

# SAN DIEGO MIRAMAR COLLEGE

## 2015–2016 CATALOG

Fall 2015, Spring 2016, Summer 2016

10440 Black Mountain Road  
San Diego, California 92126  
619-388-7800  
[www.sdmiramar.edu](http://www.sdmiramar.edu)

Patricia Hsieh, Ed.D.,  
President

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



## 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.

President

## San Diego Miramar College Administrative and Supervisory Personnel

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 Vice President, Instruction .....TBA  
 Vice President, Student Services.....Gerald A. Ramsey  
 Vice President, Administrative Services .....Brett Bell  
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 Dean, Public Safety ..... George Beitey  
 Dean, Math, Biological, Physical & Exercise Sciences ..... Dr. Paulette Hopkins  
 Associate Dean, Advanced Transportation, Technology & Energy .....Gregory Newhouse  
 Dean, Business, Technical Careers & Workforce Initiatives..... Lynne Ornelas  
 Dean, Student Affairs ..... Adela Jacobson  
 Dean, Planning, Research and Institutional Effectiveness (PRIE), Library & Technology .....Dr. Daniel Miramontez  
 Dean, Matriculation & Student Development ..... Dr. Howard Irvin  
 Accounting Supervisor.....Carmen Coniglio-Martinez  
 Admissions & Records Officer .....Dana Stack  
 Counseling Department Chair.....Rick Cassar  
 Counseling Student Services Supervisor ..... Alice Nelson  
 CalWORKS .....Joan Thompson  
 DSPS Coordinator..... Kandice Brandt  
 EOPS Coordinator.....Joan Thompson  
 Financial Aid Officer .....TBA  
 Information Officer .....Stephen Quis  
 Library/Audiovisual Supervisor.....Glenn Magpuri  
 Outreach Coordinator..... Sonny Nguyen  
 The PLACe Acting Coordinator....Dr. Daphne Figueroa  
 Transfer Center Coordinator..... Dr. Naomi Grisham  
 Career/Placement Officer .....Joseph Hankinson  
 ILC Supervisor .....Francine McCorkell  
 Microcomputer Specialist Supervisor.....Kurt Hill

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Executive Assistant to the Chancellor



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 Bernie Rhinerson.



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# Academic Calendar 2015–2016

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## Fall Semester 2015

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16-WEEK SEMESTER: Fall Classes ..... August 24, 2015 – December 19, 2015

### SPECIAL DATES

July 1, 2015 .....	Deadline to file an application for admission and receive a priority registration date and time for Fall. Students who file an application after the deadline will have open registration and will not receive priority for access to services.
August 23, 2015 .....	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
September 7, 2015 .....	Holiday – Labor Day*
September 17, 2015 .....	Constitution Day (Classes are in session)
November 11, 2015 .....	Holiday – Veterans Day*
November 13, 2015 .....	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Fall 2015 completion.
November 23 – 25, 2015 .....	Classes not in session – campus closed.
November 26 & 27, 2015 .....	Holiday – Thanksgiving*
December 21, 2015 – January 23, 2016 ..	Winter Recess

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## Spring Semester 2016

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16-WEEK SEMESTER: Spring Classes ..... January 25, 2016 – May 21, 2016

### SPECIAL DATES

November 12, 2015 .....	Deadline to file an application for admission and receive a priority registration date and time for Spring. Students who file an application after the deadline will have open registration and will not receive priority access to services.
January 18, 2016 .....	Holiday – Martin Luther King Day*
January 24, 2016 .....	RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
February 12, 2016 .....	Holiday – Lincoln Day*
February 15, 2016 .....	Holiday – Washington Day*
March 25, 2016 .....	Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Spring 2016 completion.
March 28 – April 2, 2016 .....	Spring Recess – Campus closed.
April 1, 2016 .....	Holiday – Cesar Chavez Day*

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

Note: Holidays apply to all sessions.

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## Summer Session 2016

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Summer Classes: ..... May 31 – August 6, 2016

### SPECIAL DATES

- April 28, 2016 ..... Deadline to file an application for admission and receive a priority registration date and time for Summer. Students who file an application after the deadline will have open registration and will not receive priority access to services.
- May 30, 2016 ..... Holiday – Memorial Day\*
- May 30, 2016 ..... RESIDENCE DETERMINATION DATE (APPLIES TO ALL SESSIONS)
- July 4, 2016 ..... Holiday – Independence Day\*
- July 29, 2016 ..... Last day to file a petition for graduation for an Associate Degree or Certificate of Achievement for Summer 2016 completion.

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

Note: Holidays apply to all sessions.



# 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 has now passed its 100th 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)

<p><b>Knowledge of Human Cultures and the Physical and Natural World</b></p> <p>Study in sciences, math, social sciences, humanities, histories, language and the arts; or a specialized field of study</p>
<p><b>Intellectual and Practical Skills</b></p> <p>Communication</p> <p>Critical Thinking</p> <p>Problem Solving</p> <p>Quantitative Literacy</p> <p>Information Literacy</p>
<p><b>Personal and Social Responsibility</b></p> <p>Local and global civic knowledge and engagement</p> <p>Intercultural knowledge and competence</p> <p>Ethical reasoning and action</p> <p>Foundations and skills for lifelong learning</p> <p>Pursuit of high quality, collegiate educational and extracurricular experiences</p> <p>Successful navigation of the postsecondary education system to achieve educational goal(s)</p>
<p><b>Integrative and Applied Learning</b></p> <p>Synthesis and advanced accomplishment across general and specialized studies</p> <p>Demonstration of applied skills required for the student's chosen career field</p>

## Mission Statement

San Diego Miramar College's mission is to prepare students to succeed in a complex and dynamic world by providing quality instruction and services in an environment that supports and promotes diversity, while emphasizing innovative programs and partnerships to facilitate transfer preparation, workforce training, and career advancement.

