. 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. 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. Administration of Justice 147, 148, 323, 381 and 382 are also acceptable. Fire Protection Technology 100D 150A, 160, 360, 380W, 381F are also acceptable. Students with physical conditions which prevent participation in regular physical education activity classes must file a physician's statement with the College Evaluations Office. 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 Arts of Africa, Oceania, and the Americas (M,MMR)
- ^ ARTF 115 African Art (C,M)
- ^ ARTF 120 Native American Art (M)
- ^ BLAS 104 Black Psychology (C,M)
- ^ BLAS 110 African 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 Chicana/o 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)
- ^ COMS 180 Intercultural Communication (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 (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 Modern Middle East (M)
- ^ HIST 150 Native Americans in United States History (M,MMR)
- ^ HIST 151 Native Americans in United States History (M,MMR)
- ^ 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 150 Sociology of Latinos/Latinas (C)
- ^ SOCO 223 Globalization and Social Change (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.

Students who complete natural sciences general education courses will be able to:

- demonstrate an understanding and appreciation of the scientific method
- express an understanding of the relationships between science and other human activities
- examine the natural physical world and its life forms in a variety of courses
- utilize critical thinking skills in a variety of scientific applications

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

Students who complete social and behavioral sciences general education courses will be able to:

- express understanding of how people act and have acted in response to their societies and the natural environment
- articulate how societies and social subgroups operate in specific historical and contemporary contexts

- use methods of inquiry and measurement appropriate to the particular discipline being studied

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.

Students who complete humanities general education courses will be able to:

- express understanding and appreciation of varieties of cultural and artistic expression;
- articulate an understanding of the complex relationships between the arts and their cultural, historical, and economic contexts; and
- evaluate the various elements of artistic works.

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.

Students who complete language and rationality general education courses will be able to:

- demonstrate an understanding of the principles of clear and coherent communication.
- use verbal and non-verbal languages in a clear and precise manner.
- develop logical and rational thinking skills while analyzing and communicating processes.
- evaluate different quantitative and qualitative symbol expressions and systems.

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

General Education Requirements (Option 4)

- () 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.

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 2012-2013 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 with at least a 2.0 grade point average. 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

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)

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)
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)
COMS 99	Voice and Diction for Non-Native Speakers of English (C,MMR)
COMS 101	Voice and Articulation (C,M)
COMS 103	Oral Communication (C,M,MMR)
COMS 135	Interpersonal Communication (C,M,MMR)
COMS 160	Argumentation (C,M,MMR)
COMS 170	Small Group Communication (C,M)
^ COMS 180	Intercultural Communication (C,M,MMR)
GISG 104	Geographic Information Science and Spatial Reasoning (C,M)
MATH 84	Practical Geometry (M)
MATH 85	Practical Career Mathematics (C,M)
MATH 92	Applied Beginning and Intermediate Algebra (M)
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)
MATH 107L	Introduction to Scientific Programming Lab (C)
MATH 115	Gateway to Experimental Statistics (C,MMR)

MATH 116	College and Matrix Algebra (C,M,MMR)	BIOL 107	General Biology - Lecture/Laboratory (C,M,MMR)
MATH 118	A Survey of Modern Mathematics (C,M,MMR)	BIOL 110	Introduction to Oceanography (C,M)
MATH 119	Elementary Statistics (C,M,MMR)	BIOL 111	Cancer Biology (C)
MATH 121	Basic Techniques of Applied Calculus I (C,M,MMR)	BIOL 115	Marine Biology (C,M,MMR)
MATH 122	Basic Techniques of Calculus II (C,M,MMR)	BIOL 120	The Environment of Man (M)
MATH 141	Precalculus (C,M,MMR)	BIOL 130	Human Heredity (C,M,MMR)
MATH 150	Calculus with Analytic Geometry I (C,M,MMR)	BIOL 131	Introduction to Biotechnology (MMR)
MATH 151	Calculus with Analytic Geometry II (C,M,MMR)	BIOL 135	Biology of Human Nutrition (C,MMR)
MATH 181	Mecomtronics College Algebra and Trigonometry I (C)	BIOL 160	Elements of Human Anatomy & Physiology - Lecture/Laboratory (M,MMR)
MATH 182	Mecomtronics College Algebra and Trigonometry II (C)	BIOL 180	Plants and People (C,M,MMR)
MATH 183	Mecomtronics Calculus I (C)	BIOL 205	General Microbiology (C,M,MMR)
MATH 210A	Concepts of Elementary School Mathematics I (C,M,MMR)	BIOL 210A	Introduction to the Biological Sciences I - Lecture/Laboratory (C,M,MMR)
MATH 210B	Concepts of Elementary School Mathematics II (C,M,MMR)	BIOL 210B	Introduction to the Biological Sciences II - Lecture/Laboratory (C,M,MMR)
MATH 245	Discrete Mathematics (C,M,MMR)	BIOL 215	Introduction to Zoology (C,M,MMR)
MATH 252	Calculus with Analytic Geometry III (C,M,MMR)	BIOL 230	Human Anatomy (C,M,MMR)
MATH 254	Introduction to Linear Algebra (C,M,MMR)	BIOL 235	Human Physiology (C,M,MMR)
MATH 255	Differential Equations (C,M,MMR)	BIOL 250	Introduction to Botany (M,MMR)
PHIL 100	Logic and Critical Thinking (C,M,MMR)	BIOL 285	Tropical Biology Field Experience (MMR)
PHIL 101	Symbolic Logic (C,M,MMR)	MEDA 55	Fundamentals Human Anatomy and Physiology (M)
PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)	NUTR 150	Nutrition (M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)	NUTR 155	Advanced Nutrition (M)
		PSYC 260	Introduction to Physiological Psychology (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)

2. Physical Sciences

ASTR 101	Descriptive Astronomy (C,M,MMR)
ASTR 109	Practice in Observing - Laboratory (C,M)
ASTR 111	Astronomy Laboratory (C,M,MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)
CHEM 100L	Fundamentals of Chemistry - Laboratory (C,M,MMR)
CHEM 111	Chemistry in Society (C,M)
CHEM 111L	Chemistry and Society Laboratory (C,M)
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	Physical 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)
MCTR 120B	Basic Physics for Technical Applications II (C)
PHYN 100	Survey of Physical Science - Lecture (C,M,MMR)
PHYN 101	Survey of Physical Science - Laboratory (C,M,MMR)
PHYN 105	Physical Science for Elementary Education (M,MMR)
PHYN 120	Physical Oceanography (M,MMR)
PHYS 100	Introductory Physics Lecture/Laboratory (C,M)
PHYS 125	General Physics (C,M,MMR)
PHYS 126	General Physics II (C,M,MMR)
PHYS 180A	General Physics I (C,MMR)
PHYS 180B	General Physics II (C,MMR)
PHYS 181A	General Physics Lab I (C,MMR)
PHYS 181B	General Physics Lab II (C,MMR)
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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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)
ARAB 102	Second Course in Arabic (C)
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	Arts of Africa, Oceania, and the Americas (M,MMR)
^ ARTF 115	African Art (C,M)
^ ARTF 120	Native American Art (M)
ARTF 125	Art History: Arts of the Asian Continent (M,MMR)
ARTF 191	Cultural Influences on Photography (M)
ARTF 194	Critical Photography (M)
ARTG 118	Graphic Design History (C,MMR)
^ BLAS 110	African 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)
CHIC 130	Mexican Literature in Translation (C,M)
^ CHIC 135	Chicana/o 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)		FREN 101	First Course in French (C,M)
^	CHIC 210	Chicano Culture (C,M)		FREN 102	Second Course in French (C,M)
	CHIC 230	Chicano Art (M)		FREN 201	Third Course in French (C,M)
	CHIN 101	First Course in Mandarin Chinese (M)		FREN 202	Fourth Course in French (C,M)
	CHIN 102	Second Course in Mandarin Chinese (M)		GERM 101	First Course in German (C,M)
	CHIN 201	Third Course in Mandarin Chinese (M)		GERM 102	Second Course in German (C,M)
	CHIN 202	Fourth Course in Mandarin Chinese (M)		GERM 201	Third Course in German (C,M)
	DANC 181	Introduction to Dance (C,M)		HIST 100	World History I (C,M,MMR)
	DFLM 101	Introduction to Film (MMR)		HIST 101	World History II (C,M,MMR)
	DFLM 102	The American Cinema (MMR)		* HIST 105	Introduction to Western Civilization I (C,M,MMR)
	DRAM 105	Introduction to Dramatic Arts (C,M)		* HIST 106	Introduction to Western Civilization II (C,M,MMR)
	DRAM 107	Study of Filmed Plays (C)	^	HIST 120	Introduction to Asian Civilizations (C,M,MMR)
	DRAM 108	Playwriting (C)	^	HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
^	DRAM 109	Theatre and Social Issues (C)	^*	HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
	DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)		* HIST 131	Latin America Before Independence (M)
	DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)		* HIST 132	Latin America Since Independence (M)
	DRAM 150	Cinema as Art and Communication I (M)		HUMA 101	Introduction to the Humanities I (C,M,MMR)
	DRAM 151	Cinema as Art and Communication II (M)		HUMA 102	Introduction to the Humanities II (C,M,MMR)
	ENGL 207	The Art of the Sentence (M)		HUMA 103	Introduction to the New Testament (C,M)
	ENGL 208	Introduction to Literature (C,M,MMR)		HUMA 104	Introduction to the Old Testament (M)
	ENGL 209	Literary Approaches to Film (C,M,MMR)		HUMA 106	World Religions (C,M,MMR)
	ENGL 210	American Literature I (C,M,MMR)		HUMA 201	Mythology (C,M,MMR)
	ENGL 211	American Literature II (C,M,MMR)		HUMA 202	Mythology: Hero's Journey (C)
	ENGL 215	English Literature I: 800–1799 (C,M,MMR)		HUMA 205	Exploring Human Values Through Film (M)
	ENGL 216	English Literature II: 1800–Present (C,M,MMR)	^	INTE 125	History of Decorative Arts (M)
	ENGL 220	Masterpieces of World Literature I: 1500 BCE–1600 CE (C,M,MMR)		ITAL 101	First Course in Italian (C,M)
	ENGL 221	Masterpieces of World Literature II: 1600–Present (C,M,MMR)		ITAL 102	Second Course in Italian (C,M)
^	ENGL 230	Asian American Literature (M,MMR)		ITAL 201	Third Course in Italian (C,M)
	ENGL 237	Women in Literature (C,MMR)		JAPN 101	First Course in Japanese (M)
	ENGL 238	Evaluating Children's Literature (C,M)		JAPN 102	Second Course in Japanese (M)
	ENGL 240	Shakespeare (C,M)		JAPN 201	Third Course in Japanese (M)
	FASH 120	Fashion History and Trends (M)		JAPN 202	Fourth Course in Japanese (M)
				LATI 101	First Course in Latin (M)
				LATI 102	Second Course in Latin (M)
				LATI 201	Third Course in Latin (M)

MULT 116	Flash Game Development (M)
MUSI 100	Introduction to Music (C,M,MMR)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
MUSI 102	Music History II: Mid 18th to Early 20th Century (M)
MUSI 103	History of Rock Music (MMR)
MUSI 105	Music of Our Time (M)
^ MUSI 109	World Music (C,M,MMR)
MUSI 111	Jazz - History and Development (C,M,MMR)
MUSI 125	Music, the Arts and Humanity (M)
PHIL 102A	Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
PHIL 103	Historical Introduction to Philosophy (M)
PHIL 104A	History of Western Philosophy (C,M)
PHIL 104B	History of Western Philosophy (C,M)
PHIL 105	Contemporary Philosophy (C)
PHIL 106	Asian Philosophy (C,M)
PHIL 107	Reflections on Human Nature (C,M,MMR)
* PHIL 108	Perspectives on Human Nature and Society (C,M)
PHIL 110	Philosophy of Religion (M)
PHIL 111	Philosophy in Literature (C,M)
PHIL 112	Philosophy of Science (M)
^* PHIL 125	Philosophy of Women (C,M)
PHIL 130	Philosophy of Art and Music (C,M)
* PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
PHOT 150	History of Photography (C)
RTVC 160	Introduction to Cinema (C)
RUSS 101	First Course in Russian (C,M)
RUSS 102	Second Course in Russian (M)
RUSS 201	Third Course in Russian (M)
SPAN 100	First/Second Course in Spanish-Accelerated (M)
SPAN 101	First Course in Spanish (C,M,MMR)
SPAN 102	Second Course in Spanish (C,M,MMR)
SPAN 201	Third Course in Spanish (C,M,MMR)
SPAN 202	Fourth Course in Spanish (C,M,MMR)
SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)

SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
SUST 102	Environmental Ethics (C)
TAGA 101	First Course in Tagalog (M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 101	First Course in Vietnamese (M)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

D. Social and Behavioral Sciences

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

ADJU 101	Introduction to Administration of Justice (C,MMR)
ADJU 101A	Introduction to Administration of Justice I (MMR)
ADJU 101B	Introduction to Administration of Justice II (MMR)
ADJU 101C	Introduction to Administration of Justice III (MMR)
^ ADJU 106	Diversity and Community Relations (MMR)
ADJU 193	Concepts of Criminal Law (MMR)
ADJU 230	Constitutional Law I (MMR)
AGRI 100	Principles of Sustainable Agriculture (C)
^ AMSL 104	Introduction to Deaf Culture (M)
^ ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
^ ANTH 200	Introduction to North American Indians (M)
ANTH 205	Introduction to Medical Anthropology (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)	HIST 109	History of the United States I (C,M,MMR)	
^	BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)	HIST 110	History of the United States II (C,M,MMR)	
^	BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)	^	HIST 115A	History of the Americas I (C,M)
^	BLAS 145A	Introduction to African History (C,M)	^	HIST 115B	History of the Americas II (C,M)
^	BLAS 145B	Introduction to African History (C)	^*	HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
	BUSE 100	Introduction to Business (C,M,MMR)	^	HIST 130	The Modern Middle East (M)
	BUSE 140	Business Law and the Legal Environment (C,M,MMR)	*	HIST 131	Latin America Before Independence (M)
^	CHIC 110A	Introduction to Chicano Studies (C,M)	*	HIST 132	Latin America Since Independence (M)
^	CHIC 110B	Introduction to Chicano Studies (C,M)		HIST 141	Women in United States History I (C,M,MMR)
^	CHIC 141A	United States History from a Chicano Perspective (C,M)		HIST 142	Women in United States History II (C,M,MMR)
^	CHIC 141B	United States History from a Chicano Perspective (C,M)	^	HIST 150	Native Americans in United States History (M,MMR)
	CHIC 150	History of Mexico (C,M)	^	HIST 151	Native Americans in United States History (M,MMR)
	CHIC 170	La Chicana (C,M)		HIST 154	Ancient Egypt (M)
	CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)		HIST 175	California History (M)
	CHIL 101	Human Growth and Development (C,M,MMR)		JOUR 202	Introduction to Mass Communication (C,M,MMR)
	CHIL 103	Lifespan Growth and Development (MMR)	^	NUTR 153	Cultural Foods (M)
^	CHIL 141	The Child, Family and Community (C,M,MMR)		PEAC 101	Introduction to Peace Studies (C)
	DJRN 100	Mass Media in the Digital Age (C)		PEAC 102	Nonviolence and Conflict Resolution (C)
	ECON 120	Principles of Macroeconomics (C,M,MMR)		PEAC 201	Environmental Sustainability, Justice and Ethics (C)
	ECON 121	Principles of Microeconomics (C,M,MMR)	*	PHIL 108	Perspectives on Human Nature and Society (C,M)
^	ENGL 202	Introduction to Linguistics (C,M)		PHIL 109	Issues in Social Philosophy (M)
^	FILI 100	Filipino American Experience (MMR)	^*	PHIL 125	Philosophy of Women (C,M)
	FUTR 101	Introduction to Futures Studies (C)		PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
	FUTR 102	Creating Futures: Methods and Tools (C)		POLI 101	Introduction to Political Science (C,M,MMR)
	FUTR 103	Emerging Technologies (C)		POLI 102	The American Political System (C,M,MMR)
	GEND 101	Introduction to Gender Studies (C)	^	POLI 103	Comparative Politics (C,M,MMR)
^	GEOG 102	Cultural Geography (C,M,MMR)	^	POLI 140	Contemporary International Politics (C,M,MMR)
	GEOG 104	World Regional Geography (C,M,MMR)		PSYC 101	General Psychology (C,M,MMR)
	GEOG 154	Introduction to Urban Geography (C,M)		PSYC 111	Psychological /Social Aspects of Aging, Death and Dying (C,M)
*	HIST 105	Introduction to Western Civilization I (C,M,MMR)		PSYC 121	Introduction to Child Psychology (M)
*	HIST 106	Introduction to Western Civilization II (C,M,MMR)		PSYC 123	Adolescent Psychology (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)
^ 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)
SUST 101	Introduction to Sustainability (C)

Certificate of Achievement

On the recommendation of the faculty, the colleges of the San Diego Community College District award the Certificate of Achievement to students who complete the specified requirements. 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. complete a minimum of three courses in residence;
4. and 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; and
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

Student who expect to receive an Associate Degree or a Certificate of Achievement should file a Petition for Graduation. The Petition may be completed online at: <https://studentweb.sdccd.edu>, or obtained in the Counseling Office. See Academic Calendar section for important filing dates.

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

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 Evaluators are official.

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

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.

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

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.

Continuous Enrollment

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

Awarding of Degrees or Certificates

Associate Degrees/Certificates of Achievement will be awarded at the end of the semester in which the requirements are completed.

The graduation ceremony is held once a year. Candidates for Fall, Spring and Summer graduation may participate in the ceremony which is held at the end of the Spring semester.

Diplomas

Diplomas are issued only after completion of all graduation requirements have been verified. Diplomas will be issued in the name and to the address of record at the time the diploma is awarded. For information on obtaining your diploma or certificate of achievement, or a duplicate copy, please contact the Evaluations Office on campus.

Graduation with Distinction

Graduation with honors distinction will be based upon all coursework that is associate degree and lower division baccalaureate degree applicable.

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 for coursework for the degree or certificate.

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 for the degree or certificate upon completion of all coursework completed through the Fall semester for fall graduates or 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 evaluator will review all previous college work to determine the student's eligibility for a second degree.

Transfer Programs

(See "Transfer Guide" on page 87.)

High School Courses for College Credit (Credit by Exam)

As part of an early college program called Tech Prep, high school students may earn college credit equivalent to the courses in the table below. To receive credit, students must: 1) demonstrate acquisition of the college student learning outcomes

by earning a grade of 'B' or better in the approved course and on the college approved examination 2) successfully complete the SDCCD online college application and Tech Prep certification process. The high school instructor must verify grades, ensure successful completion of enrollment process and submit each request to the Tech Prep office. Approved requests are processed annually each July. Students may request an SDCCD transcript after July 31st. For questions and more information, contact the Tech Prep program at 619-388-6572.

TECH PREP APPROVED COURSES

For the most updated list visit: <http://techprep.sdccd.edu>

HIGH SCHOOL COURSE(S)/ PROGRAM	HIGH SCHOOL SITE(S)	MIRAMAR COURSE(S)	UNITS
Transportation Technology 1-2, 3-4 OR ROP NATEF Introduction to Automotive Technology, OR ROP Auto Body Repair & Refinishing	Clairemont, Crawford Educational Complex, La Jolla, Madison, Point Loma, San Diego Educational Complex, Serra, Morse	AUTO 32	3
Air Force ROTC, Aerospace 1-3	Scripps Ranch	AVIA 290	Up to 3
Air Force ROTC, Aerospace 4	Scripps Ranch	AVIA 101	3
ROP Tools for the Digital Age	Clairemont, Hoover, Mira Mesa, San Diego Educational Complex, Scripps Ranch, Serra, Lincoln Center for Public Safety	CBTE 101 CBTE 120 CBTE 122 CBTE 127 CBTE 140 CBTE 170 CBTE 210	up to 16
Computer Applications OR Computer Applications in Business	Clairemont, Crawford Educational Complex, Hoover, Kearny Educational Complex, Mira Mesa, Mission Bay, Patrick Henry, Point Loma, San Diego Educational Complex, Scripps Ranch, Serra, University City, Lincoln Center for Public Safety & the Arts	CBTE 120	up to 3
ROP Computerized Graphic Design	Crawford Educational Complex, Morse, Patrick Henry, Point Loma, Scripps Ranch, Hoover, Kearny Educational Complex, San Diego Educational Complex, Serra, Twain, Mission Bay, Mira Mesa	CBTE 162 CBTE 170	up to 6
ROP Biotechnology 1 & 2 OR Biomedical Technology 1-2 OR Human Biology	High Tech High, Mount Carmel and Westview (Poway Unified) San Diego Educational Complex, Kearny Educational Complex, Mira Mesa, Rancho Bernardo (PUSD)	BIOL 131	4

TECH PREP APPROVED COURSES

For the most updated list visit: <http://techprep.sdccd.edu>

HIGH SCHOOL COURSE(S)/PROGRAM	HIGH SCHOOL SITE(S)	MIRAMAR COURSE(S)	UNITS
Biotech	Mount Carmel (Poway Unified)	BIOL 132	4
ROP Developmental Psychology of Children 1-4	Clairemont, Garfield, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch, Twain, University City	CHIL 160 CHIL 161 CHIL 270	up to 6
ROP Introduction to Teaching and Learning	Clairemont, Hoover, Mira Mesa, Morse, Patrick Henry, Point Loma, Scripps Ranch	CHIL 270	up to 4
Teaching Academy	Mira Mesa, Patrick Henry, Morse, and Scripps Ranch	EDUC 200	2
Teaching Academy	Mira Mesa, Patrick Henry, Morse, and Scripps Ranch	EDUC 203	1
Academy of Finance	San Diego Ed Complex	ACCT 102 CONF 110	up to 17.5
Accounting 1-2	Kearny Ed Complex, Point Loma, San Diego Educational Complex, Serra	ACCT 102	3

Transfer Guide



What is Transfer?

Transfer is the process of continuing your education at a four-year college or university, usually after completing your major preparation and general education 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.

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 (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/.

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.

UC Minimum Admission Requirements

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

1. Complete a minimum of 60 UC-transferable semester units or 90 transferable quarter units.
2. Obtain a minimum 2.4 GPA (2.8 for California non-residents). The GPA for admission can be significantly higher due to the applicant pool.
3. Complete two transferable college courses in English composition (3 semester or 4-5 quarter units each) and one transferable college course in mathematical concepts and quantitative reasoning (3 semester or 4-5 quarter units).
4. Complete four transferable college courses chosen from at least two of the following subject areas: arts and humanities, social and behavioral sciences, physical and biological sciences.

The UC gives high priority to students who complete major coursework early in their academic career.

Students who complete the Intersegmental General Education Transfer Curriculum (IGETC) pattern prior to transferring to the UC system will meet the transfer eligibility coursework requirement listed above (for details on IGETC, see appropriate section of this guide for details). Students are strongly recommended to meet with a counselor to discuss additional requirements for competitive admissions based on major and campus choice.

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.

CSU Minimum Admission Requirements

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

1. Complete a minimum of 60 CSU-transferable semester units or 90 transferable quarter units.
2. Obtain a minimum 2.0 GPA (2.4 for California non-residents). Impacted majors may have higher GPA Requirements.
3. Complete "The Golden Four" (Oral Communications, Written Communication, Critical Thinking, and Mathematics/Quantitative Reasoning) with a grade of "C" or better. Pass/No-Pass grades are not recommended in these areas.

Students are urged to complete a General Education pattern as CSU GE or IGETC (see appropriate section of this guide for details).

Students are strongly recommended to meet with a counselor to discuss additional requirements for competitive admissions based on major and campus choice.

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.

Hispanic Serving Institutions

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

Tribal Colleges and Universities

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

Out-of-State Colleges and Universities

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

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). 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). 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 93)

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 100)

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.

Other Transfer General Education Options (see page 108)

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 179). 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 125)
- Biology Studies (see page 141)
- Chemistry Studies (see page 148)
- Communication Studies for Transfer (see page 155)
- Earth Science Studies (see page 195)
- Elementary Education (see page 180)
- English/Literature Studies (see page 169)
- Health and Physical Education Studies (see page 171)
- Human Development Studies (see page 153)
- Humanities Studies (see page 177)
- Mathematics Studies (see page 185)
- Music Studies (see page 191)
- Occupational/Technical Studies (see page 182)
- Physics Studies (see page 196)
- Pre-Engineering Studies (see page 197)
- Psychology (see page 199)
- Sociology for Transfer (see page 200)
- Social and Behavioral Sciences (see page 201)
- World Language Studies (see page 203)

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 179).

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 107)

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 107.

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 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.
- IGETC certification requests will be processed if City, Mesa or Miramar college was not the last college of attendance. However, student must have completed at least one course within the district.
- 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. Pass (P) grades are also acceptable. “C-” is not acceptable.
- Students transferring to UC need not complete the Oral Communication requirement (Area 1C).
- Students transferring to CSU need not complete the Languages Other than English requirement.
- Some UC campuses do not allow use of IGETC for students who were previously enrolled at a UC campus.

- Some community college courses have limitations on the amount of credit awarded by the receiving university. See a counselor, the course description in the college catalog, or www.assist.org for more information.

IGETC is not recommended for the following transfer destinations:

- UC San Diego Revelle and Eleanor Roosevelt Colleges
- UC Berkeley Colleges of Business, Chemistry, 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

The IGETC Pattern (Option 3)

- () Colleges in parenthesis indicate where the course is approved for IGETC Requirements.
 C—City College
 M—Mesa College
 MMR—Miramar College
- * Courses with asterisks are listed in more than one area but shall not be certified in more than one area.
- + Courses with pluses indicate transfer credit may be limited by either UC or CSU, or both. Please consult a counselor for additional information.
- @ Courses with at symbols indicate CSU-only requirements.

The IGETC Pattern

Area 1—English Communication

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

Group A: English Composition

1 course, 3 semester/4-5 quarter units

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

Group B: Critical Thinking - English Composition

1 course, 3 semester/4-5 quarter units

Courses must have English Composition as a prerequisite

- ENGL 205 Critical Thinking and Intermediate Composition (C,M,MMR)
PHIL 205 Critical Thinking and Writing in Philosophy (C,M,MMR)

Group C: Oral Communication

1 course, 3 semester/4-5 quarter units

- @ COMS 103 Oral Communication (C,M,MMR)
@* COMS 135 Interpersonal Communication (C,M,MMR)
@ COMS 160 Argumentation (C,M,MMR)
@ COMS 170 Small Group Communication (C)

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	Arts of Africa, Oceania, and the Americas (M,MMR)
+ ARTF 115	African Art (C,M)
+ ARTF 120	Native American Art (M)
ARTF 125	Art History: Arts of the Asian Continent (M,MMR)
* ARTF 191	Cultural Influences on Photography (M)
ARTF 194	Critical Photography (M)
ARTG 118	Graphic Design History (C,MMR)
BLAS 110	African 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 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 & 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 103	History of Rock Music (MMR)
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)
ARAB 102	Second Course in Arabic (C)
* ARTF 191	Cultural Influences on Photography (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	Chicana/o 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)
CHIN 202	Fourth 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 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)	* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PHIL 130	Philosophy of Art and Music (C,M)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	RUSS 102	Second Course in Russian (M)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	RUSS 201	Third Course in Russian (M)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	+ SPAN 102	Second Course in Spanish (C,M,MMR)
* HIST 131	Latin America Before Independence(M)	+ SPAN 201	Third Course in Spanish (C,M,MMR)
* HIST 132	Latin America Since Independence(M)	SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
HUMA 101	Introduction to the Humanities I (C,M,MMR)	SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
HUMA 102	Introduction to the Humanities II (C,M,MMR)	SUST 102	Environmental Ethics (C)
HUMA 103	Introduction to the New Testament (C,M)	TAGA 102	Second Course in Tagalog (M,MMR)
HUMA 104	Introduction to the Old Testament (M)	TAGA 201	Third Course in Tagalog (M,MMR)
HUMA 106	World Religions (C,M,MMR)	VIET 102	Second Course in Vietnamese (M)
HUMA 201	Mythology (C,M,MMR)	VIET 201	Third Course in Vietnamese (M)
HUMA 205	Exploring Human Values through Film (M)		
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 105	Contemporary Philosophy (C)		
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)		

Area 4—Social and Behavioral Sciences

3 courses, 9 semester/12-15 quarter units
Courses from at least two disciplines or an interdisciplinary sequence.

4A: Anthropology and Archaeology Courses:

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

4B: Economics Courses:

ECON 120	Principles of Macroeconomics (C,M,MMR)
ECON 121	Principles of Microeconomics (C,M,MMR)

4C: Ethnic Studies Courses:

* AMSL 104	Introduction to Deaf Culture (M)
BLAS 100	Introduction to Black Studies (C,M)
+ BLAS 104	Black Psychology (C,M)
+ BLAS 115	Sociology from a Black Perspective (C)

	BLAS 116	Contemporary Social Problems From a Black Perspective (C,M)
	BLAS 130	The Black Family (C,M)
	BLAS 135	Introduction to Black Politics (C)
+	BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)
+	BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
*	BLAS 145A	Introduction to African History (C,M)
*	BLAS 145B	Introduction to African History (C)
	CHIC 110A	Introduction to Chicano Studies (C,M)
	CHIC 110B	Introduction to Chicano Studies (C,M)
+	CHIC 141A	United States History From a Chicano Perspective (C,M)
+	CHIC 141B	United States History From a Chicano Perspective (C,M)
	CHIC 150	History of Mexico (C,M)
	CHIC 170	La Chicana (M)
	CHIC 201	Pre-Columbian Cultures of MesoAmerica (C,M)
*	CHIC 210	Chicano Culture (C,M)
	FILI 100	Filipino American Experience (MMR)
+	HIST 150	Native Americans in United States History (M,MMR)
+	HIST 151	Native Americans in United States History (M,MMR)
	SOCO 150	Sociology of Latinos/Latinas (C)

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)
*	PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
	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 (C,M)

4F: History Courses:

+	CHIC 141A	United States History from a Chicano Perspective (C,M)
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*	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 Modern Middle East (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:

	AGRI 100	Principles of Sustainable Agriculture (C)
+	CHIL 101	Human Growth and Development (C,M,MMR)
+	CHIL 103	Lifespan Growth and Development (MMR)
*	COMS 135	Interpersonal Communication (C,M,MMR)
	ENGL 202	Introduction to Linguistics (C,M)
	FUTR 101	Introduction to Futures Studies (C)
	FUTR 102	Creating Futures: Methods and Tools (C)
	FUTR 103	Emerging Technologies (C)
	JOUR 202	Introduction to Mass Communication (C,M,MMR)
	NUTR 153	Cultural Foods (M)
	PEAC 101	Introduction to Peace Studies (C)

PEAC 102	Nonviolence and Conflict Resolution (C)
PEAC 201	Environmental Sustainability, Justice and Ethics (C)
SOCO 223	Globalization and Social Change (C,M,MMR)
SUST 101	Introduction to Sustainability (C)

SOCO 201	Advanced Principles of Sociology (C,M,MMR)
SOCO 223	Globalization and Social Change (C,M,MMR)

4H: Political Science, Government & Legal Institutions Courses:

ADJU 101	Introduction to Administration of Justice (C,MMR)
ADJU 193	Concepts of Criminal Law (MMR)
ADJU 230	Constitutional Law I (MMR)
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)
+ PSYC 123	Adolescent Psychology (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 125	Sociology of the Family (C,M)
SOCO 150	Sociology of Latinos/Latinas (C)

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.

- One course in 5A (underlined courses include a lab component)
- One course in 5B (underlined courses include a lab component)
- One of the courses selected to fulfill the requirement for 5A or 5B must include a laboratory component or a separate course must be taken from 5C. If a separate laboratory course is taken from 5C, it must match one of the two lecture courses taken from 5A or 5B.

5A: Physical Science Courses:

ASTR 101	Descriptive Astronomy (C,M,MMR)
+ CHEM 100	Fundamentals of Chemistry (C,M,MMR)
CHEM 111	Chemistry in Society (C,M)
+ 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	Physical Geology (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)
+ PHYN 100	Survey of Physical Science (C,M,MMR)
PHYN 120	Physical Oceanography (M,MMR)
+ <u>PHYS 100</u>	Introductory Physics (C,M)

- + [PHYS 125](#) General Physics (C,M,MMR)
- + [PHYS 126](#) General Physics II (C,M,MMR)
- + [PHYS 180A](#) General Physics I (C,MMR)
- + [PHYS 180B](#) General Physics II (C,MMR)
- + [PHYS 195](#) Mechanics (C,M,MMR)
- + [PHYS 196](#) Electricity and Magnetism (C,M,MMR)
- + [PHYS 197](#) Waves, Optics and Modern Physics (C,M,MMR)

5B: Biological Science Courses:

- ANTH 102 Introduction to Physical Anthropology (C,M,MMR)
- + [BIOL 100](#) Natural History Environmental Biology (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 (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 (C,M,MMR)
- [BIOL 230](#) Human Anatomy (C,M,MMR)
- [BIOL 235](#) Human Physiology (C,M,MMR)
- + [BIOL 250](#) Introduction to Botany (M,MMR)
- PSYC 260 Introduction to Physiological Psychology (C,M,MMR)

5C: Science Laboratory:

- ANTH 104 Laboratory in Physical Anthropology (C,M,MMR)
- + ASTR 109 Practice in Observing Lab (C,M)
- + ASTR 111 Astronomy Lab (C,M,MMR)
- + CHEM 100L Fundamentals of Chemistry Lab (C,M,MMR)
- CHEM 111L Chemistry in Society Laboratory (C,M)
- + CHEM 130L Introduction to Organic & Biological Chemistry Lab (C,M,MMR)

- + CHEM 152L Introduction to General Chemistry Lab (C,M,MMR)
- CHEM 200L General Chemistry I - Lab (C,M,MMR)
- CHEM 201L General Chemistry II - Lab (C,M,MMR)
- + CHEM 231L Organic Chemistry I - Lab (C,M,MMR)
- CHEM 233L Organic Chemistry II - Lab (C,M,MMR)
- GEOG 101L Physical Geography Lab (C,M,MMR)
- GEOLOGY 101 General Geology Lab (C,M,MMR)
- + PHYN 101 Survey of Physical Science Lab (C,M,MMR)
- + PHYS 181A General Physics Lab I (C,MMR)
- + PHYS 181B General Physics Lab II (C,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)
- ARAB 102 Second Course in Arabic (C)
- CHIN 101 First Course in Mandarin Chinese (M)
- CHIN 102 Second Course in Mandarin Chinese (M)
- CHIN 201 Third Course in Mandarin Chinese (M)
- CHIN 202 Fourth Course in Mandarin Chinese (M)
- FREN 101 First Course in French (C,M)

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| FREN 102 | Second Course in French (C,M) | • German/German With Listening: 500/510 |
| FREN 201 | Third Course in French (C,M) | • Hebrew (Modern): 500/470 |
| FREN 202 | Fourth Course in French (C,M) | • Italian: 500/520 |
| GERM 101 | First Course in German (C,M) | • Japanese With Listening: 500/510 |
| GERM 102 | Second Course in German (C,M) | • Korean/Korean With Listening: not offered before 1995/500 |
| GERM 201 | Third Course in German (C,M) | • Latin: 500/530 |
| ITAL 101 | First Course in Italian (C,M) | • Spanish/Spanish With Listening: 500/520 |
| 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
- 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.

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 (Option 2)

The following information is based on the 2012-2013 agreement and is distributed as follows:

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- () 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.
 - # Courses with the number sign are listed more than once in the same area, but will only be used for certification once.

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. English Language Communication 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

COMS 103	Oral Communication (C,M,MMR)
* COMS 135	Interpersonal Communication (C,M,MMR)
COMS 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

COMS 160	Argumentation (C,M,MMR)
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)

Area B. Scientific Inquiry and 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 111	Chemistry in Society (C,M)
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	Physical 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)
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,MMR)
PHYS 180B	General Physics II (C,MMR)
<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)
BIOL 115	Marine Biology (C,M,MMR)
BIOL 130	Human Heredity (C,M,MMR)
BIOL 131	Introduction to Biotechnology (MMR)
BIOL 160	Elements of Human Anatomy & Physiology (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 (C,M,MMR)
BIOL 210B	Introduction to the Biological Sciences II (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)
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 (C,M,MMR)
CHEM 100L	Fundamentals of Chemistry Laboratory (C,M,MMR)
CHEM 111L	Chemistry in Society Laboratory (C,M)
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 181A	General Physics Lab I (C,MMR)
PHYS 181B	General Physics Lab II (C,MMR)

B4: Mathematics/Quantitative Reasoning

BIOL 200	Biological Statistics (C,M)
MATH 104	Trigonometry (C,M,MMR)
MATH 107	Introduction to Scientific Programming (C)
MATH 107L	Introduction to Scientific Programming Laboratory (C)
MATH 115	Gateway to Experimental Statistics (C,MMR)
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 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)

Area C. Arts and Humanities:

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

C1: Arts (Art, Cinema, Dance, Music, Theater)

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)	C2: Humanities (Literature, Philosophy, Languages Other than English)	
ARTF 111	Art History: Renaissance to Modern (C,M,MMR)	* AMSL 104	Introduction to Deaf Culture (M)
ARTF 113	Arts of Africa, Oceania, and the Americas (M,MMR)	AMSL 115	American Sign Language Level I (C,M)
ARTF 115	African Art (C,M)	AMSL 116	American Sign Language Level II (C,M)
ARTF 120	Native American Art (M)	AMSL 215	American Sign Language Level III (C,M)
ARTF 125	Art History: Arts of the Asian Continent (M,MMR)	AMSL 216	American Sign Language Level IV (C,M)
* ARTF 191	Cultural Influences on Photography (M)	ARAB 101	First Course in Arabic (C)
ARTF 194	Critical Photography (M)	ARAB 102	Second Course in Arabic (C)
ARTG 118	Graphic Design History (C,MMR)	* ARTF 191	Cultural Influences on Photography (M)
BLAS 110	African American Art (C,M)	BLAS 150	Black Women in Literature and the Media (C,M)
BLAS 111	African Art History (M)	BLAS 155	Afro-American Literature (C,M)
BLAS 120	Black Music (C,M)	CHIC 130	Mexican Literature in Translation (C,M)
CHIC 230	Chicano Art (M)	CHIC 135	Chicana/o Literature (C,M)
DANC 181	Introduction to Dance (C,M)	CHIC 138	Literature of La Raza in Latin America in Translation (C,M)
DFLM 101	Introduction to Film (MMR)	CHIC 190	Chicano Images in Film (C,M)
DFLM 102	The American Cinema (MMR)	CHIC 203	Introductory Spanish for Spanish Speakers (C)
DRAM 105	Introduction to Dramatic Arts (C,M)	CHIC 204	Intermediate Spanish for Spanish Speakers (C)
DRAM 107	Study of Filmed Plays (C)	CHIC 210	Chicano Culture (C,M)
DRAM 109	Theatre and Social Issues (C)	CHIN 101	First Course in Mandarin Chinese (M)
DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)	CHIN 102	Second Course in Mandarin Chinese (M)
DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)	CHIN 201	Third Course in Mandarin Chinese (M)
DRAM 150	Cinema as Art and Communication I (M)	CHIN 202	Fourth Course in Mandarin Chinese (M)
DRAM 151	Cinema as Art and Communication II (M)	ENGL 208	Introduction to Literature (C,M,MMR)
FASH 120	Fashion History and Trends (M)	ENGL 209	Literary Approaches to Film (C,M,MMR)
MUSI 100	Introduction to Music (C,M,MMR)	ENGL 210	American Literature I (C,M,MMR)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)	ENGL 211	American Literature II (C,M,MMR)
MUSI 102	Music History II: Mid 18th to Early 20th Century (M)	ENGL 215	English Literature I: 800–1799 (C,M,MMR)
MUSI 103	History of Rock Music (MMR)	ENGL 216	English Literature II: 1800–Present (C,M,MMR)
MUSI 105	Music of Our Time (M)	ENGL 220	Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)
MUSI 109	World Music (C,M,MMR)	ENGL 221	Masterpieces of World Literature II: 1600 - Present (C,M,MMR)
MUSI 111	Jazz - History and Development (C,M,MMR)	ENGL 230	Asian American Literature (M,MMR)
MUSI 125	Music, the Arts and Humanity (M)	ENGL 237	Women in Literature (C,MMR)
PHOT 150	History of Photography (C)	ENGL 238	Evaluating Children's Literature (C,M)
RTVC 160	Introduction to Cinema (C)	ENGL 240	Shakespeare (C,M)
		FREN 101	First Course in French (C,M)

FREN 102	Second Course in French (C,M)	PHIL 104A	History of Western Philosophy (C,M)
FREN 201	Third Course in French (C,M)	PHIL 104B	History of Western Philosophy (C,M)
FREN 202	Fourth Course in French (C,M)	PHIL 105	Contemporary Philosophy (C)
GERM 101	First Course in German (C,M)	PHIL 106	Asian Philosophy (C,M)
GERM 102	Second Course in German (C,M)	PHIL 107	Reflections on Human Nature (C,M,MMR)
GERM 201	Third Course in German (C,M)	PHIL 108	Perspectives on Human Nature and Society (C,M)
* HIST 100	World History I (C,M,MMR)	PHIL 110	Philosophy of Religion (M)
* HIST 101	World History II (C,M,MMR)	PHIL 111	Philosophy in Literature (C,M)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	PHIL 112	Philosophy of Science (M)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	PHIL 125	Philosophy of Women (C,M)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	PHIL 130	Philosophy of Art and Music (C,M)
* HIST 131	Latin America Before Independence (M)	RUSS 101	First Course in Russian (C,M)
* HIST 132	Latin America Since Independence (M)	RUSS 102	Second Course in Russian (M)
* HIST 154	Ancient Egypt (M)	RUSS 201	Third Course in Russian (M)
HUMA 101	Introduction to the Humanities I (C,M,MMR)	SPAN 100	First/Second Course in Spanish - Accelerated (M)
HUMA 102	Introduction to the Humanities II (C,M,MMR)	SPAN 101	First Course in Spanish (C,M,MMR)
HUMA 103	Introduction to the New Testament (C,M)	SPAN 102	Second Course in Spanish (C,M,MMR)
HUMA 104	Introduction to the Old Testament (M)	SPAN 201	Third Course in Spanish (C,M,MMR)
HUMA 106	World Religions (C,M,MMR)	SPAN 202	Fourth Course in Spanish (C,M,MMR)
HUMA 201	Mythology (C,M,MMR)	SPAN 215	Spanish for Spanish Speakers I (C,M,MMR)
HUMA 202	Mythology: Hero's Journey (C)	SPAN 216	Spanish for Spanish Speakers II (C,M,MMR)
HUMA 205	Exploring Human Values through Film (M)	SUST 102	Environmental Ethics (C)
ITAL 101	First Course in Italian (C,M)	TAGA 101	First Course in Tagalog (M,MMR)
ITAL 102	Second Course in Italian (C,M)	TAGA 102	Second Course in Tagalog (M,MMR)
ITAL 201	Third Course in Italian (C,M)	TAGA 201	Third Course in Tagalog (M,MMR)
JAPN 101	First Course in Japanese (M)	VIET 101	First Course in Vietnamese (M)
JAPN 102	Second Course in Japanese (M)	VIET 102	Second Course in Vietnamese (M)
JAPN 201	Third Course in Japanese (M)	VIET 201	Third Course in Vietnamese (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)		

Area D. Social Sciences:

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

D0: Sociology and Criminology

ADJU 106	Diversity and Community Relations (MMR)
# 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 150	Sociology of Latinos/Latinas (C)
	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 Macroeconomics (C,M,MMR)
	ECON 121	Principles of Microeconomics (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 (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)
#	SOCO 150	Sociology of Latinos/Latinas (C)

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 (C,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 Modern Middle East (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)

D7: Interdisciplinary Social or Behavioral Science

	AGRI 100	Principles of Sustainable Agriculture (C)
*	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)
*	COMS 135	Interpersonal Communication (C,M,MMR)
	ENGL 202	Introduction to Linguistics (C,M)
	FUTR 101	Introduction to Futures Studies (C)

	FUTR 102	Creating Futures: Methods and Tools (C)
	FUTR 103	Emerging Technologies (C)
	JOUR 202	Introduction to Mass Communication (C,M,MMR)
*	NUTR 153	Cultural Foods (M)
	PEAC 101	Introduction to Peace Studies (C)
	PEAC 102	Nonviolence and Conflict Resolution (C)
	PEAC 201	Environmental Sustainability, Justice and Ethics (C)
	PHIL 109	Issues in Social Philosophy (M)
#	SOCO 223	Globalization and Social Change (C,M,MMR)
	SUST 101	Introduction to Sustainability (C)

D8: Political Science, Government, and Legal Institutions

	ADJU 101	Introduction to Administration of Justice (C,MMR)
	ADJU 193	Concepts of Criminal Law (MMR)
	ADJU 230	Constitutional Law I (MMR)
#	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)

D9: Psychology

#	BLAS 104	Black Psychology (C,M)
	PSYC 101	General Psychology (C,M,MMR)
	PSYC 121	Introduction to Child Psychology (M)
	PSYC 123	Adolescent Psychology (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 Learning and Self-Development:

Three semester units (4-5 quarter units).

- ADJU 205 Leadership Theory and Practice (MMR)
- BIOL 120 The Environment of Man (M)
- * CHIL 101 Human Growth and Development (C,M,MMR)
- * CHIL 103 Lifespan Growth and Development (MMR)
- COMS 180 Intercultural Communication (C,M,MMR)
- HEAL 101 Health and Life Style (C,M,MMR)
- MILS 110 Leadership Theory and Practice (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 Cardio Conditioning (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 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)

Note: Students who have completed at least 6 months of continuous active US military service have satisfied Area E. DD214 or military transcript must be on file.

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

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.

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

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: US Constitution	Area US-3: 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 Perspective (C,M)	✓	✓	
CHIC 141B U.S. History from a Chicano Perspective (C,M)	✓		✓
HIST 109 History of the United States I (C,M,MMR)	✓	✓	
HIST 110 History of the United States II (C,M,MMR)	✓		✓
HIST 115A History of the Americas I (C,M)	✓	✓	
HIST 115B History of the Americas II (C,M)	✓		✓
HIST 123 U.S. History from the Asian Pacific American Perspective (C,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 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 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**

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. 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.