### Vision

San Diego Miramar College will be a hub of education, diversity, and services to our community.

San Diego Miramar College, in keeping with this vision, supports and emphasizes the following guiding values:

- Access, learning and success of all students
- A collegiate college community that offers civility, mutual respect, courtesy, appreciation, and accountability
- Accomplishments of individuals, groups and the college as a whole
- Diversity of our students, staff, faculty and programs that reflect our community
- Creativity, innovation, flexibility and excellence in teaching, learning and service
- The ability to recognize and respond to opportunities
- Collaboration and partnerships
- Participatory governance and communication
- Sustainable practices in construction, curriculum and campus culture

### Strategic Goals

1. Provide educational programs and services that are responsive to change and support student learning and success.
2. Deliver educational programs and services in formats and at locations that meet student needs.
3. Enhance the college experience for students and the community by providing student-centered programs, services, and activities that celebrate diversity and sustainable practices.

4. Develop, strengthen, and sustain beneficial partnerships with educational institutions, business and industry, and our community.

## Accreditation

San Diego Miramar College 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



# Student Success and Support Program

(formerly the College Matriculation Program)

The goals of the Student Success and Support Program (SSSP) are to ensure that all students complete their college courses, persist to the next academic term, and achieve their educational objectives through admissions, orientation, assessment, educational planning with a counselor, and student follow-up.

## Steps to Student Success

### Step 1 – Admission

### Step 2 – Orientation

### Step 3 – Assessment

### Step 4 – Educational planning with a counselor

### Step 5 – Follow-up on student progress

These services have 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, and all students are encouraged to participate in the various services of the 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 a high school equivalency certificate.
- 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 Exercise Science (*formerly 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.

In accordance with §76038 of the California Education Code, students seeking admission who have been previously expelled from a California community college within the past five years, or who are currently in the process of a formal expulsion hearing for any offense listed in *AP 3000.2, Student Admission Status, 2.a.1-7*, are required to inform the District. Admission eligibility shall be determined in accordance with *AP 3000.2, Student Admission Status*.

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**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.**

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## 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>.

## Social Security Number

Your Social Security Number (SSN) or Individual Tax Identification Number (ITIN) is required for Federal and State reporting, and for students applying for Financial Aid. It is maintained in a secure manner and WILL NOT be visible or released to third parties for identification purposes for any reason.

Section 483 and 484 of the Higher Education Act of 1965, as amended, also gives the Financial Aid Office the authority to collect your SSN. The U.S. Department of Education uses your Social Security Number to verify your identity and retrieve your records. Providing incorrect information may result in penalties from the IRS.

All students will be assigned a unique 7-digit College Student IDentification (CSID) number upon successful submission of their application that will be required to conduct all college business.

## 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. 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. Non-Exempt 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.

## 3. 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.

**Students are strongly urged to take the assessment tests seriously. Take advantage of preparatory workshops, refresher courses, practice exams and tutoring services prior to taking the assessment tests.**

- English assessment tests may be retaken after one year.
- Math assessment tests may be retaken after one year. Students who want to retest in math earlier than one year must take a refresher session/workshop/course or advancement exam.

### 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, EPT, ELM, and/or EAP report directly to District Student Services to determine readiness for English 101 or 105 and for courses with a Math 96 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	

**Note:** EAP Conditional – Ready for CSU College-Level English/Math Course does not meet the criteria.

**IMPORTANT:** Only original document will be accepted. Copies are not valid.

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

## 4. Educational Planning with a Counselor

An education plan 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 education plan is an agreement which contains the official requirements for graduation and/or transfer. **All official transcripts of prior college work must be on file and evaluated before an official education plan can be prepared. Transcripts from foreign institutions are not required.** See the **Graduation** section on page 92 for graduation filing requirements.

Education plans outline a suggested pathway for a student to take based on their major, transfer plans or other pertinent objectives. 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. The student should review their education plan periodically with a counselor as goals or objectives change.

Career, interest and aptitudes assessments are available for students who wish to explore other options or who are undecided on their educational goal.

## 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:

- Maintenance of a certificate or license, educational development, or completion of credits for high school diploma
- Students who have an associate degree or higher
- Students concurrently enrolled at a four-year college
- Students concurrently enrolled in high school
- Students who have taken the placement tests within the last three years

### 3. Orientation

- Students with the following educational goals:
  - Maintenance of a certificate or license, educational development, or completion of credits for high school diploma
  - Students who have an associate degree or higher
  - Students concurrently enrolled at a four-year college or university
  - Students concurrently enrolled in high school

### 4. Educational Planning with a Counselor

- Students with the following educational goals:
  - Maintenance of a certificate or license, educational development, or completion of credits for high school diploma
  - Students who have an associate degree or higher
  - Students concurrently enrolled at a four-year college
  - Students concurrently enrolled in high school

### 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 (San Diego Community College District's online registration system.)

Special-Admit High School students must enroll in person at the time of their registration appointment.

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

Reg-e offers the following information and services:

- Registration—add, drop & withdraw from classes
- View the student's class schedule and payment deadlines
- Pay fees and view payment records
- Purchase a parking permit
- Purchase an Associated Students Membership
- Wait List activities—adding, dropping and Wait List status
- Pass/No Pass grading options
- View the student's Financial Aid
- View attendance hours for tracking classes
- View placement levels
- Academic deadlines and calendar

**Note:** You may only access one semester at a time.

The Reg-e portal also grants access to:

- Grade information
- Academic history
- Petitions to graduate
- Ordering transcripts
- View 1098-T tax information
- Apply to the honors program

## Online Class Restrictions

In accordance with federal regulations City, Mesa and Miramar colleges may not permit students residing outside of California to enroll in online classes without approval of the state where the student resides. Students residing in a non-approved state/territory are **not permitted** to enroll in online classes and will be dropped. Go to <http://studentweb.sdccd.edu/docs/OnlineStatesNotPermitted.pdf> for an up-to-date list of restricted states and territories.