Guaranteed Admission Programs

Miramar College offers a number of Guaranteed Admission Programs with several schools including: UCSD and SDSU as well as National University, UC Davis, UC Irvine, UC Riverside, UC Santa Barbara, and UC Santa Cruz. Students can also participate in the UCLA Transfer Alliance Program offering priority admission to Miramar students. Come to the Transfer Center for program requirements. Plan early as some agreements must be signed at least

a year in advance of the transfer semester/quarter. Interested students are strongly urged to meet with a Counselor for program details as requirements and eligibility often change.

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 for CSU campuses and 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

The CSU application is available at:
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 D-203 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 179) and/or an Associate degree in a transfer-related subject area (see page 70). 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 100). 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 179). 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 D-203.

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.

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.

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.

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 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.

Degree Curricula and Certificate Programs



Degree and Certificate List

Degree	A.A. Degree	A.S. Degree	Certificate of Achievement	Certificate of Performance	Page
Administration of Justice					
Advanced Traffic Accident Investigation			X		119
Contemporary Police Technologies		X	X		120
Correctional Technologies		X	X		120
Correctional Training for Deputy Sheriffs			X		120
Investigations Specialization		X	X		120
Law Enforcement Specialization		X	X		121
Law Enforcement Supervision			X		121
Law Enforcement Technologies			X		121
P.C. 832 Laws of Arrest				X	119
P.C. 832 Laws of Arrest - Firearms				X	119
Technical Achievement for Field Training Officers			X		121
Transportation Security				X	119
Art					
Art/Visual Studies	X				125
Combined Drawing/Painting	X				124
Craft Skills	X			X	124
Graphics	X		X		126
Studio Arts	X				125
Automotive Technology					
Automotive Chassis			X		128
Automotive Electrical			X		128
Automotive Engine Performance			X		128
Automotive Transmissions			X		128
Automotive Technology		X			129
Aviation Maintenance Technology					
Airframe		X	X		131
Airframe & Powerplant		X	X		131
Aviation General Studies		X	X		132
Aviation Work Skills				X	130
Pilot Studies		X	X		132
Powerplant		X	X		132
Aviation Operations					
Commercial Pilot				X	137
Flight Instructor				X	137
Helicopter Operations				X	137
Instrument Pilot				X	137

Degree and Certificate List

Degree	A.A. Degree	A.S. Degree	Certificate of Achievement	Certificate of Performance	Page
Management		X	X		138
Private Pilot				X	137
Professional Pilot		X	X		138
Team Resource Management				X	137
Biology					
Allied Health Track		X			140
Applied Biology Track		X			141
Applied Biotechnology-Analytical Chemistry				X	140
Applied Biotechnology-Molecular Biology				X	140
Biology Studies		X			141
Business Administration					
Business Administration		X	X		143
Business Management					
Accountancy		X			144
Business Management		X	X		145
Loan Closer				X	146
Loan Processor				X	146
Loan Underwriter				X	146
Mortgage Brokerage & Banking		X	X		147
Chemistry					
Chemistry Studies		X			148
Child Development					
Assistant Teacher				X	150
Associate Teacher			X		151
Child Development		X			152
Family Child Care				X	150
Family and Child Relations				X	150
Human Development Studies	X				153
Infant/Toddler Care				X	150
Master Teacher			X		151
Residential Care Workers				X	151
Site Supervisor		X			153
Teacher			X		152
Communication Studies					
Communication Studies for Transfer	X				155
Computer Business Technology					
Administrative Assistant		X	X	X	157

Degree and Certificate List

Degree	A.A. Degree	A.S. Degree	Certificate of Achievement	Certificate of Performance	Page
Microcomputer Applications		X	X		158
Typist/Word Processor				X	157
Website Designer				X	157
Computer and Information Science					
Computer and Information Science		X	X		160
Computer Programming				X	160
Diesel Technology					
Diesel Equipment Repair Technology			X		163
Diesel Fuel Injection Systems				X	162
Engine Overhaul, Caterpillar			X		163
Engine Overhaul, Cummins			X		163
Engine Overhaul, Detroit Diesel			X		163
Engine Repair, Caterpillar			X		163
Engine Repair, Cummins			X		164
Engine Repair, Detroit Diesel			X		164
Heavy Equipment Powertrains				X	162
Heavy Duty Transportation Technology (HDTT) (Day Program)		X	X		164
Heavy Equipment Technology (HET) (Day Program)		X	X		164
Heavy Equipment Undercarriage Systems				X	162
Mobile Hydraulics Technician				X	162
San Diego City Civil Service Equipment Mechanic Apprenticeship		X	X		165
San Diego Transit General Mechanic		X	X		166
Steering, Suspension, & Drivelines				X	162
Truck Air Brake Systems				X	162
Truck Drive Axles				X	163
Truck and Equipment Electrical Systems				X	162
Truck Transmission and Clutches				X	163
English					
Advanced ESOL				X	168
English	X				168
English/Literature Studies	X				169
Exercise Science					
Health and Physical Education Studies		X			171
Fitness Specialist			X		172
Fire Protection Technology					
Fire Prevention		X	X		174

Degree and Certificate List

Degree	A.A. Degree	A.S. Degree	Certificate of Achievement	Certificate of Performance	Page
Fire Protection		X	X		174
Fire Technology		X	X		175
Open Water Lifeguard Professional		X	X		175
Humanities					
Humanities Studies	X				177
Interdisciplinary Studies					
CSU General Education - Breadth			X		179
Elementary Education	X				180
Honors Global Competencies Certificate				X	180
Intersegmental General Education Transfer (IGETC)			X		179
Occupational/Technical Studies		X			182
Selected Studies		X			184
Mathematics					
Mathematics Studies	X				185
Medical Laboratory Technology					
Medical Laboratory Technician Training				X	187
Military Studies					
Military Leadership		X	X		189
Music					
Music Production and Engineering				X	191
Music Studies	X				191
Paralegal					
Paralegal		X	X		193
Physical Science					
Earth Science Studies		X			195
Physics Studies		X			196
Pre-Engineering Studies		X			197
Social and Behavioral Sciences					
Psychology	X				199
Social and Behavioral Sciences	X				201
Sociology for Transfer	X				200
World Language Studies					
World Language Studies	X				203

Administration of Justice

Award Type	Units
Certificate of Performance:	
P.C. 832 Laws of Arrest	2.5
P.C. 832 Laws of Arrest - Firearms	1
Transportation Security	9
Certificate of Achievement:	
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
Associate in Science Degree:	
Contemporary Police Technologies	34.5*
Correctional Technologies	33*
Investigations Specialization	33*
Law Enforcement Specialization	33*
Occupational/Technical Studies (see page 182)	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 requirements 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/Email
Steve Lickiss	A-224C	619-388-7455
Jordan Omens	A-224B	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
- Correctional Officer
- Crime Prevention Specialist
- Customs Agent
- Deputy Sheriff
- Evidence Technician
- Homeland Security
- Parking Enforcement
- Parole Officer
- Police Officer
- Police Service Officer
- Postal Inspector
- Private and Industrial Security Officer
- Probation Officer

Student Learning Outcomes

Students who complete the Administration of Justice Program will be able to:

- Understand the three parts of the criminal justice system and how they interrelate.

- Demonstrate knowledge of the California Penal Code, the California Commission on Peace Officer Standards and Training regulations and appropriate department policies and procedures.
- Relate knowledge from several employment areas such as pre-employment testing, physical requirements, psychological evaluations and social factors.
- Use information of crime scene management and investigation, forensics analysis and information technology to conduct rudimentary criminal investigations.
- Analyze and evaluate the role of criminal sanctions in recidivism rates and the rehabilitation process of offenders.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

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 182). 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.

Each basic law enforcement academy is reviewed for compliance with POST Regulations and directives on a three-year cycle. The Basic Course Certification Review (BCCR) process provides regular assessments of academy operations - a vital function to ensure course quality, integrity, and safety of entry level peace officer training in California.

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

Courses:	Units
ADJU 356A 832 PC Laws of Arrest	2.5
Total Units = 2.5	

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

Courses:	Units
ADJU 356B 832 PC Firearms	1
Total Units = 1	

Certificate of Performance: Transportation Security*

The Certificate of Performance in Transportation Security is intended for students employed or seeking employment with the Department of Homeland Security as well as anyone interested in the field of transportation security.

Courses:	Units
HSEC 100 Introduction to Homeland Security	3
HSEC 110 Intelligence Analysis and Security Management	3
HSEC 120 Transportation and Border Security	3
Total Units = 9	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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

Certificate of Achievement: Administration of Justice

Advanced Traffic Accident Investigation

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 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 332A	P.O.S.T. Certified Driving Under the Influence Course	0.5

Total Units = 34.5**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

Select three units from the following:

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

Total Units = 29.5**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
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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**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

Total Units = 33**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

Select three units from the following:

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

Total Units = 33

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
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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

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

Total Units = 33

Associate in Science Degree: 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

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

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

For graduation requirements see **Associate Degree Requirements** on page 70.

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.

Anthropology

See "Social and Behavioral Sciences" on page 198.

Arabic

See "World Language Studies" on page 203.

Art

Award Type	Units
Certificate of Performance:	
Craft Skills	10-15
Certificate of Achievement:	
Graphics	36
Associate in Arts Degree:	
Combined Drawing/Painting	27*
Craft Skills	24*
Studio Arts	48*
Art/Visual Studies	18*
Graphics	36*

* 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
Dee Dee Coppedge	H-111-A	619-388-7514 dcoppedge@sdccd.edu
Robert Fritsch	H-112-B Art Lab	619-388-7337 bfritsch@sdccd.edu
Rex Heftmann	W-221	619-388-7205 rheftman@sdccd.edu

Program Goals

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 nonspecialized art major.

Program Emphasis

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.

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.

Student Learning Outcomes

Students who complete the Art Program will be able to:

- Critically analyze, interpret, and evaluate works of art.
- Develop a foundation of art skills and a high level of craftsmanship by utilizing a variety of tools and technologies associated with the visual arts.
- Use a diverse range of global events to express personal ideas and opinions through artwork.
- Identify the theoretical, cultural, and historical contexts of art.
- Demonstrate appropriate skills needed to articulate their conscious artistic intentions, and express coherent aesthetics.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

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 page 125). 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
Total Units = 10-15	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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

Associate in Arts Degree: Art-Fine Art

Combined Drawing/Painting

Courses Required for the Major:	Units
ARTF 150A Two-Dimensional Design	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	History of Modern Art or	
ARTF 110	Art History: Prehistoric to Gothic or	
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*	
ARTF 198C	Introduction to Printmaking III*	
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 Two-Dimensional Design	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	History of Modern Art or	
ARTF 110	Art History: Prehistoric to Gothic or	
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 195B	Ceramics II	
ARTF 195C	Ceramics III	
ARTF 196	Clay and Glaze Technology	
ARTF 220A	Life Sculpture I	

Any art history course, or

PHOT 105	Introduction to Photography* (City)	3
Total Units = 21		

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

Studio Arts

Courses Required for the Major: Units

ARTF 100	Art Orientation or	
ARTF 161A	Museum Studies/Gallery Exhibition Skills I* (Mesa)	3
ARTF 150A	Two-Dimensional Design	3
ARTF 150B	Design II	3
ARTF 151 or 161B*	(Mesa)	3
ARTF 155A	Freehand Drawing I	3
ARTF 155B	Freehand Drawing II	3
ARTF 165A	Composition in Painting I	3
ARTF 175A	Sculpture I	3
ARTF 210A	Life Drawing I or	
ARTF 220A	Life Sculpture I	3

Select six units from:

ARTF 109	History of Modern Art or	
ARTF 110	Art History: Prehistoric to Gothic or	
ARTF 111	Art History: Renaissance to Modern	6

Foreign Language Requirement: three semesters of one foreign language or the successful completion of a proficiency examination is required 15

Total Units = 48

Note: Only one ARTF Arts (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	History of Modern Art	
ARTF 113	Arts of Africa, Oceania, and the Americas	
ARTF 125	Art History: Arts of the Asian Continent	
ARTF 150A	Two-Dimensional Design	
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	
CHIL 101	Human Growth and Development	
CHIL 103	Lifespan Growth and Development	
ENGL 209	Literary Approaches to Film	
GEOG 102	Cultural Geography	
PSYC 101	General Psychology.	
PSYC 230	Psychology of Lifespan Development	

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 71:

- The IGETC pattern (page 93) 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 100) 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 71) 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.

Graphics

Certificate of Achievement: Graphics

This degree provides the graduate with the demonstrable skills, documented experience, a portfolio of evidence, and the personal confidence to enter a career in which the ability to create, produce, and effectively use graphic identity and communications is a critical requirement. The program is task-oriented, intended to provide "embedded skills" beneficial to most careers.

Courses Required for the Major:	Units
ARTF 150A Two-Dimensional Design	3
ARTF 150B Beginning Graphic Design	3
ARTF 155A Freehand Drawing I	3
ARTD 160 Vector Art 01: Illustration or	
ARTD 160A Vector Art 01: Illustration Tools	1.5
and	
ARTD 160B Vector Art 01: Illustration Tasks	1.5

ARTD 170 Raster Art 01: Image Editing or	
ARTD 170A Raster Art 01A: Image Editing Tools	1.5
and	
ARTD 170B Raster Art 01B: Image Editing Tasks	1.5
ARTG 106 Typography	3
ARTD 181 Projects 01: Multi-modal productions	3
ARTG 126 Intermediate Digital Media	3
ARTG 148A Portfolio A	3
ARTG 149 Studio Practices	3

Select six units from the following list of elective courses:

ARTD 158 Survey of Graphics Technology	3
ARTF 282 Open Studio	1-2
ARTF 155B Freehand Drawing II	3
ARTF 198A Introduction to Printmaking I	3
ARTG 133 Intermediate Graphic Design II (Identity Systems)	3
ARTG 290 Independent Study in Graphic Design	1-3
ARTG 148B Portfolio B	3
ARTG 270 Work Experience in Graphic Design	1-4
ARTG 118 Graphic Design History	3
BUSE 100 Introduction to Business	3
BUSE 119 Business Communications	3

Total Units = 36

Associate in Arts Degree: Graphics

This degree provides the graduate with the demonstrable skills, documented experience, a portfolio of evidence, and the personal confidence to enter a career in which the ability to create, produce, and effectively use graphic identity and communications is a critical requirement. The program is task-oriented, intended to provide "embedded skills" beneficial to most careers.

Courses Required for the Major:	Units
ARTF 150A Two-Dimensional Design	3
ARTF 150B Beginning Graphic Design	3
ARTF 155A Freehand Drawing I	3
ARTD 160 Vector Art 01: Illustration or	
ARTD 160A Vector Art 01: Illustration Tools	1.5
and	
ARTD 160B Vector Art 01: Illustration Tasks	1.5
ARTD 170 Raster Art 01: Image Editing or	
ARTD 170A Raster Art 01A: Image Editing Tools	1.5
and	
ARTD 170B Raster Art 01B: Image Editing Tasks	1.5
ARTG 106 Typography	3
ARTD 181 Projects 01: Multi-modal productions	3
ARTG 126 Intermediate Digital Media	3

ARTG 148A	Portfolio A	3
ARTG 149	Studio Practices	3

Select six units from the following list of elective courses:

ARTD 158	Survey of Graphics Technology	3
ARTF 282	Open Studio	1-2
ARTF 155B	Freehand Drawing II	3
ARTF 198A	Introduction to Printmaking I	3
ARTG 133	Intermediate Graphic Design II (Identity Systems)	3
ARTG 290	Independent Study in Graphic Design	1-3
ARTG 148B	Portfolio B	3
ARTG 270	Work Experience in Graphic Design	1-4
ARTG 118	Graphic Design History	3
BUSE 100	Introduction to Business	3
BUSE 119	Business Communications	3

Total Units = 36

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

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 195.

Automotive Technology

Award Type	Units
Certificate of Achievement:	
Automotive Chassis	16
Automotive Electrical	16
Automotive Engine Performance	20
Automotive Transmissions	20
Associate in Science Degree:	
Automotive Technology	46*

* 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 as well as professional upgrading to persons in the automotive industry. The program provides training for state licenses as well as for each of the areas tested for National Institute for Automotive Service Excellence (ASE) certification. Certificates are offered in Automotive Electrical, Automotive Engine Performance, Automotive Transmissions, and Automotive Chassis.

Program Emphasis:

The program emphasis is on various automotive manufacturer products. Specific training in American Honda Motors and Toyota Motor Sales is available in designated courses. Students have the opportunity for internship training when available. If employed, student interns may work for a repair facility while concurrently receiving formal training in Automotive Technology coursework. Upon completion, the student may have the opportunity for full-time employment at that repair facility. While progressing through the training, students are strongly encouraged to obtain at least two Automotive Service Excellence (ASE) Certifications.

Career Options:

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

Faculty	Office	Telephone
Miramar College	S-204F	619-388-7634
Joe Young	S-204C	619-388-7672
Mark Dinger	S-204D	619-388-7642
Ryan Monroe	S-204E	619-388-7499

Student Learning Outcomes

Students who complete the Automotive Technology Program will be able to:

- Accurately diagnose and repair light duty automotive systems and components;
- Identify workplace health and safety compliance using regulations published by the Occupational Safety and Health Administration, and the Environmental Protection Agency;
- Research automotive repair data, instructions, and specifications using printed material as well as computer data base systems.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Academic Programs

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

Certificate of Achievement: Automotive Chassis

Courses Required for the Major:		Units
AUTO 061	Basic Electricity and Electrical Systems Fundamentals or	
AUTO 061T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 062	Advanced Electrical or	
AUTO 062T	Honda/Toyota Advanced Electrical	4
AUTO 076	Automotive Brake Systems or	
AUTO 076T	Honda/Toyota Automotive Brake Systems	4
AUTO 078	Suspension, Steering and Handling or	
AUTO 078T	Honda/Toyota Suspension, Steering and Handling	4
Total Units = 16		

Certificate of Achievement: Automotive Electrical

Courses Required for the Major:		Units
AUTO 061	Basic Electricity and Electrical Systems Fundamentals or	
AUTO 061T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 062	Advanced Electrical or	
AUTO 062T	Honda/Toyota Advanced Electrical	4
AUTO 065	Engine Performance or	
AUTO 065T	Honda/Toyota Engine Performance	4
AUTO 069	Climate Control Systems or	
AUTO 069T	Honda/Toyota Climate Control Systems	4
Total Units = 16		

Certificate of Achievement: Automotive Engine Performance

Courses Required for the Major:		Units
AUTO 056	Engine and Related Systems or	
AUTO 056T	Honda/Toyota Engine and Related Systems	4
AUTO 061	Basic Electricity and Electrical Systems Fundamentals or	
AUTO 061T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 062	Advanced Electrical or	
AUTO 062T	Honda/Toyota Advanced Electrical	4
AUTO 065	Engine Performance or	
AUTO 065T	Honda/Toyota Engine Performance	4
AUTO 067	Advanced Engine Performance or	
AUTO 067T	Honda/Toyota Advanced Engine Performance	4
Total Units = 20		

Certificate of Achievement: Automotive Transmissions

Courses Required for the Major:		Units
AUTO 061	Basic Electricity and Electrical Systems Fundamentals or	
AUTO 061T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 062	Advanced Electrical or	
AUTO 062T	Honda/Toyota Advanced Electrical	4
AUTO 065	Engine Performance or	
AUTO 065T	Honda/Toyota Engine Performance	4
AUTO 072	Manual Drive Train and Axles or	
AUTO 072T	Honda/Toyota Manual Drive Train and Axles	4
AUTO 074	Automatic Transmissions/Axles or	

AUTO 074T	Honda/Toyota Automatic Transmissions/Axles	4
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Total Units = 20

Associate in Science Degree: Automotive Technology

Courses Required for the Major:		Units
AUTO 056	Engine and Related Systems or	
AUTO 056T	Honda/Toyota Engine and Related Systems	4
AUTO 061	Basic Electricity and Electrical Systems Fundamentals or	
AUTO 061T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 062	Advanced Electrical or	
AUTO 062T	Honda/Toyota Advanced Electrical	4
AUTO 065	Engine Performance or	
AUTO 065T	Honda/Toyota Engine Performance	4
AUTO 067	Advanced Engine Performance or	
AUTO 067T	Honda/Toyota Advanced Engine Performance	4
AUTO 069	Climate Control Systems or	
AUTO 069T	Honda/Toyota Climate Control Systems	4
AUTO 072	Manual Drive Train and Axles or	
AUTO 072T	Honda/Toyota Manual Drive Train and Axles	4
AUTO 074	Automatic Transmissions/Axles or	
AUTO 074T	Honda/Toyota Automatic Transmissions/Axles	4
AUTO 076	Automotive Brake Systems or	
AUTO 076T	Honda/Toyota Automotive Brake Systems	4
AUTO 078	Suspension, Steering and Handling or	
AUTO 078T	Honda/Toyota Suspension, Steering and Handling	4
AUTO 085	Advanced Emission Specialist Exam Qualification Course	6

Total Units = 46

For graduation requirements see **Associate Degree Requirements** on page 70.

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

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

Aviation Maintenance Technology

Award Type	Units
Certificate of Performance:	
Aviation Work Skills	2.5
Certificate of Achievement:	
Airframe & Powerplant	78
Airframe	47
Powerplant	52.5
Pilot Studies	21
Aviation General Studies	18
Associate in Science Degree:	
Airframe & Powerplant	78*
Airframe	47*
Powerplant	52.5*
Pilot Studies	21*
Aviation General Studies	18*
Occupational/Technical Studies (see page 182)	18*

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

Description

Miramar College maintains a Federal Aviation Administration (FAA), Federal Aviation Regulation (FAR) Part 147 approved Aviation Maintenance Technician Program that leads to an FAA Mechanic's Certificate with an Airframe and Powerplant Rating. This program is structured to allow the student majoring in Airframe and Powerplant to complete the required minimum of 1900 hours of instruction in five 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 an Airframe and/or Powerplant Ratings, arrangements are made with the local FAA District Office to take the appropriate written examinations followed by the appropriate oral/practical 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.

Career Options

An FAA Mechanic's Certificate with an Airframe and Powerplant Rating enables the holder to service, maintain, inspect, and approve for return to service, any U.S. registered aircraft. Opportunities include employment in all areas of aviation maintenance such as, FAA authorized Repair Stations, local General Aviation facilities, corporate fleet maintenance facilities, and the airlines. The skills acquired in the aviation program can also be applied in other professional fields such as, advanced fabrication, design, and repair facilities, small and large manufacturers, and research and development organizations.

Faculty	Office	Telephone
David Buser	F-103-B	619-388-7663
Larry Pink	F-103-F	619-388-7665
Lonny Bosselman	F-103-G	619-388-7666
Paul Chlapecka	F-103-E	619-388-7661
Wheeler North	F-103-I	619-388-7662

Student Learning Outcomes

Students who complete the Aeronautical and Aviation Technology Program will be able to:

- Troubleshoot, service, and repair aircraft structures and flight controls;
- Troubleshoot, service, and repair various aircraft propulsion systems;
- Maintain aircraft in compliance with all applicable Federal Air Regulations.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

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 on page 20.)

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 182). 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: Aviation Work Skills*

The Certificate of Performance in Aviation Work Skills provides the student with basic work skills and competencies required for success in an entry-level, intern, or apprentice position in the aviation industry.

Courses:		Units
AVIM 52	Survey of Aviation Industry	1.5
CBTE 114	Introduction to Microsoft Windows	1
		Total Units = 2.5

Recommended Electives: Aviation Maintenance Technology 270, Aviation 270.

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Aviation Maintenance Technology

Airframe & Powerplant

Qualifies the student for the FAA Airframe and Powerplant exam.

Courses Required for the Major: **Units**

General Curriculum

AVIM 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2
AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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	Applied Airframe Electrical Systems	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	Applied Powerplant Electrical Systems	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	3
AVIM 242	Applied Aircraft Propeller Systems	1
AVIM 249	Induction and Fuel Metering	3
AVIM 250	Applied Induction and Fuel Metering	1
AVIM 253	Lubrication, Cooling, and Exhaust	3
AVIM 254	Applied Lubrication, Cooling, and Exhaust	1

Total Units = 78

Certificate of Achievement: Aviation Maintenance Technology

Airframe

Qualifies the student for the FAA Airframe exam.

Courses Required for the Major: **Units**

General Curriculum:

AVIM 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2
AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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	Applied Airframe Electrical Systems	1
Total Units = 4		

Certificate of Achievement: Aviation Maintenance Technology

Powerplant

Qualifies the student for the FAA Powerplant exam.

Courses Required for the Major: **Units**

General Curriculum

AVIM 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2
AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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	Applied Powerplant Electrical Systems	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	3
AVIM 242	Applied Aircraft Propeller Systems	1
AVIM 249	Induction and Fuel Metering	3
AVIM 250	Applied Induction and Fuel Metering	1
AVIM 253	Lubrication, Cooling, and Exhaust	3
AVIM 254	Applied Lubrication, Cooling, and Exhaust	1

Total Units = 52.5

Certificate of Achievement: 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: **Units**

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 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6

Total Units = 21

Recommended Electives: Aviation 105, Aviation Maintenance Technology 75, 102G, 102H, 105B, 111C, 111D, 112C, 112D.

Certificate of Achievement Aviation Maintenance Technology

Aviation General Studies

Prepares the student for employment in the aviation industry. This program DOES NOT meet the FAA minimum requirements for the Airframe or Powerplant rating. This is also an ideal program for students who already have their Mechanic's Certificate but wish to obtain a degree.

Courses Required for the Major: **Units**

AVIM 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2

Select 2 or more units from the following:

General Curriculum:

AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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	Applied Airframe Electrical Systems	1
Powerplant Curriculum: Units		
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	Applied Powerplant Electrical Systems	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	3
AVIM 242	Applied Aircraft Propeller Systems	1
AVIM 249	Induction and Fuel Metering	3
AVIM 250	Applied Induction and Fuel Metering	1
AVIM 253	Lubrication, Cooling, and Exhaust	3
AVIM 254	Applied Lubrication, Cooling, and Exhaust	1
		Total Units = 18

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 101G General Aviation Technology Theory I	6
AVIM 101H General Aviation Technology Theory II	6

AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2
AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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	Applied Airframe Electrical Systems	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	Applied Powerplant Electrical Systems	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	3
AVIM 242	Applied Aircraft Propeller Systems	1
AVIM 249	Induction and Fuel Metering	3
AVIM 250	Applied Induction and Fuel Metering	1
AVIM 253	Lubrication, Cooling, and Exhaust	3
AVIM 254	Applied Lubrication, Cooling, and Exhaust	1

Total Units = 78

For graduation requirements see **Associate Degree Requirements** on page 70.

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

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 101G General Aviation Technology Theory I	6
AVIM 101H General Aviation Technology Theory II	6
AVIM 102G General Aviation Maintenance Technology Practices I	2
AVIM 102H General Aviation Maintenance Technology Practices II	2
AVIM 109D Aircraft Fire Protection and Digital Logic	1
AVIM 120 Basic D.C. Electronics Theory	3
AVIM 121A Applied Basic D.C. Electronics	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	
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 Applied Airframe Electrical Systems	1
Total Units = 47	

For graduation requirements see **Associate Degree Requirements** on page 70.

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

Associate in Science Degree: Aviation Maintenance Technology

Powerplant

Qualifies the student for the FAA Powerplant exam.

Courses Required for the Major:

	Units
General Curriculum	
AVIM 101G General Aviation Technology Theory I	6
AVIM 101H General Aviation Technology Theory II	6
AVIM 102G General Aviation Maintenance Technology Practices I	2
AVIM 102H General Aviation Maintenance Technology Practices II	2
AVIM 109D Aircraft Fire Protection and Digital Logic	1
AVIM 120 Basic D.C. Electronics Theory	3
AVIM 121A Applied Basic D.C. Electronics	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 Applied Powerplant Electrical Systems	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	3
AVIM 242 Applied Aircraft Propeller Systems	1
AVIM 249 Induction and Fuel Metering	3
AVIM 250 Applied Induction and Fuel Metering	1
AVIM 253 Lubrication, Cooling, and Exhaust	3
AVIM 254 Applied Lubrication, Cooling, and Exhaust	1

Total Units = 52.5

For graduation requirements see **Associate Degree Requirements** on page 70.

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

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:		Units
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 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
Total Units = 21		

Recommended Electives: Aviation 105, Aviation Maintenance Technology 75, 102G, 102H, 105B, 111C, 111D, 112C, 112D.

For graduation requirements see **Associate Degree Requirements** on page 70.

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.

Associate in Science Degree Aviation Maintenance Technology

Aviation General Studies

Prepares the student for employment in the aviation industry. This program DOES NOT meet the FAA minimum requirements for the Airframe or Powerplant rating. This is also an ideal program for students who already have their Mechanic's Certificate but wish to obtain a degree.

Note: Prerequisites may be waived depending on the student's background.

Courses Required for the Major:		Units
AVIM 101G	General Aviation Technology Theory I	6
AVIM 101H	General Aviation Technology Theory II	6
AVIM 102G	General Aviation Maintenance Technology Practices I	2
AVIM 102H	General Aviation Maintenance Technology Practices II	2

Select 2 or more units from the following:

General Curriculum:

AVIM 109D	Aircraft Fire Protection and Digital Logic	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	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 103C	Aircraft Hydraulic Systems	3
AVIM 104B	Applied Aircraft Welding and Sheetmetal Structures	1.5
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	Applied Airframe Electrical Systems	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	Applied Powerplant Electrical Systems	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	3
AVIM 242	Applied Aircraft Propeller Systems	1
AVIM 249	Induction and Fuel Metering	3
AVIM 250	Applied Induction and Fuel Metering	1
AVIM 253	Lubrication, Cooling, and Exhaust	3
AVIM 254	Applied Lubrication, Cooling, and Exhaust	1

Total Units = 18

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Aviation Operations

Award Type	Units
Certificate of Performance:	
Commercial Pilot	6
Flight Instructor	7
Helicopter Operations	9
Instrument Pilot	7
Private Pilot	6
Team Resource Management	9
Certificate of Achievement:	
Management	25
Professional Pilot	26
Associate in Science Degree:	
Management	25*
Professional Pilot	26*

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

Description

The Aviation Operations Program integrates simulator flight training with rigorous academic study, proving a strong foundation for leadership positions within the aviation industry. The program emphasizes the study of a unique combination of group dynamics, human factors, and safety awareness along with the technical fundamentals of flight in order to enhance students' development of situational awareness, critical thinking and problem solving skills. Miramar College's Aviation Operation Program meets all requirements of the Federal Aviation Administration's Part 141 Pilot Ground School.

Career Options

The following is an abbreviated list of the myriad of career training options the Aviation Operations Program prepares its graduates to embark upon: Airline Management, Airport Management, Airport Security, Air Traffic Control, Border Patrol, Commercial Airline Pilot, Corporate Pilot, Certificated Flight Instructor, Federal Air Marshal, Federal Aviation Administration, Fixed Base Operator Management, Flying Club Management, Flight Attendant, Flight Operations Supervisor, Transportation Security Administration, US Military.

Faculty	Office	Telephone
Duane Short	F1-103H	619-388-7660

Student Learning Outcomes

Upon successful completion of the Aviation Operations program students will:

- Demonstrate preparedness to complete, or continue preparation for, the respective Federal Aviation Administration written examination.
- Demonstrate ability to communicate effectively with individuals, teams and large groups.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Credit for FAA Pilot Certificates

Pending Aviation Operations Program Director review and approval, students who already possess the associated FAA pilot certificate or rating may challenge up to two of the following courses: (AVIA 101) Private Pilot Ground School, (AVIA 199) Instrument Ground School, (AVIA 201) Commercial Airline Pilot Instruction, (AVIA 212) Professional Flight Instructor Ground School.

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, and 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 182). 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*

Courses:		Units
AVIA 133	Human Factors in Aviation	3
AVIA 201	Commercial Airline Pilot Instruction	3
		Total Units = 6

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

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Flight Instructor*

Courses:		Units
AVIA 133	Human Factors in Aviation	3
AVIA 212	Flight Instructor Ground School	4
		Total Units = 7

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

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Helicopter Operations*

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

Courses:		Units
AVIA 101	Private Pilot Ground School	3
AVIA 133	Human Factors in Aviation	3
AVIA 151	Helicopter Pilot Ground School	3
		Total Units = 9

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

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Instrument Pilot*

Courses:		Units
AVIA 133	Human Factors in Aviation	3
AVIA 199	Instrument Ground School	4
		Total Units = 7

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

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Private Pilot*

Courses:		Units
AVIA 101	Private Pilot Ground School	3
AVIA 133	Human Factors in Aviation	3
		Total Units = 6

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

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
		Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement or Associate in Science Degree: Aviation Operations

Management

Courses Required for the Major:		Units
AVIA 053	Aviation Career Skills	1
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 for High Risk Teams	3
AVIA 133	Human Factors in Aviation	3
AVIA 195	Basic Instrument Flight Procedures	3
AVIA 196	Basic Instrument Flight Lab	1
AVIA 225	Introduction to Commercial Airline Management	3
AVIA 278	Command, Leadership and Decision Making	3

Select at least three units from the following:

AVIA 101L	Private Pilot Flight Lab	1
AVIA 103	Private Pilot Knowledge Review	1
AVIA 151	Helicopter Pilot Ground School	3
AVIA 212	Flight Instructor Ground School	4
AVIA 228	Group Dynamics II	3
BUSE 119	Business Communications	3
BUSE 140	Business Law and the Legal Environment	3
BUSE 201	Business Organization and Management	3

Total Units= 29-30

Courses must be taken for a letter grade if used to satisfy degree requirements.

Note: Private Pilot certificate satisfies the AVIA 195 and 196 requirement.

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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 053	Aviation Career Skills	1
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 for High Risk Teams	3
AVIA 133	Human Factors in Aviation	3
AVIA 199	Instrument Ground School	4
AVIA 201	Commercial Airline Pilot Instruction	3
AVIA 278	Command, Leadership and Decision Making	3

Select at least three units from the following:

AVIA 101L	Private Pilot Flight Lab	1
AVIA 103	Private Pilot Knowledge Review	1
AVIA 151	Helicopter Pilot Ground School	3
AVIA 212	Flight Instructor Ground School	4
AVIA 228	Group Dynamics II	3
BUSE 119	Business Communications	3
BUSE 140	Business Law and the Legal Environment	3
BUSE 201	Business Organization and Management	3

Total Units = 29-30

Note: Courses must be taken for a letter grade if used to satisfy degree requirements.

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Biology

Award Type	Units
Certificate of Performance:	
Applied Biotechnology-Analytical Chemistry	9
Applied Biotechnology-Molecular Biology	8
Associate in Science Degree:	
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.

Faculty	Office	Telephone/Email
Rebecca Bowers-Gentry	M-211Q	619-388-7241 rbowersg@sdccd.edu
Patricia Flower	S5-101F	619-388-7489 pflower@sdccd.edu
Buran Haidar	S5-101D	619-388-7412 bhaidar@sdccd.edu

Faculty	Office	Telephone/Email
Andrew Lowe	S5-101H	619-388-7536 alowe@sdccd.edu
Marie McMahan	S5-101E	619-388-7497 mmcMahon@sdccd.edu
Laura Murphy	S5-101G	619-388-7539 lmurphy@sdccd.edu
Kevin Petti	S5-101B	619-388-7491 kpetti@sdccd.edu
Sandra Slivka	S5-101C	619-388-7490/7422 sslivka@sdccd.edu
Dan Trubovitz	S5-101A	619-388-7495 dtrubovi@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.

Student Learning Outcomes

Students who complete the Biology Program will be able to:

- Apply biology knowledge to new situations and the global economy.
- Explain the importance of the scientific method to the process of science, including in scientific experiments.
- Prepare, present and analyze biological data in a graphical format.
- Describe the applications of biology in career settings.
- Demonstrate knowledge of biology and how it relates to current events.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

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
		Total Units = 9

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
		Total Units = 8

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
		Total Units = 21

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

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Total Units = 35

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 **Requirements for the Associate Degree** on page 70.

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.

Courses Required for the Major:

Courses Required for the Major:		Units
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

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

Award Type	Units
Certificate of Achievement: Business Administration	30
Associate in Science Degree: 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.

Faculty	Office	Telephone
Octavian Dobre	M-107-F	619-388-7692

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.

Student Learning Outcomes

Students who complete the Business Administration Program will be able to:

- Perform fundamental accounting and financial management operations associated with business enterprise management.
- Apply management, human resource, and personnel practices and approaches to organizational problem solving.
- Identify good business ethics, social responsibility, and discuss the vital role in the establishment of trust and honesty expected of supervisory/managers and leaders today.

- Critically analyze the external and internal environments of a business organization and formulate appropriate strategies.
- Demonstrate ability to communicate effectively with individuals, teams and large groups.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

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 201). 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 Macroeconomics	3
ECON 121 Principles of Microeconomics	3
MATH 119 Elementary Statistics	3

Total Units = 30

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 Macroeconomics	3
ECON 121 Principles of Microeconomics	3
ENGL 101 Reading and Composition	3
MATH 119 Elementary Statistics	3

Total Units = 33

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

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Award Type	Units
Certificate of Performance:	
Loan Closer	8
Loan Processor	9
Loan Underwriter	9
Certificate of Achievement:	
Business Management	35
Mortgage Brokerage & Banking	18
Associate in Science Degree:	
Accountancy	39*
Business Management	47*
Mortgage Brokerage & Banking	27*
Occupational/Technical Studies (see page 182)	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.

Student Learning Outcomes

Students who complete the Business Management Program will be able to:

- Apply techniques and theories from various areas of business to business situations.
- Demonstrate the roles, responsibility, and expected results of people performing the supervisory/management and/or leadership roles in an organization by identifying the key concepts.
- Analyze their own capabilities using real world case scenarios to gain an understanding of what is required to gain employment in this field.

- Demonstrate effective analytical and critical thinking skills to make an appropriate decision in a complex situation.
- Identify good business ethics, social responsibility, and discuss the vital role in the establishment of trust and honesty expected of supervisory/managers and leaders today.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Octavian Dobre	M-107F	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 182). 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.

Accountancy

Description

The documentation of business activities is accomplished through accounting. Without accurate and timely accounting information businesses do not know their financial position, who owes them money, who they owe money to, or what assets they have available for business processes, etc. This program addresses the minimum skill levels to enter the technical and exacting world of accountancy.

Program Goals

With the basic knowledge of financial and managerial accounting, computerized accounting applications, accounting terminology, the process and flow of accounting an individual is ready for the entry level positions in service, retail, and manufacturing businesses. This educational path

addresses student learning objectives of 1) analyzing business events to determine the requirement for fiscal documentation, 2) appropriately recording business fiscal events as related to timing, classification, and values, 3) generating and verifying fiscal reports for financial and managerial needs, and 4) knowledge of the payroll process and the obligations and liabilities incurred through employees.

Program Emphasis

The program emphasis is the role and tasks of the bookkeeper and/or accountant in service, retail, and manufacturing businesses in today's changing environment of rules, regulations, and technology.

Careers

Career options include entry into the accounting profession as small business bookkeeping, accounts receivable, accounts payable, inventory, cost, or payroll clerk.

Associate in Science Degree: Accountancy

General knowledge of financial and managerial accounting in a technological environment as well as introductory knowledge of inventory, cost, and payroll accounting.

Courses Required for the Major:	Units
ACCT 116A Financial Accounting	4
ACCT 116B Managerial Accounting	4
ACCT 120 Federal Income Tax	3
ACCT 150 Computer Accounting Applications	3
ACCT 201A Intermediate Accounting I	3
ACCT 201B Intermediate Accounting II	3
BUSE 100 Introduction to Business	3
BUSE 119 Business Communications	3
BUSE 140 Business Law and the Legal Environment	3
CISC 181 Principles of Information Systems	4
ECON 120 Principles of Macroeconomics	3
ECON 121 Principles of Microeconomics	3

Total Units = 39

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Recommended Electives: Accounting 121, 125, 135, 270; Business 150, 155, 201; Communication

Studies 135; Computer Business Technology 140, 140A; Psychology 101.

Semester Sequence	Units
First	
ACCT 116A Financial Accounting	4
BUSE 100 Introduction to Business	3
BUSE 119 Business Communications	3
Second	
ACCT 116B Managerial Accounting	4
BUSE 140 Business Law and the Legal Environment	3
CISC 181 Principles of Information Systems	4
Third	
ACCT 150 Computer Accounting Applications	3
ACCT 201A Intermediate Accounting I	3
ECON 120 Principles of Macroeconomics	3
Fourth	
ACCT 120 Federal Income Tax	3
ACCT 201B Intermediate Accounting II	3
ECON 121 Principles of Microeconomics	3

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 Macroeconomics	3
**Occupational Electives	12
Total Units = 35	

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
BUSE 150 Human Relations in Business	3

BUSE 201	Business Organization and Management	3
ACCT 116A	Financial Accounting	4
CISC 181	Principles of Information Systems	4
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3
MARK 100	Principles of Marketing	3
**Occupational Electives		12

Total Units = 47

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

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Recommended Electives: Accounting 116B; Business 155, 270; CBTE 180; Marketing 105.

**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 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.

Careers

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

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
Total Units = 9		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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 and Banking	4
BANK 106	Loan Underwriter	5
Total Units = 9		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
Total Units = 8		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
Total Units = 18		

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
Total Units = 27		

For graduation requirements, see **Requirements for the Associate Degree** on page 70.

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

Recommended Electives: Business 140; 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

Award Type	Units
Associate in Science Degree: Chemistry Studies	18*

* and electives as needed to meet minimum of 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.

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 (3) liberal arts. Courses will also meet general education requirements for both the two and four-year institutions.

Program Level Student Learning Outcomes

Students who complete the Chemistry Program will be able to:

- Name and draw structures for inorganic and organic compounds;
- Classify inorganic and organic reactions;
- Determine the products of inorganic and organic reactions;
- Match various inorganic and organic reactions with the appropriate chemical processes.
- Successfully perform experiments involving chemical equipment, measurement, and data collection.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone/email
Rebecca Bowers-Gentry	M-211Q	619-388-7241 rbowersg@sdccd.edu
Daphne Figueroa	M-211J	619-388-7494 dfiguero@sdccd.edu
Fred Garces	S-5210	619-388-7493 fgarces@sdccd.edu
Namphol Sinkaset	M-211P	619-388-7644 nsinkase@sdccd.edu
Linda Woods	M-211K	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: Chemistry, Biochemistry, Chemical Engineering, Chemical Physics, 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.

Courses Required for the Major:	Units
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 eight 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	Analytical Chemistry	8

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.

Child Development

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

Description

Child Development offers programs for career and transfer students. Certificates of 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.

Student Learning Outcomes

Students who complete the Child Development Program will be able to:

- Apply human development and growth theories and principles to early childhood settings.
- Communicate effectively with children, families, staff and the community.
- Plan and implement developmentally appropriate curriculum for children.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Dawn Burgess	Child Dev. Center F-207	619-388-7678
Peter Elias	Child Dev. Center F-201	619-388-7677

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 page 153). 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: Assistant Teacher*

This certificate prepares students to assist in the instruction of children under the supervision of an Associate Teacher or higher. Child Development courses must be completed with a grade of "C" or better.

Courses:	Units
CHIL 101 Human Growth and Development	3
CHIL 180 Nutrition, Health & Safety for Children	3

Select one course from:

CHIL 111 Curriculum: Music/Motor Skills	
CHIL 121 Creative Art	
CHIL 131 Curriculum: Language/Science	
CHIL 141 The Child, Family and Community	3

Select one course from:

CHIL 160 Observing and Understanding Children	
CHIL 161 Observations and Issues in Child Development	
CHIL 270 Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D Child Development Center Practicum	1-4

Total Units = 10-13

Certificate of Performance: Family and Child Relations*

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

Courses:	Units
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

Select one course from:

CHIL 162 Observing and Guiding Child Behavior	
CHIL 165 Children with Special Needs	
CHIL 188 Violence in the Lives of Children and Families	3

Total Units = 13

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

Select one course from:

CHIL 111 Curriculum: Music/Motor Skills	
CHIL 121 Creative Art	
CHIL 131 Curriculum: Language/Science	
CHIL 175 Infant-Toddler Growth and Development	

3

Total Units = 9

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
Total Units = 9		

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	Violence in the Lives of Children and Families	3
Total Units = 12		

Certificates of Performance

* A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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
Select two courses from:		
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3

Select three or more units from:		
CHIL 160	Observing and Understanding Children	
CHIL 161	Observations and Issues in Child Development	
CHIL 270	Work Experience	
CHIL 291, or 291A, or 291B, or 291C, or 291D	Child Development Center Practicum	3-4
Total Units = 18-19		

Certificate of Achievement: Child Development

Teacher

This certificate prepares students to provide instruction to children and supervise Assistant and Associate Teachers. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative 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	
Total Units = 26-29		

Certificate of Achievement: Child Development

Master Teacher

This certificate prepares students to provide instruction to children and supervised Assistant/ Associate Teachers and Teachers. It further prepares the Master Teacher to coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better.

Courses Required for the Major:		Units
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	The Child, Family and Community	3
CHIL 151	Program Planning	3
CHIL 180	Nutrition, Health & Safety for Children	3

AND

Select one of the following three options that is NOT part of your Specialization (see Specializations listed below) to complete the minimum 24 unit core requirement:

CHIL 160	Observing & Understanding Children and	
CHIL 161	Observation & Issues in Child Development or	
CHIL 165	Children with Special Needs or	
CHIL 175	Infant-Toddler Growth and Development	
		3-4

AND

CHIL 215	Adult Supervision & Mentoring in Early Childhood Settings	3
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AND

CHIL 270	Work Experience or	
CHIL 275	Supervised Field Study (with concurrent enrollment in CHIL 151, Program Planning)	2-4

AND

Select one of the following Specializations for a total of 6 - 7 units:

Guiding Young Children

CHIL 160	Observing & Understanding Children	
CHIL 161	Observation & Issues in Child Development	
CHIL 162	Observing and Guiding Child Behavior or	

Family Life

CHIL 160	Observing & Understanding Children	
CHIL 161	Observation & Issues in Child Development	
CHIL 188	Violence in the Lives of Children and Families 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	
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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	Creative 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 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	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	The Child, Family and Community	3
CHIL 151	Program Planning	3

and concurrent enrollment in:

CHIL 270	Work Experience	or	
CHIL 275	Supervised Field Study		2-4
CHIL 180	Nutrition, Health & Safety for Children		3
CHIL 202	Administration of Early Childhood Programs		3
CHIL 210	Supervision of Early Childhood Programs		3
CHIL 215	Adult Supervision and Mentoring in Early Childhood Settings		3

Select one of the following three options:

CHIL 160	Observing & Understanding Children	and	
CHIL 161	Observation & Issues in Child Development	or	
CHIL 165	Children with Special Needs	or	

CHIL 175	Infant-Toddler Growth and Development		3-4
Total Units = 35-38			

Recommended Electives: (select from courses not already taken): Child Development 100, 152, 160, 161, 162, 165, 166, 175, 176, 185, 188, 202, 210, 215, 270, 275, 290, 291, 291A, 291B, 291C, 291D.

Courses offered by San Diego Community College District that meet experience requirements for Certificates and Degrees:

- CHIL 160, Observing & Understanding Children, 2 units (16 days)
- CHIL 161, Observation & Issues in Child Development, 2 units (16 days)
- CHIL 270, Work Experience, 1 unit (16 days)
- CHIL 270, Work Experience, 2 units (32 days)
- CHIL 270, Work Experience, 3 units (48 days)
- CHIL 270, Work Experience, 4 units (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 units (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	3
PSYC 101	General Psychology	3

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	Creative 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

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

Award Type	Units
Associate in Arts Degree:	
Communication Studies for Transfer**	18-22*

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

**Associate in Arts/Transfer. For more information, see page

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.

Student Learning Outcomes

Students who complete the Communication Studies Program will be able to:

- Demonstrate the ability to effectively communicate with diverse audiences in multiple contexts to meet the goals of the intended communication.
- Organize thoughts and ideas effectively and express them clearly and correctly in writing and/or presentations.
- Identify, evaluate and utilize evidence to support claims used in presentations and arguments.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Lisa Brewster	H-211	619-388-7701
Leslie Klipper	H-213	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 Communication Studies 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 for Transfer

This degree is accepted by some but not all CSU campuses.

The Associate in Arts in Communication Studies for Transfer is intended for students who plan to complete a bachelor's degree in Communication Studies or a related major in the California State University (CSU) system. Students who complete this degree and transfer to a participating CSU campus will be required to complete no more than 60 units after transfer to earn a bachelor's degree. It may not be appropriate preparation for students transferring to a CSU campus that does not accept the degree. Students who plan to complete this degree should consult a counselor for additional information about participating CSU campuses as well as university admission, degree, and transfer requirements.

NOTE: Students intending to transfer to SDSU should consult a counselor and visit www.assist.org for guidance on appropriate transfer coursework.

Required Courses:

COMS 103	Oral Communication*	3
COMS 135	Interpersonal Communication*	3
COMS 160	Argumentation*	3

Select two of the following courses:

(It is recommended to select courses that meet lower division major preparation requirements for your transfer university)

COMS 180	Intercultural Communication*	
JOUR 202	Introduction to Mass Communication*	
JOUR 210A	Newspaper Production (3 unit option only)	
ENGL 101	Reading and Composition*	
ENGL 205	Critical Thinking*	

ENGL 210	American Literature I*
ENGL 211	American Literature II*
ENGL 215	English Literature I: 800-1799*
ENGL 216	English Literature II: 1800-Present*
HIST 105	Introduction to Western Civilization I*
HIST 106	Introduction to Western Civilization II*
MATH 119	Elementary Statistics* or
PSYC 258	Behavioral Science Statistics*
PSYC 101	General Psychology*
SPAN 201	Third Course in Spanish*
6-8	

If needed to total 18 units, select one of the following courses (not selected above):

(It is recommended to select courses that meet lower division major preparation requirements for your transfer university)

COMS 180	Intercultural Communication*
JOUR 202	Introduction to Mass Communication*
JOUR 210A	Newspaper Production (3 unit option only)
ANTH 103	Introduction to Cultural Anthropology*
ENGL 101	Reading and Composition*
ENGL 205	Critical Thinking*
ENGL 210	American Literature I*
ENGL 211	American Literature II*
ENGL 215	English Literature I: 800-1799*
ENGL 216	English Literature II: 1800-Present*
HIST 105	Introduction to Western Civilization I*
HIST 106	Introduction to Western Civilization II*
MATH 119	Elementary Statistics* or
PSYC 258	Behavioral Science Statistics*
PSYC 101	General Psychology*
SPAN 201	Third Course in Spanish*
SOCO 101	Principles of Sociology*
3-5	

Total Units = 18-22

* Course also fulfills general education requirements for the CSU GE or IGETC pattern.

General Education: In addition to the courses listed above, students must complete one of the following general education options:

- The IGETC pattern (page 93) 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 100) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

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 CSU-transferable 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

Award Type	Units
Certificate of Performance:	
Administrative Assistant	10
Typist/Word processor	14
Website Designer	13
Certificate of Achievement:	
Administrative Assistant	35
Microcomputer Applications	35
Associate in Science Degree:	
Administrative Assistant	35*
Microcomputer Applications	35*
Occupational/Technical Studies (see page 182)	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.

Program Learning Outcomes

Emphasis is on modern methods and updated software and equipment.

Student Learning Outcomes

Students who complete the Computer Business Technology Program will be able to:

- Demonstrate proficiency in using software applications to enter data, format and organize data, complete calculations, graph data, create templates, develop professional reports, forms, and queries, and produce professional looking presentations
- Use graphical design principles such as desktop publishing and web site development to create and enhance electronic forms of communications
- Perform various online business transactions including the use of different search techniques
- Identify effective business communications skills

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Wahid Hamidy	M-107-M	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 182). 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 180	Microsoft Office	3
CBTE 210	Computers in Business	3
		Total Units = 10

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 143	Intermediate Microsoft Excel	3
		Total Units = 14

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Performance: Website Designer*

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

Courses:		Units
CBTE 127	Introduction to PowerPoint	2
CBTE 152	Beginning Microsoft Access	2
CBTE 161	Learning the Internet	1
CBTE 162	Web Page Creation	2
CBTE 165	Webpage Creation with Dreamweaver	3
CBTE 167	Webpage Creation Using Microsoft Expression Web	3
		Total Units = 13

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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 143	Intermediate Microsoft Excel	3
CBTE 152	Beginning Microsoft Access	2
CBTE 153	Database Development with Access	3
CBTE 170	Desktop Publishing	2
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 35

Associate in Science Degree: 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 143	Intermediate Microsoft Excel	3
CBTE 152	Beginning Microsoft Access	2
CBTE 153	Database Development with Access	3
CBTE 170	Desktop Publishing	2

CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
CBTE 210	Computers in Business or	
CBTE 211	Office Administration	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 35

For graduation requirements see **Associate Degree Requirements** on page 70.

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

Recommended Electives: 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

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

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 128	Comprehensive Presentations with Powerpoint	3
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 153	Database Development with Access	3
CBTE 167	Webpage Creation Using Microsoft Expression Web	3
CBTE 170	Desktop Publishing	2
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 35

Associate in Science Degree: Computer Business Technology

Microcomputer Applications

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

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 128	Comprehensive Presentations with Powerpoint	3
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 153	Database Development with Access	3
CBTE 167	Webpage Creation Using Microsoft Expression Web	3
CBTE 170	Desktop Publishing	2
CBTE 200	Office Telecommunications	2
CBTE 205	Records Management	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3

Total Units = 35

For graduation requirements see **Associate Degree Requirements** on page 70.

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

Award Type	Units
Certificate of Performance:	
Computer Programming	15
Certificate of Achievement:	
Computer and Information Science	31
Associate in Science Degree:	
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.

Student Learning Outcomes

Students who complete the Computer and Information Sciences Program will be able to:

- Design a specified program using appropriate manual and electronic design tools
- Implement program designs using one or more programming languages
- Use standard business applications to create documents, spreadsheets, data bases, presentations, and web pages

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Ed Brunjes	M-107-J	619-388-7700
John Couture	M-107L	619-388-7698

Faculty	Office	Telephone
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 185). 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
		Total Units = 15

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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 Macroeconomics	3
MATH 119	Elementary Statistics	3
CISC Elective(s)*		3
		Total Units = 31

*Choose a minimum of 3 units in CISC. Students should consult with their counselor prior to choosing electives to ensure electives meet program and/or transfer goals.

Associate in Science Degree: 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 Macroeconomics	3
MATH 119	Elementary Statistics	3
CISC Elective(s)*		3
		Total Units = 31

*Choose a minimum of 3 units in CISC. Students should consult with their counselor prior to choosing electives to ensure electives meet program and/or transfer goals.

Note: Only one Computer and Information Sciences (CISC) course from the above list may be used to satisfy SDCCD general education requirements.

For graduation requirements, see the **Requirements for the Associate Degree** on page 70.

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

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

Diesel Technology

Award Type	Units
Certificate of Performance:	
Diesel Fuel Injection Systems	7
Heavy Equipment Powertrains	13
Heavy Equipment Undercarriage Systems	7
Mobile Hydraulics Technician	7
Steering, Suspension, & Drivelines	7
Truck & Equipment Electrical Systems	8
Truck Air Brake Systems	7
Truck Drive Axles	7
Truck Transmissions & Clutches	13
Certificate of Achievement:	
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
San Diego City Civil Service Equipment Mechanic Apprenticeship	42
San Diego Transit General Mechanic	37

Associate in Science Degree:

Heavy Duty Transportation Technology (HDDT)—(Day Program)	47*
Heavy Equipment Technology (HET)—(Day Program)	44*
Occupational/Technical Studies (see page 182)	18*
San Diego City Civil Service Equipment Mechanic Apprenticeship	42*
San Diego Transit General Mechanic	37*

* 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.

Student Learning Outcomes

Students who complete the Diesel Technology Program will be able to:

- Accurately diagnose and repair heavy duty vehicle systems and components using a variety of tools, equipment, and instruments;
- Identify workplace health and safety compliance using regulations published by the Occupational

Safety and Health Administration, and the Environmental Protection Agency;

- Research heavy duty vehicle repair data, instructions, and specifications using printed material as well as computer data base systems.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Gene Choe	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.

Certificate of Performance: Diesel Fuel Injection Systems*

Courses:	Units
DIES 100 Introduction to Diesel Technology	2
DIES 137 Diesel Fuel Injection Systems	2
DIES 144 Electronics for Diesel Technology	3
Total Units = 7	

Certificate of Performance: Heavy Equipment Powertrains*

Courses:	Units
DIES 100 Introduction to Diesel Technology	2
DIES 105 Measuring Tools and Applied Mathematics	2
DIES 210 Brakes, Final Drives and Steering Systems	3
DIES 220 Undercarriage	3
DIES 230 Heavy Equipment Transmissions	3
Total Units = 13	

Certificate of Performance: Heavy Equipment Undercarriage Systems*

Courses:	Units
DIES 100 Introduction to Diesel Technology	2
DIES 105 Measuring Tools and Applied Mathematics	2
DIES 220 Undercarriage	3
Total Units = 7	

Certificate of Performance: Mobile Hydraulics Technician*

Courses:	Units
DIES 100 Introduction to Diesel Technology	2
DIES 105 Measuring Tools and Applied Mathematics	2
DIES 200 Mobile Hydraulic Systems	3
Total Units = 7	

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
Total Units = 7	

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
Total Units = 8	

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
Total Units = 7	

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
Total Units = 7		

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	Heavy Duty Manual Transmissions	3
DIES 165	Truck Automatic Transmissions	3
DIES 175	Truck Chassis R&R	3
Total Units = 13		

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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	Heavy Duty Manual Transmissions	3
DIES 170	Truck Drive Axles and Specifications	3

Select two courses from:

DIES 125	Diesel Engines I	
DIES 126	Diesel Engines II	
DIES 128	Diesel Engines III	
		8
Total Units = 32		

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
Total Units = 18		

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
Total Units = 18		

Certificate of Achievement: Diesel Technology

Engine Overhaul, Detroit Diesel

Courses Required for the Major:		Units
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
Total Units = 18		

Certificate of Achievement: Diesel Technology

Engine Repair, Caterpillar

Courses Required for the Major:		Units
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
Total Units = 19		

Certificate of Achievement: Diesel Technology

Engine Repair, Cummins

Courses Required for the Major:		Units
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
Total Units = 19		

Certificate of Achievement: Diesel Technology

Engine Repair, Detroit Diesel

Courses Required for the Major:		Units
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
Total Units = 19		

Certificate of Achievement: Diesel Technology

Heavy Duty Transportation Technology (HDTT) (Day Program)

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 138	Electrical Systems	3
DIES 144	Electronics for Diesel Technology	3
DIES 155	Air Brake Systems	3

DIES 160	Heavy Duty Manual Transmissions and	
DIES 175	Truck Chassis R&R	6
DIES 165	Truck Automatic Transmissions and	
DIES 200	Mobile Hydraulic Systems	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		

Certificate of Achievement: Diesel Technology

Heavy Equipment Technology (HET) (Day Program)

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 138	Electrical Systems	3
DIES 144	Electronics for Diesel Technology	3
DIES 160	Heavy Duty Manual Transmissions and	
DIES 240	Equipment Chassis R&R	6
DIES 200	Mobile Hydraulic Systems and	
DIES 230	Heavy Equipment Transmissions	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		

Associate in Science Degree: Diesel Technology

Heavy Duty Transportation Technology (HDTT) (Day Program)

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 138	Electrical Systems	3

DIES 144	Electronics for Diesel Technology	3
DIES 155	Air Brake Systems	3
DIES 160	Heavy Duty Manual Transmissions and	
DIES 175	Truck Chassis R&R	6
DIES 165	Truck Automatic Transmissions and	
DIES 200	Mobile Hydraulic Systems	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

For graduation requirements, see the **Requirements for the Associate Degree** on page 70.

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)

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 138	Electrical Systems	3
DIES 144	Electronics for Diesel Technology	3
DIES 160	Heavy Duty Manual Transmissions and	
DIES 240	Equipment Chassis R&R	6
DIES 200	Mobile Hydraulic Systems and	
DIES 230	Heavy Equipment Transmissions	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

For graduation requirements, see the **Requirements for the Associate Degree** on page 70.

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.

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, Steering and Handling	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	Heavy Duty Manual Transmissions	3
DIES 170	Truck Drive Axles and Specifications	3
SDCS 349I	Equipment Mechanic Apprentice Work Experience	16

Total Units = 42

Associate in Science Degree: San Diego City Civil Service

Equipment Mechanic Apprenticeship

Courses Required for the Major:	Units	
AUTO 078	Suspension, Steering and Handling	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	Heavy Duty Manual Transmissions	3
DIES 170	Truck Drive Axles and Specifications	3
SDCS 349I	Equipment Mechanic Apprentice Work Experience	16
Total Units = 42		

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.

San Diego Transit General Mechanic Apprenticeship

San Diego Transit apprenticeship programs are designed to prepare the student for a career as a bus mechanic or bus body repair technician. For application to the programs, please contact San Diego Transit Corporation, 100 16th Street, San Diego, CA 92101. More information is available at: www.sdcommute.com/Jobs/sdtdc/.

Program Goals:

This program will provide training for apprentice bus mechanics and bus body shop technicians for San Diego Transit.

Program Emphasis:

These programs provide related instruction for apprentices working on the job at San Diego Transit in the areas of bus mechanic and bus body repair technician.

Career Options:

Bus Mechanic, Bus Body Repair Technician.

Certificate of Achievement: San Diego Transit

General Mechanic Apprenticeship

Courses Required for the Major:		Units
DIES 100	Introduction to Diesel Technology	2
DIES 124	Diesel Engines D	7
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 170	Truck Drive Axles and Specifications	3
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2

AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
Total Units = 37		

Associate in Science Degree: San Diego Transit

General Mechanic Apprenticeship

Courses Required for the Major:		Units
DIES 100	Introduction to Diesel Technology	2
DIES 124	Diesel Engines D	7
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 170	Truck Drive Axles and Specifications	3
AIRE 100	Basic Refrigeration Theory	4
AIRE 103	Basic Refrigeration Lab	2
AIRE 124	Control Systems Theory	3
AIRE 125	Control Systems Lab	2
Total Units = 37		

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.**

Earth Science

(See "Physical Science" on page 195)

Elementary Education

(See "Associate in Arts Degree" on page 180)

Engineering

(See "Associate in Science Degree: Pre-Engineering Studies" on page 197)

English

Award Type	Units
Certificate of Performance:	
Advanced ESOL	15
Associate in Arts Degree:	
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.

Student Learning Outcomes

Students who complete the English Program will be able to:

- Demonstrate the ability to comprehend information from a variety of texts.
- Integrate logical support, including informed opinion and fact, as well as personal interpretations, to develop complex ideas and opinions.
- Organize thoughts and ideas effectively and express them clearly in writing.
- Apply appropriate writing strategies, standard grammar, and conventional academic documentation to writings of various types and purposes.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Allen Andersen	H-110-H	619-388-7535
Adrian Arancibia	H-110-I	619-388-7421
Clara Blenis	H-110-P	619-388-7533
Sheryl Gobble	H-110-M	619-388-7428
Rich Halliday	H-110-R	619-388-7517
Carmen Jay	H-110-J	619-388-7532
Lisa Munoz	H-110-Q	619-388-7360
Cheryl Reed	H-110-S	619-388-7536
Mark Manasse	H-110-G	619-388-7237
Kenneth Reinstein	H-110-E	619-388-7515

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 and 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

Select nine units from:

ESOL 030	Writing for Non-native Speakers of English II	6
ESOL 031	Reading for Non-native Speakers of English II or	
ESOL 032	Listening and Speaking for Non-Native Speakers of English II	3

Total Units = 15

*A Certificate of Performance is a departmental award that does not appear on the student’s transcript. All courses must be completed within the San Diego Community College District.

Associate in Arts Degree: English

This degree is not intended for transfer.

Courses Required for the Major:		Units
ENGL 101	Reading and Composition or	
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

**Select three units from:

ENGL 208	Introduction to Literature	
ENGL 220	Masterpieces of World Literature I: 1500 BCE – 1600 CE	
ENGL 221	Masterpieces of World Literature II: 1600–Present	3

**Select three units from:

ENGL 210	American Literature I	
ENGL 211	American Literature II	
ENGL 245	Writing Creative Nonfiction	
ENGL 247	Writing Seminar - Poetry	
ENGL 249	Introduction to Creative Writing	
ENGL 254	Intermediate Fiction Writing	3

Total Units = 18

*Meets SDSU/CSU critical thinking requirement.

**Recommended series for UC transfer.

Not all courses are offered at each campus.

For graduation requirements, see the **Requirements for the Associate Degree** on page 70.

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 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 or	
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	
COMS 103 Oral Communication	
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	
	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 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

Award Type	Units
Certificate of Achievement: Fitness Specialist	18
Associate in Science Degree: Health and Physical Education Studies	18*

* and electives as needed to meet minimum of 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 Goals

The Department of Physical Education offers an ever increasing variety of activity courses. Boasting a state-of-the-art fitness center, fieldhouse gymnasium and classrooms in addition to facilities that include a 32-acre complex of fields for softball, soccer, sand volleyball, and tennis, the Department also offers classes in a three-pool aquatic complex. Lower division theory courses provide the curricular foundation necessary to complete university transfer requirements and earn a transfer-related associate degree in Health and Physical Education Studies. In addition, an intercollegiate program offers performance-oriented students opportunities for intercollegiate competition.

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.

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.

Student Learning Outcomes

Students who complete the Physical Education Program will be able to:

- Explain the five domains of health and how they impact quality of life
- Design, develop and implement an effective personalized fitness program

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone/Email
Sean Bowers	J-222C	619-388-7232 sbowers@sdccd.edu
Nicolas Gehler	J-222E	619-388-7715 ngehler@sdccd.edu
Kevin Petti	S5-101A	619-388-7491 kpetti@sdccd.edu
Rod Porter	Fitness Center	619-388-7442 rporter@sdccd.edu

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 Life-Style	3
HEAL 131	Emergency Response (First Aid/CPR/AED)	3
NUTR 150	Nutrition	3
NUTR 170	Nutrition and Fitness	3
PHYE 164	Water Safety Instructor	3
PHYE 241B	Introduction to Kinesiology	3
PHYE 242	Care and Prevention of Injuries	2

Select at least one course from the following:

BIOL 107	General Biology - Lecture and Laboratory	4
BIOL 210A	Introduction to the Biological Sciences I	4
BIOL 230	Human Anatomy	4
BIOL 235	Human Physiology	4

Select at least one course and the remainder of units needed to meet the minimum of 18 from the following:

BIOL 130	Human Heredity	3
BIOL 135	Biology of Human Nutrition	3
BIOL 160	Elements of Human Anatomy and Physiology	4
BIOL 205	General Microbiology	5
BIOL 210B	Introduction to the Biological Sciences II	4
CHEM 100	Fundamentals of Chemistry	3
CHEM 100L	Fundamentals of Chemistry Laboratory	1

CHEM 130	Introduction to Organic and Biological Chemistry	3
CHEM 130L	Introduction to Organic and Biological Chemistry Laboratory	1
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
HEAL 101	Health and Life-Style	3
HEAL 131	Emergency Response (First Aid/CPR/AED)	3
MATH 116	College and Matrix Algebra	3
MATH 119	Elementary Statistics	3
MATH 121	Basic Techniques of Applied Calculus I	3
MATH 141	Precalculus	5
MATH 150	Calculus with Analytic Geometry I	5
PHYE 103	Aerobic Dance	0.5 - 1
PHYE 106	Aquatic Fitness	0.5 - 1
PHYE 108	Badminton	0.5 - 1
PHYE 112	Basketball	0.5 - 1
PHYE 115	Bowling	0.5 - 1
PHYE 120	Fencing	0.5 - 1
PHYE 123	Cardio Conditioning	0.5 - 1
PHYE 126	Golf	0.5 - 1
PHYE 132	Individual Conditioning	0.5 - 1
PHYE 139	Lifeguard Training	3
PHYE 141	Over-the-Line	1
PHYE 149	Soccer	0.5 - 1
PHYE 151	Softball	0.5 - 1
PHYE 153	Aerobic and Core Conditioning	0.5 - 1
PHYE 154	Fitness Walking	0.5 - 1
PHYE 155	Swimming	0.5 - 1
PHYE 156	Water Exercise	0.5 - 1
PHYE 159	Tennis	0.5 - 1
PHYE 161	Volleyball	0.5 - 1
PHYE 163	Water Polo	0.5 - 1
PHYE 166	Weight Training	0.5 - 1
PHYE 204	Intercollegiate Basketball I	1 - 2
PHYE 205	Intercollegiate Basketball II	1 - 2
PHYE 214	Intercollegiate Soccer I	2
PHYE 215	Intercollegiate Soccer II	2
PHYE 216	Intercollegiate Softball I	2
PHYE 218	Intercollegiate Swimming I	2
PHYE 219	Intercollegiate Swimming II	2
PHYE 220	Intercollegiate Tennis I	2
PHYE 221	Intercollegiate Tennis II	2
PHYE 224	Intercollegiate Volleyball I	2
PHYE 225	Intercollegiate Volleyball II	2
PHYE 226	Intercollegiate Water Polo I	2
PHYE 227	Intercollegiate Water Polo II	2
PHYE 232	Martial Arts	1
PHYE 233	Kickboxing	0.5 - 1

PHYE 240	Physical Education in the Elementary Schools	3
PHYS 125	General Physics	5
PSYC 101	General Psychology	3
PSYC 258	Behavioral Science Statistics	3
PSYC 260	Introduction to Physiological Psychology	3
SOCO 101	Principles of Sociology	3

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

Total Units = 18

Filipino

See "World Language Studies" on page 203.

Fire Protection Technology

Fire - Emergency Medical - Lifeguards

Award Type	Units
Certificate of Achievement:	
Fire Prevention	28.5
Fire Protection	33.5
Fire Technology	32.5
Open Water Lifeguard Professional	31
Associate in Science Degree:	
Fire Prevention	28.5*
Fire Protection	33.5*
Fire Technology	32.5*
Open Water Lifeguard Professional	25*
Occupational/Technical Studies (see page 182)	18*

* 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, 107, 109, 110 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, 381F and EMGM 105.

Student Learning Outcomes

Students who complete the Fire Protection Technology Program will be able to:

- Identify minimum qualifications and entry-level skills for fire fighter hiring. The student will be able to describe the following elements: application process; written exam process; physical agility exam, oral interview, chief's interview; background investigation; and fire fighter probationary process. Students will identify fire service history, culture and diversity.
- Demonstrate the ability to analyze, appraise and evaluate fire and emergency incidents and identify components of emergency management and fire fighter safety including: Size-up, report on conditions, Incident Command System; RECEO; 10 Standard Firefighting Orders; 18 Situations that Shout "Watch Out"; and common factors associated with injuries and line of duty deaths.
- Identify and comprehend laws, regulations, codes and standards that influence fire department operations, and identify regulatory and advisory organizations that create and mandate them, especially in the areas of fire prevention, building codes and ordinances, and firefighter health and safety.
- Analyze the causes of fire, determine extinguishing agents and methods, differentiate the stages of the fire and fire development, and compare methods of heat transfer.
- Calculate flow requirements for fire apparatus, diagram a pump and plumbing schematic for fire apparatus, and apply mathematic formulae to hydraulics problems.
- Identify and describe the apparatus used in the fire service, and the equipment and maintenance of fire apparatus and equipment.
- Identify and describe common types of building construction and conditions associated with structural collapse and firefighter safety.

- Differentiate between fire detection and fire suppression systems. Student will design and diagram a wet and dry fire protection system, and identify alarm system components and their operations.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Darren Hall	479-4	(619) 221-2145
Mary Kjartanson	479-3	(619) 221-2144
Dennis Sheean	480	(619) 221-2143
John Salinsky	479-5	(619) 221-2147
Marty Walsh	479-2	(619) 221-2146

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. 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 qualified applicants. These "Open Enrollee" students earn no salary while in the Academy. To be eligible for the Open Enrollee lottery, applicants 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 182). 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
ADJU 356A	832 PC Laws of Arrest	2.5

Total Units = 28.5

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 206A	Instructor Training 1A: Psychomotor Lesson Delivery	2
FIPT 206B	Instructor Training 1B: Cognitive Lesson Delivery	2
FIPT 381F	Basic Fire Fighter 1 Academy	9
EMGM 105A	Emergency Medical Technician - National Registry	7
		Total Units = 33.5

Certificate of Achievement: Fire Protection Technology

Fire Technology

Courses Required for the Major:		Units
FIPT 150A	Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning)	1.5
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 105A	Emergency Medical Technician - National Registry	7
		Total Units = 32.5

Certificate of Achievement: Fire Protection Technology

Open Water Lifeguard Professional

Courses Required for the Major:		Units
FIPT 63	Personal Watercraft Operations	1
FIPT 115	Low Angle Rescue	0.5
FIPT 121	Vertical Rescue	1
EMGM 105A	Emergency Medical Technician- National Registry	7
FIPT 160	Introduction to Open Water Lifeguarding	3
FIPT 161	Inflatable Rescue Boat Operations	1.5
FIPT 206A	Instructor Training 1A: Psychomotor Lesson Delivery	2
FIPT 206B	Instructor Training 1B: Cognitive Lesson Delivery	2
FIPT 243	Rescue Systems I	1.5

FIPT 308A	Confined Space Technician	1
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 356B	832 PC Firearms	1
		Total Units = 31

Associate in Science Degree: 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
ADJU 356A	832 PC Laws of Arrest	2.5
		Total Units = 28.5

Associate in Science Degree: 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 206A	Instructor Training 1A: Psychomotor Lesson Delivery	2
FIPT 206B	Instructor Training 1B: Cognitive Lesson Delivery	2
FIPT 381F	Basic Fire Fighter 1 Academy	9
EMGM 105A	Emergency Medical Technician - National Registry	7
		Total Units = 33.5

Associate in Science Degree: Fire Protection Technology

Fire Technology

Courses Required for the Major:		Units
FIPT 150A	Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning)	1.5
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 105A	Emergency Medical Technician - National Registry	7
Total Units = 32.5		

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 105A	Emergency Medical Technician - National Registry	7
FIPT 160	Introduction to Open Water Lifeguarding	3
FIPT 206A	Instructor Training 1A: Psychomotor Lesson Delivery	2
FIPT 206B	Instructor Training 1B: Cognitive Lesson Delivery	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
Total Units = 25		

Geology

See "Physical Science" on page 195.

Geography

See "Social and Behavioral Sciences" on page 198.

History

See "Social and Behavioral Sciences" on page 198.

Humanities

Award Type	Units
Associate in Arts Degree:	
Humanities Studies	18*

* and electives as needed to meet minimum of 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.

Student Learning Outcomes

Students who complete the Humanities Program will be able to:

- Analyze the impact cultures and subcultures have on societal expectations and behaviors.
- Distinguish the uniqueness of a variety of cultures to develop an appreciation for these differences.
- Analyze historical occurrences and their impact on societal expectations and behaviors.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Paula Carrier	H-1100	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 or	
PHIL 100	Logic and Critical Thinking	3

Select at least 15 units from the following:

ANTH 103	Introduction to Cultural Anthropology	3
ARTF 113	Arts of Africa, Oceania, and the Americas	3
ARTF 125	Art History: Arts of the Asian Continent	3
BLAS 140A	History of the U.S., Black Perspectives	3
BLAS 140B	History Of The U.S., Black Perspectives	3
ENGL 208	Introduction to Literature	3
ENGL 210	American Literature I	3
ENGL 211	American Literature II	3
ENGL 220	Masterpieces of World Literature I: 1500 BCE – 1600 CE	3
ENGL 221	Masterpieces of World Literature II: 1600 – Present	3
HIST 100	World History I	3
HIST 101	World History II	3
HIST 105	Introduction to Western Civilization I	3
HIST 109	History of the United States I	3
HIST 110	History of the United States II	3
HIST 141	Women in United States History I	3
HIST 142	Women in United States History II	3
HUMA 101	Introduction to the Humanities I	3
HUMA 102	Introduction to the Humanities II	3
HUMA 106	World Religions	3
HUMA 201	Mythology	3
MUSI 100	Introduction to Music	3
MUSI 109	World Music	3
PHIL 100	Logic and Critical Thinking	3
PHIL 101	Symbolic Logic	3
PHIL 102A	Introduction To Philosophy: Reality and Knowledge	3
PHIL 102B	Introduction To Philosophy: Values	3
PHIL 205	Critical Thinking and Writing in Philosophy	3
POLI 102	The American Political System	3

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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 149.

Interdisciplinary Studies

Award Type	Units
Certificate of Performance:	
Honors Global Competencies Certificate	15-17
Certificate of Achievement:	
CSU General Education-Breadth	39-40
Intersegmental General Education Transfer (IGETC)	37-40*
Associate in Arts Degree:	
Elementary Education	18*
Associate in Science Degree:	
Occupational/Technical Studies	18*
Selected Studies	18*

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

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.

Student Learning Outcomes

Students who complete a certificate or degree in the Interdisciplinary Studies Program will be able to:

- Organize thoughts and ideas effectively and express them clearly and correctly in writing
- Read, analyze, discuss, and evaluate written works and sources
- Express and manipulate quantitative information in verbal, numeric, graphic, and symbolic form
- Interpret natural phenomena through the application of scientific principles
- Examine the relationships between science and other human activities

- Evaluate the ways people act and have acted in response to their societies and social subgroups
- Demonstrate an awareness of cultural activities and artistic expressions
- Apply language toward logical thought, clear and precise expression, and critical evaluation of communication

Upon successful completion of a degree in the Interdisciplinary Studies program, students can also:

- Demonstrate critical inquiry, analysis, thinking, writing, and quantitative skills across two or more related interdisciplinary 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 100 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 93 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:	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
COMS 180 Intercultural Communication	3
ECON 120 Principles of Macroeconomics	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
PHIL 106 Asian Philosophy	3
PHIL 125 Philosophy of Women	3
POLI 101 Introduction to Political Science	3
POLI 103 Comparative Politics	3
POLI 140 Contemporary International Politics	3

Select 3 units from the following:

CHIL 101 Human Growth and Development	3
CISC 181 Principles of Information Systems	4
GEOG 102 Cultural Geography	3
HEAL 101 Health and Life-Style	3
PSYC 101 General Psychology	3

Total Units = 15-17

This certificate will be offered through the Honors Programs at City, Mesa, and Miramar Colleges. All coursework except for foreign language must be done as an honors class or as an honors contract.

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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

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	
COMS 103	Oral Communication	
COMS 135	Interpersonal Communication	
COMS 160	Argumentation	
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	Physical 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	
TAGA 101	First Course in Tagalog	
TAGA 102	Second Course in Tagalog	
TAGA 201	Third Course in Tagalog	

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Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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: 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 150	Human Relations in Business
HEAL 131	Emergency Response (First Aid/CPR/AED)
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 100	Introduction to Military Science
MILS 110	Leadership Theory and Practice
MILS 120	Military Justice, Ethics, and the Law of Armed Conflict
PERG 130	Career-Life Planning

PHYE 139	Lifeguard Training
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	Applied Airframe Electrical Systems
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 127	Introduction to PowerPoint
CBTE 128	Comprehensive Presentations with Powerpoint
CBTE 140	Microsoft Excel
CBTE 153	Database Development with Access
CBTE 162	Web Page Creation
CBTE 165	Webpage Creation with Dreamweaver
CBTE 170	Desktop Publishing
CBTE 180	Microsoft Office
DIES 100	Introduction to Diesel Technology
DIES 121	Diesel Engines A or
DIES 122	Diesel Engines B or
DIES 124	Diesel Engines D
DIES 135	Applied Failure Analysis
DIES 144	Electronics for Diesel Technology
DIES 160	Heavy Duty Manual Transmissions
DIES 170	Truck Drive Axles and Specifications
EMGM 105A	Emergency Medical Technician-National Registry
EMGM 106	Emergency Medical Technician-Defibrillation/Combitude
FIPT 150A	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 160	Introduction to Open Water Lifeguarding
MLTT 201	Clinical Chemistry and Urinalysis
MLTT 202	Clinical Hematology and Immunology
MLTT 203	Clinical Microbiology

0.5 - 17

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.

Associate in Arts Degree: 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.

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 70. 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.

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.**

Legal Assistant

See "Paralegal" on page 192.

Mathematics

Award Type	Units
Associate in Arts Degree: Mathematics Studies	18*

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

Description

Mathematics is the study of numbers, structures, and associated relationships using rigorously defined literal, numerical and operational symbols. Given certain conditions about systems of numbers or other 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.

Student Learning Outcomes

Students who complete the Mathematics Program will be able to:

- Demonstrate ability to apply mathematical skills to achieve academic and professional goals
- Demonstrate an ability to apply critical thinking in problem solving
- Demonstrate sufficient mathematical knowledge for further academic study in mathematics or related disciplines
- Demonstrate ability to analyze and solve mathematical problems in everyday life

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone/Email
Francois Bereaud	M-211I	619-388-7503 fbereaud@sdccd.edu
Julia Gordon	M-211F	619-388-7690 jgordon@sdccd.edu
Wayne Sherman	M-211H	619-388-7689 wsherman@sdccd.edu
Harvey Wilensky	M-211E	619-388-7510 hwilensnk@sdccd.edu

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 Macroeconomics	
ECON 121	Principles of Microeconomics	
GEOL 100	Physical 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 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.**

Medical Laboratory Technology

Award Type	Units
Certificate of Performance: Medical Laboratory Technician Training	12-13
Certificate of Achievement: Medical Laboratory Technology	20-21
Associate in Science Degree: Medical Laboratory Technology	20-21*

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

Description

The Medical Laboratory Technology (MLT) program prepares students for employment in clinical

laboratories, industry and biotechnology as a Medical Laboratory Technician. The program curriculum integrates basic concepts, technical procedures, and laboratory exercises prior to clinical education at a affiliate site. This provides practical experience for students to master the competencies, skills, and knowledge required in this profession.

Note: This is currently a grant-funded program with enrollment restrictions. Visit website for more information: www.sdmiramar.edu/instruction/mltt.

Program Goals

The MLT program is designed to produce trained employees to enter the medical laboratory workforce. As such, the program's primary learning outcome is to graduate competent, workplace-ready members of the health care team who

- Exhibit theoretical comprehension and competence in all MLT courses by passing comprehensive college and certification exams.
- Demonstrate entry-level MLT skills in the following clinical laboratory areas: Clinical Chemistry, Hematology, Urinalysis and coagulation, Immunology and Immunochemistry, and Microbiology.
- Demonstrate professionalism and awareness of their role in the delivery of health care to patients, such as respecting the rights of patients, colleagues and other health professionals as they perform duties within the constraints of legal, moral and ethical conduct.
- Exhibit positive attitudes in the areas of professionalism and commitment to delivering excellent health care.

Career Options

The MLT program is designed to educate and prepare students to sit for a national exam, which when passed will allow for immediate entry into a clinical lab environment as a Medical Laboratory Technician. The types of clinical labs include community-based hospital labs, teaching hospitals, private hospitals and clinics, and Clinical Research Organization (CRO) support services.

Award Notes

The student will be required to complete a series of biology and chemistry prerequisites for the MLT program. Please consult the catalog and counselors for more information.

Certificate of Performance: Medical Laboratory Technician Training*

The Certificate of Performance in Medical Laboratory Technician Training is designed to enhance or develop the skill sets of the medical laboratory technician or those seeking employment in the field of medical laboratory technology.

Courses:		Units
MLTT 201	Clinical Chemistry and Urinalysis	4
MLTT 202	Clinical Hematology and Immunology	4
MLTT 203	Clinical Microbiology	4
or		
BIOL 205	General Microbiology	5
		Total Units = 12-13

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

Certificate of Achievement: Medical Laboratory Technology

Courses Required for the Major:		Units
MLTT 201	Clinical Chemistry and Urinalysis	4
MLTT 202	Clinical Hematology and Immunology	4
MLTT 203	Clinical Microbiology	4
or		
BIOL 205	General Microbiology	5
MLTT 51	Directed Clinical Practice in Clinical Chemistry	2
MLTT 52	Directed Clinical Practice in Clinical Hematology Urinalysis and Coagulation	2
MLTT 53	Directed Clinical Practice in Clinical Immunology and Immunochemistry	2
MLTT 54	Directed Clinical Practice in Clinical Microbiology	2
		Total Units = 20-21

Associate in Science: Medical Laboratory Technology

Courses Required for the Major:		Units
MLTT 201	Clinical Chemistry and Urinalysis	4
MLTT 202	Clinical Hematology and Immunology	4

MLTT 203	Clinical Microbiology or	4
BIOL 205	General Microbiology	5
MLTT 51	Directed Clinical Practice in Clinical Chemistry	2
MLTT 52	Directed Clinical Practice in Clinical Hematology Urinalysis and Coagulation	2
MLTT 53	Directed Clinical Practice in Clinical Immunology and Immunoematology	2
MLTT 54	Directed Clinical Practice in Clinical Microbiology	2
Total Units = 20-21		

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

Award Type	Units
Certificate of Achievement:	
Military Leadership	18-19
Associate in Science Degree:	
Military Leadership	18-19*
Occupational/Technical Studies (see 182)	18*

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

Description

The Military Studies program provides an interdisciplinary foundation in leadership and management skills with a focus on application to the U.S. military. It is intended primarily for

active duty, reserve, or National Guard military personnel 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 Goals

Upon successful completion of this program, students can:

- Apply principles of leadership, ethics, and law to common decisions made by military leaders.
- Assess the effectiveness of leadership traits, skills, styles, and processes that have been applied to real-world leadership situations.
- Analyze the structure, role, and function of the U.S. military in relation to the U.S. Constitution and other components of the U.S. government.
- Read, analyze, discuss, evaluate, and write critically about topics related to military leadership.

Career Options

This program is primarily intended to prepare students for career advancement in the active duty, reserve, or National Guard military services. Some examples of career options include:

- Senior Noncommissioned Officer (E-6 to E-9)
- Warrant Officer (W-1 to W-5)
- Department of Defense civilian supervisor
- Military contractor
- Public service manager

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.

Student Learning Outcomes

Students who complete the Military Studies Program will be able to:

- Apply principles of leadership, ethics, and law to common decisions made by military leaders.
- Assess the effectiveness of leadership traits, skills, styles, and processes that have been applied to real-world leadership situations.
- Analyze the structure, role, and function of the U.S. military in relation to the U.S. Constitution and other components of the U.S. government.
- Read, analyze, discuss, evaluate, and write critically about topics related to military leadership

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 182). 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

The Certificate of Achievement in Military Leadership 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.

Courses Required for the Major:		Units
MILS 100	Introduction to Military Science	3
MILS 110	Leadership Theory and Practice	3
MILS 270	Work Experience in Military Leadership	3-4
ENGL 101	Reading and Composition or	
BUSE 119	Business Communications	3
POLI 102	The American Political System	3

Select three units from the following:

AVIA 128	Group Dynamics for High Risk Teams	3
AVIA 228	Group Dynamics II	3
BUSE 201	Business Organization and Management	3
MILS 120	Military Justice, Ethics, and the Law of Armed Conflict	3
SUPR 101	Introduction to Supervision	3
SUPR 115	Management and Organization for Supervisors	3

Total Units = 18-19

Note: SUPR 101 and SUPR 115 are offered at San Diego City College.

Associate in Science: Military Leadership

The Associate in Science in Military Leadership 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.

Courses Required for the Major:		Units
MILS 100	Introduction to Military Science	3
MILS 110	Leadership Theory and Practice	3
MILS 270	Work Experience in Military Leadership	3-4
ENGL 101	Reading and Composition or	
BUSE 119	Business Communications	3
POLI 102	The American Political System	3

Select three units from:

AVIA 128	Group Dynamics for High Risk Teams	3
AVIA 228	Group Dynamics II	3
BUSE 201	Business Organization and Management	3
MILS 120	Military Justice, Ethics, and the Law of Armed Conflict	3
SUPR 101	Introduction to Supervision	3
SUPR 115	Management and Organization for Supervisors	3

Recommended Communication and Analytical Thinking General Education Course:

CISC 181	Principles of Information Systems or	
COMS 103	Oral Communication or	
COMS 135	Interpersonal Communication	3-4

Recommended Natural Sciences General Education Course:

GEOG 101	Physical Geography or	
PHYN 120	Physical Oceanography	3

Recommended Humanities General Education Course:

ARAB 101	First Course in Arabic or	
HUMA 106	World Religions or	
SPAN 101	First Course in Spanish or	
SPAN 215	Spanish for Spanish Speakers I or	
TAGA 101	First Course in Tagalog	3-5

Recommended Social And Behavioral Sciences General Education Course:

BLAS 140A	History of the U.S., Black Perspectives or	
CHIC 141A	United States History from a Chicano Perspective or	

HIST 109	History of the United States I or	
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 = 18-19

Note: SUPR 101 and SUPR 115 are offered at San Diego City College.

For graduation requirements see **Associate Degree Requirements** on page 70.

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

Recommended Electives: Communications Studies 180; Geography 102, 104; History 130; Political Science 140; Sociology 223.

Music

Award Type	Units
Certificate of Performance: Music Production and Engineering	15
Associate in Arts Degree: Music Studies	18*

* and electives as needed to meet minimum of 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.

Student Learning Outcomes

Students who complete the Music Program will be able to:

- Conduct an in depth analysis of contemporary music identifying genres from different periods as well as an analysis of music from historical and theoretical perspectives.
- Summarize societal issues associated with the production, dissemination, celebration and consumption of Music.
- Describe the relationship between technology using the technological tools applicable as it relates to music.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Channing Booth	H-216A	619-388-7511
Mark Hertica	H-215A	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.

Courses:	Units
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
Total Units = 15	

*A Certificate of Performance is a departmental award that does not appear on the student's transcript. All courses must be completed within the San Diego Community College District.

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: 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.

Courses Required for the Major:		Units
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	3
ENGL 105	Composition and Literature	3
ENGL 205	Critical Thinking and Intermediate Composition	3
MUSI 108	The Business of Music	3
MUSI 109	World Music	3
MUSI 110	Music for Elementary School Teachers	3
MUSI 111	Jazz - History and Development	3
MUSI 120	Beginning Voice Class	2
MUSI 132A	Classical Guitar I	1
MUSI 132B	Classical Guitar II	1
MUSI 150A	Basic Musicianship	3
MUSI 158A	Music Theory I	4
MUSI 190	The Electronic Music Studio	3
MUSI 201	Recording Arts	3
MUSI 202	Computer Music	3
MUSI 252	Concert Jazz Band	1-3
MUSI 268A	Beginning Ear Training Laboratory I	1
PSYC 101	General Psychology	3

Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

See "Interdisciplinary Studies" on page 178.

Paralegal

Legal Assistant

Award Type	Units
Certificate of Achievement: Paralegal	30-36
Associate in Science Degree: Paralegal	30-36*
Occupational/Technical Studies (see page 182)	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. According to the ABA, "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.

CAMPUS 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.

Program Goals

The Paralegal program provides students with a post-secondary level of education that will prepare them for transfer to a four-year university. It also provides students with the practical training they need to be employed or retained as a paralegal by an attorney, law office, governmental agency, or other entity in the private or public sectors throughout the various jurisdictions in the United States.

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).

Career Options

Paralegal.

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 occupational 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.

Student Learning Outcomes

Students who complete the Paralegal Program will be able to:

- Recognize ethical issues that arise in a legal work environment and apply rules of professional conduct to resolve them;
- Perform the duties of an entry level paralegal in a law firm or other legal work setting;
- Demonstrate written skills that paralegals use on the job;
- Apply basic principles of legal analysis;
- Use computers and other technology for document production, law office management, and trial preparation;
- Perform legal research using both printed and electronic sources.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Program Director

The Program Director's office is located in M-107Q. Any questions regarding program contact Program Director:

P. Darrel Harrison M-107-Q 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 182). 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: Paralegal

This option is available only to students entering the program who have completed all general education core requirements through coursework received by either an Associates in Arts degree or a Bachelor's degree. The Certificate of Achievement as a Paralegal requires completion of the (18 units) required core

courses, (12 units) legal specialty elective courses or (up to 6 units) approved law related courses totaling 30 units.