## 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.

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 K1-205.

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";
6. Failure to meet a prerequisite or co-requisite Requirement;
7. Enrolling in an online course while residing in a state not approved by the department of education.

## Study Load Limit

The maximum study load for a semester is 20 academic units including Exercise Science (*formerly Physical Education*) activity units.

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 including Exercise Science (*formerly Physical Education*) activity units.

Six units of credit is considered a minimum full-time during the summer session; four units is three-quarters time, and three 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 Military & Veterans who meet the eligibility criteria\*, Foster Youth, CalWorks, EOPS & DSPS students.

#### Group 2

- Continuing Students who have completed orientation, assessment and have an education plan (Abbreviated education plans only grant a student priority for 3 semesters.)
- Continuing CE Advantage Students

#### Group 3

- New & Returning Students who have completed orientation, assessment and have an education plan (Abbreviated education plans only grant a student priority for 3 semesters.)

#### Group 4

- Continuing, New & Returning Students who have **not** completed all three services: orientation, assessment, and have an education plan.

#### Group 5

- Students with 100+ Units (Does NOT include Basic Skills units.)

(Active Military & Veterans, CalWorks, DSPS & EOPS students will receive first priority within this group.)

#### Group 6

- Students who are Concurrently Enrolled at a 4-year Institution.

(Active Military & Veterans, CalWorks, DSPS & EOPS students will receive first priority within this group.)

#### Group 7

- Students with four (4) or more Certificates of Achievement
- Students with two (2) or more Associate Degrees
- Students with a Baccalaureate Degree

(Active Military & Veterans, CalWorks, DSPS & EOPS students will receive first priority within this group.)

#### Group 8

- Students who are academically disqualified or disqualified for lack of progress or who have not yet returned to good academic standing.

(Active Military & Veterans, CalWorks, DSPS & EOPS students will receive first priority within this group.)

Within each priority group above, students are prioritized according to cumulative units, including transfer units.

#### 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
- 90.0+ units

\*Students who are Active Duty Military or Veterans, discharged within the past fifteen (15) years, may be eligible for up to 4 years of priority registration. Students should contact the Admissions Office for additional information. A military ID card or DD214 will be required for verification.

### 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 Enrollment and Advisories

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

evaluated and on file well in advance of registration to minimize registration delays.

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

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

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

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

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

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

### Challenge Procedures

Students who believe they have sufficient grounds may challenge a prerequisite, corequisite, or limitation on enrollment in a specific course (the student does not 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 51.

## 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 Admissions Office.
- The residence determination date is the day immediately preceding the first day of classes for each semester.
- 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
- A Veteran or dependent using or intending to use their GI Bill benefits while currently living in California and has enrolled at San Diego City, Mesa or Miramar College within three years of their discharge date
- 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
- A nonresident special part-time high school student who meets admission requirements is exempt from paying nonresident tuition

## 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
- A nonresident special part-time high school student who meets admission requirements is exempt from paying nonresident tuition

## Exception to Residency Requirements

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

- Active duty military personnel and their dependents stationed in California

## 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 school in California for three or more years;
- have completed the equivalent of three years of high school in California;
- 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 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](http://www.sdmiramar.edu)

## General Information

1. An international student must register for and maintain a minimum of 12 units each semester while at Miramar College. Part-time F-1 status will not be approved. The registration status and academic performance of all international students will be monitored by the college.
2. A recent photograph must be submitted with an application (passport size is acceptable).
3. Prospective international students are advised that they must comply with all requirements of the U.S. Citizenship and Immigration Services (formerly INS) and of San Diego Miramar College to be admitted as international students.
4. 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; 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. The processing of an application normally requires a minimum of three to five months. 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/](http://www.ets.org/toefl/). Institutional reports or photocopies will not be accepted. Students may petition to waive the TOEFL requirement under one of the following conditions:

1. completion of a transfer level college English composition course at an accredited United States institution with a grade of "C" or higher;
2. completion of ESL assessment and placement at a level of English 42 and 43 or higher; in addition, the student must take the prescribed course work at the level of assessment; or
3. a minimum SAT verbal score of 450.

**Advanced Degrees:** An international student in possession of an associate degree or its equivalent,

or higher (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. Minimum of \$18,000 required for one school year (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 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 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 housing within walking distance of the college.

## Visa Students (other than F-1)

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

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

## 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 \$19.00 per semester for Fall and Spring semesters, and \$16.00 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 2015-2016 non resident tuition fee is \$193.00 per unit.

### 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.

**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.

**Returned Check Fee:** 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:

- **Primary Session (16 Weeks)**  
Friday of the second week
  - **Non-Primary Sessions (16 weeks or more)**  
Monday of the third week
  - **Short-Term Sessions (Less than 16 weeks)**  
Monday of the second week
  - **Classes 1 week or shorter**  
See Admissions Office for deadline dates
2. Students who are administratively dropped when a Petition to Challenge is denied will receive a full refund of the class(es) petitioned.
  3. Students who are academically disqualified and administratively dropped will receive a full refund.  
  
No refund is given for classes dropped after the deadline.
  4. In order to receive a refund, **parking permits** must be returned to College Police or the Accounting Office within the refund deadlines described in #1.

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.

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

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# Academic Information and Regulations



**Disclaimer:** SDCCD continuously reviews and updates policies and procedures to ensure compliance with state and federal regulations and changes in business practices. Please refer to the SDCCD website for the most up to date information.

# 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 [cjay@sdccd.edu](mailto:cjay@sdccd.edu), or Naomi Grisham, at [ngrisham@sdccd.edu](mailto:ngrisham@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 by email at [cjay@sdccd.edu](mailto:cjay@sdccd.edu).