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 - Procedures	3
LEGL 120	Tort Law	3
LEGL 180	Contract Law	3

Select 12 units from the following legal elective courses:

LEGL 106	Computer Assisted Legal Research (CALR)	1
LEGL 140	Law Office Management and Technology	3
LEGL 145	Federal Court Practices and Procedures	3
LEGL 150	Criminal Litigation and Procedure	3
LEGL 155	Employment Law	3
LEGL 160	Bankruptcy Law	3
LEGL 165	Family Law	3
LEGL 170	Corporate Law	3
LEGL 175	Estates, Trusts, and Wills	3
LEGL 200	Elder Law	3
LEGL 205	Environmental Law	3
LEGL 210	Immigration Law	3
LEGL 270	Paralegal Internship / Work Experience	1-4
LEGL 296	Individualized Instruction in Legal Assistant	0.5 - 2

A maximum of 6 units from the following law-related courses may be substituted for legal elective courses:

ADJU 102	Criminal Law I	1
ADJU 160	Criminal Law II	3
ADJU 230	Constitutional Law I	3
BUSE 140	Business Law and the Legal Environment	3
REAL 105	Legal Aspects of Real Estate I	3
LABR 112 ¹	California Workers Compensation	3
ACCT 116A	Financial Accounting	4
ACCT 120	Federal Income Tax	3

¹Labor Studies 112 is offered only at City College.

Total Units = 30

Associate in Science Degree: Paralegal

In addition to the 30 units of general education and graduation requirements listed in this catalog, the

Associate in Science degree as a Paralegal requires completion of the core courses (18 units) and legal elective courses (12 units) for a total of 60 units. Up to 6 units of approved law-related courses may be substituted for legal electives.

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 - Procedures	3
LEGL 120	Tort Law	3
LEGL 180	Contract Law	3

Select 12 units from the following legal elective courses:

LEGL 106	Computer Assisted Legal Research (CALR)	1
LEGL 140	Law Office Management and Technology	3
LEGL 145	Federal Court Practices and Procedures	3
LEGL 150	Criminal Litigation and Procedure	3
LEGL 155	Employment Law	3
LEGL 160	Bankruptcy Law	3
LEGL 165	Family Law	3
LEGL 170	Corporate Law	3
LEGL 175	Estates, Trusts, and Wills	3
LEGL 200	Elder Law	3
LEGL 205	Environmental Law	3
LEGL 210	Immigration Law	3
LEGL 270	Paralegal Internship / Work Experience	1-4
LEGL 296	Individualized Instruction in Legal Assistant	0.5 - 2

A maximum of 6 units from the following law-related courses may be substituted for legal elective courses:

ADJU 102	Criminal Law I	1
ADJU 160	Criminal Law II	3
ADJU 230	Constitutional Law I	3
BUSE 140	Business Law and the Legal Environment	3
REAL 105	Legal Aspects of Real Estate I	3
LABR 112 ¹	California Workers Compensation	3
ACCT 116A	Financial Accounting	4
ACCT 120	Federal Income Tax	3

¹Labor Studies 112 is offered only at City College.

Total Units = 30

Other law-related classes may be accepted or substituted by petition or course substitution.

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.**

Physical Education

See "Exercise Science" on page 170.

Physical Science

Award Type	Units
Associate in Science Degree:	
Earth Science Studies	18*
Physics Studies	19*
Pre-Engineering Studies	18*

* and electives as needed to meet minimum of 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.

The Physical Science program is designed to prepare students to transfer to a four-year university in a physical science-related discipline.

Program Level Student Learning Outcomes

Students who complete the Physical Science Program will be able to:

- Identify connections between scientific theory and observations
- Solve problems related to concepts in the physical sciences
- Visualize important features of a given physical phenomenon
- Interpret scientific results collected by others and/or assess the validity of results collected in a physical science laboratory

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Regina Bochicchio	M-211M	619-388-7496 gbochicc@sdccd.edu
Sadayoshi Okumoto	M-211O	619-388-7540 sokumoto@sdccd.edu

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: 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.

Courses Required for the Major:		Units
CHEM 200	General Chemistry I - Lecture	3
CHEM 200L	General Chemistry I - Laboratory	2
PHYS 125	General Physics or	
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	
COMS 103	Oral Communication	
ECON 121	Principles of Microeconomics	
GEOG 101	Physical Geography	
GEOG 101L	Physical Geography Laboratory	
GEOG 102	Cultural Geography	
GEOL 100	Physical 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	

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Total Units = 18

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.

Associate in Science: 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

Total Units = 19

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.

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

Associate in Science: 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 Microeconomics
GEOL 100	Physical 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 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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

See "Social and Behavioral Sciences" on page 198.

Selected Studies

See "Interdisciplinary Studies" on page 178.

Social and Behavioral Sciences

Award Type	Units
Associate in Arts Degree:	
Psychology	18*
Sociology for Transfer**	18*
Social and Behavioral Sciences	18*
* and electives as needed to meet minimum of 60 units required for the degree.	
**Associate in Arts/Transfer. For more information, see page 70	

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.

Student Learning Outcomes

Students who complete the Social and Behavioral Sciences Program will be able to:

- Interpret and discuss classic and contemporary theories of society, groups, and individuals as they relate to the social and behavioral sciences.
- Apply critical thinking skills in discussing the interrelationship of anthropology, psychology, political science, economics, history, sociology and geography and the processes that influence one another.
- Interpret contemporary social and behavioral science problems and issues by applying the scientific method.
- Value the diversity of individuals and the role of cultural, ethnic, racial, and economic factors in explaining the attitudes and behaviors of individuals and groups within a society.

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
Marilyn Espitia	H-110-F	619-388-7504
Parvine Ghaffari	H-110-N	619-388-7507
Laura Gonzalez	H-110-D	619-388-7534
Daniel Igou	H-110-C	619-388-7646
Kenneth McPherson	H-110-T	619-388-7516
Angela Romero	H-110-V	619-388-7413
Thomas Schilz	H-110-A	619-388-7500

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: 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 or	
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 Macroeconomics	
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 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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 Arts: Sociology for Transfer

This degree is accepted by some but not all CSU campuses.

The Associate in Arts in Sociology for Transfer is intended for students who plan to complete a bachelor's degree in Sociology or a related major

in the California State University (CSU) system. Students who complete this degree and transfer to a participating CSU campus will be required to complete no more than 60 units after transfer to earn a bachelor's degree. It may not be appropriate preparation for students transferring to a CSU campus that does not accept the degree. Students who plan to complete this degree should consult a counselor for additional information about participating CSU campuses as well as university admission, degree, and transfer requirements.

NOTE: Students intending to transfer to SDSU should consult a counselor and visit www.assist.org for guidance on appropriate transfer coursework.

Courses Required for the Major:		Units
SOCO 101	Principles of Sociology*	3
SOCO 110	Contemporary Social Problems*	3
MATH 119	Elementary Statistics* or	
PSYC 258	Behavioral Science and Statistics*	3
PSYC 166	Introduction to Social Psychology*	3
PSYC 255	Introduction to Psychological Research	3

Select one of the following courses:

(It is recommended to select courses that meet lower division major preparation requirements for your transfer university)

SOCO 201	Advanced Principles of Sociology*	
SOCO 223	Globalization and Social Change*	
ANTH 103	Introduction to Cultural Anthropology*	
ENGL 205	Critical Thinking*	
GEOG 102	Cultural Geography*	
PHIL 100	Logic and Critical Thinking*	
PSYC 101	General Psychology*	
		3
Total Units = 18		

* Course also fulfills general education requirements for the CSU GE or IGETC pattern.

General Education: In addition to the courses listed above, students must complete one of the following general education options:

- The IGETC pattern (page 93) 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 100) is accepted by all CSU campuses and some private/independent or out of state universities. It is not accepted by the UC system.

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	
Total Units = 18	

General Education: In addition to the courses listed above, students must complete one of the general education options listed on page 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.**

Spanish

See "World Language Studies" on page 203.

Speech Communications

See "Communication Studies" on page 154.

Tagalog

See "World Language Studies" on page 203.

World Language Studies

Award Type	Units
Associate in Arts Degree: World Language Studies	18*

* and electives as needed to meet minimum of 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.

Student Learning Outcomes

Students who complete the World Language Studies Program will be able to:

- Demonstrate increased comprehension of the target language
- Utilize skills developed in class to produce the target language
- Demonstrate increased appreciation of the target language culture

Students will be assessed through a combination of performance evaluations, written assignments, and written tests and quizzes.

Faculty	Office	Telephone
April Koch	H-110-K	619-388-7537
Virginia Naters	H-110-L	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: 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 Macroeconomics
ECON 121	Principles of Microeconomics
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

Total Units = 18

***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 71:

- The IGETC pattern (page 93) 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 100) 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 76) 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.**

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.

Effective 2009-2010 catalog year (and each year thereafter), students must earn a grade of "C" or better in courses required for the major.

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 the associate degree and is not intended for transfer to a four-year college or university. Final determination regarding the transfer of credit rests with the receiving institution.
- **50-99** Course credit applies toward the associate degree and is not intended for transfer to a four-year college or university. Final determination regarding the transfer of credit rests with the receiving institution.
- **100-299** Course credit applies toward the associate degree and is intended for transfer to a four-year college or university. (Some courses may be identified as associate degree applicable only. See catalog course description.) Final determination regarding the transfer of credit 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. (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, Experimental Topics 18, 23, 63, 265, Tutoring 44, and Work Experience courses 270, 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 on 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.

Challenge Procedures

Students may challenge a prerequisite, corequisite or limitation on enrollment. Contact the Admissions Office to obtain a Petition to Challenge **AT LEAST** 10 working days prior to the start of the primary term/semester.

Generic Course Information

Any discipline or department may offer the courses listed below which do not appear individually in the catalog. If applicable to a particular subject area, it will be listed under the appropriate departmental heading (subject indicator) in the college class schedule. For further information, please check with the instructor or department chair.

Supervised Tutoring (044)

Supervised tutoring courses are available in each discipline. To enroll in a supervised tutoring course,

a student must be enrolled in a college or basic skills course in the respective discipline. The courses are designed to prepare the student to succeed in the corequisite or subsequent courses. Supervised tutoring may be taken four times, each time with a different corequisite. Credit does not apply to the associate degree.

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. (See catalog course description to determine credit for Associate Degree or Transfer.)

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. AA/AS; CSU.

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. AA/AS; CSU.

Service Learning—Elementary and Junior 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. AA/AS; CSU.

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. AA/AS; CSU.

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,

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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. AA/AS; CSU.

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. AA/AS; CSU.

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. AA/AS; CSU.

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:

AA/AS: Associate Degree Applicable. The course will apply toward the units required for the associate degree at San Diego Community College District colleges. The course is not intended for transfer to a four-year college or university. However, final determination of transfer credit rests with the receiving institution.

CSU: California State University Applicable. The course will apply toward the units required for the baccalaureate degree at the California State University system.

UC: University of California Applicable. The course will apply toward the units required for the baccalaureate degree at the University of California system.

UC Transfer Limitations. See a counselor: 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 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.

Field Trip: (FT) A field trip may be required for this course. Detailed information concerning costs incurred will be provided by the instructor.

Private Colleges/Independent/Out-of-State:

Note regarding Private / Independent / Out-of-state institutions: San Diego Community College District courses that are designated as CSU or UC transferable may 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.

Physical Education Classes/ Intercollegiate Sports-disclaimer

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

UC Transfer and Physical Education Courses

The University of California divides physical education courses into three categories: 1) Activity; 2) Theory, and 3) Academic/Scholarly. Credit for Activity courses is limited to four (4) units. Credit for Theory courses is limited to eight (8) units. No credit limitation is established for Academic/Scholarly courses. All UC-transferable physical education courses and their associated unit limitations are listed on Web ASSIST at: www.assist.org.

UC Transfer and Variable Topics Courses

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

Accounting (ACCT)

102 Basic Accounting

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

116A Financial Accounting

**4 hours lecture, 4 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU; UC.

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) AA/AS; CSU; UC.

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

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UC = University of California Applicable

identifies how tax planning skills can determine economic outcomes. Furthermore, it demonstrates and differentiates between tax avoidance and tax evasion. (FT) AA/AS; CSU.

121 California Income Tax

**1 hour lecture, 1 unit
Grade Only**

Advisory: Concurrent enrollment in: Accounting 120. This course is a study of California personal income taxation and tax planning. Emphasis is placed on tax concepts and related social economic issues rather than tax return preparation. The course distinguishes between California and Federal Income Tax requirements. This course is intended for all students interested in California income tax. AA/AS; CSU.

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) AA/AS; CSU.

201A Intermediate Accounting I

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Accounting 116A with a grade of "C" or better, or equivalent.

This course introduces students to advanced theory and concepts with an emphasis on financial accounting standards and principles. Emphasis is placed on corporate financial statements. Topics include the acquisition, valuation, and disposition of assets as well as the identification and reporting of current liabilities. This course is intended for accounting majors and students interested in

upgrading their accounting job/career skills. (FT) AA/AS; CSU.

201B Intermediate Accounting II

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Accounting 201A with a grade of "C" or better, or equivalent.

This course continues the study of advanced theory and concepts that was started in Accounting 201A. Emphasis is placed on the valuation and presentation of liabilities and stockholders' equity, revenue recognition, leases and tax accounting. This course is intended for accounting majors and students interested in upgrading their accounting job/career skills. (FT) AA/AS; CSU.

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 206. 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. The Department may impose physical qualifications for participation when a physical ability is validly deemed essential. 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

**108 total hours lecture, 5.5 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

101 Introduction to Administration of Justice **3 hours lecture, 3 units** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Administration of Justice (ADJU) 101 and 101A, 101B, 101C combined: maximum credit, 3 units. 101A, 101B, 101C must all be taken for transfer to be granted.

101A Introduction to Administration of Justice I

1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Administration of Justice (ADJU) 101 and 101A, 101B, 101C combined: maximum credit, 3 units. 101A, 101B, 101C must all be taken for transfer credit to be granted.

101B Introduction to Administration of Justice II

1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Administration of Justice (ADJU) 101 and 101A, 101B, 101C combined: maximum credit, 3 units. 101A, 101B, 101C must all be taken for transfer credit to be granted.

101C Introduction to Administration of Justice III

1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Administration of Justice (ADJU) 101 and 101A, 101B, 101C combined: maximum credit, 3 units. 101A, 101B, 101C must all be taken for transfer credit to be granted.

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102 Criminal Law I**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

106 Diversity and Community Relations**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

140 Patrol Procedures**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

147 Physical Conditioning**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

This course provides a balanced physical conditioning program for Administration of Justice and Fire Technology students. This course is intended for students preparing for employment in the criminal justice or fire protection career fields. AA/AS; CSU.

148 Defensive Tactics**3 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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 or as a condition of continued or volunteer employment. (FT) AA/AS; CSU.

149 Firearms**3 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course covers the moral aspects, legal provisions, safety precautions, and restrictions pertaining to the use of firearms including firing the pistol and shotgun. Students must meet all applicable firing range safety requirements in order to participate in live fire activities. This course is intended for students majoring in Administration of Justice or those interested in firearms safety. It may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS; CSU.

160 Criminal Law II**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

161 Juvenile Procedures**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. This course is intended for students majoring in Administration of Justice or others interested in the juvenile justice system. (FT) AA/AS; CSU.

162 Criminal Investigation**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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 preserve fingerprints. (FT) AA/AS; CSU.

167 Report Writing**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

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) AA/AS; CSU.

180 Drug Abuse and Law Enforcement**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

181 Vice and Organized Crime**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

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) AA/AS; CSU.

182 Street Gangs and Law Enforcement**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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190 Legal Aspects of Corrections**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

193 Concepts of Criminal Law**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

194 Introduction to Correctional Science**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

201 California Criminal Procedure**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

205 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 Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Administration of Justice 386 or Military Studies 110.

This course provides an interdisciplinary foundation in the field of leadership theory and practice. Students study the principles, definitions, and various models of leadership. Topics include the psychological, social, cultural, and physiological aspects of leadership such as traits, skills, styles, and processes; contingency, path-goal, and leader-member exchange theory; the mind-body relationship; 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. (FT) AA/AS; CSU; UC.

210 Rules of Evidence

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

220 Law Enforcement Forensics

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

230 Constitutional Law I

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

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. AA/AS; CSU.

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. AA/AS; CSU.

300 First Aid

**8-9 total hours lecture, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383 and 384 each with a grade of "C" or better, or equivalent.

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This course provides first aid training for peace officers and other public safety personnel. Topics include communication, terminology, situation assessment, environmental emergencies, cardiopulmonary resuscitation, medical emergency childbirth, and the emotionally disturbed. This course is intended for practicing public safety personnel who need first aid training as outlined by the State of California regulations. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

304 Intermediate Traffic Accident Investigation

**16 total hours lecture,
24 total hours lab, 1.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 and Mathematics 34D, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

This Peace Officers Standards and Training (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) AA/AS.

305 Advanced Traffic Accident Investigation

**80 total hours lecture, 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 Peace Officers Standards and Training (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) AA/AS.

307 Traffic Enforcement Radar Certification

**24 total hours lecture, 1.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20. This Peace Officer Standards & Training (POST) certified course covers the legal and technical use of radar equipment. Topics include radar history and theory, moving and stationary radar, equipment setup and calibration, target identification, and the detection of anomalous and spurious readings. (FT) AA/AS.

312 Basic Supervisory Course

**80 total hours lecture, 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. Topics include theories of supervision as well as practical skills and techniques. The course consists of lecture, demonstration, breakout groups, and role-playing. This course is intended for practicing law enforcement officers. (FT) AA/AS.

313 Public Safety Dispatcher's Basic Course

**120 total hours lecture, 6.5 units
Grade Only**

This course will provide the student with entry-level skills and knowledge relevant to public safety dispatchers. Topics include the California legal system, telephone and radio procedures, emergency medical dispatch functions, stress awareness, and critical incident response. This course is intended for current or future employees providing dispatch service for law enforcement personnel in agencies participating in the Peace Officer Standards and Training (P.O.S.T.) Public Safety Dispatcher Program. (FT) AA/AS.

314 Officer Safety and Field Tactics

**16 total hours lecture,
24 total hours lab, 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 provides safety and field tactics training for current public safety officers. Topics include weapons retention, new laws and legal research, civil liability, officer survival in field situations, high-risk vehicle stops, and shooting proficiency. This course is intended for practicing peace officers. (FT) AA/AS.

316 Baton Instructor Course

**48 total hours lab, 1 unit
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383 and 384, each with a grade of "C" or better, or equivalent (POST Certification).

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This Peace Officer Standards & Training (P.O.S.T.) certified course develops baton instruction skills. Students learn the teaching techniques of an all encompassing impact weapon/control device program. This program enables students to give basic baton training with one set of techniques that is useful with a variety of impact weapons/control devices. Topics include techniques of instruction for the side handle, straight, and expandable batons, OPN nunchaku, flashlight, and the Sap. This course meets Regional Baton Instructor application requirements. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

320 Semi-Automatic Pistol Training

**24-27 hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 323 or 381, 382, 383 and 384 or Administration of Justice 385, each with a grade of "C" or better, or equivalent. Introduction to the fundamental characteristics of the self-loading semi-automatic pistol. Topics include firearms safety, use of force decision making, marksmanship skills, pistol operation, and pistol maintenance. Training occurs in both daylight and lowlight conditions. Range firing exercises are basic and combat oriented. This course is intended for practicing law enforcement officers. It may be repeated as necessary to meet a legally mandated training requirement as a condition of continued paid or volunteer employment. (FT) AA/AS.

322 Basic Traffic Accident Investigation

**32 total hours lecture,
8 total hours lab, 2 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383 and 384 each with a grade of "C" or better, or equivalent.

This Peace Officer Standards and Training (P.O.S.T.) certified course provides the student with skills and knowledge to properly investigate and document traffic collisions. Students complete peace officer requirements to write traffic collision-related notices of violations based on reasonable cause per California Vehicle Code Section 40600. Other topics include collision-related traffic laws, traffic accident investigation procedures, and court presentations. This course is intended for practicing peace officers. (FT) AA/AS.

323 S.T.C. Certified Corrections Officer Core Course

**80-90 total hours lecture,
480-540 total hours lab, 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. This course is intended for students entering initial employment as corrections officers. (FT) AA/AS.

324 S.T.C. Certified Supplemental Core Course

**56 total hours lecture, 3 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383 and 384, each with a grade of "C" or better, or equivalent (POST Certification).

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides entry level training for correction officers who are peace officers and have

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UC = University of California Applicable

completed the Peace Officer Standards & Training (P.O.S.T.) Basic Course.

It emphasizes facility operations, inmate supervision and management, facility security, booking and releasing inmates, and emergency procedures. This course meets California State Board of Corrections mandates. (FT) AA/AS.

327 Advanced Patrol Strategies

**16 total hours lecture,
24 total hours lab, 1.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383 and 384, each with a grade of "C" or better, or equivalent (POST Certification).

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides updated training in advanced officer safety and field tactics. Topics include performance driving, survival firearms, and officer involved shootings. Students practice drills under varied weather and lighting conditions. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

330 P.O.S.T. Certified Field Training Officer Course

**16-18 hours lecture, 24-27 hours lab, 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 introduces students to the field training program and provides them with the knowledge, skills, and abilities to function as Field Training Officers (FTOs). Topics include FTO roles, ethics, civil liability, instructional techniques, sexual harassment, leadership, documentation, officer safety, override and intervention, adult learning theory, and other related subjects. This course is designed for recently appointed FTOs from law enforcement agencies. AA/AS.

331A Advanced Officer Training/Field Operations

**72-88 hours lab, 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 updated training in the areas of field tactics, criminal law, and general patrol procedures for members of the Sheriff's Department. It is intended for deputies and sergeants who are being assigned to patrol stations for the first time or being reassigned to patrol after an absence of more than one year. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

332A P.O.S.T. Certified Driving Under the Influence Course

**1.5 hours lab, 0.5 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: This course is not open to students with previous credit for Administration of Justice 332.

This Peace Officer Standards and Training (P.O.S.T.) certified course provides instruction on technical and legal issues involved in the detection, apprehension and prosecution of the "Driving Under the Influence" (DUI) driver. Emphasis is on the physical symptoms of drivers under the influence, including testing using the current standardized sobriety tests. Other topics include legal considerations, officer safety, and California Department of Motor Vehicles requirements concerning legal sanctions of DUI drivers. This course is intended for practicing police officers. AA/AS.

333A P.O.S.T. Certified Firearms Instructors Course

**0.5 hours lecture, 24-39 hours lab, 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 provides training for peace officer firearms instructors in the skills and knowledge to identify and assist peace officers with deficient firearms skills. Topics include firearms safety, liability encountered during training, basic firearms knowledge, course design, methods of instruction, lesson plans, and presentation strategies. Students also receive a special weapons orientation and preview new firearms accessories and equipment. This course is intended for practicing peace officers. (FT) AA/AS.

334 Law Enforcement Emergency Vehicle Operation

**27 total hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

335 P.O.S.T. Certified Tactical Communications Course

**8 total hours lecture, 0.5 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 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. AA/AS.

343 Peace Officer's Guide to Internal Affairs

**8 total hours lecture, 0.5 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 law enforcement officers with a thorough working knowledge of department Internal Affairs investigative procedures. AA/AS.

344 Strategies for Advanced Officers

**24 total hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course 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. AA/AS.

346 Juvenile Counselor Basic Core Course

**144 total hours lecture,
44 total hours lab, 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) AA/AS.

348 Essentials of Investigation

**40 total hours lecture, 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. AA/AS.

350A Weapons and Safety Training for Probation Officers

**120-135 total hours lab, 2.5 units
Grade Only**

Prerequisite: Administration of Justice 356A 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 350

This course provides weapons and safety training for armed Probation staff assigned to special operations, intensive supervision, or home supervision. Students must have successfully completed a Peace Officers Standards and Training (P.O.S.T.) approved P.C. Laws of Arrest course. Subjects include legal update liability, shooting skills, deadly force, survival skills,

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and chemical agents. Students who successfully complete the course satisfy the firearms requirement for peace officers pursuant to Penal Code section 832. (FT) AA/AS.

351 Chemical Agents Training for Peace Officers

**8-9 total hours lecture, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384, each with a grade of "C" or better, or equivalent.

This course trains peace officers in the use of liquid aerosol chemical agents. Topics include dispersement, effects, use of force, tactics, liability, and policies and procedures. The course addresses all Peace Officer Standards & Training (P.O.S.T.) mandated performance objectives. (FT) AA/AS.

356A 832 PC Laws of Arrest

**40 total hours lecture, 2.5 units
Grade Only**

This course meets the Peace 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) AA/AS.

356B 832 PC Firearms

**12 total hours lecture,
12 total hours lab, 1 unit
Grade Only**

This course meets the Peace 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) AA/AS.

359 Field Training Officer Update

**4 hours lecture, 12-20 hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy.

This course develops instructional skills and techniques for current police officers assigned as Field Training Officers (FTOs) providing standardized training to newly assigned patrol officers. Topics include techniques of training, application of knowledge and skills in the field, methods of trainee feedback and evaluation, learning styles, and communication skills. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued or volunteer employment. (FT) Not applicable to the Associate Degree.

361D Defensive Tactics Building Searches

**0-1 hour lecture, 7-15 hours lab, 0.2 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy.

This course develops skills and techniques for current peace officers to search buildings for persons armed with dangerous weapons. Topics include officer mindset, approach to the target, types of entries, partner communication, officer responsibilities, and equipment considerations. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued or volunteer employment. (FT) Not applicable to the Associate Degree.

361L Less-Lethal Munitions Training (LLMT)

**0-1 hour lecture, 7-15 hours lab, 0.2 units
Grade Only**

Prerequisite: Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy or Administration of Justice 384 with a grade of "C" or better, or equivalent Basic P.O.S.T. Certified Academy or Administration of Justice 385 with a grade of "C" or better, or equivalent military law enforcement specialist training program.

This course provides training on the use of less-lethal munitions for current law enforcement officers. Topics include safety guidelines, history and development, terminology, legal issues, use of force guidelines, employment techniques, and documentation. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement as a condition of continued

paid or volunteer employment. (FT) Not applicable to the Associate Degree.

361R Regional Officer Training

**8 - 24 total hours lecture,
8 - 23 total hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 323 with a grade of "C" or better, or equivalent, or Standards and Training for Corrections Certified Correctional Officer Core Course Academy; or Administration of Justice 384 with a grade of "C" or better, or equivalent, or Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy; or Administration of Justice 385 with a grade of "C" or better, or equivalent, or military law enforcement specialist training program.

This course is designed for peace officers, correctional personnel below the rank of middle management and military law enforcement personnel. It meets the requirements of Peace Officers Standards and Training (P.O.S.T.), Title 15, Minimum Standards of Training for Local Corrections and Probation Officers (S.T.C.) 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. Topics include new legislation and legal updates; emergency medical techniques; skill proficiency training in vehicle operations, firearms, and defensive tactics; and the application of law enforcement policy to typical public safety situations. Other topics related to the continued proficiency of law enforcement personnel may also be addressed. 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 the Associate Degree.

361S Continuing Professional Training for Sheriff Deputies

**8-16 total hours lecture,
10-30 total hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy or Administration of Justice 381, 382, 383 and 384, each with a grade of "C" or better, or equivalent. This course provides advanced technical skill and proficiency training for practicing Sheriff's deputies, including detention supervisors and

correctional officers. Topics include the use of force, less-lethal munitions, driving techniques, and firearms. This course meets the requirements of Peace Officer Standards & Training (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. 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 the Associate Degree.

361T Block 20: Force Options / Internal Affairs for Correctional Deputies

**0-1 total hours lecture,
7-15 total hours lab, 0.2 units
Grade Only**

Prerequisite: Administration of Justice 323, 265A or 324, each with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy.

This course provides refresher training on defensive tactics, force options/transition techniques, and Internal Affairs investigations. Students will participate in practical training exercises and scenarios, including defensive tactics and force transition drills. This course is intended for current correctional deputies including Peace Officers, Adult Corrections Officers, Juvenile Corrections Officers and Supervisors, who are free of injuries and on full duty status. 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 the Associate Degree.

365 Assessment Tools Used on Adult Offender Populations

**18 total hours lecture, 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

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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. (FT) AA/AS.

366 Radar-Laser Operator (LIDAR)

**0-1 hour lecture, 7-15 hours lab, 0.2 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy.

This course prepares current law enforcement officers to operate radar- and laser-based vehicle speed measurement devices. Topics include scientific principles, operational considerations, device operation, and legal considerations. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued paid or volunteer employment. (FT) Not applicable to the Associate Degree.

367 Traffic Collision Computer Aided Diagramming

**4 hours lecture, 12-20 hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy.

This course teaches current law enforcement officers to prepare diagrams of traffic collision scenes using specialized computer software. Topics include manual and electronic data gathering, computer software functions, and collision scene diagram composition. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued paid or volunteer employment. (FT) Not applicable to the Associate Degree.

368 Critical Incidents/Tactical Commander's Course

**24-40 hours lab, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic P.O.S.T. Certified Academy.

This Peace Officer Standards and Training (POST) certified course provides current law enforcement officers with the knowledge and skills to serve

as commanders during critical incidents. Topics include critical incident pre-planning, problem solving strategies, incident management, and communication. This course is intended for practicing peace officers functioning as first-line managers or above. (FT) Not applicable to the Associate Degree.

369 Drug Influence: 11550

**0-1 hour lecture, 7-15 hours lab, 0.2 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy.

This course provides an overview of illegal drug characteristics, effects, and detection from a law enforcement perspective. Topics include drug categories, characteristics, history, effects, packaging, and drug detection. Students also practice conducting drug test evaluations including standardized field sobriety tests. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued or volunteer employment. (FT) Not applicable to the Associate Degree.

371 P.O.S.T. Certified Regular Basic Course Module Format, Level I

**274 total hours lecture,
70 total hours lab, 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 Peace Officers Standards and Training (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) AA/AS.

**372 P.O.S.T. Certified Regular Basic Course
Module Format, Level II****178 total hours lecture,
46 total hours lab, 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 Peace Officers Standards and Training (P.O.S.T.) requirements for Level II Reserve status. (FT) AA/AS.

**373 P.O.S.T. Certified Regular Basic Course
Module Format, Level III, P.C. 832 (Part 1)****70 total hours lab, 3.5 units
Grade Only**

This course meets the Peace Officers Standards and Training (P.O.S.T.) requirements of 832 P.C., which includes Professional Orientation, Ethics, Criminal Justice System, Community Relation, 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) AA/AS.

**374 P.O.S.T. Certified Regular Basic Course
Module Format, Level III, P.C. 832 (Part 2)****108 total hours lecture,
54 total hours lab, 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 Peace Officers Standards and Training (P.O.S.T.) requirements for Level III Reserve status. (FT) AA/AS.

375 Community Service Officer Academy**80 total hours lecture,
240 total hours lab, 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) AA/AS.

378 Defensive Tactics Instructor**72-88 hours lab, 1.5 units
Grade Only**

Prerequisite: Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy or Administration of Justice 384 with a grade of "C" or better, or equivalent Basic Peace Officers Standards and Training (P.O.S.T.) Certified Academy or Administration of Justice 385 with a grade of "C" or better, or equivalent military law enforcement specialist training program

This course prepares current peace officers to serve as instructors for defensive tactics courses. Topics include presentation skills, civil liability, close quarters defensive tactics, restraint techniques, searches, takedown techniques, handgun retention, disarming techniques, use of the police baton, force option transitions, and edged weapon defense. This course is intended for practicing law enforcement officers and may be repeated as necessary to meet a legally mandated training requirement or as a condition of continued or volunteer employment. (FT) Not applicable to the Associate Degree.

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379 Academy Instructor Certification Course (AICC)

**32-40 hours lecture, 0.5 units
Grade Only**

Prerequisite: Administration of Justice 384 with a grade of "C" or better, or equivalent Basic P.O.S.T. Certified Academy.

This course prepares current peace officers to serve as instructors for Peace Officer Standards and Training (P.O.S.T.)-certified courses in a law enforcement academy environment. Topics include instructor roles and responsibilities; adult learning fundamentals; lesson planning; instructional design; lesson delivery; instructional resources; presentation and facilitation skills; POST requirements, policies, procedures and resources; and evaluation and testing protocol. This course is intended for practicing law enforcement officers. (FT) AA/AS.

381 P.O.S.T. Certified Regional Academy Module 1

**80-90 total hours lecture,
480-540 total hours lab, 15 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

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 is intended for students entering initial employment as peace officers. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

382 P.O.S.T. Certified Regional Academy Module 2

**40-45 total hours lecture,
96-108 total hours lab, 4.5 units
Grade Only**

Prerequisite: Administration of Justice 381 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

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 is intended for students entering initial employment as peace officers. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

383 P.O.S.T. Certified Regional Academy Module 3

**26.5 total hours lecture,
36 total hours lab, 2 units
Grade Only**

Prerequisite: Administration of Justice 382 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

384 P.O.S.T. Certified Regional Academy Module 4

**40 total hours lecture,
72 total hours lab, 4 units
Grade Only**

Prerequisite: Administration of Justice 383 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

385 Law Enforcement Specialist/Master at Arms

**144-162 total hours lecture,
72-81 total 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.

392 Special Topics in Instructor Development

**32-36 hours lecture,
96-108 hours lab, 0.1 - 4 units
Grade Only**

Prerequisite: Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy; or Administration of Justice 384 with a grade of "C" or better, or equivalent Basic P.O.S.T. Certified Academy; or Administration of Justice 385 with a grade of "C" or better, or equivalent military law enforcement specialist training program.

This course is designed for peace officers, correctional personnel, and military law enforcement personnel seeking certification as an instructor in a law enforcement-related subject area. Instructional theory, principles, and techniques are taught from a variety of different focus areas that may vary from term to term. Focus areas may include defensive tactics instruction, field training officer instruction, firearms instruction, police baton instruction, non-lethal chemical agents instruction, or emergency vehicle instruction, among others. Focus areas are listed in the class schedule and student transcripts. This course, including specific focus areas, may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

393 Special Topics in Field Tactics

**1 - 64 hours lecture,
7 - 119 hours lab, 0.2 - 4 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384 each with a grade of "C" or better, or equivalent or Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified

Correctional Officer Core Course Academy or Administration of Justice 385 with a grade of "C" or better, or equivalent military law enforcement specialist training program.

This course is designed for practicing peace officers, correctional personnel, and military law enforcement personnel seeking professional training in field tactics. Fundamental skills and techniques used by law enforcement officers in the regular execution of their duties are taught from a variety of different focus areas that may vary from term to term. Focus areas may include defensive tactics, weapons proficiency training, vehicle or equipment operation, arrest procedures, investigation techniques, organized crime enforcement, or prisoner control, among others. Focus areas are listed in the class schedule and student transcripts. This course, including specific focus areas, may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

394 Special Topics in Law Enforcement Policy and Procedure

**1 - 64 hours lecture,
7 - 119 hours lab, 0.2 - 4 units
Grade Only**

Prerequisite: Administration of Justice 381, 382, 383, and 384 each with a grade of "C" or better, or equivalent or Administration of Justice 323 with a grade of "C" or better, or equivalent S.T.C. Certified Correctional Officer Core Course Academy or Administration of Justice 385 with a grade of "C" or better, or equivalent military law enforcement specialist training program.

This course is designed for practicing peace officers, correctional personnel, and military law enforcement personnel seeking professional training in federal-, state- or department-level policy and procedure. Current laws, policies, processes, and other guidance pertinent to decisions made by law enforcement officers are taught from a variety of different focus areas that may vary from term to term. Focus areas may include new legislation and legal updates, social issues, special investigations, domestic violence intervention, hate crimes, sexual harassment, or cultural diversity, among others. Focus areas are listed in the class schedule and student transcripts.

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This course, including specific focus areas, may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

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 206. 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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/hominins and hominoids. This course is intended for anthropology majors and all students interested in life and/or behavioral sciences. (FT) AA/AS; CSU; UC.

103 Introduction to Cultural Anthropology 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is a survey 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 intended for anthropology majors and all students interested in life and/or behavioral sciences. (FT) AA/AS; CSU; UC.

104 Laboratory in Physical Anthropology 3 hours lab, 1 unit Letter Grade or Pass/No Pass Option

Prerequisite: Anthropology 102 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 R6 and W6.

This course is a practical study of biological anthropology. Students perform field and laboratory studies in genetics, human variation, human osteology, anthropometry, hominid/hominin evolution, comparative primate anatomy, primate behavior, and forensic anthropology. This course is intended for anthropology majors and all students interested in life and/or behavioral sciences. (FT) AA/AS; CSU; UC.

107 Introduction to Archaeology 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is an introductory study of the history, methods 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) AA/AS; CSU; UC.

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. AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Art— Digital Media (ARTD)

158 Survey of Graphics Technology

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20. This course is an introduction to the field of graphics technology. It provides a context for studying the effects of changing graphics technology on our civilization and environment from the historic, cultural, and market perspectives. Students also relate the field of graphics to their personal lives and ambitions. This course is intended for students majoring in graphics or anyone interested in the fields of communications and marketing. (FT) AA/AS; CSU.

160 Vector Art 01: Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Prerequisite: Art-Fine Art 150B with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for the combination of Digital Media 160A and 160B.

This course develops the linked skills of visualizing images as systems of shapes and the computerized techniques for creating those shapes. Students use Adobe Illustrator to create typography, information graphics, text illustration, symbols, logos, and other computer-aided graphics. Students also repurpose vector graphics for a variety of practical applications and train in efficient creation and manipulation of Bézier objects using pointer and keyboard-driven techniques to build images with the unique capabilities of vector graphics for pattern, precision, and relationships. This course in combination with ARTD 170 provides a comprehensive overview of computer imaging technology. This course is intended for students majoring in Graphics or anyone interested in the field of graphics. It may be taken up to four times with significant software changes. (FT) AA/AS; CSU.

160A Vector Art 01: Illustration Tools

**0.75 hours lecture, 2.25 hours lab, 1.5 units
Grade Only**

Prerequisite: Art-Fine Art 150B with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Digital Media 160. This course develops the linked skills of visualizing images as systems of shapes and the computerized techniques for creating those shapes. Students use Adobe Illustrator to create typography, information graphics, logos, and other computer-aided graphics. Students also train in efficient creation and manipulation of Bézier objects using pointer and keyboard-driven techniques to build images with the unique capabilities of vector graphics for pattern, precision, and relationships. This course in combination with ARTD 170A provides a comprehensive overview of computer imaging technology. This course is intended for students majoring in Graphics or anyone interested in the field of graphics. It may be taken up to four times with significant software changes. (FT) AA/AS; CSU.

160B Vector Art 01: Illustration Tasks

**0.75 hours lecture, 2.25 hours lab, 1.5 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Digital Media 160A with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Digital Media 160. This course further develops the skills introduced in ARTD 160A. Students use Adobe Illustrator to produce information graphics such as maps, charts, diagrams, and signs; text illustration; and symbols such as icons, logos, and glyphs. Students also repurpose vector graphics for a variety of practical applications in print and screen media for publication, promotion, web, sign and display, packaging, imprinted goods, and business communications. This course is intended for students

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CSU = California State University Applicable
UC = University of California Applicable

majoring in Graphics or anyone interested in the field of graphics, business, or art. This course may be taken up to four times with significant software changes. (FT) AA/AS; CSU.

170 Raster Art 01: Image Editing
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Prerequisite: Art-Fine Art 150B with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for the combination of Digital Media 170A and 170B.

This course introduces students to the production processes for creating and editing raster graphics, primarily using Photoshop. Students learn the computer program, eye-hand skills, workflows, and application of computer graphics tools used to edit and repurpose images for various screen and print jobs in promotional and informational publications, web applications, sign and display, packaging, imprinted goods, and business communications. This course is intended for students majoring in Graphics or those seeking a foundation in digital photographic editing. This course may be taken up to four times with significant software changes. (FT) AA/AS; CSU.

170A Raster Art 01A: Image Editing Tools
0.75 hours lecture, 2.25 hours lab, 1.5 units
Grade Only

Prerequisite: Art-Fine Art 150B with a grade of "C" or better, or equivalent

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Digital Media 170.

This course introduces students to the production processes for creating and editing raster graphics, primarily using Photoshop. Students learn the computer program, eye-hand skills, and workflows used to edit and repurpose images for various screen and print jobs in promotional and informational publications, web applications, sign and display, packaging, imprinted goods, and business communications. This course is intended for students majoring in Graphics or those seeking a foundation in digital photographic editing. This course may

be taken up to four times with significant software changes. (FT) AA/AS; CSU.

170B Raster Art 01B: Image Editing Tasks
0.75 hours lecture, 2.25 hours lab, 1.5 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Digital Media 170A with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Digital Media 170. This course further develops the skills introduced in ARTD 170A for creating and editing raster graphics primarily using Photoshop. Students focus on the application of computer graphics tools to screen and print jobs in promotional and informational publications, web applications, sign and display, packaging, imprinted goods, and business communications. This course is intended for students majoring in Graphics or those seeking enhancement of digital photographic editing skills. This course may be taken up to four times with significant software changes. (FT) AA/AS; CSU.

181 Projects 01: Multi-modal productions
1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only

Advisory: English 48, English 49 and Math 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Art-Fine Art 150B, Digital Media 160A, 160B, 170A, 170B and Art-Graphic Design 106, each with a grade of "C" or better, or equivalent.

This course teaches students to design and execute systematic graphics projects based on research, according to a schedule, and guided by an approval process. Students use a full range of graphics techniques to communicate a shared vision to a certain audience for a determined result. The course emphasizes self discipline in time management and project coordination. This course is intended for students majoring in Graphics or anyone creating or managing graphics-intensive projects. (FT) AA/AS; CSU.

Art—Fine Art (ARTF)

100 Art Orientation

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is a survey of the visual arts. Emphasis is placed on the various aesthetic approaches, philosophies and artistic orientations around the world in historical and contemporary perspective.

This course is intended for humanities majors and all students interested in art and/or art history. (FT) AA/AS; CSU; UC Transfer Course List.

107 Contemporary Art

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: Art-Fine Art 109 and Art-Fine Art 111, each with a grade of "C" or better; English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course provides a survey of contemporary art and architecture examining theoretical and cultural influences on art from the late 20th century to present. The course is designed for students interested in contemporary art history, as well as for art majors who are focusing on contemporary design, painting, sculpture or ceramics. (FT) AA/AS; CSU; UC.

109 History of Modern Art

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. 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) AA/AS; CSU; UC.

110 Art History: Prehistoric to Gothic

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is a survey of the visual arts in western civilization from prehistory through the Gothic period. Emphasis is placed on representative art and architecture from Mesopotamia, Iran, Egypt, the Aegean, Etruscan, Rome and Greece. This course is intended for art majors and all students interested in art history, the humanities and culture. (FT) AA/AS; CSU; UC.

111 Art History: Renaissance to Modern

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is a survey of the visual arts in western civilization from the Renaissance to the Modern era. Emphasis is placed on representative art and architecture from the Renaissance, Mannerism, Baroque, Rococo, Neo-Classicism, Romanticism, Impressionism, Post-Impressionism, and Modernism eras. This course is intended for art majors and all students interested in art history, the humanities and culture. (FT) AA/AS; CSU; UC.

113 Arts of Africa, Oceania, and the Americas

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is an introduction to the visual arts produced by selected peoples of Africa, Oceania, and the Americas from the prehistoric to contemporary periods. The topics covered in the course are representative of the art and architecture produced by groups from Africa, Oceania and the Americas emphasizing how art is representative of the cultural, religious, social, or political orientation of each region. This course is designed for art and art history majors and all who are interested in the humanities. (FT) AA/AS; CSU; UC Transfer Limitation: Fine Art (ARTF) 113 and 120 combined: maximum credit, one course.

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125 Art History: Arts of the Asian Continent
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides a survey of paintings, sculpture, architecture, and associated fine arts from India, China, Japan, and other countries throughout the Asian continent. It emphasizes the social, religious, and political highlights of each culture and their effects on art forms from prehistoric to modern times. This course is designed not only for art students, but also for those who are interested in history, religion, philosophy, humanities, and cultural enrichment. (FT) AA/AS; CSU; UC.

150A Two-Dimensional Design
2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6. This course is an introduction to two-dimensional space and form. Emphasis is placed on ways of organizing visual space into vivid and coherent images. This course is designed for students beginning a study of art and/or related disciplines. (FT) AA/AS; CSU; UC.

150B Beginning Graphic Design
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; 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) AA/AS; CSU; UC.

151 Three-Dimensional Design
1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Art-Fine Art 150A 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 and W6. This course is an introduction to three-dimensional space and form. Emphasis is placed on organizing visual space into valid and coherent structures. This course is designed for students beginning the study of art and/or related disciplines. (FT) AA/AS; CSU; UC.

155A Freehand Drawing I
2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6. This is an introductory course designed to develop the student’s ability to perceive and translate visual relationships from 3-dimensional (3-D) space into 2-dimensional (2-D) drawings. Emphasis is placed on the use of art theory, basic art elements and compositional strategies to create pictorial space and compose original images based on observation. This course is intended for art majors and all students interested in learning freehand drawing whether or not they have previous art experience. (FT) AA/AS; CSU; UC.

155B Freehand Drawing II
2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6 and Art-Fine Art 155A with a grade of “C” or better, or equivalent. This course is an intermediate course in which students apply art principles and theory to create solutions to particular problems of graphic representation and expression. Emphasis is placed on visual analysis and inquiry in creating pictorial space and applying drawing media. Students are introduced to the use of interdisciplinary art forms and image making and explore New Genres as a means of continued intellectual and artistic development. This course is intended for art and graphic art students. (FT) AA/AS; CSU; UC.

165A Composition in Painting I
2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Art-Fine Art 155A 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 R6 and W6 and Art-Fine Art 150A and Art-Fine Art 152, each with a grade of “C” or better, or equivalent.

This course is an introduction to oil and acrylic painting methods and techniques. Emphasis is placed 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. This course is intended for students pursuing an Associate in Arts degree, preparing for a major in Art, and those who wish to improve their artistic skills. (FT) AA/AS; CSU; UC.

165B Composition in Painting II

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165A with a grade of "C" or better, or equivalent.

This course is the second semester of introduction to oil and acrylic painting methods and techniques. Emphasis is placed on the 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 pursuing an Associate in Arts degree, preparing for a major in Art, and those who wish to improve their artistic skills. (FT) AA/AS; CSU; UC.

165C Composition in Painting III

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165B with a grade of "C" or better, or equivalent.

This course is the third semester of introduction to oil and acrylic painting methods and techniques. Emphasis is placed on composition, color, and application of general design principles at a more advanced level of creativity and sophistication. This course is designed to develop students' creative abilities and critical thinking in visual terms through the use of individual assignments tailored to students' skills. This course is intended for students pursuing an Associate in Arts degree, preparing for a major in Art, and those who wish to improve their artistic skills. (FT) AA/AS; CSU; UC.

165D Composition in Painting IV

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 165C with a grade of "C" or better, or equivalent.

This course is the fourth and final semester of introduction to oil and acrylic painting methods and techniques. Emphasis is placed on contemporary methods and theories related to conceptualism and new genre. Students produce large format and mural scale paintings. This course is designed to develop students' creative abilities and critical thinking in visual terms through the use of individual assignments tailored to students' skills. This course is intended for students pursuing an Associate in Arts degree, preparing for a major in Art, and those who wish to improve their artistic skills. (FT) AA/AS; CSU; UC.

170A Contemporary Crafts I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6; Art-Fine Art 150A with a grade of "C" or better, or equivalent.

This course teaches students techniques, methods and processes to produce a variety of crafts. Students develop projects using various media including ceramics, wood, fibers, glass, plastic and metal. Students explore design principles, expressive quality and individual ideas. This course is intended for students pursuing careers or future studies in Studio Arts, Applied Design or Industrial Arts. (FT) AA/AS; CSU.

170B Contemporary Crafts II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 170A 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 and W6. This course continues the study of various crafts media at an intermediate level. Emphasis is placed on individual exploration and expression. This course is intended for students pursuing careers or future

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studies in Studio Art, Applied Design or Industrial Design. (FT) AA/AS; CSU.

170C Contemporary Crafts III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

A continuation of Art-Fine Art 170A and 170B. Provides advanced studies in two areas with structured development of the media. (FT) AA/AS; CSU.

195A Ceramics I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

195B Ceramics II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

195C Ceramics III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 195B with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

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) AA/AS; CSU; UC.

198A Introduction to Printmaking I

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Art-Fine Art 150A and Art-Fine Art 155A, each with a grade of "C" or better or equivalent and English 101, with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is an introduction to the basic printmaking media of intaglio, relief, and monoprinting. Emphasis is placed on the techniques for creating and printing plates. Students investigate papers, select for properties, analyze aesthetic strategies for image making, and practice the principles of editioning and print conservation. This course is designed for art majors and all students interested in printmaking. (FT) AA/AS; CSU; UC.

198B Introduction to Printmaking II

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 198A with a grade of "C" or better, or equivalent.

This course is the second semester in basic printmaking media. Emphasis is placed on increasingly complex processes, such as photo intaglio, collagraph, and reduction color relief. Students apply aesthetic criteria in analyzing their creative choices and examine contemporary printmaking in world cultures. This course is designed for art and art history majors and all students interested in printmaking. (FT) AA/AS; CSU; UC.

198C Introduction to Printmaking III

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 198B with a grade of "C" or better, or equivalent.

This course is the third semester in printmaking media. Emphasis is placed on the development of a personal visual language through the application of advanced print processes, such as multiple-plate

intaglio, double drop printing, mezzotint, and white ground. Students experiment with combining print processes to create a cohesive body of artwork for presentation. This course is designed for art and art history majors and all students interested in printmaking. (FT) AA/AS; CSU; UC.

210A Life Drawing I

**2 hours lecture, 4 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Art-Fine Art 155A with a grade of "C" or better, or equivalent.

Advisory: Art-Fine Art 150A with a grade of "C" or better, or equivalent; English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This is a basic course in drawing the human form as a sequence of studies from live models. Accurate and expressive translations of the mass as two-dimensional drawings are refined in a variety of achromatic media. This course is designed for students who are majoring in fine art and is also a relevant foundation for those that are interested in disciplines that use the human form such as animation and fashion design. (FT) AA/AS; CSU; UC.

210B Life Drawing II

**2 hours lecture, 4 hours lab, 3 units
Grade Only**

Prerequisite: Art-Fine Art 210A with a grade of "C" or better, or equivalent.

This course is an intermediate course in drawing the human form as a sequence of studies from live models. Students work with color and experiment with concepts related to figure drawing. This course is designed for students who are majoring in fine art and is also a relevant foundation for those that are interested in disciplines that use the human form such as animation and fashion design. (FT) AA/AS; CSU; UC.

220A Life Sculpture I

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

220B Life Sculpture II

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

220C Life Sculpture III

**1.5 hours lecture, 4.5 hours lab, 3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

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. AA/AS; CSU.

282 Open Studio

**3-6 hours lab, 1-2 units
Letter Grade or Pass/No Pass Option**

Corequisite: Completion of or concurrent enrollment in Art-Fine Art 150B or 155A or 165A or 170A or 195A

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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) AA/AS; CSU.

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 206. 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 previous 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 is intended for graphic design majors and anyone interested in typography. (FT) AA/AS; CSU; UC.

118 Graphic Design History

**3 hours lecture, 3 units
Grade Only**

This course examines graphic design as a vital component of each culture and period in human history. Great minds in design, breakthrough technologies and important design movements are covered in their historical context. This course is intended for graphic design majors and anyone interested in design history. (FT) AA/AS; CSU; UC.

120 Illustration

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; and Art-Fine Art 150A and 155B, each with a grade of “C” or better, or equivalent. This course will address illustration methods, materials and tools used as related to the discipline of graphic design. Emphasis is placed on developing effective visual concepts and solutions through specific illustration assignments. Students will explore a variety of media techniques utilizing both black and white and color. (FT) AA/AS; CSU.

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) AA/AS; CSU; UC.

125 Digital Media

**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous 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, each semester. This course is intended for graphic design majors and anyone interested in digital media. (FT) AA/AS; CSU; UC.

126 Intermediate Digital Media**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Art-Graphic Design 125 with a grade of “C” or better, or equivalent.

This course is an intermediate level survey course which explores the principles of digital media utilized for visual communication. Instruction will incorporate the primary hardware and software utilized in the digital media industry today. Each section of this course may utilize different hardware and software and may therefore be taken three times for credit. (FT) AA/AS; CSU.

133 Intermediate Graphic Design II (Identity Systems)**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Advisory: Art-Graphic Design 125 or Art-Fine Art 150A, 150B or 185, with a grade of “C” or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Art-Commercial Art 110 or 133.

This intermediate course covers the application of design principles to the production of logos and marks. Students learn to use type in current marks, create design briefs, and use branding in the development of package designs. Traditional and computer approaches are covered. This course is designed for the student as preparation for the major in graphic design. (FT) AA/AS; CSU.

148A Portfolio A**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Students must submit portfolio of graphic design work in order to obtain an add code from the instructor for registration.

Limitation on Enrollment: This course is not open to students with previous credit for Art-Graphic Design 147 or 155.

This advanced course covers the design and layout of personal identity to a stationary package, resume, cover letter and self-promotional piece. The class features guest lecturers in the field of portfolio preparation, business and legal issues. Analysis of existing work, issues of format and content and implementation of a portfolio development

plan culminates in completed panels. This course is designed for the student in graphic design as preparation for the major in graphic design. (FT) AA/AS; CSU.

148B Portfolio B**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Art-Graphic Design 147.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Students must submit a portfolio of graphic design work in order to obtain an add code from the instructor for registration.

This advanced course applies the portfolio strategies developed in 147A to the creation of a complete professional portfolio of work. Students are required to formally present their portfolio for review and critical analysis by department faculty and advisors. This course is designed for the students in graphic design as preparation for the major in graphic design. (FT) AA/AS; CSU.

149 Studio Practices**1.5 hours lecture, 4.5 hours lab, 3 units
Grade Only**

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment. Students must submit portfolio of graphic design work in order to obtain an add code from the instructor for registration.

This advanced course is designed to provide opportunities for professional practice in the field of graphic design. Whenever possible students will work on real jobs for non-profit organizations and San Diego City or Miramar College. Interfacing with clients, developing design briefs and graphic problem solving will result in printed portfolio samples. This course is designed for the student in graphic design as preparation for the major in graphic design. This course may be taken four times for credit. (FT) AA/AS; CSU.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265),

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Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 206. 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 Pass/No Pass Option

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

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) AA/AS; CSU; UC.

111 Astronomy Laboratory

3 hours lab, 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; 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 206. 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

51 Quick Service Lube, Pre-Delivery Inspection Technician 1.75 hours lecture, 3.75 hours lab, 3 units Grade Only

Advisory: Automotive Technology 53 or 53A, Automotive Technology 53B and 53C each with a grade of "C" or better; Mathematics 38 with a grade of "C" or better or equivalent or assessment level M30 and English 35 with a grade of "C" or better or equivalent or English 42 and English 43, each with

a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for the combination of Automotive Technology 51A, 51B, and 51C.

This course provides an overview of automotive quick services and new/used vehicle preparation. Topics include 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. This course is intended for students majoring in automotive technology or others interested in developing automotive service skills. (FT) AA/AS.

51A Quick Service Lube, Pre-Delivery Inspection Technician Module I 0.75 hours lecture, 0.75 hours lab, 1 unit Grade Only

Advisory: Automotive Technology 53 or 53A, Automotive Technology 53B and 53C each, with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

Advisory: Completion of or concurrent enrollment in English 35 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 51.

This first course in a three course series introduces students to automotive quick services and new/used vehicle preparation. Topics include safety considerations, hazardous materials (HazMat) regulations, vehicle inspections, and preparing estimates and repair orders. Students also learn how to identify and operate necessary equipment and tools. This course is intended for students majoring in automotive technology or others interested in developing automotive service skills. (FT) AA/AS.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

51B Quick Service Lube, Pre-Delivery Inspection Technician Module II**0.75 hours lecture, 0.75 hours lab, 1 unit
Grade Only**

Advisory: Automotive Technology 51A and 53 or Automotive Technology 53A, 53B and 53C, each with a grade of "C" or better or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

Advisory: Completion of or concurrent enrollment in English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 51.

This second course in a three course series provides an overview of vehicle quick servicing. Topics include changing fluids and filters, proper hazardous waste disposal, and minor electrical repairs. Students also practice operating necessary equipment and tools. This course is intended for students majoring in automotive technology or others interested in developing automotive service skills. (FT) AA/AS.

51C Quick Service Lube, Pre-Delivery Inspection Technician Module III**0.25 hours lecture, 2.25 hours lab, 1 unit
Grade Only**

Advisory: Automotive Technology 51A, 51B, 53 or 53A, 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

Advisory: Completion of or concurrent enrollment in English 35 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 51.

This third course in a three course series provides an overview of vehicle road testing procedures. Topics include road testing techniques, vehicle operation, and systems evaluations. This course is intended for students majoring in automotive technology or others interested in developing automotive service skills. (FT) AA/AS.

51T Honda/Toyota Quick Service Lube, Pre-Delivery Inspection Technician**2 hours lecture, 6 hours lab, 4 units
Pass/No Pass**

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20 and Automotive Technology 53 with a grade of "C" or better, or equivalent or Automotive Technology 53A, 53B, and 53C, each with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in English 35 with a grade of "C" or better, or equivalent or 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 an overview of Honda- and Toyota-specific automotive quick services and new/used vehicle preparation. Topics include vehicle inspections, preparing estimates, changing fluids and filters, proper hazardous waste disposal, minor electrical repairs, and road-testing techniques using Honda/Toyota information systems, forms, and maintenance/repair procedures. 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. This course is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

53 Introduction to Automotive Technology**1.75 hours lecture, 3.75 hours lab, 3 units
Grade Only**

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent, or Assessment Skill Level M20.

Advisory: Completion of or concurrent enrollment in: English 35, or English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 112 or the combination of Automotive Technology 53A, 53B, and 53C.

This course provides students with an overview of the automotive industry, a basic understanding of how each system within an automobile works, and automotive safety procedures. Topics include the use of basic automotive hand, power, and lifting tools; major measuring instruments; automobile diagnostics; and other devices and procedures used by automotive technicians. This course is intended for beginning automotive technology students

or anyone interested in the automotive industry. (FT) AA/AS.

53A Introduction to Automotive Technology Module I

**0.75 hours lecture, 0.75 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent, or Assessment Skill Level M20.

Advisory: Completion of or concurrent enrollment in: English 35, or English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 53 or 112.

This first course in a three course series introduces students to automotive tools and safety procedures. Topics include safety equipment, safe work habits, and the use of basic automotive hand, power, and lifting tools. This course is intended for beginning automotive technology students or anyone interested in the automotive industry. (FT) AA/AS.

53B Introduction to Automotive Technology Module II

**0.75 hours lecture, 0.75 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent, or Assessment Skill Level M20. Automotive Technology 53A with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: English 35, or English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 53 or 112.

This second course in a three course series provides an overview of major automotive systems. Topics include engines; engine electrical systems; fuel, ignition, and emission systems; power train; chassis system; and brakes. This course is intended for beginning automotive technology students or anyone interested in the automotive industry. (FT) AA/AS.

53C Introduction to Automotive Technology Module III

**0.25 hours lecture, 2.25 hours lab, 1 unit
Grade Only**

Advisory: Mathematics 34A with a grade of "C" or better, or equivalent, or Assessment Skill Level M20; Automotive Technology 53A and 53B, each with a grade of "C" or better, or equivalent.

Advisory: Completion of or concurrent enrollment in: English 35, or English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 53 or 112.

This third course in a three course series introduces students to the automotive industry and vehicle diagnostics. Topics include occupational options, industry terminology, vehicle diagnostic procedures, and vehicle inspections/repair estimates. This course is intended for beginning automotive technology students or anyone interested in the automotive industry. (FT) AA/AS.

56 Engine and Related Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 53 or 53A, 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better or assessment skill level M30; English 35 or 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 a detailed study of the internal combustion engine. Students learn how to disassemble engines, identify and measure parts, and reassemble engines properly. Other topics include fuel, electrical, cooling, and lubrication systems reviews. This course is designed to prepare students for the Automotive Service Excellence (ASE) A1 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

56T Honda/Toyota Engine and Related Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 51T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or 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 a detailed study of Honda- and Toyota-specific internal combustion engines and related systems. Students learn how to disassemble Honda/Toyota engines, identify and measure parts, and reassemble engines properly. Other topics include fuel, electrical, cooling, and lubrication systems. This course is designed to prepare students for the Automotive Service Excellence (ASE) A1 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

61 Basic Electricity and Electrical Systems Fundamentals

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 53 or 53A, 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and English 35 with a grade of "C" or better or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course covers basic electrical principles, body wiring, and starting and charging systems. Topics include the construction, operation, and function of automotive electrical components. This course is intended for students majoring in automotive technology or others interested in automotive electrical systems. (FT) AA/AS.

61T Honda/Toyota Basic Electricity and Electrical Systems Fundamentals

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 51T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better or equivalent or assessment level M30 and

English 35 with a grade of "C" or better or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course covers basic electrical principles and Honda- and Toyota-specific body wiring, starting, and charging systems. Topics include the construction, operation, and function of electrical components for Honda and Toyota vehicles. This course is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

62 Advanced Electrical

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 61 with a grade of "C" or better, or equivalent.

Advisory: Automotive Technology 53 or 53A, 53B and 53C with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course prepares students to diagnose and repair complex electrical/electronic 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. Also included is an introduction to hybrid vehicle operation, safety, service, and emergency response. This course prepares students for the Automotive Service Excellence (ASE) A6 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

62T Honda/Toyota Advanced Electrical

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 61T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 and English 35, each with a grade of "C" or better, or equivalent or Assessment Skill Level M30 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course prepares students to diagnose and repair complex electrical/electronic systems used in Honda and Toyota automobiles. Topics include a review of the principles of electrical circuits, electrical devices, the use of test equipment to diagnose malfunctions, and the examination of various Honda/Toyota computerized control systems. The course emphasizes the development of a systematic diagnostic and repair procedure. Also included is an introduction to Honda/Toyota hybrid vehicle operation, safety, service, and emergency response. This course prepares students for the Automotive Service Excellence (ASE) A6 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

65 Engine Performance

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 61 with a grade of "C" or better, or equivalent.

Advisory: Automotive Technology 56, 53 or 53A, 53B and 53C, each with a grade of "C" or better; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Advisory: Completion of or concurrent enrollment in Automotive Technology 62 with a grade of "C" or better, or equivalent.

This course covers engine management basics, including an overview of common sensors and their functions, ignition systems, fuel systems, and air induction and exhaust systems. Students are also introduced to engine diagnosis procedures. This course prepares students for the Automotive Service Excellence (ASE) A8 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

65T Honda/Toyota Engine Performance

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 56T with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Automotive Technology 62T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30

and English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course covers Honda/Toyota engine management basics. Topics include an overview of sensors and their functions, ignition systems, fuel systems, and air induction and exhaust systems. Students are also introduced to Honda/Toyota-specific engine diagnosis procedures. This course prepares students for the Automotive Service Excellence (ASE) A8 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

67 Advanced Engine Performance

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 61 with a grade of "C" or better, or equivalent.

Advisory: Automotive Technology 62, 65 and 53 or Automotive Technology 53A, 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course builds on skills learned in the Engine Performance course with an emphasis on engine diagnostics. Topics include an in-depth study of system monitors, engine misfire, oxygen (O₂) and Air Fuel (A/F) sensors, fuel systems, and emission control systems. This course prepares students for the Automotive Service Excellence (ASE) L-1 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

67T Honda/Toyota Advanced Engine Performance

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Prerequisite: Automotive Technology 65T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent

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CSU = California State University Applicable
UC = University of California Applicable

or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course builds on skills learned in the Honda/Toyota Engine Performance course with an emphasis on engine diagnostics. Topics include an in-depth study of Honda/Toyota system monitors, engine misfire, oxygen (O₂) and Air Fuel (A/F) sensors, fuel systems, and emission control systems. This course prepares students for the Automotive Service Excellence (ASE) L-1 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

69 Climate Control Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 61, 53 or Automotive Technology 53A, Automotive 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Advisory: Completion of or concurrent enrollment in: Automotive Technology 62 with a grade of "C" or better, or equivalent.

This course introduces students to climate control systems. Topics include heating, ventilation, and air conditioning (HVAC) systems and related components. Students diagnose and repair common problems with climate control systems, including manual, electronic and vacuum controls, evacuation and recharging of air conditioning, and component replacement. Other topics include safety, environmental concerns, and Environmental Protection Agency (EPA) 609 Refrigerant Handling License requirements. This course prepares students for the Automotive Service Excellence (ASE) A7 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

69T Honda/Toyota Climate Control Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Automotive Technology 62T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent

or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course introduces students to Honda- and Toyota-specific climate control systems, including Heating, Ventilation, and Air Conditioning (HVAC) systems and related components. Students diagnose and repair common problems with climate control systems, including manual, electronic and vacuum controls; evacuation and recharging of air conditioning; and component replacement. Other topics include safety and environmental concerns; Environmental Protection Agency (EPA) 609 Refrigerant Handling License requirements; and Honda/Toyota hybrid vehicle climate control systems. This course prepares students for the Automotive Service Excellence (ASE) A7 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

72 Manual Drive Train and Axles

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 61, 53 or 53A, Automotive Technology 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4. *Advisory:* Completion of or concurrent enrollment in Automotive Technology 62 with a grade of "C" or better, or equivalent.

This course familiarizes students with manual transmissions, final drives and transaxles. Topics include clutch assemblies, manual transmissions, manual transaxles, transfer cases, and rear-wheel, 4-wheel, and all-wheel drive systems. This course prepares students for the Automotive Service Excellence (ASE) A3 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

72T Honda/Toyota Manual Drive Train and Axles

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Automotive Technology 62T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This course familiarizes students with Honda- and Toyota-specific manual transmissions, final drives and transaxles. Topics include clutch assemblies, manual transmissions, manual transaxles, transfer cases, and rear-wheel, 4-wheel, and all-wheel drive systems. This course prepares students for the Automotive Service Excellence (ASE) A3 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

74 Automatic Transmissions/Axles

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 61, 62, 53 or 53A, Automotive Technology 53B and 53C with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

Advisory: Completion of or concurrent enrollment in Automotive Technology 67 with a grade of "C" or better, or equivalent.

This course covers the principles and operation of hydraulically and electronically controlled transmissions and transaxles. Topics include hydraulics, components, power flow, and the development of a systematic approach to diagnosis and repair. This course prepares students for the Automotive Service Excellence (ASE) A2 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

74T Honda/Toyota Automatic Transmissions/Axles

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Automotive Technology 67T with a grade of "C" or better, or equivalent.

Advisory: Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C"

or better, or equivalent or Assessment Skill Levels R4 and W4.

This course covers the principles and operation of Honda- and Toyota-specific hydraulically and electronically controlled transmissions and transaxles. Topics include hydraulics, components, power flow, and the development of a systematic approach to diagnosis and repair. This course prepares students for the Automotive Service Excellence (ASE) A2 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

76 Automotive Brake Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Advisory: Automotive Technology 61, 53 or 53A, Automotive Technology 53B and 53C, each with a grade of "C" or better, or equivalent; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of "C" or better, or equivalent or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4. *Advisory:* Completion of or concurrent enrollment in Automotive Technology 62 with a grade of "C" or better, or equivalent.

This course teaches students brake system diagnosing and replacement procedures. Topics include inspection and measurement of brake components; resurfacing brake drums and disc rotors; hydraulics, wheel cylinders, disc calipers, and master cylinders; brake bleeding; adjustment and repair of drum/disc brakes; and diagnosis of power assist units and computer controlled brake systems. This course prepares students for the Automotive Service Excellence (ASE) A5 certification and is intended for students majoring in automotive technology. (FT) AA/AS.

76T Honda/Toyota Automotive Brake Systems

**2 hours lecture, 6 hours lab, 4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Automotive Technology 62T with a grade of "C" or better, or equivalent.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

Advisory: Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of “C” or better, or equivalent or English 42 and English 43, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R4 and W4.

This course teaches students Honda- and Toyota-specific brake system diagnosing and replacement procedures. Topics include inspection and measurement of Honda/Toyota brake components; resurfacing brake drums and disc rotors; hydraulics, wheel cylinders, disc calipers, and master cylinders; brake bleeding; adjustment and repair of drum/disc brakes; and diagnosis of power assist units and computer controlled brake systems. This course prepares students for the Automotive Service Excellence (ASE) A5 certification and California Brake Adjuster C license and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

78 Suspension, Steering and Handling **2 hours lecture, 6 hours lab, 4 units** **Grade Only**

Advisory: Automotive Technology 53 with a grade of “C” or better, or equivalent or Automotive Technology 53A, 53B, and 53C with a grade of “C” or better or equivalent; Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of “C” or better, or equivalent or English 42 and English 43, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R4 and W4.

Students learn about the theory and repair of automotive suspension, steering, and handling systems. Topics include the design and operation of all components of suspension, steering, four-wheel steering, tire and wheel, and four-wheel alignment of late-model automobiles and light-duty trucks. This course prepares students for Automotive Service Excellence (ASE) A4 certification. (FT) AA/AS.

78T Honda/Toyota Suspension, Steering and Handling **2 hours lecture, 6 hours lab, 4 units** **Grade Only**

Corequisite: Completion of or concurrent enrollment in Automotive Technology 61T with a grade of “C” or better, or equivalent.

Advisory: Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30, English 35 with a grade of “C” or better, or equivalent

or English 42 and English 43, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R4 and W4.

This course covers the theory and repair of automotive suspension, steering, and handling systems. Topics include the design and operation of all components of suspension, steering, four-wheel steering, tire and wheel, and four-wheel alignment of Honda/Toyota automobiles and light-duty trucks. This course prepares students for Automotive Service Excellence (ASE) A4 certification and is intended for automotive technology students seeking Honda Professional Automotive Career Training (PACT) or Toyota Technician (T-TEN) certification. (FT) AA/AS.

80A Toyota Manual Transmission and Transaxles 302

1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 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) AA/AS.

80B Toyota Suspension, Steering and Handling 452

1 hour lecture, 1 unit
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 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) AA/AS.

80C Toyota Brake Systems 552**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 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) AA/AS.

80D Toyota Electrical Circuit Diagnosis 623**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

80E Toyota Body Electrical Diagnosis 652**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

80F Toyota Electronic & Computer Systems 672**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

80G Toyota Air Conditioning and Climate Control 752**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

80H Toyota Automatic Transmissions 262**2 hours lecture, 2 units****Letter Grade or Pass/No Pass Option**

Advisory: English 49, English 48 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5, W5 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) AA/AS.

81 Introduction to Alternative Fuels and Electric Hybrid Vehicles**2 hours lecture, 2 units****Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Automotive Technology 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) AA/AS.

85 Advanced Emission Specialist Exam Qualification Course**5 hours lecture, 3 hours lab, 6 units****Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

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) AA/AS.

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. AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Aviation (AVIA)**53 Aviation Career Skills****1 hour lecture, 1 unit****Letter Grade or Pass/No Pass Option**

Advisory: Completion of or concurrent enrollment in Aviation Maintenance Technology 52 with a grade of "C" or better, or equivalent.

This course provides students with the foundational job preparation and work skills necessary for a successful career in aviation. Topics include

aviation-related career planning, resume writing targeted to the aviation industry, aviation job search strategies, and interviewing skills. Students also develop personal work skills and learn appropriate communication and etiquette standards required for success in the aviation industry. (FT) AA/AS.

101 Private Pilot Ground School

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Advisory: Concurrent enrollment in Aviation 101L with a grade of "C" or better, or equivalent.

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. Topics include aerodynamics and the principles of flight; airplane instruments, engines, and systems; airports; air traffic control and airspace; Federal Aviation Regulations (FARs); aircraft performance; aeromedical factors and decision making; weather and weather services; navigation; and cross country flight planning. This course, combined with AVIA 133 (Human Factors in Aviation), fulfills all requirements for the Federal Aviation Administration (FAA) Private Pilot Knowledge Test. This course is intended for students majoring in Aviation Operations or those pursuing a private pilot's license. (FT) AA/AS; CSU.

101L Private Pilot Flight Lab

**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: Completion of or concurrent enrollment in Aviation 101 with a grade of "C" or better, or equivalent.

Designed for the beginning pilot, this lab provides a hands-on introduction to basic airplane operations, procedures, regulations, and techniques using a real airplane and flight simulator. This course may be taken four times for credit. Students who repeat this course will demonstrate increased skill, proficiency, speed, and accuracy in ground operations, flight maneuvers, airplane control, flight by reference to instruments, and communications. It is intended for students majoring in Aviation Operations or those pursuing a private pilot's license. (FT) AA/AS; CSU.

103 Private Pilot Knowledge Review

**1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option**

Prerequisite: Aviation 101 with a grade of "C" or better, or equivalent or Miramar College Private Pilot Certificate of Completion or proof of eligibility to test for FAA Private Pilot Knowledge Test and Aviation 133 with a grade of "C" or better, or equivalent or Miramar College Private Pilot Certificate of Completion or proof of eligibility to test for FAA Private Pilot Knowledge Test.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation 301. This course offers students the opportunity to review written examination material to prepare for the Federal Aviation Administration (FAA) Private Pilot Knowledge Test. Topics include a review of aerodynamics and the principles of flight; airplane instruments, engines, and systems; airports; air traffic control and airspace; Federal Aviation Regulations (FARs); aircraft performance; aeromedical factors and decision making; weather and weather services; navigation; and cross country planning. This course is intended for students seeking private pilot certification. (FT) AA/AS; CSU.

105 Introduction to Aviation and Aerospace

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5, and M20.

This course provides an introduction to the aviation and aerospace industry. Topics include aviation employment and career paths, aviation history and regulations, patterns of commercial industry development before and after deregulations, current industry trends, international operations, and future developments. This course is intended for students majoring in Aviation Operations or anyone interested in the aviation industry. (FT) AA/AS; CSU.

125 Aviation and Airport Management

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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. This course is intended for students majoring in Aviation Operations or those interested in the aviation industry. (FT) AA/AS; CSU.

128 Group Dynamics for High Risk Teams
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5. 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. This course is intended for students majoring in Aviation Operations or anyone interested in leadership and group dynamics. (FT) AA/AS; CSU.

133 Human Factors in Aviation
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5. *Advisory:* Completion of or concurrent enrollment in Aviation 101 with a grade of "C" or better, or equivalent. 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. This course is intended for students majoring in Aviation Operations or anyone interested in the field of aviation safety. (FT) AA/AS; CSU.

151 Helicopter Pilot Ground School
3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation 101 with a grade of "C" or better, or equivalent. *Advisory:* English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 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 they pertain to helicopter operations. This course, combined with AVIA 101 (Private Pilot Ground School) and AVIA 133 (Human Factors in Aviation), fulfills all requirements for the FAA Helicopter Private Pilot Knowledge Test. It is intended for students majoring in Aviation Operations or those seeking helicopter pilot qualification. (FT) AA/AS; CSU.

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 AVIA 101 prerequisite). *Advisory:* English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20. *Advisory:* Concurrent enrollment in Aviation 196. Designed for the beginning pilot, this course provides an introduction to basic Instrument Flight Rules (IFR) procedures, regulations, and techniques. Topics include airplane instruments and instrument flying techniques, IFR airspace and air traffic control procedures, pertinent Federal Aviation Regulations (FAR), IFR weather and weather services, aeromedical factors and decision making in instrument conditions, and IFR flight planning. This course is intended for students majoring in Aviation Operations or anyone interested in flight training. (FT) AA/AS; CSU.

196 Basic Instrument Flight Lab
3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Prerequisite: Aviation 101 with a grade of "C" or better, or equivalent (Private Pilot Certificate satisfies the AVIA 101 prerequisite).

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Advisory: Completion of or concurrent enrollment in Aviation 195 with a grade of "C" or better, or equivalent.

This laboratory course 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. This course may be taken four times for credit. It is intended for students majoring in Aviation Operations or anyone interested in flight training. (FT) AA/AS; CSU.

199 Instrument Ground School

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Aviation 195 and Aviation 196 with a grade of "C" or better, or equivalent (Private Pilot Certificate satisfies the AVIA 195 and 196 prerequisite).

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

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. Topics include 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. It is intended for students majoring in Aviation Operations or anyone interested in flight training. (FT) AA/AS; CSU.

201 Commercial Airline Pilot Instruction

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation 101 and Aviation 133, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 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. Topics include 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 Federal Aviation Administration (FAA) Commercial Pilot Knowledge Test. This course is intended for students majoring in Aviation Operations or those seeking commercial pilot qualification. (FT) AA/AS; CSU.

212 Flight Instructor Ground School

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Aviation 101, 133 and 199, each with a grade of "C" or better, or equivalent (Private Pilot Certificate satisfies the Aviation 101 and 199 prerequisite).

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20; Aviation 128 and Aviation 201, each with a grade of C or better, or equivalent (Commercial Pilot Certificate satisfies the Aviation 201 advisory).

This course provides an introduction to methods of flight instruction by integrating learning theory with an in-depth study of aeronautical science. The course utilizes a flight simulator lab in which students practice flight instruction techniques. Other topics include optimum adult learning environments and instructional techniques pertaining to the principles of flight, airplane systems and performance,

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UC = University of California Applicable

Federal Aviation Regulations, aeromedical factors, weather, and navigation. When combined with AVIA 133 (Human Factors in Aviation), this course fulfills all requirements for the Federal Aviation Administration (FAA) Fundamentals Of Instruction (FOI), Certified Flight Instructor (CFI), and/or Advanced Ground Instructor (AGI) pilot knowledge tests. It is intended for students majoring in Aviation Operations or those seeking qualification as a flight instructor. (FT) AA/AS; CSU.

225 Introduction to Commercial Airline Management

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation 105 and Aviation 125 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This capstone course serves as an introduction to the field of commercial airline management. Topics include aviation manager career paths and responsibilities, current aviation industry trends and challenges, air carrier operations, Federal Aviation Regulations (FARs), airline economics, labor union relations, and international operations. This course is intended for students majoring in Aviation Operations or anyone interested in the commercial airline industry. (FT) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This aviation course offers students the opportunity to continue developing "reflective-practitioner" skills, building on learning experienced in AVIA 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. This course is intended for students majoring in Aviation Operations or anyone interested in leadership and group dynamics. (FT) AA/AS; CSU.

278 Command, Leadership and Decision Making

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation 101 and Aviation 133, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Aviation 128 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Changes in aviation regulations now require aviation professionals to receive leadership and command training as part of their professional development in order to become employed within the commercial industry. To address this requirement, this capstone course builds upon previous aviation program coursework; in particular, expanding students' understanding of the physiological, psychological, and group dynamics factors that can lead to team breakdown, leadership failures, poor decision making, and accidents. To better understand these pressures, students will work in small groups analyzing case studies of selected aircraft accidents and incidents and present their findings for large group discussion. This course is intended for students majoring in Aviation Operations or those seeking professional employment with the commercial airline industry. (FT) AA/AS; CSU.

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. AA/AS; CSU.

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 206. 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 Pass/No Pass Option**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

101G General Aviation Technology Theory I **6 hours lecture, 6 units** **Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation Maintenance Technology 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) AA/AS; CSU.

103A Aircraft Wood, Fabric, Finishing and Composite Structures

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100 and 100S or 101G, 101H, 102G and 102H, 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. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

103B Aircraft Welding and Sheetmetal Structures

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100 and 100S or 101G, 101H, 102G and 102H, each with a grade of "C" or better, or equivalent.

Students learn about the design, inspection, servicing, testing, and repair of aircraft sheet metal and welded structures. Topics include identifying and selecting specific aluminum and steel alloys,

selecting appropriate fasteners, and using gas and electric arc welding equipment. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

103C Aircraft Hydraulic Systems

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100 and 100S or 101G, 101H, 102G and 102H, each with a grade of "C" or better, or equivalent.

Students learn about the design, inspection, servicing, testing, and repair of aircraft hydraulic and pneumatic components and systems. Topics include safety considerations, fluid types, seal types, component parts, and troubleshooting issues. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

103D Aircraft Landing Gear Systems

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100, 100S or 101G, 101H, 102G and 102H, each with a grade of "C" or better, or equivalent.

This course is a study of landing gear systems, including retraction systems, shock struts, brakes, wheels, tires, and steering systems. Topics include the inspection, check, service, and repair of speed and take-off warning systems, electrical brake controls, anti-skid systems, and landing gear position indicating and warning systems. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

104A Applied Aircraft Wood, Fabric, Finishing and Composite Structures

**4.5 hours lab, 1.5 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Aviation Maintenance Technology 103A 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. The content of this course meets the minimum requirements of Federal Aviation

Regulation (FAR) Part 147, Appendix C, Section I: Subjects A, B, C, D: 11, 12, 13. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

104B Applied Aircraft Welding and Sheetmetal Structures

**4.5 hours lab, 1.5 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Aviation Maintenance Technology 103B with a grade of "C" or better, or equivalent.

Students learn about the design, inspection, servicing, testing, and repair of aircraft sheet metal and welded structures. Topics include gas and electric arc welding, sheet metal layout, bending, and assembly techniques, and conventional and special fasteners. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix C, Section I: Subjects D: 14, 15, 16; E. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

104C Applied Aircraft Hydraulic Systems

**3 hours lab, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Aviation Maintenance Technology 103C with a grade of "C" or better, or equivalent.

Students learn about the design, inspection, servicing, testing, and repair of aircraft hydraulic and pneumatic components and systems. Topics include safety considerations, fluid types, seal types, component parts, and troubleshooting issues. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix C, Section II: Subject B. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

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.

This hands-on course teaches students to operate, inspect, check, service, and repair landing gear retraction systems, shock struts, brakes, wheels, tires, and steering systems. Other topics include the inspection, check, service, and repair of speed and take-off warning systems and components, electrical brake controls, anti-skid systems, and landing gear position and warning systems. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix C, Section II: Subjects A, H. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

105A Aircraft Cabin Atmosphere Control

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100 and 100S or 101G, 101H, 102G and 102H, each with a grade of "C" or better, or equivalent.

Students learn about the design, inspection, maintenance, and repair of cabin atmosphere control systems and aircraft protection systems. Topics include heating, cooling, pressurization, oxygen, and ice and rain systems and components. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

105B Aircraft Assembly, Rigging and Inspection

**1.5 hours lecture, 1.5 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 100 and 100S or 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

This course is a study of fixed and rotary wing aircraft assembly techniques. Topics include aircraft alignment, balance and rigging of movable surfaces, jacking of aircraft, and aircraft inspections for conformity and airworthiness. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

106A Aircraft Cabin Atmosphere Control **1.5 hours lab, 0.5 units** **Grade Only**

Corequisite: Completion of or concurrent enrollment in: Aviation Maintenance Technology 105A with a grade of "C" or better, or equivalent.

This course teaches students how to operate, maintain, and repair heating, cooling, air conditioning, pressurization, oxygen, and ice and rain control systems and components. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix C, Section II: Subjects C., I. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

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.

This hands-on course teaches students to apply fixed and rotary wing aircraft assembly techniques in an aircraft maintenance shop environment. Topics include aircraft alignment, balance and rigging of movable surfaces, aircraft jacking procedures, and aircraft inspections for conformity and airworthiness. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147 Appendix C; Section I: Subjects F., G. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

107B Turbine Engines

3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, and 102H each, with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course is a study of the theory of operation, design, overhaul, inspection, servicing, repair and troubleshooting of turbine engines. Topics include turbojet, turbofan, turboprop, and turboshaft aircraft powerplants and their related subsystems. This

course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

108B Applied Turbine Engines

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.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course is the practical application of the theory of operation, design, overhaul, inspection, servicing, repair and troubleshooting of turbine engines.

Topics include turbojet, turbofan, turboprop, and turboshaft aircraft powerplants and their related subsystems. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section 2: Subjects F. 20 and 22; G. 24 and 25; H 26, 27, and 28; L; and M. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

109A Airframe Electrical Systems

3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, 102H, 120, 121A, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course is a study of the design, installation, and operation of alternating and direct current systems.

Topics 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.

This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

109B Powerplant Ignition Systems**2 hours lecture, 2 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, and 102H each, with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Students learn about the design, installation, and operation of powerplant ignition systems. Topics 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 is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

109C Powerplant Electrical Systems**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, 102H, 120, 121A, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Students learn about the design, installation, and operation of both direct and alternating powerplant electrical current systems. Topics 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. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

109D Aircraft Fire Protection and Digital Logic**1 hour lecture, 1 unit
Grade Only**

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This airframe and powerplant course covers all aspects of fire protection systems. Topics include system design, maintenance practices, extinguishing systems, digital logic systems, and basic computer applications used in the aircraft industry. This course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix C, Section II: Subject J; and Appendix D, Section II: Subject B. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe and/or Powerplant rating. (FT) AA/AS; CSU.

110A Applied Airframe Electrical Systems**3 hours lab, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 109A with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Students learn practical applications in the design, installation, troubleshooting, repair, and operation of both direct and alternating current systems. Topics 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. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147 Appendix C; Section II: Subjects E and G. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe rating. (FT) AA/AS; CSU.

110B Applied Powerplant Ignition Systems**1.5 hours lab, 0.5 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 109B with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

Students learn practical applications in the design, installation, servicing, troubleshooting, repair, and operation of powerplant ignition systems. Topics 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 Federal Aviation Regulation (FAR) Part 147, Appendix D; Section II: Subject E. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

110C Applied Powerplant Electrical Systems
1.5 hours lab, 0.5 units
Grade Only

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 109C with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Students learn practical applications in the design, installation, troubleshooting, repair, and operation of both direct and alternating current systems. Topics 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 Federal Aviation Regulation (FAR) Part 147, Appendix D; Section II: Subjects A & C. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

111C Reciprocating Engines I
3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course focuses on the theory of operation, design, overhaul, inspection, and repair of aircraft reciprocating powerplants. It is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration

(FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

111D Reciprocating Engines II
3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course focuses on aircraft reciprocating powerplant systems and operations. Topics include the check, repair, servicing, installation, removal, and inspection of aircraft reciprocating powerplants. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

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 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This practical hands-on course allows students to apply the theory of operation, overhaul, inspection, and repair of aircraft reciprocating powerplants. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section I: Subjects A: 1, 2. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

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.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This course provides students with the practical application of powerplant systems and operations. Topics include the operation, installation,

removal, inspection, repair, servicing, check, and troubleshooting of powerplant installations. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section I: Subjects A: 3, 4; C: 8. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

120 Basic D.C. Electronics Theory
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, 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) AA/AS; CSU.

121A Applied Basic D.C. Electronics
4.5 hours lab, 1.5 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

Advisory: English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU.

241 Aircraft Propeller Systems

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G and 102H, each with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation Maintenance Technology 107A.

This course is a study of aircraft propellers. Topics include propeller aerodynamics, theory of operation, inspection, checks, troubleshooting, and maintenance of reciprocating and turboprop controllable-pitch propellers and propeller components. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

242 Applied Aircraft Propeller Systems

**3 hours lab, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 241 with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation Maintenance Technology 108A.

The course covers the practical application of installation, removal, inspection, repair, service, and troubleshooting of propellers and propeller system components. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section II: Subject K. It is intended for students majoring in Aviation Maintenance Technology or those seeking

a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

249 Induction and Fuel Metering

**3 hours lecture, 3 units
Grade Only**

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G and 102H with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

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 the 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. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

250 Applied Induction and Fuel Metering

**3 hours lab, 1 unit
Grade Only**

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 249 with a grade of “C” or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation Maintenance Technology 112A.

This course covers practical applications of aircraft induction system theory. Topics include the 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. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section II: Subjects F: 20, 21, 22; G: 24, 25; and H: 26, 27, 28. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration

(FAA) Mechanics Certificate with Powerplant rating.
(FT) AA/AS; CSU.

253 Lubrication, Cooling, and Exhaust
3 hours lecture, 3 units
Grade Only

Prerequisite: Aviation Maintenance Technology 101G, 101H, 102G and 102H with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

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. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

254 Applied Lubrication, Cooling, and Exhaust

3 hours lab, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in Aviation Maintenance Technology 253 with a grade of "C" or better, or equivalent.

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Aviation Maintenance Technology 112B.

This course covers 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. The content of this course meets the minimum requirements of Federal Aviation Regulation (FAR) Part 147, Appendix D, Section II: Subjects D: 14, 15, 16; I: 29, 30; and J: 31, 32a, 32b. It is intended for students majoring in Aviation Maintenance

Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Powerplant rating. (FT) AA/AS; CSU.

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. AA/AS; CSU.

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 206. 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 48, English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M40.

This course is an introduction to the mortgage brokerage and banking industry. Students learn the history, concepts, vocabulary, loan products and product flow of the mortgage banking industry, and the functions of the many participants in a loan transaction. Other topics 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 are discussed. Throughout the course, emphasis is placed on the importance of follow-through, quality customer service, and ethics as they relate to the mortgage brokerage and

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CSU = California State University Applicable
UC = University of California Applicable

banking industry. Course content relates specifically to California regulations. This course is intended for students interested in real estate, banking, and finance. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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.

This course provides an analysis of loan documentation, including investor requirements, and the steps required to smoothly close a loan.

Other topics include 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. This course is intended for students interested in real estate, banking, and finance. (FT) AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; 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 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6 or English 105 with a grade of "C" or better, or equivalent; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 105,

Biology 106, Biology 210A, or Biology 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 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) AA/AS; CSU; UC Transfer Limitation: No credit for Biology (BIOL) 105, 106 or 107 if taken after 210A, 210B.

115 Marine Biology

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is a study of marine biology. Emphasis is placed on marine organisms, their natural history and special adaptations to the ocean environment. Topics include the marine environment, plankton, marine plants, marine invertebrates, fishes, marine birds, marine reptiles, and marine mammals. Students participate in several field trips to local marine habitats and museums. This course is intended for all students interested in marine biology. (FT) AA/AS; CSU; UC.

130 Human Heredity

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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. This course is designed for students interested in biology and human heredity. (FT) AA/AS; CSU; UC.

131 Introduction to Biotechnology

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level W5.

This course is a general examination of biology as it relates to the field of biotechnology. Topics 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. Topics include the measurement of activity and quantity of proteins, growth and manipulation of bacteria, genetic engineering and antibody methods. This course is intended for students majoring in applied biology and as a general education option for all students. (FT) AA/AS; CSU; UC.

132 Applied Biotechnology I

**2 hours lecture, 6 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Advisory: English 49 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) AA/AS; CSU.

133 Applied Biotechnology II

**2 hours lecture, 6 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Advisory: Biology 132 or 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

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current techniques used in the biotechnology industry. (FT) AA/AS; CSU.

134 Introduction to the Biotechnology Lab
3-4 hours lab, 1 unit
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

135 Biology of Human Nutrition
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

This is an introductory course that relates biological principles to human nutrition. This course integrates concepts from biology, biochemistry, microbiology, physiology, and psychology to explain the interaction between nutrients and the human body. The scientific process used to establish nutrient requirements, address dietary fads, and correlate diet and health is explored. Topics include food composition and diet analysis; digestion, absorption and nutrient utilization; psychological and cultural aspects of diet; food value, cost, and sustainable food production; world food and population issues; and nutritional needs at different stages of life. This course is intended for all that want to learn about how diet and nutrition impact their own health, as well as the health of the global population and the environment. (FT) AA/AS; CSU; UC.

160 Elements of Human Anatomy and Physiology

3 hours lecture, 3 hours lab, 4 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Biology 230 or 235. This course is an introduction to the structure and functions of the human body. Emphasis is placed on the human body systems including the integumentary, skeletal, muscular, nervous, endocrine, reproductive, cardiovascular, lymphatic, respiratory, excretory, and digestive systems. This course is designed for students preparing for allied health occupations such as radiological technician, physical therapist assistant, and medical laboratory technician, as well as students interested in learning about the human body. AA/AS; CSU.

180 Plants and People
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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) AA/AS; CSU; UC Transfer Limitation: Credit will only be granted for either Biology (BIOL) 180 or 215 and 250 combined. No Credit for Biology (BIOL) 180, 215 or 250 if taken after 210A or 210B.

205 General Microbiology
3 hours lecture, 6 hours lab, 5 units
Grade Only

Prerequisite: Biology 107 and Chemistry 100 and 100L or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

This introductory course covers fundamental aspects of microbiology including taxonomy, structure, physiology, reproduction, genetics, control, immunology, diversity, and host-symbiont relationships. Lab work emphasizes basic techniques for culturing, staining, counting, and identifying microorganisms. This course is intended for students pursuing careers in allied health fields and may meet entry requirements for these allied health fields. (FT) AA/AS; CSU; UC.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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) AA/AS; CSU; UC.