## Class Attendance

Students who do not attend the first class meeting may be dropped by the instructor. Students, who cannot attend because of illness, religious observation, or a serious problem, should notify the instructor. Students who miss the first class meeting and do not plan to attend must log-on to Reg-e to drop the class to avoid receiving an "F" grade.

**It is the student's responsibility to drop by the published deadlines.**

# 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 Grading Policy on page 29.

**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 District Records Office. A final grade will be assigned when the work stipulated has been completed and evaluated by the instructor or when the time limit for completion of the work has passed. An "I" must be made up no later than one year following the end of the term in which it was assigned. In the event of unusual, verifiable circumstances beyond the student's control, a petition may be filed in the Office of the Vice President, Student Services for extension of the one-year time limit. **Course repetition is not permitted to remove an Incomplete.**

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

The following conditions apply to official withdrawal:

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

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**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.**

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**Limitations:**

1. No more than 12 units of a student's coursework completed in the San Diego Community College District graded on a Pass/No Pass basis will be used to meet Associate Degree requirements.
2. No classes graded on a Pass/No Pass basis may be applied to courses required in the major for graduation.

**Conditions:**

1. Students who wish to be graded on a Pass/No Pass basis must submit a petition to the Admissions Office or select the Pass/No Pass option online via Reg-e 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 61% 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 cumulative 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 semester 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 as well as deadline dates for filing a Petition for Readmission are 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 Policy 3100, Student Rights, Responsibilities, Campus Safety and Administrative Due Process.

Academic dishonesty occurs when a student attempts to show possession of a level of knowledge or skill which he or she does not possess. The two most common kinds of academic dishonesty are cheating and plagiarism. Cheating is defined as the act of obtaining or attempting to obtain credit for academic work by the use of any dishonest, deceptive, or fraudulent means. Plagiarism is defined as the act of incorporating ideas, words, or specific substance of another, whether purchased, borrowed or otherwise obtained, and submitting the same as one's own work to fulfill academic requirements without giving credit to the appropriate source.

Students who engage in practices of cheating or plagiarism may warrant two separate and distinct courses of disciplinary action which may be applied concurrently in response to a violation of this policy. Students are responsible for knowing what constitutes academic dishonesty and for consulting with instructors about questions or concerns. Procedure 3100.3 describes the Academic and Administrative Sanctions for Students who are found to be cheating or Plagiarizing. Copies of the procedures can be obtained in the Office of the Vice President of Student Services and online at <http://www.sdccd.edu/public/district/policies/>.

## 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 similar active participatory courses in Exercise Science (*formerly Physical Education*) and Visual and Performing Arts, regardless of grade or symbol earned.
- Academic renewal is not allowed for work experience courses.

- 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 any course, regardless of grade or symbol earned.

## Academic Renewal Without Course Repetition

A student with substandard academic performance (GPA below 2.0) 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 coursework to be disregarded was completed.
2. **Students with degrees or certificates earned at City, Mesa or Miramar:** Coursework 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 course(s)/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, or 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 DSPS 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 the DSPS Office on campus in K1-204 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 Admissions and Records 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 District 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 immediately upon 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

### Foreign Transcripts

- Foreign transcripts are not required.
- Students who elect to waive the requirement of a foreign transcript must submit a Foreign Transcript Waiver Agreement form available at the campus Evaluations Office.
- Students who elect to submit a foreign transcript must provide a foreign transcript evaluation from an approved agency.

For additional information contact the Counseling Office on campus.

## 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.
- Credit granted by SDCCD does not necessarily transfer to other institutions. Transferability of credit is determined by the receiving college or university.
- Credit awarded through non-traditional education may not be used for grade alleviation.
- A maximum of 30 cumulative units may be granted for acceptable scores on any combination of AP, CLEP, DANTES, or IB.
- Duplicate credit will not be awarded for nontraditional education sources and completed coursework.

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	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Art History</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C1 <u>or</u> C2 IGETC: 3 semester units towards Area 3A <u>or</u> 3B	SDCCD: ARTF 110 <u>or</u> ARTF 111
<b>Biology</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B2 & B3 IGETC: 4 semester units towards Area 5B & 5C	SDCCD: N/A

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Calculus AB or BC/AB subscore<sup>1</sup></b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: 3 semester units towards Area 2A	SDCCD: N/A
<b>Calculus BC<sup>1</sup></b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: 3 semester units towards Area 2A	SDCCD: N/A
<b>Chemistry</b> 3 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area B CSU GE: 6 semester units towards Area B1 & B3 IGETC: 4 semester units towards Area 5A & 5C	SDCCD: CHEM 200
<b>Chemistry</b> 4 or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area B CSU GE: 6 semester units towards Area B1 & B3 IGETC: 4 semester units towards Area 5A & 5C	SDCCD: CHEM 200 & CHEM 201
<b>Chemistry</b> 3 <i>Exam taken Fall 2009 or later</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 IGETC: 4 semester units towards Area 5A & 5C	SDCCD: CHEM 200
<b>Chemistry</b> 4 or 5 <i>Exam taken Fall 2009 or later</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 IGETC: 4 semester units towards Area 5A & 5C	SDCCD: CHEM 200 & CHEM 201
<b>Chinese Language &amp; Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Comparative Government &amp; Politics</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D8 IGETC: 3 semester units towards Area 4H	SDCCD: POLI 103