210B Introduction to the Biological Sciences II

**3 hours lecture, 3 hours lab, 4 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

215 Introduction to Zoology

**2 hours lecture, 6 hours lab, 4 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Biology 107 with a grade of "C" or better, or equivalent.

Advisory: English 48 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) AA/AS; CSU; UC Transfer Limitation: Credit will only be granted for either Biology (BIOL) 180 or 215 and 250 combined. No credit for Biology (BIOL) 180, 215 or 250 if taken after 210A or 210B.

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) AA/AS; CSU; UC.

231 Media Experiences in Human Anatomy

**1 hour lecture, 1 unit
Pass/No Pass**

Corequisite: Biology 230.

This course is self-paced study of anatomy through the use of computer software, microscope slides, anatomical models, and graphics. 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

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knowledge of the human body beyond the scope of introductory biology. AA/AS; CSU.

232 Experience in Human Dissection

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Biology 230 with a grade of "C" or better, or equivalent.

Advisory: Biology 230 completed within five years of enrollment in Biology 232.

Biology 230 Preregistration counseling with instructor is highly recommended.

This course provides a supervised study and actual experience in human dissection. Topics include dissection techniques and human anatomy. This course is intended for students pursuing careers in nursing, medicine, and other allied health professions. (FT) AA/AS; CSU.

235 Human Physiology

3 hours lecture, 3 hours lab, 4 units

Letter Grade or Pass/No Pass Option

Prerequisite: Biology 107 with a grade of "C" or better, or equivalent.

Advisory: Biology 230, Chemistry 100 and Chemistry 100L, each with a grade of "C" or better, or equivalent.

This course is an introductory study of human body functions. Emphasis is placed on the nervous, endocrine, muscular, cardiovascular, immune, digestive, respiratory, urinary and reproductive systems. This course is intended for students majoring in nursing, allied health, psychology, biology and physical education. (FT) AA/AS; CSU; UC.

250 Introduction to Botany

2 hours lecture, 6 hours lab, 4 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Credit will only be granted for either Biology (BIOL) 180 or 215 and 250 combined. No credit for Biology (BIOL) 180, 215 or 250 if taken after 210A or 210B.

285 Tropical Biology Field Experience

3 hours lab, 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU.

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. AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

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) AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

140B History of the U.S., Black Perspectives
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 or English 49 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

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. AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B 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 295 for complete English course descriptions and page 277 for complete Communication Studies course descriptions. Refer to the class schedule under the particular subject listing for designated sections.

English

- 43 English Review
- 49 Basic Composition (This course is no longer degree applicable)
- 101 Reading and Composition
- 105 Composition and Literature
- 205 Critical Thinking and Intermediate Composition

Communication Studies

- 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 206. 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 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W4; or Business 92 with a grade of "C" or better, or equivalent.

This introductory course for both business and non-business majors provides a broad understanding of the business community. Topics include business functions and terminology, occupational choices, and economic role. (FT) AA/AS; CSU; UC.

101 Business Mathematics
3 hours lecture, 3 units
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 a comprehensive study of business mathematics and reviews basic mathematics, such as decimals, fractions, and percentages. Topics include bank services, payroll, the mathematics of buying and selling, interest and loans, taxes, insurance, depreciation, and other business computations. This course is intended for students majoring in business or others interested in a business setting such as managers, supervisors, and work team members. (FT) AA/AS; CSU.

119 Business Communications
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or Business 92 with a grade of "C" or better, or equivalent.

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This course introduces the principles of effective business communications. Topics include the development, analysis, organization, and composition of various types of written and oral business communications. Students develop clear, concise, and persuasive letters, memoranda, and reports. This course is intended for students majoring in business and for others working in a business environment. (FT) AA/AS; CSU.

140 Business Law and the Legal Environment
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or Business 92 with a grade of "C" or better, or equivalent.

This course introduces students to the legal system, the laws that govern business in America, and the principles underlying fundamental 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. This course is intended for students majoring in business and for others interested in business law. (FT) AA/AS; CSU; UC.

150 Human Relations in Business
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces students to human behavior as it relates to business. Topics include leadership, communication, status, decision making, motivation, and personnel problems. This course is intended for students majoring in business and others interested in a business setting such as managers, supervisors, and work team members. (FT) AA/AS; CSU.

201 Business Organization and Management
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or Business 92 with a grade of "C" or better, or equivalent.

This course covers business organization and management fundamentals. Topics include business planning, leadership, productivity, managerial ethics, and corporate social responsibility. This course is

intended for students majoring in business and for others interested in a business setting such as managers and supervisors. (FT) AA/AS; CSU.

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. AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent, or Assessment Skill Level M40.
Corequisite: Completion of or concurrent enrollment in: Chemistry 100L with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in Chemistry 152 and 200.

This course is an introductory study of the language and tools of chemistry. Basic concepts of the structure, properties, interactions of matter and energy are studied, both qualitatively and quantitatively. Emphasis is placed on matter, chemical changes, chemical conversions, chemical bonding, and acid-base chemistry. This course is taken by students majoring in nursing, nutrition, or animal health technology and provides a foundation for further coursework in chemistry, in particular for

introductory organic chemistry. (FT) AA/AS; CSU; 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.

100L Fundamentals of Chemistry Laboratory **3 hours lab, 1 unit**

Letter Grade or Pass/No Pass Option

Corequisite: Chemistry 100.

Advisory: English 48 and English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, 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) AA/AS; CSU; 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.

130 Introduction to Organic and Biological Chemistry

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 100 and 100L, or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 130L with a grade of "C" or better, or equivalent.

This 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. This course is designed for nursing, nutrition, and allied health majors. (FT) AA/AS; CSU; UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with Lab).

130L Introduction to Organic and Biological Chemistry Laboratory

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 100 and 100L, or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 130 with a grade of "C" or better, or equivalent

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. This course is designed for nursing, nutrition, and allied health majors. (FT) AA/AS; CSU; UC Transfer Limitation: Chemistry (CHEM) 130, 130L and 231, 231L combined: maximum credit, one course (with Lab).

152 Introduction to General Chemistry

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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 152L with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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 the principles of inorganic and physical chemistry in preparation for General Chemistry. Topics include atomic structure, chemical nomenclature, periodicity, chemical equations, stoichiometry, solutions, and gas laws. Emphasis is placed on problem solving and chemical calculations. This course is intended

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for those students majoring in one of the natural sciences, engineering, or related curricula who need to take General Chemistry. (FT) AA/AS; CSU; 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 Pass/No Pass 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 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Chemistry 151. This course is a one-semester laboratory in the principles of inorganic and physical chemistry in preparation for General Chemistry. Topics include chemical measurement, significant figures, laboratory safety, laboratory techniques, chemical reactions and stoichiometry. Emphasis is placed on problem solving, data analysis and chemical calculations. This course is intended for students majoring in one of the natural sciences, engineering or related curricula who need to take General Chemistry. (FT) AA/AS; CSU; 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 Pass/No Pass Option

Prerequisite: Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent and Mathematics 96 with a grade of "C" or better, or equivalent, or Assessment Skill Level M50.

Corequisite: Completion of or concurrent enrollment in Chemistry 200L with a grade of "C" or better, or equivalent.

This is the first course in a two course sequence in general chemistry. Emphasis is placed on the principles and laws of inorganic chemistry, including 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. This course is intended for science majors and all students interested in chemistry. (FT) AA/AS; CSU; UC Transfer Course List.

200L General Chemistry I - Laboratory

6 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in Chemistry 200 with a grade of "C" or better, or equivalent.

This is the first semester laboratory course in a two course sequence in general chemistry. Emphasis is placed on laboratory experiments that illustrate the fundamental principles and laws of chemical behavior and the properties of matter, including quantitative, mathematical problem-solving. Topics include techniques of data analysis, chemical formulas, equations, stoichiometry and maintenance of a laboratory notebook. This course is intended for science majors and all students interested in chemistry. (FT) AA/AS; CSU; UC.

201 General Chemistry II - Lecture

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Chemistry 200 and Chemistry 200L, each with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in Chemistry 201L with a grade of "C" or better, or equivalent.

This course 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 of physical and inorganic chemistry with an emphasis on quantitative, mathematical problem solving. Topics in the course include chemical kinetics, chemical equilibrium, acid base theory, thermochemistry, thermodynamics, electrochemistry, coordination chemistry and nuclear chemistry. The course also includes an introduction to organic chemistry. (FT) AA/AS; CSU; UC.

201L General Chemistry II - Laboratory

6 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in Chemistry 201 with a grade of "C" or better, or equivalent.

This is the second semester laboratory course of a two course sequence in general chemistry. It is intended for students majoring in science or satisfying prerequisites for professional schools. Emphasis is placed on the fundamental principles of physical and inorganic chemistry. Topics include techniques of data analysis, chemical kinetics, chemical equilibrium, acid, base, and salt, thermochemistry, electrochemistry, coordination chemistry. Wherever appropriate and whenever possible, computer skills are introduced and applied to data analysis, laboratory simulations, and computer interfacing with laboratory equipment. (FT) AA/AS; CSU; UC.

231 Organic Chemistry I - Lecture
3 hours lecture, 3 units
Letter Grade or Pass/No Pass 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 Level R6 and W6 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, molecular structure, isomerism, conformational analysis, nomenclature, reaction mechanisms, and synthesis. An emphasis is placed on the reactions of aliphatic compounds such as alkanes, cycloalkanes, alkenes, alkynes, alkyl halides, and alcohols. 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) AA/AS; CSU; 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 Pass/No Pass 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 105 or English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels W6 and R6.

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 measurement 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) AA/AS; CSU; 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 Pass/No Pass 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. The topics covered include, but are not limited to, molecular structure, molecular behavior, nomenclature, reaction mechanisms, and synthesis. An emphasis is placed on the reactions of selected classes of organic compounds, such as alcohols, ethers, aldehydes,

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ketones, carboxylic acids and their derivatives, amines, benzenoid and heterocyclic aromatics and their derivatives, carbohydrates, lipids, amino acids their bio-organic compounds. 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. This course 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. (FT) AA/AS; CSU; UC.

233L Organic Chemistry II - Laboratory
6 hours lab, 2 units
Letter Grade or Pass/No Pass 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. 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. This course 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. (FT) AA/AS; CSU; UC.

251 Analytical Chemistry

3 hours lecture, 6 hours lab, 5 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

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 206. 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, English 43 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4, W4 and M20.

This course provides an overview of appropriate record keeping and business practices necessary to effectively run a daycare business. Topics include 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. This course is intended for students planning to operate a childcare business as well as currently practicing child development professionals. (FT) AA/AS.

101 Human Growth and Development

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course examines the interrelationship among the physical, cognitive, and psychosocial growth and development of individuals from conception through adolescence. It emphasizes positive relationships with family members, peers, and other significant individuals. Topics include theories and philosophies of human development and cross-cultural patterns. Students observe children and educational programs. 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) AA/AS; CSU; UC Transfer Limitation: Child Development (CHIL) 101 and 103 combined: maximum credit, one course.

103 Lifespan Growth and Development

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is a study of human development from conception to death. Topics include 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. This course is intended for child development professionals or anyone interested in the study of human development. (FT) AA/AS; CSU; 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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

121 Creative Art

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course introduces the creative process and experience in early childhood education programs. Emphasis is placed on creative development, 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. This course is intended for students majoring in Child Development or others interested in the creative process in early childhood education. (FT) AA/AS; CSU.

131 Curriculum: Language/Science

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 133 or 135.

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 is designed for Child Development majors and may be used to partially fulfill requirements for Title 22 licensing and child development permits. (FT) AA/AS; CSU.

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133 Language and Literature**3 hours lecture, 3 units
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.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 131.

This course introduces the function of language and literature in early childhood educational programs. It emphasizes the development of language and literature curriculum activities, basic teaching skills, guidance techniques, equipment and materials, and opportunities to assist learning among English Language Learners. 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) AA/AS; CSU.

135 Curriculum: Science and Math**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Child Development 131.

This course examines the development and significance of science and math concepts for young children. Emphasis is placed on the planning and implementation of developmentally appropriate science and math activities, basic teaching skills, guidance techniques, equipment and materials for various age and maturity levels. This course is designed for all students interested in working with children and may be used for licensing and child development permits. (FT) AA/AS; CSU.

141 The Child, Family and Community**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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 childcare centers requirements. This course is designed for all students interested in child development and multi-cultural and behavioral studies. (FT) AA/AS; CSU.

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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

153 Techniques of Teaching Using the Reggio Emilia Approach**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

160 Observing and Understanding Children
1 hour lecture, 3 hours lab, 2 units
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.

Limitation on Enrollment: Health and Safety. TB clearance within the last year is required.

This course focuses on behavioral patterns and growth processes of young children through observations and supervised participation in the campus Child Development Center. The course emphasizes the principles of observing, interpreting, and guiding children's behavior. Topics include 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) AA/AS; CSU.

161 Observations and Issues in Child Development

1 hour lecture, 3 hours lab, 2 units
Grade Only

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent, or Assessment Skills Level R4 and W4.

Limitation on Enrollment: Health and Safety. TB clearance within the last year is required.

This course explores current issues in child development and how these issues influence both the child and family. The course emphasizes effective communication skills, positive guidance techniques, kindergarten readiness skills, and appropriate classroom activities. It includes supervised participation in the campus Child Development Center, and it fulfills the specialization requirements for the State of California Master Teacher Permit when taken with CHIL 160 and 162 or CHIL 160 and 188. (FT) AA/AS; CSU.

162 Observing and Guiding Child Behavior
3 hours lecture, 3 units
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 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) AA/AS; CSU.

165 Children With Special Needs
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is a survey of education for children with special needs. Emphasis is placed on the types and characteristics of special needs as well as on the methods for integrating children with special needs into inclusive educational settings. Topics include the history of special education legislation, current educational compliance requirements and community resources available to parents, teachers and other professionals. This course is designed for professionals and parents who work with children with special needs. This course partially fulfills the specialization requirement for the State of California Master Teacher Permit. (FT) AA/AS; CSU.

166 Special Needs Curriculum
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is an in-depth study of curriculum for children with special needs. Emphasis is placed on the concept of full inclusion of children with special needs into school/community settings and on related educational strategies and adaptive equipment. This course is designed for parents, teachers, nurses, social workers, and paraprofessionals employed in schools, day care centers, and child development programs. This course partially meets the specialization

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requirements for the Master Teacher Permit. (FT) AA/AS; CSU.

175 Infant-Toddler Growth and Development
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

176 Principles of Infant/Toddler Caregiving
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is a study of the principles of infant/toddler care, including all aspects of infant and toddler development. Students learn to plan appropriate indoor and outdoor curriculum and environments. Topics include health, nutrition and safety for the very young as well as licensing regulations, staff interactions, parent participation and program development. This course is for child development majors and partially fulfills master teacher permit specializations. (FT) AA/AS; CSU.

180 Nutrition, Health and Safety for Children
3 hours lecture, 3 units
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 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) AA/AS; CSU.

188 Violence in the Lives of Children and Families

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course examines the causes and effects of violence in the lives of children and families. Emphasis is placed on the skills needed for conflict resolution and on the environmental set-ups and curricula that promote peaceful, cooperative and nonviolent play and interactions. Information about the history, current legislation, reporting responsibilities, and identification of abuse is also given. This course is designed for parents, teachers, nurses, and other child care professionals to learn strategies for understanding and responding to the various forms of stress and violence that affect children today. (FT) AA/AS; CSU.

202 Administration of Early Childhood Programs

3 hours lecture, 3 units
Grade Only

Prerequisite: Child Development 101 and 141, each with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Child Development 111 and 121 or 131, with a grade of "C" or better, or equivalent.

This course is an overview of early childhood education program administration. Topics include 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. This course is designed for anyone seeking a position as a site supervisor or center director. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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. AA/AS.

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. AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

291 Child Development Lab Practicum

**3-12 hours lab, 1-4 units
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; 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.

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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. (FT) AA/AS; CSU.

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 R4 and W4.

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) AA/AS; CSU.

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 R4 and W4.

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) AA/AS; CSU.

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) AA/AS; CSU.

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 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 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) AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Communication Studies (COMS)

99 Voice and Diction for Non-Native Speakers of English

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4 or English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 99.

The course provides instruction and practice in American English vocal standards and communication skills. Topics include 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. This course is intended for non-native speakers of English who want to learn and practice American English vocal standards. (FT) AA/AS.

103 Oral Communication

3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 103.

This course is an introduction to speechmaking. Emphasis is placed on the skills required to organize and deliver a variety of types of speeches. Students give several speeches with and without visual aids. This course is designed for Communication Studies majors and for anyone interested in honing their speech skills. (FT) AA/AS; CSU; UC.

135 Interpersonal Communication

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 135.

This course is a study of effective interpersonal skill development and practice in oral and written communication. Emphasis is placed on the personal, situational, and cultural influences of interaction. Topics include human perception, interpersonal dynamics, listening, conflict management, and verbal and non verbal symbol systems. The course is intended for students who communicate in one-on-one situations, including communication, fashion, allied health, public service and business majors. This course is also intended for students who are interested in further development of effective interpersonal skills in work, volunteer, and personal environments. (FT) AA/AS; CSU; UC.

160 Argumentation

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Communication Studies 103 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 160.

This course is a study of argumentation. Emphasis is placed on research, analysis of propositions, testing of evidence, construction of the brief, and preparation for presentation of constructive and refutation cases. This course is designed for communications studies majors and anyone interested in argumentation and debate. (FT) AA/AS; CSU; UC.

180 Intercultural Communication

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Speech Communications 180.

This course is a study of communication between members of differing cultures. Emphasis is placed on the culture and communication, including social psychological variables, verbal and nonverbal

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language systems, cross-cultural communication breakdowns and conflict resolution. Students apply the principles of intercultural communication to contemporary cross-cultural and global communication issues. This course is designed for students majoring in communication studies, international business, business, education, social sciences, nursing, mass communications, and all fields of study that require cross-cultural contact and/or awareness of cultural distinctions. (FT) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Computer and Information Sciences (CISC)

71 MicroController Programming 3 hours lecture, 3 hours lab, 4 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. This course is designed for students who want to increase their understanding of microcontrollers and embedded programming. (FT) AA/AS.

181 Principles of Information Systems 3 hours lecture, 3 hours lab, 4 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

186 Visual Basic Programming 3 hours lecture, 3 hours lab, 4 units Grade Only

Advisory: English 49 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) AA/AS; CSU; UC.

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 49 and Mathematics 46, 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) AA/AS; CSU; UC Transfer Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to 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) AA/AS; CSU; UC Transfer Limitation: Computer and Information Sciences (CISC) 189A and 189B are equal to 190. No credit for 189A or 189B if taken after 190.

190 Java Programming

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 49 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) AA/AS; CSU; UC.

192 C/C++ Programming

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Advisory: English 49 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) AA/AS; CSU; UC.

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) AA/AS; CSU; UC.

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 R6 and W6. 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) AA/AS; CSU; UC.

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. AA/AS; CSU.

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. AA/AS; CSU.

This discipline may offer specialized instruction in one or more of the following areas: Supervised Tutoring (044), Experimental Topics (265),

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Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 206. 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 **0.75 hour lecture, 0.75 hour lab, 1 unit** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Office Information Systems 101, 102, or 164.

This course introduces students to basic keyboarding skills and document processing activities. Topics include keyboarding and basic word processing. Students practice keying by touch using word processing software. (FT) AA/AS; CSU.

114 Introduction to Microsoft Windows **0.75 hours lecture, 0.75 hours lab, 1 unit** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Computer Business Technology 101 or Computer Business Technology 103, each with a grade of "C" or better, or equivalent. This course is an overview of the features of the Microsoft Windows operating system and environment. Students learn to use and customize the start menu; work with Windows accessory programs; manage storage drives; work with folders and files; create shortcuts; and customize the desktop. This course is designed for students intending to use Microsoft Windows for academic, professional and/or personal purposes. This course may be repeated three times to update skills as technologies change. (FT) AA/AS; CSU.

120 Beginning Microsoft Word **1.5 hours lecture, 1.5 hours lab, 2 units** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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) AA/AS; CSU.

122 Intermediate Microsoft Word **2 hours lecture, 3 hours lab, 3 units** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101, 103, and 120, each with a grade of "C" or better, or equivalent.

This course introduces students to intermediate-level text editing features in Microsoft Word. Topics include envelopes and labels, mail merge, sorting, styles, templates, wizards, macros, document notations, tables of contents and indexes, online forms, columns, drawing tools, and Web page basics. (FT) AA/AS; CSU.

127 Introduction to PowerPoint **1.5 hours lecture, 1.5 hours lab, 2 units** **Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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. AA/AS; CSU.

128 Comprehensive Presentations with PowerPoint

**2 hours lecture, 3 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 and W5; Computer Business Technology 101 or 102 or 103 and 114 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 126.

This course is a hands-on study of the skills required to plan, develop, and deliver PowerPoint presentations on a computer and on the Web. Emphasis is placed on adding and modifying text, graphics, sound, video, and effects, such as transitions and custom slide animations. Topics also include adding, modifying and creating templates. Students learn to add, import and format data for tables and charts, to customize presentations, add interactivity, and integrate PowerPoint with other applications. This course is intended for all students and professionals who wish to acquire skills in digital presentations. This course may be repeated three times to update skills in using new versions. (FT) AA/AS; CSU.

140 Microsoft Excel

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Computer Business Technology 101, 103, and 114, 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 140A and 140B.

This course covers the fundamentals of Microsoft Excel and is intended for students without any prior experience with this program. Topics include creating and formatting worksheets and charts, managing a workbook, and using productivity features to enter functions and analyze data. (FT) AA/AS; CSU.

143 Intermediate Microsoft Excel

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels

R5 and W5; Computer Business Technology 101, 114, and 140 each with a grade of "C" or better, or equivalent.

This course covers intermediate-level functions and projects using Microsoft Excel. Topics include charts, pivot tables, functions, formulas, data validation, autofilters, macros, visual basic for applications, and collaboration with other programs. This course is intended for students majoring in a computer business technology field or anyone interested in expanding knowledge and competency with Microsoft Excel. (FT) AA/AS; CSU.

152 Beginning Microsoft Access

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101 and 114, each with a grade of "C" or better, or equivalent.

This course introduces students to the fundamentals of Microsoft Access. Topics include creating, modifying, and sorting database tables; creating queries; creating and enhancing custom forms and reports; modifying the database structure; and importing and exporting data to other programs. This course is intended for students majoring in a computer business technology field or anyone interested in learning the fundamental functions of Microsoft Access. (FT) AA/AS; CSU.

153 Database Development with Access

**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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;

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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) AA/AS; CSU.

161 Learning the Internet

**0.75 hours lecture, 0.75 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 103 and 114, each with a grade of "C" or better, or equivalent.

This course introduces students to the Internet. Students receive hands-on practice using a web browser 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, and conducting business on the Internet. This course is intended for students majoring in a variety of applied computer fields. This course may be repeated three times to update skills as browser technologies change. (FT) AA/AS; CSU.

162 Web Page Creation

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Computer Business Technology 114 and Computer Business Technology 161, each with a grade of "C" or better, or equivalent. This course provides a hands-on approach to creating Web pages for an Intranet or Web site. Students learn to use Hypertext Markup Language (HTML), wizards and templates to create Web pages with links and graphics and Multimedia enhancements. Students will use basic Cascading Style Sheet (CSS). This course is intended for students, majoring in a variety of fields, and professionals who need a basic knowledge of HTML. This course may be repeated three times to update skills as Web page technologies change. (FT) AA/AS; CSU.

165 Webpage Creation with Dreamweaver

**2.5 hours lecture, 1.5 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment

Skill Level R5 and W5; Computer Business Technology 101, Computer Business Technology 114 and Computer Business Technology 161, each with a grade of "C" or better, or equivalent.

This course is a hands-on study of webpage creation. Students use a HyperText Markup Language (HTML) editor to create HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Web development skills include adding behaviors, using templates and library items, and embedding hypertext links, video, graphic, and multimedia files. This course is designed for students and professionals acquiring or updating skills in creating and editing simple webpages. This course may be repeated three times to update skills as Web technologies change. (FT) AA/AS; CSU.

167 Webpage Creation Using Microsoft Expression Web

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

This course teaches students how to create websites using Microsoft Expression Web. Students use a hands-on approach to design, analyze, create, manage, and publish websites on the Internet for personal or business use. Topics include formatting text using Hypertext Markup Language (HTML) and Extensible Hypertext Markup Language (XHTML) and Cascading Style Sheets (CSS). Other topics include images, hyperlinks, templates, tables, forms, and page layout and design. This course is intended for students majoring in Computer Business Technology or others interested in web design. (FT) AA/AS; CSU.

170 Desktop Publishing

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 101 and 114, each with a grade of "C" or better, or equivalent.

Students in this course learn the features of desktop publishing software by designing and creating professional quality publications for business and home. Topics include text and table frames, WordArt, images, graphic accents, and Web page functions. This course is intended for office support staff, administrative assistants, small business owners,

and others who require a basic knowledge of desktop publishing. This course may be repeated three times to update skills as desktop publishing technologies change. (FT) AA/AS; CSU.

180 Microsoft Office

**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Computer Business Technology 101, 114 and 161, each with a grade of "C" or better, or equivalent.

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 includes instruction on how to seamlessly integrate data within and between the programs in an efficient manner. This course is intended for students interested in learning a business software suite. This course may be repeated three times to update skills as Microsoft Office Professional Suite technologies change. (FT) AA/AS; CSU.

200 Office Telecommunications

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course provides 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 include basic communication theory, fundamentals of telephone systems, and components of data communications systems. This course is intended for students interested in the selection or use of office telecommunications systems. (FT) AA/AS; CSU.

205 Records Management

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Computer Business Technology 101 with a grade of "C" or better, or equivalent.

This course covers the fundamentals of traditional and electronic records management. Topics include indexing and the major filing methods; selection of systems, equipment, and supplies; design, control, and maintenance of inactive records; and the role of records management and the records manager in the information industry. This course is designed to prepare students for employment in the field of Records Information Management (RIM) and for students interested in records management. (FT) AA/AS; CSU.

210 Computers in Business

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

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. AA/AS; CSU.

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

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page 206. 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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

Dance (DANC)

135 Jazz Dance 1.5 - 3 hours lab, 0.5 - 1 unit Letter Grade or Pass/No Pass Option

Jazz Dance is a course which explores a variety of jazz dance techniques focusing on the development of coordination, flexibility, balance, strength, correct body alignment and rhythmic perception. Dance combinations are performed to demonstrate technical ability at all skill levels. Jazz Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 135, may be taken four times for credit. (FT) AA/AS; CSU; UC.

140 Modern Dance I 1.5 - 3 hours lab, 0.5 - 1 unit Letter Grade or Pass/No Pass Option

Modern Dance is a course that explores the fundamental concepts and techniques of modern dance including floor stretch, center work, locomotor

sequences and dance combinations. The student demonstrates, defines and performs flexibility, coordination, rhythmic and dynamic perception, control and strength. The class critiques, discusses and analyzes line, design, technique, choreography and dynamic qualities through lectures, videotapes and concert critiques. Modern Dance fulfills lower division requirements for dance majors. This course, in combination with Physical Education 140, may be taken four times for credit. (FT) AA/AS; CSU; UC.

Digital Film Production (DFLM)

101 Introduction to Film 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

102 The American Cinema 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

Diesel Technology (DIES)

90 Forklift Operation

**0.5 hours lecture, 1.5 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course covers the theory, principles, and operation of forklifts. Topics include forklift safety, use and operation, load handling, preventive maintenance and upkeep, problem identification. This course is designed to prepare students for the Occupational Safety and Health Administration (OSHA) Forklift Certification. (FT) AA/AS.

100 Introduction to Diesel Technology

**2 hours lecture, 2 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M30.

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 measuring tools. Students also receive an overview of the Miramar College Diesel Technology program. This course is intended for students majoring in Diesel Technology or those interested in the industry. (FT) AA/AS; CSU.

101 Heavy Duty Truck, Advanced Transportation, Equipment Preventive Maintenance and Inspections

**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.

This course covers the fundamental skills necessary for preventive maintenance on trucks and other heavy-duty equipment. Students learn to perform inspection and maintenance procedures on heavy duty trucks, alternative fueled trucks, heavy equipment. Topics include theory of maintenance practices, industry related Material Safety Data

Sheets (MSDS) and hazardous materials (HAZMAT) documentation, California Biannual Inspection of Terminal (B.I.T.), heavy-duty shop tools and equipment usage, and service literature usage. This course is designed for students interested in the commercial diesel and alternative fuel industry. (FT) AA/AS; CSU.

105 Measuring Tools and Applied Mathematics

**1 hour lecture, 3 hours lab, 2 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Diesel Technology 110 or Diesel Technology 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 service industry. This course is intended for students majoring in Diesel Technology. (FT) AA/AS; CSU.

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. Topics include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. This course is designed for students who intend to develop foundational skills applicable to the diesel repair industry. (FT) AA/AS; CSU.

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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. Topics include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. This course is designed for students who intend to develop foundational skills applicable to the diesel repair industry. (FT) AA/AS; CSU.

123 Diesel Engines C**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.

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. This course is designed for students who intend to develop foundational skills applicable to the diesel repair industry. (FT) AA/AS; CSU.

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.

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 Cummins diesel engines. Topics include theory of operation, construction and application, how to use diesel repair shop equipment and tools, and dynamometer performance testing. This course is designed for students who intend to develop foundational

skills applicable to the diesel repair industry. (FT) AA/AS; CSU.

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 previous credit for Diesel Technology 110 or 121.

Students learn the fundamental skills necessary to perform major overhaul operations on Detroit Diesel engines. Topics include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. This course is designed for students who have prior experience in the diesel repair industry. (FT) AA/AS; CSU.

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 previous credit for Diesel Technology 120, 122 or 201A.

Students learn the fundamental skills necessary to perform major overhaul operations on Caterpillar diesel engines. Topics include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. This course is designed for students who have prior experience in the diesel repair industry. (FT) AA/AS; CSU.

128 Diesel Engines III**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 previous credit for Diesel Technology 124.

Students learn the fundamental skills necessary to perform major overhaul operations on Cummins diesel engines. Topics include theory of operation, construction and application, and how to use diesel repair shop equipment and tools. This course is designed for students who have prior experience in the diesel repair industry. (FT) AA/AS; CSU.

131 Alternative-Fueled Engine Overhaul
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.

This course covers the fundamental skills necessary to perform major overhaul operations on alternative-fueled engines. Topics include theory of operation, construction and application, and use of repair shop tools and equipment associated with large bore alternative-fueled engines. This course is designed for students who have prior experience in the diesel industry. (FT) AA/AS; CSU.

135 Applied Failure Analysis
3 hours lecture, 3 units
Grade Only

This course introduces students to the fundamental principles involved in failure analysis of heavy duty diesel engine components. Students also learn problem solving techniques based on basic metallurgy concepts, different types of metals, metal forming processes, analysis of fractures, and identification of component wear characteristics. This course is designed for students interested in the commercial diesel and alternative fuel industry. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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.

Advisory: English 48, English 49 and Mathematics 38, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M30.

Limitation on Enrollment: This course is not open to students with previous credit for Diesel Technology 140 or Diesel Technology 214.

This course covers the theory, laboratory practice, principles of operation, overhaul, and servicing of heavy duty transportation and equipment air brake systems. Topics include servo type brakes,

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UC = University of California Applicable

foundation type brakes, S-cam brakes, wedge brakes, disc brakes, air compressors, air reservoir systems, piping, control valves, switches, anti-lock, brake service procedurers, reuseability guidelines, and actuators used in heavy duty transportation and equipment air systems. This course is intended for students majoring in Diesel Technology. (FT) AA/AS; CSU.

160 Heavy Duty Manual 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 previous credit for Diesel Technology 130 or 211A.

This course covers the theory, laboratory practice, principles of operation, overhaul, maintenance, and troubleshooting of heavy duty manual transmissions for heavy duty transportation (HDT) vehicles using accepted industry standards and procedures. Topics include transmission types, powerflow, disassembly, component inspection, reassembly, re-useability guidelines, air shift systems, troubleshooting procedures, and gear ratio calculations for manual transmissions used on Class 6 through Class 8 trucks. This course is designed for students majoring in diesel technology or those interested in the heavy duty transportation industry. (FT) AA/AS; CSU.

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.

This course covers the theory, laboratory practice, principles of operation, overhaul, maintenance, and troubleshooting of heavy duty automatic transmissions for heavy duty transportation (HDT) vehicles using accepted industry standards and procedures. Topics include transmission types and powerflow, torque converter types and powerflow, disassembly, component inspection, reassembly, re-useability guidelines, transmission shift control systems, troubleshooting procedures, and planetary gear ratio calculations for automatic transmissions used on Class 6 through Class 8 trucks. This course is designed for students majoring in diesel technology or those interested in the heavy duty transportation industry. (FT) AA/AS; CSU.

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.

This course covers the theory, laboratory practice, principles of operation, overhaul, maintenance, and troubleshooting of heavy duty drive axles for heavy duty transportation (HDT) vehicles using accepted industry standards and procedures. Topics include drive axle types, powerflow, disassembly, component inspection, reassembly, re-useability guidelines, troubleshooting procedures, and truck specifications for drive axles used on Class 6 through Class 8 trucks. This course is designed for students majoring in diesel technology or those interested in the heavy duty transportation industry. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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 course covers the theory, laboratory practice, principles of operation, servicing, overhaul, and maintenance for Heavy Duty Transportation (HDT) steering, suspension, and driveline systems used on Class 6 through Class 8 trucks. Topics include caster, camber, toe-in, basic alignment, steering systems, driveline systems, and suspension systems used on commercial trucks. Students learn common industry

methods to perform vibration analysis, steering, suspension, and driveline system adjustments and repairs. This course is designed for students majoring in diesel technology or those interested in the off-highway heavy equipment industry. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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.

This course covers the principles and practices in the operation and servicing of heavy equipment brakes, final drive systems, and steering systems. This course is designed for students interested in the off-highway diesel equipment industry. (FT) AA/AS; CSU.

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.

This course covers the fundamentals of operation, wear analysis, preventive maintenance, and major service of track-type undercarriages. This course is designed for students interested in the off-highway diesel equipment industry. (FT) AA/AS; CSU.

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 course covers the theory, laboratory practice, principles of operation, overhaul, maintenance, and troubleshooting of heavy equipment power-shift transmissions (HET) using accepted industry standards and procedures. Topics include transmission types and powerflow, torque converter types and powerflow, disassembly, component inspection, reassembly, re-useability guidelines, transmission shift control systems, troubleshooting procedures, and planetary gear ratio calculations for automatic transmissions used on off-highway heavy equipment. This course is designed for students majoring in diesel technology or those interested in the off-highway heavy equipment industry. (FT) AA/AS; CSU.

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) AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

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Disability Support Programs and Services (DSPS)

Courses listed under DSPS have been designed for students with disabilities. Additional classes are offered at City and Mesa campuses. See appropriate catalog.

20 Introduction to Accessible Computers 1 hour lecture, 1 unit Pass/No Pass 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. This course may be taken three times for credit. Not applicable to the Associate Degree.

21 Accessible Computing Lab 1.5 - 6 hours lab, 0.5 - 2 units Pass/No Pass

Limitation on Enrollment: This course is not open to students with previous credit for Disability Support Programs and Services 76. This course is 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. This course may be repeated three times with new hardware or software. (FT) Not applicable to the Associate Degree.

40 Individual Assessment and Educational Planning 0.5 hours lecture, 0.5 units Pass/No Pass Only

Limitation on Enrollment: This course is not open to students with previous credit for Disabled Students Programs and Services 50. This course teaches students about their individual learning aptitude as compared to measured academic achievement. Students use standardized achievement and aptitude assessment instruments in accordance with the California Community College Learning Disabilities Eligibility Model to create a learning profile related to community college academic demands. Other topics include individual cognitive processing strengths and weaknesses, compensatory learning strategies, study skills, and disability management. This course is intended for students who believe they may have a learning disability or those interested in exploring

issues related to learning aptitudes. (FT) Not applicable 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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Economics (ECON)

120 Principles of Macroeconomics 3 hours lecture, 3 units Grade Only

Prerequisite: Mathematics 92 or Mathematics 96, each with a grade of "C" or better or equivalent or Assessment Skill Level M45, M50 or higher, or math assessment that verifies Intermediate Algebra competency, or any college level Intermediate Algebra course or higher completed with a grade of "C" or better.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is an introduction to aggregate economic analysis. Topics include market systems, aggregate measures of economic activity, macroeconomic equilibrium, money and financial institutions, monetary and fiscal policy, international economics and economic growth. This course is intended for business majors and all students interested in macroeconomics. (FT) AA/AS; CSU; UC.

121 Principles of Microeconomics 3 hours lecture, 3 units Grade Only

Prerequisite: Mathematics 92 or Mathematics 96, each with a grade of "C" or better or equivalent or Assessment Skill Level M45, M50 or higher or math assessment that verifies Intermediate Algebra competency, or any college level Intermediate Algebra course or higher completed with a grade of "C" or better.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is an introduction to economic analysis of specific decision-making sectors in the economy

(micro analysis). Sectors include households, firms and government. Topics covered include productivity and costs for individual firms, industry types, the labor market, anti-trust issues, income distribution, and environmental externalities. This course is intended for business majors and all students interested in microeconomics. (FT) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Education (EDUC)

100 Tutor Training

**0.5 hours lecture, 1.5 hours lab, 1 unit
Pass/No Pass Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU.

200 Teaching as a Profession

**2 hours lecture, 2 units
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course is a study of the foundations and issues related to effective instruction in reading, writing, science and mathematics. Emphasis is placed on both curriculum and pedagogy. Students also explore current educational career options. This course is designed for students considering teaching as a profession as well as for paraprofessionals and tutors. (FT) AA/AS; CSU; UC.

203 Service Learning for Prospective Teachers

**1 hour lecture, 1 unit
Letter Grade or Pass/No Pass Option**

Limitation on Enrollment: Health and Safety. 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) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Emergency Medical Technician (EMGM)

50 CPR for Health Care Providers

**0.5 hours lecture, 0.5 units
Pass/No Pass Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

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mouth-to-mask ventilation, and automated external defibrillator (AED) use. (FT) AA/AS.

105A Emergency Medical Technician - National Registry

**6 hours lecture, 3 hours lab, 7 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Fire Protection Technology 130 or Emergency Medical Technician 105.

Limitation on Enrollment: Health and Safety. Students must have a current Healthcare Provider Level CPR Card, immunization record, and a current TB test within 6 months of course start.

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 National Registry EMT Cognitive Examination for Emergency Medical Technician. (FT) AA/AS; CSU.

106 Emergency Medical Technician - Defibrillation/Combitude

**0.25 hours lecture, 0.75 hours lab, 0.5 units
Grade Only**

Prerequisite: San Diego County Division of Emergency Medical Services Policy D-320 requirement: Current BLS-C level certification in CPR approved by the American Heart Association or the American Red Cross. This course is not open to students with previous credit for Fire Protection Technology 136.

This course covers all techniques required to perform pre-hospital automated defibrillation of victims of cardiac arrest. Topics include student demonstration of skill proficiency in basic life support, airway management, and identification and management of patients requiring pre-hospital defibrillation. This course is intended for practicing Emergency Medical Technicians or others working in the healthcare field. Students must be employed with an approved Provider Agency in order to receive accreditation from the San Diego County Division of Emergency Medical Services. This course may be repeated as necessary to meet a legally mandated training

requirement as a condition of continued or volunteer employment. (FT) AA/AS; CSU.

142 Special Problems in Field Internship

**9-15 hours lab, 3-5 units
Pass/No Pass Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

296 Individualized Instruction in Emergency Medical Technology

**3 hours lab, 1 unit
Letter Grade or Pass/No Pass Option**

Corequisite: Emergency Medical Technician 105A or Emergency Medical Technician 350.

This course provides supplemental instruction to reinforce achievement of the learning objectives of a course in the same discipline under the supervision of an instructor for 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 students in reaching specific learning objectives. This open entry/open exit course is offered concurrently with designated courses. This course is intended for students currently enrolled in a related course or preparing for a licensing or certification exam and may be repeated as necessary to meet a legally mandated training requirement as a condition of continued paid or volunteer employment. (FT) AA/AS; CSU.

350 Recertification Course for San Diego County EMT

**14 hours lecture, 18 hours lab, 1 unit
Grade Only**

Prerequisite: Emergency Medical Technician 105, 105A or Fire Protection Technology 130, each with a grade of "C" or better, or equivalent EMT certificate.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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 recertify, 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 recertify through San Diego County Emergency Medical Services and/or the National Registry of Emergency Medical Technicians. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. This course is intended for practicing Emergency Medical Technicians. (FT) Not applicable to the Associate Degree.

351 Advanced Cardiac Life Support Inservice
16 total hours lecture, 1 unit
Pass/No Pass Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

16 total hours lecture, 1 unit
Pass/No Pass Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

16 total hours lecture, 1 unit
Pass/No Pass Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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 206. 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.

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The program consists of four levels and the student is assigned a level based on the result of his/her placement test.

The first level, L19, is a combined skills class in a lecture/lab format. Students who successfully complete this course are at the intermediate-low level. Some students at the beginning level may find ESOL 19 difficult. For these students, counselors are available to discuss options and resources, including classes at Continuing Education.

The second and third levels, L20 and L30, are made up of three courses. The grammar-writing component is a six-unit course; the reading and listening/speaking components are three units each.

The fourth level, L40, is a single course in reading and writing. Students who successfully complete ESOL 40 can read and write at an advanced level. They are prepared to take English courses one level below transfer (ENGL 48 & 49).

19 Transitional English for ESOL Students **3 hours lecture, 6 hours lab, 5 Units** **Letter Grade or Pass/No Pass Option**

Advisory: Assessment Skill Level L19. Students are advised to take the ESOL placement test prior to enrollment and perform at level 19.

Limitation on Enrollment: This course is not open to students with credit for English 7 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 Pass/No Pass 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 8 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 Pass/No Pass 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 Pass/No Pass 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
Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 20 and 21, 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 previous credit for English 9 or 6. This course in writing and grammar prepares students to write at the intermediate-high ESOL level. In this course, students learn to write paragraphs, essays 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 will not obscure meaning or distract the reader. Students also read academic texts and apply study skills necessary for success in further academic studies. This course is intended for non-native speakers of English who wish to improve their writing skills. Not applicable to the Associate Degree.

31 Reading for Non-native Speakers of English II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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 Pass/No Pass 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 Pass/No Pass 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 10 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 48 and English 49. (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.

35 Vocational English

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent.

This course prepares students for successful writing in a variety of career/technical subject areas.

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It is designed for students seeking a vocational certificate rather than an associate degree or transfer to a university. The course emphasizes writing for vocational careers. Writing products include memos, faxes, emails, resumes, letters, and research reports. Students develop listening and reading skills that are necessary for success in vocational careers. (FT) Not applicable to the Associate Degree.

Reading

42 College Reading and Study Skills I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: Assessment Skill Level R3. This course is designed for native speakers of English. ESL students should enroll in English for Speakers of Other Languages 19, 20, 21, 22, 30, 31, 32 or 40 as recommended by the placement test for non-native English speakers.

Limitation on Enrollment: This course is not open to students with previous credit with a "C" or better in English 265B or English 47A.

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 by 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) Not applicable to the Associate Degree.

48 College Reading and Study Skills II

(Formerly English 56)

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent or Assessment Skill Level L40 or English 42 with a grade of "C" or better, or equivalent or Assessment Skill Level R4.

Limitation on Enrollment: This course is not open to students with previous credit with a "C" or better in English 265B or English 47A.

Limitation on Enrollment: This course is not open to students with previous credit for English 56.

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 the Associate Degree.

Writing

43 English Review

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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 English for Speakers of Other Languages 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 with a "C" or better in English 265B or English 47A.

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 basic compositions (which may include short essays). Students also read texts as the basis for writing and develop critical thinking skills necessary for success in college courses. (FT) Not applicable to the Associate Degree.

49 Basic Composition

(Formerly English 51)

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English for Speakers of Other Languages 40 with a grade of "C" or better, or equivalent or Assessment Skill Level L40 or 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 previous credit with a "C" or better in English 265B or English 47A.

Limitation on Enrollment: This course is not open to students with previous credit for English 51.

This course is designed to prepare students to write successfully at the transfer level. In this course students practice the writing process in the production and editing of essays. Students also review grammatical and mechanical structures as needed to support the successful expression of meaning. In addition, students read and think critically using a variety of texts which are the basis for writing and class discussion. A District-wide, timed-writing examination, holistically graded by English instructors, is part of the final course grade. Designated sections of this course may be taught from a specific cultural perspective and are cross-listed under Black Studies and Chicano Studies in the class schedule. (FT) Not applicable to the Associate Degree.

English Courses

(Also see *Humanities*, page 319)

101 Reading and Composition

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49 or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5 or English 37A, 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. 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) AA/AS; CSU; UC.

105 Composition and Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49, or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5 or English 64, English 37A or English 37B, each 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) AA/AS; CSU; UC.

205 Critical Thinking and Intermediate Composition

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

208 Introduction to Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49, or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6 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

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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) AA/AS; CSU; UC.

209 Literary Approaches to Film

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49 or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6 or English 105 with a grade of "C" or better, or equivalent.

This course is a study of film from a literary perspective. Emphasis is placed on reading and writing about film, film analysis, and cultural impact. Topics include film composition, genre, and literary criticism. This course is designed for English majors and all students interested in literature and/or film. (FT) AA/AS; CSU; UC.

210 American Literature I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

211 American Literature II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

215 English Literature I: 800-1799

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

216 English Literature II: 1800-Present

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; or English 105 with a grade of "C" or better, or equivalent.

This course offers a survey of British literature from the Romantic period to the 20th century (approximately 1800 to the present) including representative works from the pre-Romantic and Romantic periods, the Victorian and later Victorian period, and the Modern period. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students critically analyze, in

essays and research papers, authors, specific works, and other topics as assigned. This course satisfies requirements for the major in English as well as general education and humanities requirements. (FT) AA/AS; CSU; UC.

220 Masterpieces of World Literature I: 1500 BCE - 1600 CE

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49 or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6 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 2150 BCE–1600 CE), including the established classic literature of the Near East, Tibet, 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. This course is intended for English majors and anyone interested in World Literature. (FT) AA/AS; CSU; UC.

221 Masterpieces of World Literature II: 1600 - Present

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49 or English 47A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6 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. This course is intended for English majors and anyone interested in World Literature. (FT) AA/AS; CSU; UC.