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Computer Science A<sup>1</sup></b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 2 quarter/1.3 semester units	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Computer Science AB<sup>1</sup></b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>English Language and Composition</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units <sup>2</sup>	SDCCD GE: 3 semester units towards Area A1 <u>and</u> Reading and Written Expression Competency CSU GE: 3 semester units towards Area A2 IGETC: 3 semester units towards Area 1A	SDCCD: ENGL 101
<b>English Literature and Composition</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units <sup>2</sup>	SDCCD GE: 6 semester units towards Area A1 & C <u>and</u> Reading and Written Expression Competency CSU GE: 6 semester units towards Area A2 & C2 IGETC: 3 semester units towards Area 1A <u>or</u> 3B	SDCCD: ENGL 101
<b>Environmental Science</b> 3 <i>Exam taken prior to Fall 2009</i>	SDCCD: 4 semester units CSU: 4 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 <u>or</u> Area B2 & B3 IGETC: 3 semester units towards Area 5A & 5C	SDCCD: N/A
<b>Environmental Science</b> 4 or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 4 semester units CSU: 4 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 <u>or</u> Area B2 & B3 IGETC: 3 semester units towards Area 5A & 5C	SDCCD: BIOL 120
<b>Environmental Science</b> 3 <i>Exam taken Fall 2009 or later</i>	SDCCD: 4 semester units CSU: 4 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 IGETC: 3 semester units towards Area 5A & 5C	SDCCD: N/A
<b>Environmental Science</b> 4 or 5 <i>Exam taken Fall 2009 or later</i>	SDCCD: 4 semester units CSU: 4 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 4 semester units towards Area B CSU GE: 4 semester units towards Area B1 & B3 IGETC: 3 semester units towards Area 5A & 5C	SDCCD: BIOL 120

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>European History</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C <u>or</u> D CSU GE: 3 semester units towards Area C2 <u>or</u> D6 IGETC: 3 semester units towards Area 3B <u>or</u> 4F	SDCCD: N/A
<b>French Language</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area C CSU GE: 6 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>French Language</b> 3, 4, or 5 <i>Exam taken between Fall 2009 and Fall 2011</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>French Language and Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>French Literature</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>German Language</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area C CSU GE: 6 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>German Language</b> 3, 4, or 5 <i>Exam taken between Fall 2009 and Fall 2011</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>German Language and Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Human Geography</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D5 IGETC: 3 semester units towards Area 4E	SDCCD: GEOG 102
<b>Italian Language and Culture</b> 3	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: ITAL 101
<b>Italian Language and Culture</b> 4 or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: ITAL 102
<b>Japanese Language and Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Latin Literature</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Latin</b> 3, 4 or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Latin: Vergil</b> 3, 4, or 5 <i>Exam taken prior to Fall 2012</i>	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B and Area 6A Competency	SDCCD: N/A
<b>Macroeconomics</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D2 IGETC: 3 semester units towards Area 4B	SDCCD: ECON 120
<b>Microeconomics</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D2 IGETC: 3 semester units towards Area 4B	SDCCD: ECON 121
<b>Music Theory</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD: 3 semester units towards Area C CSU GE: 3 semester units towards Area C1 IGETC: N/A	SDCCD: N/A
<b>Music Theory</b> 3, 4, or 5 <i>Exam taken Fall 2009 or later</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Physics B</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units <sup>3</sup> CSU: 6 semester units <sup>3</sup> UC: 8 quarter/5.3 semester units <sup>5</sup>	SDCCD GE: 6 semester units towards Area B <sup>3</sup> CSU GE: 6 semester units towards Area B1 & B3 <sup>3</sup> IGETC: 4 semester units towards Area 5A & 5C	SDCCD: N/A
<b>Physics B</b> 3, 4, or 5 <i>Exam taken between Fall 2009 and Fall 2013</i>	SDCCD: 6 semester units <sup>3</sup> CSU: 6 semester units <sup>3</sup> UC: 8 quarter/5.3 semester units <sup>5</sup>	SDCCD GE: 4 semester units towards Area B <sup>3</sup> CSU GE: 4 semester units towards Area B1 & B3 <sup>3</sup> IGETC: 4 semester units towards Area 5A & 5C	SDCCD: N/A
<b>Physics 1</b> 3, 4, or 5	SDCCD: 4 semester units <sup>3</sup> CSU: 4 semester units <sup>3</sup> UC: N/A	SDCCD GE: 4 semester units towards Area B <sup>3</sup> CSU GE: 4 semester units towards Areas B1 & B3 <sup>3</sup> IGETC: N/A	SDCCD: N/A
<b>Physics 2</b> 3, 4, or 5	SDCCD: 4 semester units <sup>3</sup> CSU: 4 semester units <sup>3</sup> UC: N/A	SDCCD GE: 4 semester units towards Area B <sup>3</sup> CSU GE: 4 semester units towards Area B1 & B3 <sup>3</sup> IGETC: N/A	SDCCD: N/A

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Physics C (electricity / magnetism)</b> 3, 4, or 5	SDCCD: 4 semester units <sup>3</sup> CSU: 4 semester units <sup>3</sup> UC: 4 quarter/2.6 semester units <sup>5</sup>	SDCCD GE: 4 semester units towards Area B <sup>3</sup> CSU GE: 4 semester units towards Areas B1 & B3 <sup>3</sup> IGETC: 3 semester units towards Areas 5A & 5C <sup>4</sup>	SDCCD: N/A
<b>Physics C (mechanics)</b> 3, 4, or 5	SDCCD: 4 semester units <sup>3</sup> CSU: 4 semester units <sup>3</sup> UC: 4 quarter/2.6 semester units <sup>5</sup>	SDCCD GE: 4 semester units towards Area B <sup>3</sup> CSU GE: 4 semester units towards Areas B1 & B3 <sup>3</sup> IGETC: 3 semester units towards Areas 5A & 5C <sup>4</sup>	SDCCD: N/A
<b>Psychology</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D9 IGETC: 3 semester units towards Area 4I	SDCCD: PSYC 101
<b>Seminar</b> 3, 4, 5	SDCCD: 6 semester units CSU: 6 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Spanish Language</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area C CSU GE: 6 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Spanish Language and Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Spanish Literature</b> 3, 4, or 5 <i>Exam taken prior to Fall 2009</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 6 semester units towards Area C CSU GE: 6 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A
<b>Spanish Literature and Culture</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <u>and</u> Area 6A Competency	SDCCD: N/A