230 Asian American Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

237 Women in Literature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

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249 Introduction to Creative Writing
3 hours lecture, 3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

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 206. 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 Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

**Fire Protection
 Technology (FIPT)**

50 Community Emergency Response Team Training
2 total hours lecture, 1.5 units
Letter Grade or Pass/No Pass Option

This course provides students with the beginning skills needed to respond to community disasters when emergency services are not immediately available. Topics include disaster preparedness, fire safety, medical operations, light search and rescue, survivor trauma, and terrorist incidents. This course may be repeated as necessary to develop increased skill proficiency. This class is intended for students who would like to prepare for natural and man made disasters. (FT) AA/AS.

63 Personal Watercraft Operations
1 hour lecture, 1.5 hours lab, 1 unit
Grade Only

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.
Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 and W5.

Limitation on Enrollment: Health and Safety. Students must be sponsored by a lifeguard agency. This course is not open to students with previous credit for Fire Protection Technology 163.

This course trains open-water lifeguards in the operation and crew responsibilities of the personal water craft (PWC). Topics include boating law, safety, technology, maintenance, and operation. This course is designed for qualified open-water lifeguards only. (FT) AA/AS.

100D Candidate Physical Ability Test Preparation
1 hour lecture, 3 hours lab, 1.5 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course assists students in preparing for the Candidate Physical Ability Test (CPAT), Biddle, and other firefighter physical ability examinations. Topics include the principles of exercise, various kinds of training programs, and task-specific exercise training.

This course is intended for students preparing to enter a firefighter academy. This course may be taken up to four times. Successive repetitions of the course are intended to further develop CPAT-targeted physical fitness and skills. (FT) AA/AS; CSU.

101 Fire Protection Organization

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 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. This course is intended for students majoring in Fire Technology or anyone interested in fire protection. (FT) AA/AS; CSU.

102 Fire Prevention Technology

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

103 Fire Protection Equipment and Systems

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

104 Building Construction for Fire Protection

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

105 Fire Behavior and Combustion

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

106 Truck Company Operations

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

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equipment, personnel requirements, and truck company responsibilities that relate to the strategies, tactics, and specialized skills required for truck company operations. (FT) AA/AS; CSU.

107 Fire Fighting Tactics and Strategy
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

109 Fire Service Hydraulics
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, 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) AA/AS; CSU.

110 Wildland Fire Control
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

111 Fire Apparatus and Equipment
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

115 Low Angle Rope Rescue
1.5 hours lab, 0.5 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 or W5.

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 needed 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. This course is intended for firefighters, lifeguards, and other emergency response personnel. (FT) AA/AS; CSU.

120 Firefighter Safety and Survival
3 hours lecture, 3 units
Grade Only

This course provides students with the basic principles and history related to the national firefighter life safety initiatives, with a focus on the need for cultural and behavior change throughout the emergency services. Topics include assessment of fire dangers, common fire situations, risk abatement, personal preparation for unforeseen fire emergencies, roles and responsibilities in educating the public on fire safety, and development of a survival attitude. Students learn problem-solving techniques for increased situational awareness and self-reliance in an emergency. This course is intended for students majoring in Fire Technology, practicing firefighters and other emergency service personnel, or anyone with an interest in fire safety. (FT) AA/AS; CSU.

121 Vertical Rescue**16 total hours lecture, 24 total hours lab, 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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 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) AA/AS; CSU.

150A Introduction to Fire Suppression and Maintenance Manipulative Tasks (Beginning)
**4.5 hours lab, 1.5 units
Grade Only**

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 100A or Fire Protection Technology 100A.

This course introduces the applied operation and maintenance of basic rescue and fire suppression apparatus and equipment. Topics include ropes, ladders, and other equipment; forcible entry techniques; search and rescue; and physical fitness training. This course is intended for students majoring in the field of fire technology or those interested in a career in the fire service. (FT) AA/AS; CSU.

150B Introduction to Fire Suppression and Maintenance Manipulative Tasks (Intermediate)**4.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Fire Protection Technology 150A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Technology 100B or Fire Protection Technology 100B.

This course provides intermediate-level instruction in the operation and maintenance of fire service equipment. Topics include extinguishers and protective equipment, hose, nozzles, fittings, hose evolutions, fire service ladders, and salvage and overhaul procedures. The course is designed 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. This course is intended for students majoring in the field of fire technology or those interested in a career in the fire service. (FT) AA/AS; CSU.

150C Introduction to Fire Suppression and Maintenance Manipulative Tasks (Advanced)
**4.5 hours lab, 1.5 units
Grade Only**

Prerequisite: Fire Protection Technology 150B 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 100C or Fire Protection Technology 100C.

This course provides advanced instruction in the operation and maintenance of fire service equipment. Topics include extinguishers and protective equipment, hose, nozzles, fittings, hose evolutions, fire service ladders, and salvage and overhaul procedures. This course is designed at an advanced level to facilitate students' qualification for the manipulative training portion of Firefighter I as specified by the California Fire Service Training and Education Division of the State Fire Marshal's Office. This course is intended for students majoring in the field of fire technology or those interested in a career in the fire service. (FT) AA/AS; CSU.

160 Introduction to Open Water Lifeguarding
**2 hours lecture, 3 hours lab, 3 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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,

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and legal issues. The content of the course follows United States Lifesaving Association standards. This course is intended for students currently employed or seeking employment as open water lifeguards. (FT) AA/AS; CSU.

162 Seamanship - Rescue Boat Handling
16 total hours lecture,
24 total hours lab, 1 unit
Grade Only

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

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) AA/AS; CSU.

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) AA/AS; CSU.

168 Lifeguard Beach Management
3.5 hours lecture, 3.5 units
Grade Only

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.

This advanced course provides lifeguard beach management training for those aspiring to supervise or act as lead ocean lifeguard personnel. Topics include resource and equipment deployment strategies, water observation and beach coverage systems and methods, and lifeguard resource and personnel coordination. (FT) AA/AS; CSU.

200A Fire Command IA
40 Hours lecture, 2 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous 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. It provides an in-depth analysis of the principles of fire control including utilization of personnel and equipment, fire problem pre-planning, and the use of extinguishing agents on the fire ground. Other topics include a review of fire chemistry, methods of fire attack, and basic firefighting tactics and strategy. This course is intended for practicing firefighters and others interested in firefighting command and control. (FT) AA/AS; CSU.

200B Fire Command IB
40 hours lecture, 2 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. Topics include identification and hazard mitigation, decontamination, protective clothing, environmental concerns, and legal issues. This course is intended for practicing firefighters or others interested in firefighting command and control. (FT) AA/AS; CSU.

200C Fire Command 1C

**28 total hours lecture,
12 total hours lab, 1.5 units
Grade Only**

Prerequisite: Fire Protection Technology 200A and 310A each with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, 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) AA/AS; CSU.

201 Fire Management I

**40 total hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

202A Fire Prevention IA

**40 total hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

202B Fire Prevention IB

**40 total hours lecture, 2 units
Grade Only**

Prerequisite: Fire Protection Technology 202A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

202C Fire Prevention IC

**1.75 hours lecture, 0.75 hours lab, 2 units
Grade Only**

Prerequisite: Fire Protection Technology 202B with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU.

203A Fire Investigation IA

**28 hours lecture, 12 hours lab, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Protection Technology 224 or Fire Science 224.

This course introduces students to arson investigation. Topics include fire causes, recognizing

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and preserving evidence, interviewing witnesses and suspects, and giving court testimony. This course is part of the California State Fire Academy curriculum and satisfies the National Fire Protection Association standards for Fire Officer I. (FT) AA/AS; CSU.

203B Fire Investigation IB

**40 total hours lecture, 2 units
Grade Only**

Prerequisite: Fire Protection Technology 203A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 244 or Fire Protection Technology 244.

This course expands upon the concepts introduced in Fire Investigation IA. Topics include investigative report writing, interviewing and interrogation techniques, evidence collection and preservation procedures, and flame spread characteristics within buildings. This course is part of the California State Fire Academy curriculum and satisfies the National Fire Protection Association standards for Fire Officer I. (FT) AA/AS; CSU.

206A Instructor Training 1A: Psychomotor Lesson Delivery

**40 - 44 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 226, Fire Protection Technology 226 or Fire Protection Technology 204B.

This course provides training for prospective instructors within the fire technology field. Topics include the identification of training needs, course objectives and content, levels of instruction, student objectives, technical lesson plan development, and instructional techniques for technical subjects. This course is required for students preparing for Fire Officer and/or teaching in the State Fire Marshal System. It is intended for practicing firefighters or students majoring in Fire Protection Technology. (FT) AA/AS; CSU.

206B Instructor Training 1B: Cognitive Lesson Delivery

**40 - 44 hours lecture, 2 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Fire Protection Technology 206A 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 226, Fire Protection Technology 226 or Fire Protection Technology 204B.

This California State Fire Academy course prepares students to provide training within their fire departments or to teach community college fire technology courses. Topics include identification of training needs, course objectives and content; establishment of levels of instruction and measurable student objectives; the psychology of learning; and evaluation of effectiveness. This course is required for students preparing for Fire Officer and/or teaching in the State Fire Marshal System. It is intended for practicing firefighters or students majoring in Fire Protection Technology. (FT) AA/AS; CSU.

206C Training Instructor 1C: Instructional Development Techniques

**40 total hours lecture, 2 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Fire Protection Technology 206B with a grade of "C" or better, or equivalent.

This third course in a three-course series provides students the opportunity to develop, receive feedback, and finalize instructional materials as well as deliver two teaching demonstrations. Topics include lesson-plan development, ancillary components, and tests in accordance with the latest concepts in career education. The intent of the class is for students who wish to teach in the CA State Fire Marshal System and work as Training Officers. (FT) AA/AS; CSU.

210A Driver Operator - Driving

**28 total hours lecture,
12 total hours lab, 1.5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 110 or 210A.

This course meets the technical and driving requirements established by the State Fire Marshal 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 pumps. (FT) AA/AS; CSU.

210B Driver Operator - Pumping

**28 total hours lecture,
12 total hours lab, 1.5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 and M20.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 110 or 210B.

This course meets the technical and practical requirements for using fire department pumps. Topics include fire apparatus pumping specifications, testing, design and construction features, performance factors, and field hydraulics. (FT) AA/AS; CSU.

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 basic P.O.S.T. Academy.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Science 243. This course provides training in heavy rescue techniques to fire service and other emergency personnel. Students learn how to use rescue equipment, construct rescue systems, package rescuers, and manage rescue scenes. Topics include the construction and/or use of spar lashing, gin poles, A-frames, tripods, block and tackle systems, cribbing and wedges, and shores. (FT) AA/AS; CSU.

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) AA/AS; CSU.

250 Structure Collapse Technician

**12 total hours lecture,
51 total hours lab, 1.5 units
Grade Only**

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5, 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) AA/AS.

256 Fire Command 2D Planning for Large Scale Disasters

**40 total hours lecture, 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) AA/AS; CSU.

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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. AA/AS; CSU.

300A Commanding Multiple Alarms or Large Fire Suppression Forces, Fire Command 2A**28 total hours lecture,****12 total 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) AA/AS; CSU.

300B Management of Major Hazardous Materials Incidents, Fire Command 2B**28 total hours lecture,****12 total 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) AA/AS; CSU.

300C Fire Command 2C, High Rise Fire Tactics**32 total 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) AA/AS.

300E Fire Command 2E, Wildland Fire Tactics**32 total 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) AA/AS.

301L Fire Company Officer Training**32 total hours lecture,****24 total hours lab, 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) AA/AS.

303A Fire Investigation 2A, Criminal and Legal Procedures**16 total hours 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) AA/AS.

303B Fire Investigation 2B, Field Case Studies **16 total hours 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) AA/AS.

306A Haz Mat Emergency Response First Responder Operational **18 total hours 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) AA/AS.

308A Confined Space Technician **4 total hours lecture,** **36 total hours lab, 1 unit** **Grade Only**

Prerequisite: Fire Protection Technology 243 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

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. This course is intended for practicing fire service officers, lifeguards, or others seeking advanced rescue training. (FT) AA/AS; CSU.

308B Current Special Issues (Confined Space Awareness) **8 total hours lecture, 0.5 units** **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) AA/AS.

309A Emergency Medical Care of the Sick and Injured **16 - 18 hours lecture,** **24 - 46 hours lab, 1.5 units** **Grade Only**

This course trains students in the emergency medical skills needed by public safety personnel. Topics include emergency care procedures, such as examining the victim, observing surroundings,

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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) AA/AS.

310A Basic Incident Command System I-200
16 total hours 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) AA/AS.

310B Intermediate Incident Command System I-300 Standardized Emergency Management System
16-26 total hours lecture, 0.5 - 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) AA/AS.

310C Advanced Incident Command System I-400 Standardized Emergency Management System

16 total hours 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) AA/AS.

310E Strike Team Leader-Engine I-334
16 total hours lecture, 1 unit
Grade Only

This 12 - 16 hour 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) AA/AS.

310F Division/Group Supervisor I-339
16 total hours lecture, 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 total hours lecture,
16 total hours lab, 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) AA/AS.

310H Introduction to Wildland Fire Behavior Calculations S-390

**8 total hours lecture,
16 total hours lab, 0.5 unit
Grade Only**

Prerequisite: Fire Protection Technology 310A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS.

310J Fire Operations in the Urban Interface S-215

**8 total hours lecture,
24 total hours lab, 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) AA/AS.

310L Leadership and Organizational Development SH-301

**12 total hours lecture,
12 total hours lab, 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. AA/AS.

310M Fire Suppression Tactics S-336

**32 total 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) AA/AS.

310O Intermediate Wildland Fire Behavior S-290

**32 total hours lecture, 1.5 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS.

310S Operations Section Chief I-430

**28 total hours lecture,
12 total hours lab, 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,

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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) AA/AS.

311M Swiftwater Rescue Technician I
8 total hours lecture,
22 total hours lab, 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) AA/AS.

312A Auto Extrication
4 - 4.5 total hours lecture,
12 - 13.5 total hours lab, 0.5 units
Pass/No Pass

Prerequisite: Emergency Medical Technician 105 or Emergency Medical Technician 105A 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 312.

This course provides students with hands-on experience in the procedures and systems utilized during automobile extrication. Topics include auto extrication techniques, types of hand and power tools, window removal, door opening, roof removal, seat pulling, stabilization of vehicles, and simulated victim rescue. This course is intended for practicing firefighters and other emergency response personnel. This course may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

360 Advanced Open Water Lifeguard Training
72 - 80 hours lecture,
96 - 110 hours lab, 6.5 units
Pass/No Pass

Prerequisite: Fire Protection Technology 160 or Fire Protection Technology 160R, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Health and Safety. Must be sponsored by a Regional Lifeguard Agency.

Limitation on Enrollment: This course is not open to students with previous credit for Fire Protection Technology 260.

This advanced level course trains current seasonal lifeguards for year-round positions. Topics include municipal rules and regulations, equipment operation, lifesaving procedures, law enforcement, emergency management, report writing, and leadership. Content of the course follows the standards of the United States Lifesaving Association. This course is intended for current seasonal lifeguards sponsored by a Regional Lifeguard Agency. (FT) AA/AS.

361 Current Issues and Skills Maintenance for Professional Firefighters
4 to 40 total hours lecture,
12 to 40 total hours lab, 0.5 - 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 Marshal, 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
192 - 240 total hours lab, 4 units
Pass/No Pass

Prerequisite: Fire Protection Technology 381F with a grade of "C" or better, or equivalent (Fire Protection Technology 380F or Firefighter I card).

This in-service fire training course updates, improves, and assesses the knowledge, skills, and abilities of fire crews. Students complete Emergency Medical Technician (EMT)-1 recertification and wildland/urban interface training. Other topics include hazardous materials, weapons of mass destruction, Motor Vehicle Incident (MVI) / Mass Casualty Incident (MCI) training, Aircraft Rescue Firefighting (ARFF), and incident command position responsibilities. This course is intended for practicing firefighters.

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 the Associate Degree.

362B In-service Lifeguard Training Modules
192 - 240 hours lab, 4 units
Pass/No Pass

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.
 This in-service lifeguard training course updates, improves, and assesses the knowledge, skills, and abilities of current lifeguard personnel, including Emergency Medical Technician (EMT)-1B recertification. Topics include water rescue and drowning prevention, beach management and law enforcement, leadership, vessel rescue, maritime enforcement, marine firefighting, swift water rescue, Self-Contained Underwater Breathing Apparatus (SCUBA) rescue, technical rope rescue, Hazardous Materials (HAZMAT) handling, weapons of mass destruction, and multiple victim/mass casualty incident command. This course is intended for practicing open water lifeguards and may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) Not applicable to the Associate Degree.

363 Refresher, Open Water Lifeguard
30 - 47 total hours lab, 0.5 units
Pass/No Pass

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent open water lifeguard certification and Fire Protection Technology 309A with a grade of "C" or better, or equivalent public safety emergency care certification.
Limitation on Enrollment: This course is not open to students with previous credit for maximum credit for Fire Protection Technology 160R.
 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 repeated as necessary to meet a legally mandated training requirement as a condition of continued employment. (FT) Not applicable to the Associate Degree.

364 Marine Firefighting
8-9 hours lecture, 24-39 hours lab, 1 unit
Grade Only

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.
Limitation on Enrollment: Health and Safety. Must be sponsored by a regional lifeguard agency.
 This California Department of Boating and Waterways course provides students with firsthand knowledge of the hazards of marine fire fighting. Students experience the actual conditions of fighting boat fires under controlled conditions. This course is intended for practicing ocean lifeguards. It may be repeated as necessary to meet a legally mandated training requirement as a condition of continued or volunteer employment. (FT) AA/AS.

365 All Terrain Vehicle Operations - Lifeguards
4-6 hours lecture, 12-18 hours lab, 0.5 units
Grade Only

Prerequisite: Fire Protection Technology 160 with a grade of "C" or better, or equivalent.
 This course provides training in the operation and responsibilities of All Terrain Vehicles (ATVs) used in beach lifeguard operations. Topics include terminology, legal considerations, basic maintenance, riding operations, and pre- and post-operation inspections. This course is intended for practicing lifeguards. It may be repeated as necessary to meet a legally mandated training requirement as a condition of continued paid or volunteer employment. (FT) Not applicable to the Associate Degree.

380W Basic Wildland Firefighter Academy
16 hours lecture,
72-81 hours lab, 2.5 units
Grade Only

This California Department of Forestry (CDF)/ United States Forest Service (USFS) Firefighter I Basic Academy course introduces students to knowledge and skills related to wildland fire control. The course teaches students how to safely and efficiently perform the tasks of wildland firefighters. This course is intended for students currently employed or seeking employment as firefighters. (FT) AA/AS.

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381F Basic Fire Fighter 1 Academy**432-486 hours lab, 9 units
Grade Only**

Prerequisite: Emergency Medical Technician 105A with a grade of "C" or better, or equivalent EMT certificate.

This course provides students with the theory, techniques, and psychomotor skills needed to be a firefighter. Topics include the fire service's role in society; principles of fire behavior; firefighter health and safety; fire equipment operation and maintenance; and firefighting tasks and techniques. The course emphasizes the requirements of the California State Board of Fire Services Certified Firefighter 1 training. It is intended for students currently employed or seeking employment as firefighters. (FT) AA/AS; CSU.

392 Special Topics in Fire Management**8-45 hours lecture, 0.5 - 2.5 units
Grade Only**

Prerequisite: Fire Protection Technology 200A, 200B, 200C, 201, 202A, 202B, 203A, 206A and 206B, each with a grade of "C" or better, or equivalent. State Fire Training System Regulation.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course provides students with sound management principles needed for the transition from supervisor to manager in the fire service. Management principles and practices are taught from a variety of different focus areas that may vary from term to term. Focus areas may include: human relations, group dynamics, conflict resolution, financial planning, budget preparation and control, diversity management, and labor relations, among others. Focus areas are listed in the class schedule and student transcripts. (FT) AA/AS; CSU.

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 206. 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 Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course examines the major world patterns of the physical environment. The course covers the fundamental information and processes dealing with the earth's atmosphere, climate, landforms, 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 or Social Science majors. (FT) AA/AS; CSU; UC.

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 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU; UC.

102 Cultural Geography**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

104 World Regional Geography**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Geology (GEOL)

100 Physical Geology**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Advisory: Concurrent enrollment in Geology 101 with a grade of "C" or better, or equivalent.

Physical Geology is the science of the Earth, the materials of which it is composed, and the processes that are acting upon it. Topics include plate tectonics and earth's internal structure, the formation and classification of minerals and rocks, geologic structures, and geologic processes of the earth's surface and subsurface. This course is intended for students with a general interest in the geological sciences as well as those majoring in geology, earth science, or geological engineering. (FT) AA/AS; CSU; UC.

101 General Geology Laboratory**3 hours lab, 1 unit****Letter Grade or Pass/No Pass Option**

Corequisite: Completion of or concurrent enrollment in Geology 100 with a grade of "C" or better, or equivalent.

Advisory: English 48 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) AA/AS; CSU; UC.

104 Earth Science**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

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Health Education (HEAL)

101 Health and Life-Style

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 49 and 56, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

131 Emergency Response (First Aid/CPR/AED)

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is of interest to students who wish to earn the American Red Cross certifications necessary for employment as an emergency first responder. This class also satisfies the prerequisite requirement for students entering the Emergency Medical Technician (EMT) program or any educational program requiring a college level first aid class. This course follows the U.S. Department of Transportation First Responder National Standard Curriculum and meets Emergency Cardiovascular Care (ECC) Guidelines. Students successfully completing this course receive certifications in Emergency Response (valid for 3 years), CPR/AED for the Professional Rescuer (valid for 2 years), Bloodborne Pathogens and Administering Emergency Oxygen (each valid for 1 year). This course may be repeated to renew certifications. (FT) AA/AS; CSU; UC.

190 Health Education For Teachers

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

101 World History II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

105 Introduction to Western Civilization I
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

106 Introduction to Western Civilization II
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

109 History of the United States I
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B, and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

110 History of the United States II
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

120 Introduction to Asian Civilizations
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

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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) AA/AS; CSU; UC.

121 Asian Civilizations in Modern Times

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

141 Women in United States History I

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

142 Women in United States History II

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

150 Native Americans in United States History

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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 Americans, 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. This course is designed for anyone interested in United States and Native American history. (FT) AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B combined: maximum credit, one series.

151 Native Americans in United States History

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: History (HIST) 109-110, 141-142, 150-151, Black Studies (BLAS) 140A-140B and/or Chicano Studies (CHIC) 141A-141B 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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Homeland Security (HSEC)

100 Introduction to Homeland Security 3 hours lecture, 3 units Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course introduces the structure, organization and components of the Department of Homeland Security. Students examine the importance of the agencies associated with Homeland Security and their interrelated duties and relationships. Other topics include significant historical events; state, national, and international law; and contemporary threats. This course is intended for students employed or seeking employment with the Department of Homeland Security as well as anyone interested in the role of Homeland Security in U.S. government. (FT) AA/AS; CSU.

110 Intelligence Analysis and Security Management 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 48, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course introduces students to the topic of intelligence analysis and its relationship to the security management of terrorist attacks and other threats. Students examine the structure and operation of the U.S. intelligence community and the use of intelligence in national decision-making.

Other topics include intelligence support of Homeland Security measures, counterintelligence, accountability and civil liberties, and intelligence activities of other governments. This course is intended for students employed or seeking employment with the Department of Homeland Security as well as anyone interested in the role of intelligence agencies in U.S. government. (FT) AA/AS; CSU.

120 Transportation and Border Security 3 hours lecture, 3 units Grade Only

Advisory: English 48 and English 49 each, with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides an in-depth view of modern border and transportation security. Topics include security for seaports, ships, aircraft, trains, trucks, pipelines, and busses. The course focuses on the analysis of legal, economic, political, and cultural aspects of transportation security. This course is intended for students employed or seeking employment with the Department of Homeland Security as well as anyone interested in the field of transportation security. (FT) AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This interdisciplinary course develops students' understanding and appreciation of humankind's

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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) AA/AS; CSU; UC.

102 Introduction to the Humanities II
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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 civilizations. (FT) AA/AS; CSU; UC.

106 World Religions
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. This course is an introduction to the basic elements of the religions of the world, their similarities and differences, and their impact on believers and society. The course includes a study of the historical development, doctrines, rituals, sects, and scriptures of the major religions of the world. Some analysis of ancient religious traditions and tribal religious beliefs and practices may be included. This course is intended for all students interested in humanities and the study of world religions. (FT) AA/AS; CSU; UC.

201 Mythology
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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 is meant for students in the Humanities

and for those interested in the myths of the world. (FT) AA/AS; CSU; UC.

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 206. 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. *Limitation on Enrollment:* This course is not open to students with previous credit for 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) AA/AS; CSU; UC.

210A Newspaper Production
6-9 hours lab, 2-3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. 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) AA/AS; CSU.

210B Newspaper Production 2

6-9 hours lab, 2-3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU.

210C Newspaper Production 3

6-9 hours lab, 2-3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU.

210D Newspaper Production 4

6-9 hours lab, 2-3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU.

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

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(270). Detailed course descriptions are listed on page 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Legal Assistant (LEGL)

100A Introduction to Paralegalism

**1 hour lecture, 1 unit
Grade Only**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

Limitation on Enrollment: This course is not open to students with previous credit for Legal Assistant 100. This introductory course for students entering the paralegal program provides an overview of the paralegal's role in the workplace and legal system. Topics include controversies within the profession, ethics and responsibilities, sources of law, legal-research technology, and an introduction to federal and state court systems. (FT) AA/AS; CSU.

100B Legal Procedures

**2 hours lecture, 2 units
Grade Only**

Prerequisite: 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, Administration of Justice 105, or Business 180. This core course provides an overview of the various legal specialties offered within the paralegal program. Topics include litigation, torts, bankruptcy, family law, contract law, corporate law, trusts and wills, federal court practices and procedures, legal writing, immigration and legal research. Students learn specialized legal terminology and technology. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

105 Legal Research

**3 hours lecture, 3 units
Grade Only**

Prerequisite: 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 legal research. Topics include an overview 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 Shepard's system of validating cases and statutes, use of Internet research, and an introduction to LexisNexis and Westlaw. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

106 Computer Assisted Legal Research (CALR)

**3 hours lab, 1 unit
Grade Only**

Prerequisite: Legal Assistant 105 with a grade of "C" or better, or equivalent.

This course is a specialty elective in the Paralegal program that provides students with hands-on experience in performing legal research using the computer. Students learn to identify research issues and find legal references and information using the Internet, Loislaw, Lexis/Nexis, and other sources. This course is intended for students majoring in Paralegal or those interested in legal research. (FT) AA/AS; CSU.

110 Legal Writing & Communications

**3 hours lecture, 3 units
Grade Only**

Prerequisite: 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 communication. Topics include case analysis, legal reasoning, brief writing, legal memoranda, reports, and correspondence. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

115 Civil Litigation - Procedures

**3 hours lecture, 3 units
Grade Only**

Prerequisite: 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 Legal Assistant 109 or Business 183.

This course introduces students to the civil litigation process. Students examine the basic principles of civil procedures as applicable to both plaintiffs and defendants in the California court system. Other topics include jurisdiction, venue, discovery and preparation of pleadings. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

120 Tort Law**3 hours lecture, 3 units
Grade Only**

Corequisite: 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 110 or Business 184.

This core course introduces students to the broad area of civil wrongs and their appropriate remedies. Topics include tort law principles in the traditional areas of intentional torts, negligence, strict liability, product liability, nuisance, and commonly employed defenses. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

140 Law Office Management and Technology**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This course examines systems and procedures for law office management and administration. Students learn how paralegals use computer systems and legal software applications to make their jobs easier and improve their value to employers. Topics include file management, personnel issues, computer systems, timekeeping and billing, case management/calendaring/docket control, litigation support, and legal ethics. This course is intended for students majoring in Paralegal or others interested in law office management and administration. (FT) AA/AS; CSU.

145 Federal Court Practices and Procedures**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

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.

This course presents the legal practices and procedures utilized in federal court. Topics include criminal, civil, bankruptcy, and appellate procedures. The course emphasizes rules of practice to help students develop the skills legal assistants utilize

in law offices. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

150 Criminal Litigation and Procedure**3 hours lecture, 3 units
Grade Only**

Corequisite: 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 113 or Business 187.

This course provides students with an understanding of criminal litigation practice and procedure. Topics include the criminal court system, criminal investigation and prosecution, discovery and investigation, pre-trial motions, trial preparation and procedures, and post-trial motions and relief. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

155 Employment Law**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: Legal Assistant 105 or 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 and employees. Students learn about both the federal and state regulatory environment as it applies to employment law. Topics include pre-employment concerns, legal aspects of the employer/employee relationship, discrimination issues and actions, terminations, and ethical issues in employment law. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

160 Bankruptcy Law**3 hours lecture, 3 units
Grade Only**

Co requisite: Completion of or concurrent enrollment in: Legal Assistant 100B with a grade of "C" or better, or equivalent.

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CSU = California State University Applicable
UC = University of California Applicable

Advisory: Completion of or concurrent enrollment in: Legal Assistant 105 or 110, each 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. This course is a specialty elective in the Legal Assistant program that focuses on bankruptcy law and procedures. It covers commencement of a case, preparation of schedules, operation and liquidation procedures, adversary matters, litigation in bankruptcy court, and debtors' and creditors' rights and obligations. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

165 Family Law

**3 hours lecture, 3 units
Grade Only**

Co requisite: 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. This course is a specialty elective in the Legal Assistant program that focuses on domestic relations law and its application to family situations. Topics include formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, and domestic violence. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

170 Corporate Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Business 265. 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. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

175 Estates, Trusts, and Wills

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

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. This course is intended for students majoring in Paralegal or others interested in estate administration. (FT) AA/AS; CSU.

180 Contract Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This course provides students with the knowledge and skills for drafting and interpreting different types of contracts. Topics include elements of a contract, performance and breach issues, defenses to formation and enforcement, contract remedies, and third party contracts. This course is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

200 Elder Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: Legal Assistant 105 or 110, with a grade of "C" or better, or equivalent.

This specialty elective in the Legal Assistant program focuses on legal issues that affect older people. Topics include financial and estate planning, health care, personal planning and protection, and consumer protection. This course is intended for students majoring in Paralegal or those seeking employment in law firms handling elder law and senior care housing facilities. (FT) AA/AS; CSU.

205 Environmental Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

This legal specialty elective introduces students to the emerging field of environmental law through a critical review of basic legal concepts and their social, economic and environmental effects. Topics include various sources of environmental law, legal remedies, planning acts, environmental protection acts, environmental assessment acts, and hearing boards and their operation. This class is intended for students majoring in Paralegal. (FT) AA/AS; CSU.

210 Immigration Law

**3 hours lecture, 3 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in: Legal Assistant 100B with a grade of "C" or better, or equivalent.

Advisory: Legal Assistant 105 with a grade of "C" or better, or equivalent.

This course provides an overview of the laws of immigration and naturalization. Topics include the history of immigration, the evolution of this country's policies toward aliens, and the interplay of the three administrative agencies which administer immigration and naturalization laws: the Justice Department, Labor Department and State Department. This course is intended for students majoring in Paralegal or anyone interested in immigration law. (FT) AA/AS; CSU.

270 Paralegal Internship / Work Experience

**60 - 300 other hours, 1-4 units
Grade Only**

Corequisite: Completion of or concurrent enrollment in Legal Assistant 100B with a grade of "C" or better, or equivalent.

A program of applied learning experiences for students employed in a paralegal-related job or internship under the supervision of an attorney in a law office, government agency, or other legal setting. One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work. This course may be taken four times for a maximum of 16 units. However, the combined maximum credit for all Work Experience courses from all disciplines may not exceed 16 units. This course is intended for students majoring in Paralegal or those interested in the legal field. (FT) AA/AS; CSU.

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 206. 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 Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; or English 37A, English 37B, or English 64 each with a grade of "C" or better, or equivalent.

This course is an overview of information resources and the skills required to use them effectively. Students learn how to use library resources such as electronic indexes and databases, online services, and the Internet, as well as learn to 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) AA/AS; CSU; UC.

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 206.

Lifeguarding

See Fire Protection Technology (FIPT), page 300.

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Marketing (MARK)

100 Principles of Marketing

**3 hours lecture, 3 units
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 is an overview of the foundations, principles, processes, and goals of marketing. Topics include ethics and social responsibility, global marketing and world trade, corporate marketing and strategies. Marketing strategies include product planning, development, pricing, distribution, and promotion. This course is intended for students majoring in business or others interested in a business setting such as managers and supervisors. (FT) AA/AS; CSU.

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. AA/AS; CSU.

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 206. 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
Pass/No Pass**

This course is intended for students who have completed the math assessment with a level of M20 (prealgebra) and wish to improve their placement level; students who have successfully completed Prealgebra but need more review; or students who unsuccessfully attempted Beginning Algebra and need review of Prealgebra skills. The course consists 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 a Prealgebra prerequisite. This course will not replace a failing grade in Prealgebra. Not Applicable to Associate Degree.

15B Elementary Algebra and Geometry Refresher

**3 hours lab, 1 unit
Pass/No Pass**

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 Beginning Algebra but need more review; or students who unsuccessfully attempted Intermediate Algebra and need review of Beginning Algebra and Geometry skills. The course consists 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 a Beginning Algebra prerequisite. This course will not replace a failing grade in Beginning Algebra. Not Applicable to Associate Degree.

15C Intermediate Algebra and Geometry Refresher**3 hours lab, 1 unit
Pass/No Pass**

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 Intermediate Algebra but need more review; or students who unsuccessfully attempted a transfer level math class and need review of Intermediate Algebra and Geometry skills. The course consists 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 an Intermediate Algebra prerequisite. This course will not replace a failing grade in Intermediate Algebra. Not Applicable to Associate Degree.

15D Geometry Refresher**3 hours lab, 1 unit
Pass/No Pass**

This course is intended for those students who have completed a high school geometry course or for those students who have completed Intermediate Algebra and Geometry and need to review geometric principles prior to taking Math for Elementary Teachers or Trigonometry. The course consists of personalized computer assisted instruction to refresh those concepts identified as needed for each student. (FT) Not Applicable to Associate Degree.

15E Trigonometry Refresher**3 hours lab, 1 unit
Pass/No Pass**

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). The course consists of personalized computer assisted instruction to refresh those concepts identified as needed for each student. (FT) Not applicable to the Associate Degree.

15F College Algebra Refresher**3 hours lab, 1 unit
Pass/No Pass**

This course is intended for those students who have completed the math assessment with a level of M50 and need to review their College Algebra skills prior to taking a Calculus sequence. The course consists 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 a College Algebra prerequisite. Students wishing to challenge Pre-calculus must also show competence in Trigonometry. (FT) Not applicable to the Associate Degree.

34A Basic Mathematics and Study Skills

(formerly Mathematics 32)

4 hours lecture, 4 units**Letter Grade or Pass/No Pass Option**

Advisory: English 42 or English for Speakers of Other Languages 31, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 or L40.
Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 32. This course is an introduction to fundamental concepts of arithmetic. Emphasis is placed on addition, subtraction, multiplication, division and exponentiation on whole numbers, fractions, and decimals. Topics also include simple percents and ratios, systems of measurement, and applications of these topics. Students learn basic study skills necessary for success in mathematics courses. This course is intended for students preparing for Pre-algebra. (FT) Not applicable to the Associate Degree.

38 Pre-Algebra and Study Skills

(formerly Mathematics 35)

4 hours lecture, 4 units**Letter Grade or Pass/No Pass Option**

Advisory: English 42 or English for Speakers of Other Languages 31 and Mathematics 34A, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R4 or L40 and M20.
Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 35. This course is a study of the fundamentals of arithmetic operations with signed numbers,

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including fractions and decimals as well as an introduction to some elementary topics in beginning algebra. Topics also include ratios and proportions, perfect squares and their square roots, elementary topics in geometry, systems of measurement, and monomial arithmetic. Students learn basic study skills necessary for success in mathematics courses. This course is intended for students preparing for Beginning Algebra. (FT) Not applicable to the Associate Degree.

41 Math Study Skills

**1 hour lecture, 1 unit
Pass/No Pass**

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. (FT) Credit for this course does not apply to the associate degree.

46 Elementary Algebra and Geometry

(formerly Mathematics 95)

**5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 38 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 48, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels W4 and R5.

Limitation on Enrollment: This course is not open to students with previous credit for Mathematics 95 with a grade of "C" or better.

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 intended for students preparing for higher-level geometry and algebra courses. (FT) Not Applicable to Associate Degree, basic skills.

47A Beginning Algebra and Practical Descriptive Statistics

**3 hours lecture, 3 hours lab, 4 units
Grade Only**

Prerequisite: Mathematics 38 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 48, each with a grade of "C" or better, or equivalent or Assessment Skill Level W4 and R5.

This course is the first of a two course sequence in the study of statistical methods integrated with algebraic tools to prepare students to analyze processes encountered in society and the workplace. The course covers an introduction to algebra and descriptive statistics in an integrated approach. Topics include data collection, organizing and interpreting data graphically, qualitative and quantitative data sets, measures of central tendency and measures of dispersion, bivariate data and scatter plots, linear functions and their graphs, nonlinear functions and their graphs, and applying technology to calculate various types of regressions. Students are expected to implement technology to perform calculations to organize data in order to make statistical conclusions. This sequence of courses is intended for students that are not planning on majoring in a science, technology, engineering, or mathematics related disciplines. This course is only basic skills/remedial. (FT) Not applicable to Associate Degree.

Associate Degree Courses

96 Intermediate Algebra and Geometry

**5 hours lecture, 5 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40. *Advisory:* English 48 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W4.

Intermediate algebra and geometry is the second of a two-course 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, exponential and logarithmic functions, conic sections, sequences

and series, and solid geometry. The course also includes application problems involving these topics. This course is intended for students preparing for transfer-level mathematics courses. (FT) AA/AS.

Transfer Level Courses

104 Trigonometry

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

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. (FT) AA/AS; CSU.

115 Gateway to Experimental Statistics

3 hours lecture, 3 hours lab, 4 units

Grade Only

Prerequisite: Mathematics 47A with a grade of "C" or better, or equivalent Statway I.
Advisory: Completion of or concurrent enrollment in English 43 and English 48, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W4 and R5. This course is a second in the study of statistical methods integrated with algebraic tools to prepare students to analyze these processes encountered in society and the workplace. The course covers a review of functions, their geometric properties, counting principles and probability rules, probability distribution functions, sampling, and inferential statistics of one and two variable data sets. Students are expected to implement technology to perform calculations to analyze data and make statistical conclusions. This sequence of courses is intended for students that are not planning on majoring in a science, technology, engineering or mathematics related discipline. (FT) AA/AS; CSU.

116 College and Matrix Algebra

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 116 and 141 combined: maximum credit, one course.

118 A Survey of Modern Mathematics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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 R6 and W6. 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. (FT) AA/AS; CSU.

119 Elementary Statistics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 92 or Mathematics 96, each with a grade of "C" or better, or equivalent or Assessment Skill Levels M45 or 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

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testing, linear regression and correlation. Analytical reading and problem solving are required for success in this course. This course is intended for students interested in statistical analysis or need a transfer math course. (FT) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 119, Biology (BIOL) 200 or Psychology (PSYC) 258 combined: maximum credit, one course.

121 Basic Techniques of Applied Calculus I
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent.

This course examines the study of calculus using numerical, graphical, and analytical methods to analyze calculus problems encountered in real-world applications in business, natural/life sciences, and social sciences. Topics include limits, derivatives, and integrals of algebraic, exponential, and logarithmic functions, curve sketching, optimization, and areas under and between curves and partial derivatives and optimization of multivariable functions. This is the first course in a sequence of mathematics courses for students intending to major in business, economics, or natural and social sciences. This course does not fulfill a mathematics requirement for mathematics, chemistry, physics, or engineering majors at most universities. (FT) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 121 and 150 combined: maximum credit, one course.

122 Basic Techniques of Calculus II
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 121 with a grade of "C" or better, or equivalent.

This second course in a math sequence covers methods of integration, multivariable functions and optimization problems, differential equations, Taylor series development and application, derivatives and integrals of trigonometric functions, and their usage in solving problems encountered in real-world applications in business, life and social sciences and economics. It is intended for students majoring in business, natural science, social science and economics. AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 122 and 151 combined: maximum credit, one course.

141 Precalculus

5 hours lecture, 5 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 116 and 141 combined: maximum credit, one course.

150 Calculus with Analytic Geometry I
5 hours lecture, 5 units
Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 121 and 150 combined: maximum credit, one course.

150L Calculus I Laboratory
3 hours lab, 1 unit
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

151 Calculus with Analytic Geometry II
4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 150 with a grade of “C” or better, or equivalent.
 This is the second course in the calculus and analytic geometry sequence. 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, as it serves as a basis for multivariable calculus and differential equations, as well as most upper division courses in mathematics and engineering. This course is intended for the transfer student planning to major in mathematics, computer science, physics, chemistry, engineering or economics. (FT) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 122 and 151 combined: maximum credit, one course.

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 R6 and W6; 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) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 210A and 210B combined: maximum credit, one course.

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) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 210A and 210B combined: maximum credit, one course.

212 Children’s Mathematical Thinking
1 hour lecture, 1 unit
Grade Only

Corequisite: Completion of or concurrent enrollment in: Mathematics 210A 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 Levels R6 and W6.
 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.

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This course is intended for students pursuing a Multiple Subject Credential. (FT) AA/AS; CSU.

245 Discrete Mathematics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 122 or Mathematics 151, each with a grade of "C" or better, or equivalent.

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, and number theory. The topics covered include propositional and predicate logic, methods of proof, set theory, Boolean algebra, number theory, equivalence and order relations, and functions. This forms a basis for upper division courses in mathematics and computer science, and is intended for the transfer student planning to major in these disciplines. (FT) AA/AS; CSU; UC.

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) AA/AS; CSU; UC.

254 Introduction to Linear Algebra

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

255 Differential Equations

3 hours lecture, 3 units

Grade Only

Prerequisite: Mathematics 252 and Mathematics 254, each with a grade of "C" or better, or equivalent.

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. (FT) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Medical Laboratory Technician (MLTT)

51 Directed Clinical Practice in Clinical Chemistry

160 hours other, 2 units
Grade Only

Prerequisite: Medical Laboratory Technician Training 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Health and Safety. Certified Phlebotomy Technician Level II or III.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course provides clinical laboratory practice and experience in the laboratory of general and specialized chemistry. Different instrumentation will be introduced, as well as bench and manual methods. Emphasis is placed on technique, accuracy and precision. This practicum will take place at a clinical affiliate site that will be assigned by the Medical Laboratory Technician Training Program Director. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS.

52 Directed Clinical Practice in Clinical Hematology, Urinalysis and Coagulation

160 hours other, 2 units
Grade Only

Prerequisite: Medical Laboratory Technician Training 201 and 202, each with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Health and Safety. Certified Phlebotomy Technician Level II or III.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course provides laboratory practice and experience in the laboratory of hematology, urinalysis and coagulation. Different instrumentation will be introduced, as well as bench and manual methods. Emphasis is placed on technique, accuracy and precision. This practicum will take place at a clinical affiliate site that will be assigned by the Medical Laboratory Technician Training Program Director. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS.

53 Directed Clinical Practice in Clinical Immunology and Immunoematology

160 hours other, 2 units
Grade Only

Prerequisite: Medical Laboratory Technician Training 202 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Health and Safety. Certified Phlebotomy Technician Level II or III.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course provides clinical laboratory practice and experience in the laboratory of serology and blood banking, including syphilis serology and general immunology. Different instrumentation will be introduced, as well as bench and manual methods. Emphasis is placed on technique, accuracy and precision. This practicum will take place at a clinical affiliate site that will be assigned by the Medical Laboratory Technician Training Program Director. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS.

54 Directed Clinical Practice in Clinical Microbiology

160 hours other, 2 units
Grade Only

Prerequisite: Medical Laboratory Technician Training 203 or Biology 205, with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Health and Safety. Certified Phlebotomy Technician Level II or III.

Limitation on Enrollment: Must obtain an Add Code from the instructor for enrollment.

This course provides laboratory practice and experience in the clinical laboratory of microbiology. Different instrumentation will be introduced, as well as bench and manual methods. Emphasizes technique, accuracy and precision. This practicum will take place at a clinical affiliate site that will be assigned by the Medical Laboratory Technician Training Program Director. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

201 Clinical Chemistry and Urinalysis
1 hour lecture, 9 hours lab, 4 units
Grade Only

Prerequisite: Biology 107 or 131 and Biology 160 or (Biology 230 and 235) and Chemistry 130 and 130L, each with a grade of "C" or better, or equivalent.
Advisory: English 101 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6, W6 and M50.
 This course introduces the theory and practice underlying the basic methodologies used in clinical chemistry and urinalysis. Lecture covers an introduction to components of body fluids such as blood and urine, basic principles of the clinical laboratory, quality control and quality assurance, patient confidentiality and safe handling practices of body fluids. Laboratory covers principles and theories of clinical chemistry with an emphasis on methodologies and instrumentation common to the clinical chemistry and urinalysis laboratory, specimen handling, measurement, and data analysis. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS; CSU.

202 Clinical Hematology and Immunology
2 hours lecture, 6 hours lab, 4 units
Grade Only

Prerequisite: Biology 107 or 131 and Biology 160 or (Biology 230 and 235) and Chemistry 130 and 130L, each with a grade of "C" or better, or equivalent.
Advisory: English 101 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6, W6 and M50.
 This course introduces the theory and practice underlying the basic methodologies used in clinical hematology, immunology and blood banking. Lecture covers an introduction to components of blood with emphasis on the immune system and blood typing, principles and practices of blood banking, quality control and quality assurance, patient confidentiality and safe handling practices of body fluids. Laboratory covers principles and theories of clinical hematology and immunology with an emphasis on methodologies, specimen handling, measurement, and data analysis. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS; CSU.

203 Clinical Microbiology
2 hours lecture, 6 hours lab, 4 units
Grade Only

Prerequisite: Biology 107 or 131 and Biology 160 or (Biology 230 and 235) and Chemistry 100 and 100L or Chemistry 152 and 152L, each with a grade of "C" or better, or equivalent.
Advisory: English 101 and Mathematics 96, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6, W6 and M50.
Limitation on Enrollment: This course is not open to students with previous credit for Biology 205 General Microbiology.
 This course introduces the theory and methods used in clinical microbiology laboratory. Lecture covers an introduction to distinguishing clinically relevant organisms from normal flora. Laboratory covers principles and theories of the identification of clinically relevant microorganisms. This course is intended for students majoring in Medical Laboratory Technology or those wanting to update their medical laboratory skill set. (FT) AA/AS; CSU.