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Statistics</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: 3 semester units towards Area 2A	SDCCD: MATH 119
<b>Studio Art: Drawing</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 8 quarter/5.3 semester units <sup>6</sup>	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: ARTF 150A & ARTF 155A
<b>Studio Art: 2-D Design</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 8 quarter/5.3 semester units <sup>6</sup>	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Studio Art: 3-D Design</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 8 quarter/5.3 semester units <sup>6</sup>	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>U.S. Government &amp; Politics</b> 3, 4, or 5	SDCCD: 3 semester units CSU: 3 semester units UC: 4 quarter/2.6 semester units	SDCCD GE: 3 semester units towards Area D & US-2 <sup>7</sup> CSU GE: 3 semester units towards Area D8 & US-2 <sup>7</sup> IGETC: 3 semester units towards Area 4H & US-2 <sup>7</sup>	SDCCD: POLI 101
<b>U.S. History</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C & US-1 <u>or</u> Area D & US-1 <sup>7</sup> CSU GE: 3 semester units towards Area C2 & US-1 <u>or</u> Area D6 & US-1 <sup>7</sup> IGETC: 3 semester units towards Area 3B & US-1 <u>or</u> Area 4F & US-1 <sup>7</sup>	SDCCD: HIST 109
<b>World History</b> 3, 4, or 5	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C <u>or</u> D CSU GE: 3 semester units towards Area C2 <u>or</u> D6 IGETC: 3 semester units towards Area 3B <u>or</u> 4F	SDCCD: HIST 101

## Advanced Placement Test (AP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<p>* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Students passing both English AP exams will receive a maximum of 8 quarter units / 5.3 semester units toward UC baccalaureate degree requirements.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>7. Students who have completed the American Institutions requirement except for the California government portion must complete one course approved in Area US-3.</li> </ol>			
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	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Biology</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B2 IGETC: 3 semester units towards Area 5B	SDCCD: N/A
<b>Chemistry</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B1 IGETC: 3 semester units towards Area 5A	SDCCD: N/A
<b>Economics</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D2 IGETC: 3 semester units towards Area 4B	SDCCD: ECON 120 & ECON 121
<b>Geography</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D5 IGETC: 3 semester units towards Area 4E	SDCCD: N/A

## International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>History (any region)</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C <u>or</u> D CSU GE: 3 semester units towards Area C2 <u>or</u> D6 IGETC: 3 semester units towards Area 3B <u>or</u> 4F	SDCCD: N/A
<b>Language A1 (any language)</b> 4 Higher Level <i>Exam taken prior to Fall 2013</i>	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Language A1 (any language)</b> 5-7 Higher Level <i>Exam taken prior to Fall 2013</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <sup>1</sup>	SDCCD: N/A
<b>Language A2 (any language)</b> 4 Higher Level <i>Exam taken prior to Fall 2013</i>	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Language A2 (any language)</b> 5-7 Higher Level <i>Exam taken prior to Fall 2013</i>	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <sup>1</sup>	SDCCD: N/A
<b>Language A Literature</b> 4 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Language A Literature</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <sup>1</sup>	SDCCD: N/A
<b>Language A Language and Literature</b> 4 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Language A Language and Literature</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: 3 semester units towards Area 3B <sup>1</sup>	SDCCD: N/A

## International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Language B (any language)<sup>2</sup></b> 4 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Language B (any language)<sup>2</sup></b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: N/A CSU GE: N/A IGETC: Area 6A Competency	SDCCD: N/A
<b>Mathematics</b> 4 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A
<b>Mathematics</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: 3 semester units towards Area 2A	SDCCD: N/A
<b>Physics</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B1 IGETC: 3 semester units towards Area 5A	SDCCD: N/A
<b>Psychology</b> 5-7 Higher Level	SDCCD: 3 semester units CSU: 3 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D9 IGETC: 3 semester units towards Area 4I	SDCCD: N/A
<b>Theatre</b> 4 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C1 IGETC: N/A	SDCCD: N/A
<b>Theatre</b> 5-7 Higher Level	SDCCD: 6 semester units CSU: 6 semester units UC: 8 quarter/5.3 semester units	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C1 IGETC: 3 semester units towards Area 3A	SDCCD: N/A
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.			
1. Students who pass the Language A or A1 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.			

## International Baccalaureate (IB) Credit

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
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	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>American Government</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D8 IGETC: N/A	SDCCD: N/A
<b>American Literature</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Analyzing and Interpreting Literature</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Biology</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B2 IGETC: N/A	SDCCD: N/A
<b>Calculus</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A
<b>Chemistry</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B1 IGETC: N/A	SDCCD: N/A
<b>College Algebra</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A

## College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>College Algebra - Trigonometry</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 and Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A
<b>English Literature</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Financial Accounting</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>French – Level I</b> 50 or higher	SDCCD: 6 semester units <sup>1</sup> CSU: 6 semester units <sup>1</sup> UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>French – Level II</b> 59 or higher	SDCCD: 12 semester units <sup>1</sup> CSU: 12 semester units <sup>1</sup> UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>German – Level I</b> 50 or higher	SDCCD: 6 semester units <sup>1</sup> CSU: 6 semester units <sup>1</sup> UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>German – Level II</b> 60 or higher	SDCCD: 12 semester units <sup>1</sup> CSU: 12 semester units <sup>1</sup> UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>History of the United States I</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D & US-1 <sup>2</sup> CSU GE: 3 semester units towards Area D6 & US-1 <sup>2</sup> IGETC: N/A	SDCCD: N/A
<b>History of the United States II</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D & US-1 <sup>2</sup> CSU GE: 3 semester units towards Area D6 & US-1 <sup>2</sup> IGETC: N/A	SDCCD: N/A
<b>Human Growth and Development</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: 3 semester units towards Area E IGETC: N/A	SDCCD: N/A

## College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Humanities</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Information Systems and Computer Applications</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introduction to Educational Psychology</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introductory Business Law</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introductory Psychology</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D9 IGETC: N/A	SDCCD: N/A
<b>Introductory Sociology</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D0 IGETC: N/A	SDCCD: N/A
<b>Natural Sciences</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area B CSU GE: 3 semester units towards Area B1 <u>or</u> B2 IGETC: N/A	SDCCD: N/A
<b>Pre-Calculus</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A
<b>Principles of Accounting</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Macroeconomics</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D2 IGETC: N/A	SDCCD: N/A

## College Level Examination Program (CLEP)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Principles of Management</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Marketing</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Microeconomics</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D2 IGETC: N/A	SDCCD: N/A
<b>Spanish – Level I</b> 50 or higher	SDCCD: 6 semester units <sup>1</sup> CSU: 6 semester units <sup>1</sup> UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Spanish – Level II</b> 63 or higher	SDCCD: 12 semester units <sup>1</sup> CSU: 12 semester units <sup>1</sup> UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: 3 semester units towards Area C2 IGETC: N/A	SDCCD: N/A
<b>Trigonometry</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area A2 <u>and</u> Mathematics Competency CSU GE: 3 semester units towards Area B4 IGETC: N/A	SDCCD: N/A
<b>Western Civilization I</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area C <u>or</u> D CSU GE: 3 semester units towards Area C2 <u>or</u> D6 IGETC: N/A	SDCCD: N/A
<b>Western Civilization II</b> 50 or higher	SDCCD: 3 semester units CSU: 3 semester units UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: 3 semester units towards Area D6 IGETC: N/A	SDCCD: N/A
* Credit may not be awarded for exams which duplicate credit for the same content earned through other means.			
<ol style="list-style-type: none"> <li>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.</li> <li>2. Students who have completed the American Institutions requirement except for the California government portion must complete one course approved in Area US-3.</li> </ol>			
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	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>A History of the Vietnam War</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Art of the Western World</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Astronomy</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area B CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Business Ethics &amp; Society</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Business Mathematics</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Criminal Justice</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Environment and Humanity</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Ethics in America</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Foundations of Education</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Fundamentals College Algebra</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area A2 and Mathematics Competency CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Fundamentals of Counseling</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Fundamentals of Cybersecurity</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Here's to Your Health</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: Health Education District Requirement CSU GE: N/A IGETC: N/A	SDCCD: N/A

## DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Human Cultural Geography</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Human Resources Management</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introduction to Business</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introduction to Computing</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introduction to Law Enforcement</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area D CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Introduction to World Religions</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area C CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Lifespan Developmental Psychology</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Management Information Systems</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Organizational Behavior</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Personal Finance</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Finance</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Physical Science</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area B CSU GE: N/A IGETC: N/A	SDCCD: N/A

## DANTES Subject Standardized Test (DANTES/DSST)

EXAM AND REQUIRED SCORE	UNIT REQUIREMENTS FULFILLED	GENERAL EDUCATION (GE) REQUIREMENTS FULFILLED	MAJOR REQUIREMENTS FULFILLED
<b>Principles of Public Speaking</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area A2 CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Statistics</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: 3 semester units towards Area A2 and Mathematics Competency CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Principles of Supervision</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Substance Abuse (formerly Drug &amp; Alcohol Abuse)</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>Technical Writing</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: N/A
<b>The Civil War and Reconstruction</b> 400 or higher	SDCCD: 3 semester units CSU: N/A UC: N/A	SDCCD GE: N/A CSU GE: N/A IGETC: N/A	SDCCD: 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 <a href="http://getcollegecredit.com/resources">http://getcollegecredit.com/resources</a>			

### 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. For questions and more information, contact the CTE Transition Program at 619-388-6572.

### 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:

- Joint Services Transcript
- 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)

Military service credit may be granted upon verification of six (6) months of continuous active duty, or completion of basic training for National Guard/Reservists. Four (4) units of credit may be awarded to meet the district graduation requirements in Health and PE. Three (3) of those units may also be used to satisfy Area E of the CSU General Education Breadth pattern.

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.

### **Servicemembers Opportunity Colleges Degree Network System (SOC DNS)**

San Diego City and Miramar Colleges are members of the Servicemembers Opportunity Colleges Degree Network System (SOC DNS). 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 SOC DNS Program network through the campuses of San Diego City and San Diego Miramar Colleges. SOC DNS 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 Corps 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 Accommodations and Disability Discrimination 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 accommodations 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, including those that take place in a clinical setting, without compromising the essential components of the course, educational program or degree.

SDCCD identifies Disability Support Programs and Services (DSPS), or the campus 504 officer, as the office to determine academic accommodations under Section 504 of the 1973 Rehabilitation Act.

The Site Compliance Officer (SCO) is identified as the campus individual to handle all discrimination grievances under the Americans with Disabilities Act or the District's Equal Employment Opportunity and Diversity Office, BP 3410.

The intent of this policy is to ensure 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.

You may view a full copy of the policy and administrative procedure by accessing the following website: <http://www.sdccd.edu/docs/policies/Student%20Services/BP%203105.pdf>

Students with verified disabilities who may require academic accommodations or auxiliary aids are strongly recommended to contact the Disability Support Programs and Services (DSPS) Department, Room K1-204, 619-388-7312, and complete the orientation procedures well before classes begin to ensure timely provision of services. Students are encouraged to identify themselves to the appropriate instructors to discuss the details

and time lines necessary to provide appropriate accommodations. Students enrolled in online courses are encouraged to contact the college DSPS department where the courses are being offered to request academic accommodation. Questions regarding academic accommodations and disability discrimination, including how to file a complaint or a formal grievance with regards to academic accommodations should be directed to the college 504 Officer, Gerald Ramsey, Vice President of Student Services, 619-388-7810, Room N-203.