Military Studies (MILS)

100 Introduction to Military Science
3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.
Limitation on Enrollment: This course is not open to students with previous credit for Military Studies 101.
 This course introduces students to the structure, organization, and practices of the U.S. military. Students examine the Constitutional foundation, 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, military law, and ethics. This course is intended for anyone interested in the U.S. military or military service. (FT) AA/AS; CSU.

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 R6 and W6.

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 the psychological, social, cultural, and physiological aspects of leadership such as traits, skills, styles, and processes; contingency, path-goal, and leader-member exchange theory; the mind-body relationship; 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) AA/AS; CSU; 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) AA/AS; CSU; UC Transfer Course List.

270 Work Experience in Military Leadership

**60-300 Hours, 1-4 units
Grade Only**

Prerequisite: Military Studies 100 or 101, with a grade of "C" or better, or equivalent and 110 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: Must obtain an Add Code from Work Experience Coordinator for enrollment.

A program of applied learning experiences for students employed in a job or internship related to military leadership. One unit of credit is earned for each 75 hours of paid employment or 60 hours of volunteer work. This course may be taken four times

for a maximum of 16 units. However, the combined maximum credit for all Work Experience courses from all disciplines may not exceed 16 units. (FT) AA/AS; CSU.

Music (MUSI)

100 Introduction to Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

103 History of Rock Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course surveys the origins and development of rock and roll music from the early 1950s to the present including the pre-1950s roots of rock music. The course focuses on the evolution of different styles within the genre as well as the social, political, economic and cultural contexts of rock music. Additionally, basic musical concepts such as pitch, rhythm and form are introduced and applied to the music under consideration. This course is intended for all students interested in music. (FT) AA/AS; CSU; UC.

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UC = University of California Applicable

108 The Business of Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU.

109 World Music

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5. 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) AA/AS; CSU; UC.

110 Music for Elementary School Teachers

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5. 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 playing an instrument, and practice using lesson plans for teaching these concepts to children. (FT) AA/AS; CSU.

111 Jazz - History and Development

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

120 Beginning Voice Class

1.5 hours lecture, 1.5 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

132A Classical Guitar I

0.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Advisory: Music 150A with a grade of "C" or better, or equivalent.

This is the first of a two-semester sequence of courses that present the study of classical guitar. The beginning course introduces basic skills to students who have had little or no experience with the guitar. The course is intended for students who are interested in learning the fundamentals of classical guitar and elementary music skills. This course focuses on developing right and left-hand technique and sight-reading. Lectures are followed by practical application on the instrument. (FT) AA/AS; CSU; UC.

132B Classical Guitar II

0.5 hours lecture, 1.5 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Music 132A with a grade of "C" or better, or equivalent.

This is the second in a two-semester sequence of study of classical guitar. In this course students are introduced to a set of broad-ranging technical skills, including mastery of the fretboard, chord chart reading, and sight-reading. This course also introduces level-appropriate literature, including works from several periods and styles, with an emphasis on interpretation skills. Lectures are followed by practical application on the instrument. Students apply the skills and techniques developed in this class in live performances. (FT) AA/AS; CSU; UC.

150A Basic Musicianship

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is the study and practice of musical literacy. Emphasis is placed on the development of perceptions in sight and sound as related to the symbols of rhythmic, melodic, and harmonic notation. Topics include skill development in notating notes, intervals, scales, key signatures, rhythms, and chords. Students identify terms used to indicate navigation, tempo and dynamics. This course is designed for music majors and musicians. (FT) AA/AS; CSU; UC.

158A Music Theory I

4 hours lecture, 4 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

190 The Electronic Music Studio

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment

Skill Levels R5 and W5; 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) AA/AS; CSU.

201 Recording Arts

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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) AA/AS; CSU.

202 Computer Music

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Music 190 with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; and Music 150A with a grade of "C" or better, or equivalent.

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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) AA/AS; CSU.

205A Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU.

205B Projects in Electronic Music

**2.5 hours lecture, 1.5 hours lab, 3 units
Letter Grade or Pass/No Pass Option**

Prerequisite: Music 205A with a grade of "C" or better, or equivalent.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; 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) AA/AS; CSU.

252 Concert Jazz Band

**3-9 hours lab, 1-3 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

268A Beginning Ear Training Laboratory I

3 hours lab, 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

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 206. 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 101 with a grade of "C" or better, or equivalent or Assessment Skill Level W6 and R6 and Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20. This course is a study of 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 source of nutrients, and current nutritional issues. Students utilize computer technology to analyze dietary intake and evaluate nutritional status. Included is a personal dietary analysis indicating nutritional issues. Students operated computer assisted program available. This course is intended for students majoring in nutrition and all students interested in the science of nutrition. AA/AS; CSU; UC Transfer Limitation: Nutrition (NUTR) 150 and 155 combined: maximum credit, one course.

170 Nutrition and Fitness

**3 hours lecture, 3 units
Grade Only**

Advisory: English 48 and English 49 each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is a practical study of sports and nutrition. Emphasis is placed on the role of nutrition and enhanced performance. Students evaluate their nutritional needs during various stages of exercise. Topics include carbohydrate loading, use of supplements, determination of body composition. This course is intended for nutrition majors, athletes and all students interested in health and fitness. (FT) AA/AS; CSU.

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 206. 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), page 280.

Paralegal

See Legal Assistant (LEGL), page 322.

Personal Growth (PERG)

30 Career Planning

1-3 hours lecture, 1-3 units

Letter Grade or Pass/No Pass 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) AA/AS.

65 Orientation to College

**0.5 - 1 hour lecture, 0.5 - 1 unit
Pass/No Pass 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) AA/AS.

120 College Success and Lifelong Learning

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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

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effectively deal with issues in their personal lives and educational and career plans. (FT) AA/AS; CSU; UC.

127 College Success Skills

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 with a grade of "C" or better, or equivalent, or Assessment Skill Level R5; and completion of or concurrent enrollment in English 49 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) AA/AS; CSU; UC.

130 Career-Life Planning

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: Completion of or concurrent enrollment in: English 48 or English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Level R5 or W5.

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) AA/AS; CSU.

140 Life Skills and Personal Adjustment

1-3 hours lecture, 1-3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This course is designed for students who want to learn and acquire effective ways for developing their emotional, social, educational, and professional life skills. This course is a practical study of the principles and application of strategies that assist in the development of coping and life skills. Topics include 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) AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6 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 impediments to its mastery. It emphasizes the development of skills in logical analysis 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) AA/AS; CSU; UC.

101 Symbolic Logic

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Philosophy 100 with a grade of "C" or better, or equivalent..

Advisory: English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Level W6 and R6 and Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

This course is a study of the elements of symbolic logic, sentential calculus and quantification theory.

Topics include identity, definite descriptions, natural deduction and structure of language. This course is intended for philosophy majors and students pursuing studies in computer science. (FT) AA/AS; CSU; UC.

102A Introduction To Philosophy: Reality and Knowledge

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 or English 105, with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6.

This course is an introductory study of the aims, methods, types and problems of philosophy and philosophical inquiry. Emphasis is placed on the nature of reality and knowledge. Materials for this survey of philosophy may draw from classical and contemporary thinkers. Students are encouraged to articulate, analyze, and evaluate their own beliefs/positions in the context of meaningful philosophical inquiry. This course is intended for anyone concerned with human existence and humanity's place in the universe. (FT) AA/AS; CSU; UC.

102B Introduction To Philosophy: Values

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6 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 focusing on values and their place in an individual's daily life. Materials for this survey 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. This course is for anyone interested in the origin and justification of values and their application to everyday life. (FT) AA/AS; CSU; UC.

107 Reflections on Human Nature

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6 or English 105 with a grade of "C" or better, or equivalent.

This course is an introductory study of the issues and problems exemplified in the process of meaningful

philosophical activity relating to the topic of human nature. Students 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 or scientific and religious orientations. Students are encouraged to engage in independent research, analysis and formulation. This course is intended for students pursuing studies in behavioral and/or social sciences. (FT) AA/AS; CSU; UC.

205 Critical Thinking and Writing in Philosophy

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; 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) AA/AS; CSU; UC.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

155 Swimming

2-3 hours lab, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

156 Water Exercise

2-3 hours lab, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC Transfer Limitation. See a Counselor.

163 Water Polo

2-3 hours lab, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

164 Water Safety Instructor

2.5 hours lecture, 1.5 hours lab, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is of interest to students who wish to earn the American Red Cross certifications necessary for employment as a swimming instructor. 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. Students may repeat this course to renew certifications. Adequate swimming skills are necessary at the Learn to Swim Level 4. (FT) AA/AS; CSU; UC.

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, 0.5 - 1 unit
Letter Grade or Pass/No Pass Option**

This rigorous aerobic dance course is designed to increase both fitness levels and awareness of what constitutes a safe and effective exercise program. Instruction includes a balanced program of aerobics, toning, stretching, relaxation and related health topics. 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 skill development and enhanced cardio-vascular fitness. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

Individual Activities

A basic program which offers the student a choice of vigorous, competitive activity in individual sports and activities designed to provide carry-over value for leisure life. Instruction is in fundamental skills knowledge of rules and strategy, with emphasis on physical fitness.

108 Badminton**2-3 hours lab, 0.5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course provides instruction and on-court experience in the skills, strategies, rules and behaviors necessary to play badminton at the beginning, intermediate or advanced 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. AA/AS; CSU; UC Transfer Limitation. See a Counselor.

115 Bowling**2-3 hours lab, 0.5 - 1 unit
Letter Grade or Pass/No Pass Option**

This course is designed to develop bowling skills. Emphasis is placed on stance, point of origin, approach, back swing, release and follow through. Topics include rules, scoring and etiquette in the game of bowling. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course offered for three hours per week, the additional time is utilized for

spot bowling and participation in league bowling situations. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

120 Fencing**2-3 hours lab, 0.5 - 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

123 Cardio Conditioning**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course includes instruction in the skills necessary to improve aerobic fitness, cardiovascular health, muscular endurance/ strength, and flexibility. Through fitness topics covered, students develop an individual fitness program. Aerobic and anaerobic exercise for the development of comprehensive fitness. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course offered for three hours per week, the additional time is utilized for increasingly strenuous cardiovascular activities. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

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126 Golf**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides golf instruction and practice in the fundamentals of the 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. This course is intended for beginners, intermediate and advanced players. This course may be taken four times for credit. Students must demonstrate increased proficiency with each repetition. When this course is offered for three hours per week, the additional time is utilized for skill development and increased management of game strategies. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

132 Individual Conditioning**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

153 Aerobic and Core Conditioning**2-3 hours lab, 0.5 - 1 unit
Pass/No Pass**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed to provide students with the knowledge and practice to develop the attitudes and habits required for attaining and maintaining appropriate, individual physical fitness levels. Emphasis is placed on developing and maintaining cardiovascular efficiency as well as endurance and flexibility through individual and circuit training. This course is designed to improve student proficiency and skill level with each repetition and may be taken up to four times for credit. This course is intended for students seeking to develop individual lifelong physical fitness habits as well as those needing to satisfy the physical education graduation requirement. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

154 Fitness Walking**2-3 hours lab, 0.5 - 1 unit
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Fitness Walking is an introductory course that covers the principles of aerobic and cardiovascular health through various walking techniques. Comprehensive instruction in fitness principles, stress reduction, weight management and heart health are covered. This course is intended for Kinesiology majors and all students interested in a healthy lifestyle. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours a week the additional time is utilized for skill development and enhanced cardio-vascular fitness. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

159 Tennis**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed to increase both skill level and on-court experience. Instruction includes the basic strokes, skills, strategies, rules and etiquette 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

166 Weight Training

**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: Completion of or concurrent enrollment in English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is an introduction to progressive resistance training. Instruction includes proper methods of weight training, various types of weight training programs, and safety factors. This course is designed for students interested in developing strength, muscle endurance and power as well as Kinesiology majors. This course may be taken four times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. When this course is offered for three hours a week, the additional time is utilized for increased set repetitions and strength development. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

232 Martial Arts

**3 hours lab, 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed for students with an interest in martial arts. The course is geared toward International Okinawan Goju-Ryu Karate-Do Federation (IOGKF), and Tae Kwon Do Federation, with phrases and terms from other styles for general informational usage. Emphasis is placed on the fundamentals of martial arts, including martial arts safety skills and etiquette, punches, blocks, strikes, kicks, stances, vital points, tournament terminology, numbers and kata and forms, (Poomse) Kick/strike analysis, flexibility, conditioning and endurance are stressed in the progression of the class. Students must demonstrate increased proficiency and skill attainment with each repetition. This course may be taken four times for credit. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

233 Kickboxing

**2-3 hours lab, 0.5 - 1 unit
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed for students interested in developing kickboxing skills. The course includes solo training, partner training, equipment training, controlled sparring, and the art of Muay Thai 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. Students must demonstrate increased proficiency and skill attainment with each repetition. This course may be taken four times for credit. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

Intercollegiate Athletics

204 Intercollegiate Basketball I

**Spring/Fall, 5-10 hours lab, 1-2 units
Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC Transfer Limitation. See a Counselor.

205 Intercollegiate Basketball II

**5-10 hours lab, 1-2 units
Letter Grade or Pass/No Pass Option**

This course is intended for the second season of intercollegiate competition. Basketball skills and game strategies are at the advanced levels of participation. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

214 Intercollegiate Soccer I

**10 hours, 2 units
Letter Grade or Pass/No Pass Option**

Advisory: Physical Education 149 with a grade of "C" or better, or equivalent, and/or previous competitive soccer experience.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

215 Intercollegiate Soccer II

Fall, 10 hours, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

216 Intercollegiate Softball I

10 hours lab, 2 units

Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

218 Intercollegiate Swimming I

160 - 180 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

219 Intercollegiate Swimming II

160 - 180 hours lab, 2 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

220 Intercollegiate Tennis I

10 hours lab, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

221 Intercollegiate Tennis II

Spring, 10 hours lab, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

224 Intercollegiate Volleyball I

160-180 hours lab, 2 units

Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Physical Education 161 with a grade of "C" or better, or equivalent and/or previous competitive volleyball experience.

This is the first course in intercollegiate volleyball competition. Topics include analyses of team offensive and defensive systems. This course is designed to prepare advanced volleyball students for intercollegiate competition. This course is offered in the fall and spring semester and may be taken two times for credit. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

225 Intercollegiate Volleyball II

Fall, Spring, 10 hours lab, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

226 Intercollegiate Water Polo I

Fall, 10 hours lab, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

227 Intercollegiate Water Polo II

Fall, 10 hours lab, 2 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitations. See a Counselor.

Team Sports

112 Basketball

2-3 hours lab, 0.5 - 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course offers basic instruction in the fundamental skills of basketball and team offense and defense. Topics include terminology, rules, and strategy of the game. 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 on individual analysis of technique and performance. This course may be taken four times for credit. It is intended for students interested in the sport of basketball as well as those needing to satisfy the physical education graduation requirement. (FT) AA/AS; CSU; UC Transfer Limitations. See a Counselor.

141 Over-the-Line

3 hours lab, 1 unit

Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC Transfer Limitations. See a Counselor.

149 Soccer

2-3 hours lab, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: See a Counselor.

151 Softball

2-3 hours lab, 0.5 - 1 unit

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

161 Volleyball

2-3 hours lab, 0.5 - 1 unit
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides instruction and on-court experience in fundamental skills, offensive and defensive strategies, rules and etiquette necessary to play volleyball. The ability to perform the basic fundamentals will be demonstrated in game situations as well as skills testing. 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 skill development and court strategy. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

248A Professional Activities/ Tennis**1 hour lecture, 3 hours lab, 2 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

251A Professional Activities/Basketball I**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

251B Professional Activities/Basketball II**1.5 hours lecture, 1.5 hours lab, 2 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation. 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) AA/AS; CSU; UC Transfer Limitation. 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) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**Fitness Specialist Certificate
Courses****270 Fitness Specialist Work Experience****60 - 300 hours other, 1-4 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

A program of on-the-job learning experiences for students employed in a job related to the Fitness Specialist Certificate program. This course may be taken for a maximum of 4 units. However, the combined maximum credit for all Work Experience courses from all disciplines may not exceed 16 units. (FT) AA/AS; CSU.

280 Applied Exercise Physiology**2 hours lecture, 2 units
Grade Only**

Advisory: Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40. This course is designed for the student in the Fitness Specialist Certificate Program planning 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) AA/AS; CSU.

281 Applied Kinesiology**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning 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) AA/AS; CSU.

282 Techniques of Weight Training

**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program intending to teach weight training. Topics include anatomy, physiology, training sequences, equipment options, safety factors, and contraindications. (FT) AA/AS; CSU.

283 Exercise and Fitness Assessment

**1.5 hours lecture, 1.5 hours lab, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program to develop the skills necessary to assess and evaluate exercise and fitness parameters. Topics include 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) AA/AS; CSU.

284 Fitness and Sports Nutrition

**2 hours lecture, 2 units
Grade Only**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This course is designed for the student in the Fitness Specialist Certification Program. Students study the basic principles of nutrition and the ramifications of nutrition on sports activities. (FT) AA/AS; CSU.

285 Exercise for Special Populations

**2 hours lecture, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning to study the exercise implications for special populations related to age, medical condition and level of fitness. Emphasis is placed on cardiac conditions, diabetes, obesity, physical disabilities, Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), asthma, sensory impairments. Issues and barriers to exercise are

included for each of the following groups: seniors, children, athletes, mentally impaired and pregnant and post partum women. (FT) AA/AS; CSU.

286 Techniques of Exercise Leadership

**1.75 hours lecture, 0.75 hours lab, 2 units
Grade Only**

This course is designed for the student in the Fitness Specialist Certificate Program planning 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) AA/AS; CSU.

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) AA/AS.

Physical Education Theory Classes

240 Physical Education in the Elementary Schools

**3 hours lecture, 1 hour lab, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: Completion of or concurrent enrollment in: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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.

AA/AS = Associate Degree Applicable
CSU = California State University Applicable
UC = University of California Applicable

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) AA/AS; CSU.

241B Introduction to Kinesiology
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Physical Education 241.

This is an introductory course covering the professional career options, history, basic philosophy and principles of Kinesiology. Additionally a nutritional component covers the current and emerging issues in foods and nutrition. This course is of interest to anyone exploring opportunities in the fields of health, wellness, physical activity, nutrition and sport. This course is required for Kinesiology majors. (FT) AA/AS; CSU; UC.

242 Care and Prevention of Injuries
Fall, Spring, 2 hours lecture, 1 hour lab, 2 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

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) AA/AS; CSU; UC.

242B Care and Prevention of Injuries
3 hours lecture, 3 units
Grade Only

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

Limitation on Enrollment: This course is not open to students with previous credit for Physical Education 242.

This course covers the theory and practice of emergency field care and basic athletic first aid. Topics include prevention and care of common athletic injuries, bandaging and/or taping techniques. This course is designed for students interested in athletic training, coaching of sports

and majoring in Physical Education, Kinesiology and Exercise Science. (FT) AA/AS; CSU.

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 206. 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 Pass/No Pass Option

Advisory: English 42, English 43 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4, W4 and M20.

Advisory: Concurrent enrollment in: Physical Science 101.

This course is an introductory survey of the fundamental concepts of astronomy, geology, chemistry and physics. Emphasis is placed on the interrelationships among these disciplines and the ways in which the physical sciences affect modern life. This course is intended for students with a general interest in the physical sciences. (FT) AA/AS; CSU; UC Transfer Limitation: No credit if taken after a college level course in Chemistry or Physics.

101 Survey of Physical Science Laboratory
3 hours lab, 1 unit
Letter Grade or Pass/No Pass 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 48 and Mathematics 46, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and M40.

This course introduces students to the science laboratory and is designed to demonstrate the fundamental concepts of astronomy, geology, chemistry and/or physics as presented in Physical Science 100. Emphasis is placed on the application of the scientific method and collaborative learning. This course is recommended for students planning to major in geography and/or planning to transfer to a four-year institution. (FT) AA/AS; CSU; UC Transfer

Limitation: No credit if taken after a college level course in Chemistry or Physics.

105 Physical Science for Elementary Education

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48, English 49 and Mathematics 46, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M40.

This course is an introductory survey of fundamental concepts in physics and chemistry. Emphasis is placed on the ways in which physical science principles are relevant to societal issues, such as energy use and environmental sustainability. This course is especially designed for those interested in teaching science in a primary school setting in which students must understand scientific methodologies and master content in the physical sciences. (FT) AA/AS; CSU.

120 Physical Oceanography

3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5, W5 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) AA/AS; CSU; UC.

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 206. 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 Pass/No Pass Option

Prerequisite: Mathematics 104 or Mathematics 116, each 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) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

126 General Physics II

4 hours lecture, 3 hours lab, 5 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

180A General Physics I

4 hours lecture, 4 units
Letter Grade or Pass/No Pass Option

Prerequisite: Mathematics 116 with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Mathematics 121 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120A and 125A or credit or concurrent enrollment in Physics 124A.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on

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CSU = California State University Applicable
UC = University of California Applicable

developing an understanding of the properties of matter, mechanics, heat and sound in order to make calculations and solve fundamental physics problems. (FT) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

180B General Physics II

4 hours lecture, 4 units

Letter Grade or Pass/No Pass Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 120B and 125B or credit or concurrent enrollment in Physics 124B.

This course is an introductory survey of the concepts and principles of physics. Emphasis is placed on developing an understanding of the properties of electricity, magnetism, light and modern physics in order to make calculations and solve fundamental physics problems. (FT) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A, 195B, 195C and 195-196-197 combined: maximum credit, one series.

181A General Physics Laboratory I

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Corequisite: Completion of or concurrent enrollment in: Physics 180A with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 121A.

This laboratory course is a hands-on study of the properties of matter, mechanics, heat and sound through laboratory experiments. This course is designed for students interested in the physical sciences. (FT) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

181B General Physics Laboratory II

3 hours lab, 1 unit

Letter Grade or Pass/No Pass Option

Prerequisite: Physics 180A with a grade of "C" or better, or equivalent.

Corequisite: Completion of or concurrent enrollment in: Physics 180B with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with previous credit for Physics 121B.

This laboratory course is a hands-on study of the principles of electricity, magnetism, light and modern physics through laboratory experiments. This course is designed for students interested in the physical sciences. (FT) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 195-196-197 combined: maximum credit, one series.

195 Mechanics

4 hours lecture, 3 hours lab, 5 units

Letter Grade or Pass/No Pass 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 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 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) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 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 Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Physics (PHYS) 120A-120B, 121A-121B, 124A-124B, 125-126, 180A-180B, 181A-181B, 195A-195B-195C and 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 206. 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is an introduction to the field of Political Science. Emphasis is placed on the concepts and methodologies used in the study of political institutions, political participation, public opinion, and the international political system. Topics also include a survey of political theory and the history of American political ideology and culture. This course is required for Political Science majors and recommended for all students interested in the field of Political Science. (FT) AA/AS; CSU; UC.

102 The American Political System

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This comprehensive survey course, designed for students intending to transfer to a four-year college or university, provides an in depth study of the American political system. Both national and California experiences are studied from the perspective of constitutional frameworks, institutions, issues, and policies. NOTE: If used to satisfy part of the American Institutions requirement, Political Science 102 may not be used to satisfy the SDCC District's three-unit social science requirement. Political Science 102 is required for completion of the major in political science. Political Science 102 taken in conjunction with History 109, 115A, 141, 150; Black Studies 140A; Chicano Studies 141A, satisfies the District and CSU American Institutions/California Government requirements. (FT) AA/AS; CSU; UC.

103 Comparative Politics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level W6 and R6.

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Limitation on Enrollment: This course is not open to students with previous credit for Political Science 130.

This course is an introduction to comparative politics. Emphasis is placed on analyses of various political systems using the fundamental concepts and methodologies of comparative politics. This course is designed for political science majors and anyone interested in comparative and/or international politics. (FT) AA/AS; CSU; UC.

140 Contemporary International Politics

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

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 206. 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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) AA/AS; CSU; UC Transfer Limitation: Psychology (PSYC) 101 and Black Studies (BLAS) 104 combined: maximum credit, one course.

123 Adolescent Psychology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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. AA/AS; CSU; 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is a study of the psychology of women, the nature of women's lives, and the various roles that women play. Emphasis is placed on an historical, ethnic and cross-cultural treatment of women in the United States and abroad. Topics include women's sexuality, health, life span development and socio-political status in the world today. This course is intended for psychology and women's studies majors. (FT) AA/AS; CSU; UC.

135 Marriage and Family Relations

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course is a study of the behaviors related to courtship, engagement, marriage, and family life. Emphasis is placed on the historical, cross cultural, and social perspectives of families. Topics include interpersonal communication, economic management, and sexuality as they relate to the family. This course is intended for psychology and child development majors and all students interested in the psychology of interpersonal communication. (FT) AA/AS; CSU; UC.

137 Human Sexual Behavior

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is a study of the psychological, social, and physiological dimensions of human sexual behavior. Emphasis is placed on the diversity of human sexual development and current research. This course is designed for psychology majors and all students interested in human sexual behavior and related issues. (FT) AA/AS; CSU; 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 Pass/No Pass Option

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6. 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 their theories. This course is designed for psychology majors and anyone seeking a stronger understanding of psychological theory. (FT) AA/AS; CSU; UC.

166 Introduction to Social Psychology

3 hours lecture, 3 units

Grade Only

Advisory: English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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) AA/AS; CSU; UC.

211 Learning

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC.

230 Psychology of Lifespan Development

3 hours lecture, 3 units

Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

245 Abnormal Psychology

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Advisory: 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 troubled patterns of abnormal behavior. Emphasis is placed on the theoretical models as they relate to assessment, diagnoses, etiology, treatment, and prognosis of psychopathologies. Topics also include legal and ethical issues related to abnormal psychology. This course is designed for psychology majors and all students interested in abnormal psychology. (FT) AA/AS; CSU; UC.

255 Introduction to Psychological Research

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

Prerequisite: Psychology 101 with a grade of "C" or better, or equivalent.

This course is an introduction to scientific methodology in psychology. Emphasis is placed on descriptive, experimental, and applied research. Students learn the American Psychological Association writing style for empirical report writing. This course is intended for psychology majors and behavioral science students interested in the processes of research. AA/AS; CSU; UC.

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258 Behavioral Science Statistics**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. Topics include data collection; descriptive and inferential statistics; measures of central tendency, dispersion, relative standing, and relationship; probability; hypothesis evaluation; and tests for treatment effects. This course is intended for students majoring in the behavioral/social sciences or those interested in applied statistics. (FT) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 119, Biology (BIOL) 200 or Psychology (PSYC) 258 combined: maximum credit, one course.

259 Behavioral Science Statistics Laboratory**3 hours lab, 1 unit****Letter Grade or Pass/No Pass Option**

Corequisite: Psychology 258.

This laboratory course offers students practice in using statistical analysis software for the behavioral sciences. Emphasis is placed on data entry, graphing, hypothesis testing and statistical analyses. This course is intended for psychology and other behavioral science majors and anyone interested in using statistical analysis software for research purposes. (FT) AA/AS; CSU.

260 Introduction to Physiological Psychology**3 hours lecture, 3 units****Letter Grade or Pass/No Pass 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. AA/AS; CSU; UC.

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 206. 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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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) AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

Sociology (SOCO)

101 Principles of Sociology

**3 hours lecture, 3 units
Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU; UC Transfer Limitation: Sociology (SOCO) 101 and Black Studies (BLAS) 115 combined: maximum credit, one course.

110 Contemporary Social Problems**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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) AA/AS; CSU; UC.

201 Advanced Principles of Sociology**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

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. AA/AS; CSU; UC.

223 Globalization and Social Change**3 hours lecture, 3 units****Letter Grade or Pass/No Pass Option**

Advisory: English 101 with a grade of "C" or better, or equivalent, or Assessment Skill Levels R6 and W6; Sociology 101 with a grade of "C" or better, or equivalent.

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) AA/AS; CSU; UC.

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 206. 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 Pass/No Pass 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) AA/AS.

101 First Course in Spanish**5 hours lecture, 5 units****Letter Grade or Pass/No Pass 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 previous credit for or concurrent enrollment in Spanish 100.

This entry level course introduces 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. They also examine and explore basic Spanish language structures and vocabulary. This course is intended for beginning students who seek basic proficiency in the Spanish language, students who want to take other Spanish courses and students who want to learn Spanish for their personal enrichment. (FT) AA/AS; CSU; UC Transfer Limitation: Spanish (SPAN) 100, 101-102 combined: maximum credit, 10 units.

102 Second Course in Spanish**5 hours lecture, 5 units****Letter Grade or Pass/No Pass 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.

Limitation on Enrollment: This course is not open to students with previous credit for or concurrent enrollment in Spanish 100.

In this interactive continuation of first-semester Spanish, students develop listening, reading, speaking, and writing skills at a more complex level. Students further develop their receptive and productive competencies to the intermediate low/mid level. The course explores additional Spanish language structures and vocabulary for communication. This course is intended for students who want to further their basic proficiency in the Spanish language, students who want to take a third-semester Spanish course, and students who want to continue learning Spanish for their personal enrichment. (FT) AA/AS; CSU; UC Transfer Limitation: Spanish (SPAN) 100, 101-102 combined: maximum credit, 10 units.

201 Third Course in Spanish**5 hours lecture, 5 units****Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Spanish (SPAN) 201-202 and Chicano Studies (CHIC) 203-204 combined: maximum credit, one series.

202 Fourth Course in Spanish**5 hours lecture, 5 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Spanish 201 with a grade of "C" or better, or equivalent.

Limitation on Enrollment: This course is not open to students with credit for Spanish 200.

This course is offered as an advanced intermediate level course. It reviews and furthers grammatical features in Spanish through oral and written communication within a cultural background. Readings of literary and/or culturally relevant authentic materials are examined in depth. (FT) AA/AS; CSU; UC Transfer Limitation: Spanish (SPAN) 201-202 and Chicano Studies (CHIC) 203-204 combined: maximum credit, one series.

210 Conversation and Composition Spanish I**3 hours lecture, 3 units****Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

211 Conversation and Composition Spanish II**3 hours lecture, 3 units****Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

215 Spanish for Spanish Speakers I**5 hours lecture, 5 units****Letter Grade or Pass/No Pass Option**

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 placed on formal, written communication skills in Spanish at the intermediate level, and the study of Hispanic and Chicano culture through contemporary reading materials. The course focuses on language challenges particular to Spanish speakers such as orthography, the inappropriate mix of English and Spanish, and contrasts between standard Spanish and regional variations. This course is conducted entirely in Spanish. (FT) AA/AS; CSU; UC.

216 Spanish for Spanish Speakers II**5 hours lecture, 5 units****Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

296 Individual Instruction in Spanish**1.5 - 6 hours lab, 0.5 - 2 units****Pass/No Pass 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. AA/AS; CSU.

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 206. Please refer to the class schedule and/or see the dean or department chair for availability.

SPECIAL EDUCATION

(See Disability Support Programs and Services, page 290)

SPEECH COMMUNICATIONS

(See Communication Studies, page 277)

Tagalog (TAGA)**101 First Course in Tagalog****5 hours lecture, 5 units****Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC Transfer Limitation: Corresponds to two years of high school study.

102 Second Course in Tagalog**5 hours lecture, 5 units****Letter Grade or Pass/No Pass Option**

Prerequisite: Tagalog 101 with a grade of "C" or better, or equivalent.

Advisory: Concurrent enrollment in: Tagalog 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) AA/AS; CSU; UC.

201 Third Course in Tagalog

**5 hours lecture, 5 units
Letter Grade or Pass/No Pass 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) AA/AS; CSU; UC.

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 206. 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 course 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 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. AA/AS; CSU.

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. AA/AS; CSU.

Apprenticeship—San Diego City Civil Service (SDCS)

349I Equipment Mechanic Work Experience Hours by arrangement, 300 hours total, 4 units Pass/No Pass

Corequisite: Diesel Technology 100.

Advisory: English 42 and English 43, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R4 and W4

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) AA/AS.

San Diego Miramar College Faculty



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B.A., William Paterson College

Ph.D., Temple University

BEITEY, George

Dean of School of Public Safety

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B.A., San Diego State University

M.P.A., National University

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Mathematics

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English/ESL

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M.A., San Diego State University

BOCHICCHIO, Regina

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Coursework at Universite d' Aix-Marseilles, Aix-en-Provence, France

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BOOTH, Channing

Music

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M.A., Boston Conservatory and Berklee College of Music

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Aviation

BOWERS, Sean Patrick

Exercise Science

Head Women's Soccer Coach

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Eugene Chamberlin
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Larry Cooke
Robert Crosby
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Daniel Dramer
Gisella Duarte-Cosman
Kenneth Fawcett
Fran Fehlman
Diana Fink
S.M. Franklin
Gin Gee
Vernal Goodman
Rex Gorton
Ruth Gray
Stephen Greene
Robert D. Henderson
Eldon Hoover

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Yolanda James
Jerry LaFrance
Linda Lee
Morris W. Magoski
Ray McFarlane
Dale Mathews
Joan Messenger
Arashmidos Monjabez
Carol Murphy
Sally Nalven
Corrie Ort
Ronald Page
James Palmer
William S. Puett
Rayley Quon
Jay Root
David Sanderlin
June Scopinich
Susan Scott
John S. Shablow
Richard Shultz
Dorothy Simpson
Sandra Smith
Mary Strobbe
Donald Taylor
Terry Truitt
Helen Webb
James L. Weber

San Diego Miramar College Classified Employees



Name	Position	Department
AGONAFER, Sara	Senior Clerical Assistant	Public Safety
AGUILAR, Jessica	Student Services Assistant	Veterans Affairs
ALLEN, Joyce	Senior Secretary	Arts & Humanities
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
ARREOLA, Atala	Custodian I	Facilities Services
ARTEAGA, Eduardo	Custodian I	Facilities Services
ATKINSON, Ellie	Student Services Assistant	Counseling
BARENO, Leticia	Senior Secretary	Business, Technical Careers and Workforce Initiatives
BARLOLONG, Tina	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
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
CARRANZA, Gloria	Student Services Assistant	Admissions & Records
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
CONIGLIO, Carmencita	Accounting Supervisor	Student Accounting
CONTRERAS, Miguel	Custodian I	Facilities Services
CORDERO, Melanie	Senior Secretary	Math, Biological, Exercise and Physical Science
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, Rachell	Clerical Assistant	College Police
De LOS REYES, Edgar	Student Services Assistant	Financial Aid

Name	Position	Department
De PERALTA, Cliff	Athletic Equipment Attendant	Aquatics
DIMAYUGA, Pocholo	Custodian I	Facilities Services
ELMONE, Shauna	Administrative Technician	Business Office
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
FURMAN, Karen	Student Services Supervisor I	Admissions & Records, Veterans Affairs
GALVAZ, Danny	Custodian I	Facilities Services
GARCIA-LORENZO, Epifanio	Gardener/Groundskeeper	Gardening
GUTOWSKI, Dan	Hourglass Park Coordinator	Park & Aquatic Center
HANKINSON, Joseph	Placement Officer	Career/Employment
HAYES, Alana	Athletic Equipment Attendant	Park & Aquatic Center
HENDERSON, Bill	Food Service Supervisor	Food Services
HERMANN, Jack	Custodial Crew Leader	Facilities Services
HERNANDEZ, Rey	Custodian I	Facilities Services
HILL, Kurt	Microspecialist Supervisor	Instructional Computer Support
HODGES, Margaret	Administrative Technician	Public Safety
HOUILLION, Helen	Senior Student Services Assistant	Evaluations, Veterans Affairs
HUBBARD, Terrie	Administrative Technician	Office of Instruction
HUNT, Margaret (Peggy)	Clerical Supervisor	Public Safety
HUYNH, An	Gardener/Groundskeeper	Gardening
IDANO, Tito	Gardener/Groundskeeper	Gardening
IRINGAN, Lina	Food Service Worker I	Food Services
JOHNSTON, Toniann	Senior Student Services Assistant	Testing/Assessment/Career Services
KAPITZKE, Denise	Accounting Supervisor	Business Office
KELETA, Aster	Senior Clerical Assistant	Office of Instruction/Athletics
KING, Jenny	Senior Student Services Assistant	Financial Aid
KINLEY, Roy	Grounds Crew Leader	Facilities Services
KNUDTSON, Knute	Athletics Groundskeeper	Aquatics
LATIF, Maryam	Student Services Assistant	Admissions & Records
LE, Dam Van	Instructional Lab Technician/Chemistry	Physical Sciences
LINDSAY, Dane	Regional Facilities Officer	Facilities Services
LONGFELLOW, Tom	Lead Production Services Assistant	Reprographics
MAGPURI, Glenn	Instructional Support Supervisor	Library/LRC
MANALASTAS, Emilia	Instructional Lab Technician/Biology	Biological Sciences
MARQUEZ, Cynthia	Instructional Lab Tech/Child Development	Child Development

Name	Position	Department
McCORKELL, Francine	Instructional Support Supervisor	Independent Learning Center
McLEMORE, Edwin	Student Services Assistant	Transfer Center
McMULLIN, Carla	Instructional Lab Technician	Child Development
MIDDLETON, Carletta	Senior Secretary	Student Affairs & Matriculation
MILGAR, Lucas	Custodian I	Facilities Services
MIZE, Joan	Graphic Artist/Photographer	Communications
MONDAY, Regina	ATTE & Biotech Liaison	Grant Office
MORA, Dante	Stock Clerk I	Receiving/Stockroom
MORAN, Kieran	Instructional Assistant	Auto Mechanics
MORFORD, Charlene	Clerical Assistant	College Police
NAJIMY, Temmy	Senior Secretary	Library & Technology
NEAL, Marcia	Custodian I	Facilities Services
NELSON, Alice	Student Services Supervisor I	Counseling, EOPS & DSPS
NGUYEN, Tam Quy	Media Clerk	Library/LRC
NGUYEN, Tien	Instructional Lab Technician/Chemistry	Physical Sciences
NGUYEN, Truongson (Sonny)	Outreach Coordinator	Outreach Office
NGUYEN, Vuong Tung	Instructional Support Supervisor	Biological and Physical Sciences
NOVAK, Antonia	Senior Student Services Assistant	Admissions & Records
NOVAK, Anthony	Accounting Technician	Student Accounting
PADRIQUE, Eli	Custodian I	Facilities Services
PAPA, Ben	Custodial Crew Leader	Facilities Services
PARENT, Christine	Production Services Assistant	Reprographics
PATTERSON, Mary	Accounting Technician	Business Office
PHAM, Lonnie	Student Assistance Technician	Financial Aid
PHAYMANY, Pamela	Media Clerk	Library/LRC
PHILLIPS, Lorna	Medical Office Assistant	Health Services
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
RODGERS, Stacy	Administrative Technician	Public Safety
ROSAS, Herminio	Gardener/Groundskeeper	Groundskeeping
SALEHI, Kayhan	Instructional Asst/Learning Resources	Independent Learning Center
SHOOSHTARY, Sam	Student Assistance Technician	EOPS/CARE
SMITH, Carol	Instructional Lab Technician/Biology	Biological Sciences
SMITH, William T.	Webmaster	Library & Technology
SORIANO, Anna Liza	Hourglass Park Supervisor	Park & Aquatics Center
STACK, Dana	Student Services Supervisor II	Admissions & Records, VA, Evaluations

Name	Position	Department
STAMOS, William	Instructional Lab Technician	Instructional Computer Support Computer Science
STILLSON, Daniel	Gardener/Groundskeeper	Gardening
STOUT, Mark	Instructional Lab Technician/Aviation	Aviation Maintenance Technology
SWINGLE, Bonnie	Media Technician	Library/LRC/Audio Visual
THOMAS, Elizabeth	Instructional Lab Technician	Child Development Child Development
TILLEY, Dan	Custodian I	Facilities Services
TODD, Katinea	Administrative Secretary	Office of Instruction
TREVISAN, Sandra	Information Officer	Communications
TUAZON, Ricardo	Custodian I	Facilities Services
UM, Minh Chon (Stephen)	Word Processing/Duplicating	Reprographics Support Services Supervisor
VILABOY, Teresa	Financial Aid Officer	Financial Aid
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 Sciences
VU, Diep Mong	Instructional Lab Technician/Chemistry	Physical Sciences
WAN, Kwai Chee (Alice)	Student Services Technician	Admissions & Records
WILKINS, Carlotta	Instructional Assistant	Auto Technology
WILLIAMS, Phillip	Network Specialist	Instructional Computer Support
WILLIAMS, Terhea	Instructional Lab Technician/Biology	Biological Sciences
WIMS, Victor	Custodian I	Facilities Services
YOUNG, Sean	Instructional Assistant/Auto Mechanics	Auto Technology

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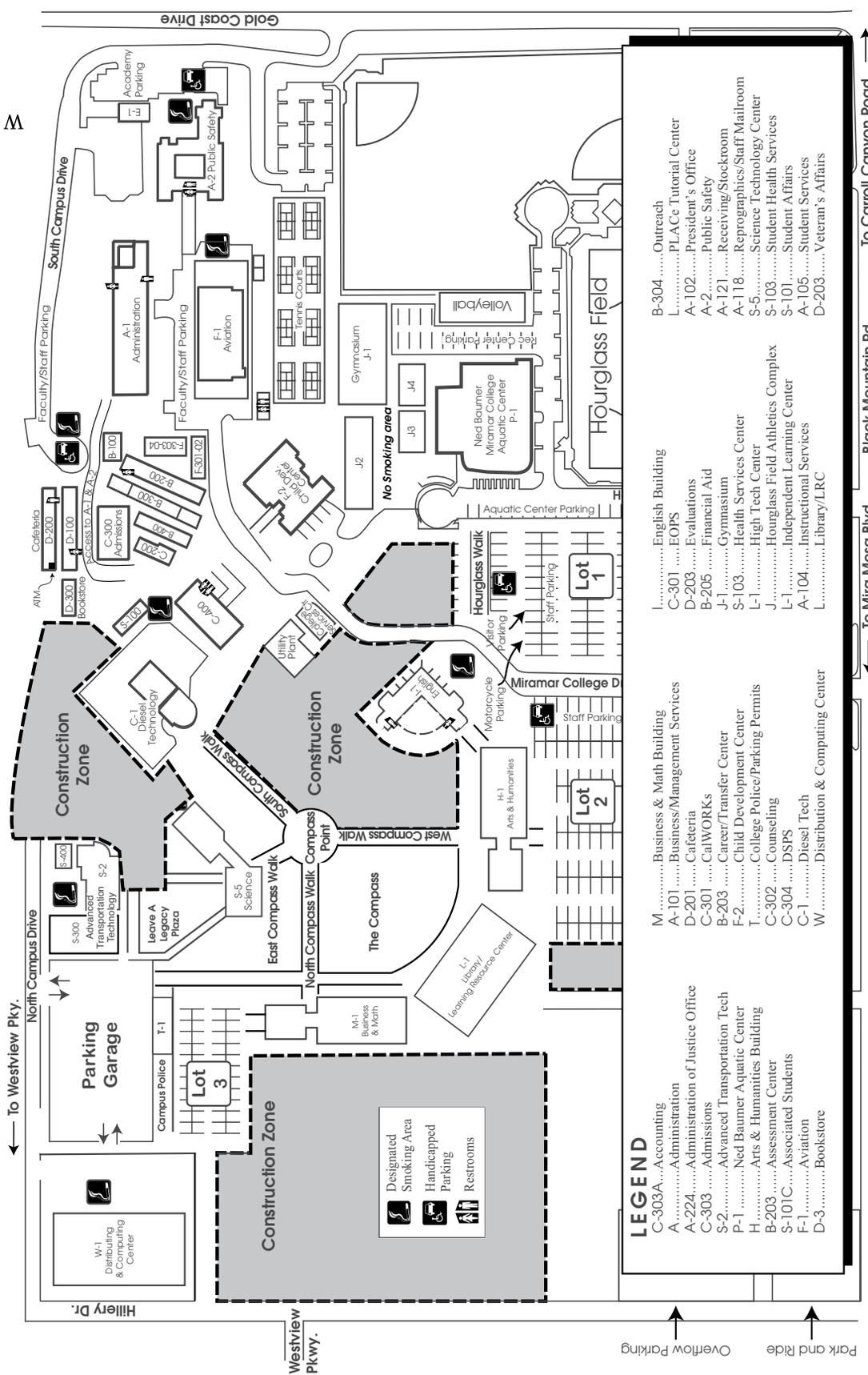
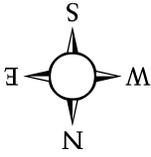
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SAN DIEGO MIRAMAR COLLEGE CAMPUS MAP



LEGEND

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- A.....Administration
- A-224.....Administration of Justice Office
- C-303.....Admissions
- S-2.....Advanced Transportation Tech
- P-1.....Ned Baumer Aquatic Center
- H.....Arts & Humanities Building
- B-203.....Assessment Center
- S-101C.....Associated Students
- F-1.....Aviation
- D-3.....Bookstore
- C-303A.....Business & Math Building
- A-101.....Business/Management Services
- D-201.....Cafeteria
- C-301.....CalWORKS
- B-203.....Career/Transfer Center
- F-2.....Child Development Center
- T.....College Police/Parking Permits
- C-302.....Counseling
- C-304.....DSPS
- C-1.....Diesel Tech
- W.....Distribution & Computing Center
- M.....English Building
- C-301.....EOPS
- D-203.....Evaluations
- B-205.....Financial Aid
- J-1.....Gymnasium
- S-103.....Health Services Center
- L-1.....High Tech Center
- J.....Hourglass Field Athletics Complex
- L-1.....Independent Learning Center
- A-104.....Instructional Services
- L.....Library/LRC
- B-304.....Outreach
- L.....PLACe Tutorial Center
- A-102.....President's Office
- A-2.....Public Safety
- A-121.....Receiving/Stockroom
- A-118.....Reprographics/Staff Mailroom
- S-5.....Science Technology Center
- S-103.....Student Health Services
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- A-105.....Student Services
- D-203.....Veteran's Affairs

6/2012

Subject to change. Check www.sdmiramar.edu for up-to-date information.