Students may file a complaint with the Chancellor of the California Community Colleges within thirty calendar days of the event or following the completion of the college Accommodation Grievance process. (<http://californiacommunitycolleges.cccco.edu>)

Students may file a complaint with the Federal Office of Civil Rights in San Francisco, California, if he or she believes that the college or one of its representatives is violating his or her rights. ([ocr.sanfrancisco@sd.gov](mailto:ocr.sanfrancisco@sd.gov))

## Debt Owed to the College

In alignment with California Education Code Section 76225 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, Campus Safety and Administrative Due Process); or

- 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 federal 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 2011, a three year tracking period.

The completion and transfer rates are listed below:

	Completion Rates	Transfer-Out Rates
City	14.30%	12.39%
Mesa	23.16%	17.76%
Miramar	30.15%	14.31%

These rates do not represent the success rates of the entire student population at the college. Our statewide completion indicators for student success include a six-year tracking period for all first-time students. Current information can be found at: <http://scorecard.cccco.edu/scorecard.aspx>

### Completion and Transfer Rates for Athletics

	Initial Cohort	Completion Rate	Transfer Rate
City College/ECC	30	13%	13%
Mesa College	43	30%	23%
Miramar College	5	0%	0%

Source: SDCCD Information System and National Student Clearinghouse

The cohort includes first-time athletes who are enrolled full-time. The methodology is the same as used for the *Student Right-To-Know* (SRTK) graduation and transfer rates, which is consistent with the NCAA.

## 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. The San Diego Community College District is committed to equal opportunity in educational programs, employment, and all access to institutional programs and activities.

The District, and each individual who represents the District, shall provide access to its services, classes, and programs without regard to national origin, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, military or veteran status, or because he/she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics. No qualified student with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the district or be subjected to discrimination by it.

Students wishing to file complaints based upon discrimination should contact the campus Site Compliance Officer (SCO), George Beitey at 619-388-7860, Room A-210D. 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 the campus 504 Officer, Gerald Ramsey, Vice President of Student Services at 619-388-7810, Room N-203, Disability Support Programs and Services in Room K1-204, or call 619-388-7312. Students who want to file a disability discrimination grievance under the Americans with Disabilities Act (ADA) should contact the Campus Site Compliance Officer (SCO), George Beitey at 619-388-7860, Room A-210D.

### 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 Gender Discrimination and Sexual Harassment

San Diego City, Mesa and Miramar College are committed to support all regulations under Title IX. Title IX states: "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." – 20 USC 1681

The sexual harassment of students, including the crime of sexual violence, is a form of sex discrimination and interferes with students' right to receive an education free from discrimination and harassment.

Sexual violence, as that term is used in this section, refers to physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent due to the victim's use of drugs or alcohol. An individual also may be unable to give consent due to an intellectual or other disability. A number of different acts fall into the category of sexual violence, including rape, sexual assault, sexual battery, and sexual coercion. All such acts of sexual violence are forms of sexual harassment covered under Title IX.

For further information or procedures for filing a formal complaint of discrimination on the basis of sex or sexual harassment are found online at <http://www.sdccd.edu/titleix> or contact your college Title IX officer:

## College Title IX Officer

### San Diego City College (E-Building)

Denise Whisenhunt  
dwhisenh@sdccd.edu  
(619) 388-3464

### San Diego Mesa College (I-400)

Julianna Barnes  
jbarnes@sdccd.edu  
(619) 388-2678

### San Diego Miramar College (N-203)

Gerald Ramsey  
gramsey@sdccd.edu  
(619) 388-7810

### San Diego Continuing Education (Rm 104, Educational Cultural Complex (ECC))

Brian Ellison  
bellison@sdccd.edu  
(619) 388-4850

## 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 for additional information.

## Smoking Regulation

### (Board of Trustees Policy – BP 0505)

#### MIRAMAR COLLEGE IS A SMOKE AND TOBACCO-FREE CAMPUS

All campuses and facilities of the San Diego Community College District, City College, Mesa College, Miramar College, and Continuing Education operate in compliance with the provisions of Government Code 7597 and San Diego Municipal Code section 43.1003(a) regulating smoking in a public place or place of employment. In accordance with Board Policy (BP 0505) Smoke and Tobacco Free District Property smoking and the use of any tobacco product are prohibited on all properties owned or controlled by the District.

Miramar College is committed to creating a clean, healthy working and learning environment for students, faculty, staff and visitors. All students, employees and visitors on the Miramar College property are subject to BP 0505 regulations, which will be strictly enforced at all times. Student Health Services at Miramar College offers Cessation Program Referrals to educate the college community about the risks of tobacco and the availability of Smoking Control Programs. Visit or call the Student Health Services on campus for additional information at 619-388-7881.

Additional information is available in the Campus Police Office. For complete SDCCD Policy 0505 and Procedure 0505.2 information, please visit: <http://www.sdccd.edu/public/district/policies/>.

## 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 any time 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, Campus Safety, 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, Campus Safety and Responsibilities, BP 3100, Section *a* through *j*. Note that grades are not grievable under this policy. Refer to the Grade Challenge section, page 29, of this catalog.

## Academic Freedom & Freedom of Expression

### (Board of Trustees Policy – BP 4030)

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 – AP 3001.1)

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/>.

## Complaint Processes

San Diego City, Mesa, and Miramar Colleges are committed to an educational environment that is free from interference and disruption, and that fosters equity and mutual respect.

Students may file a complaint when they believe that a College faculty or staff member has violated the following Board Policies and Administrative Procedures:

1. Student Rights, Responsibilities, Campus Safety and Administrative Due Process: Policy 3100
2. Student Grievance: Procedure 3100.1
3. Student Discipline: Procedure 3100.2
4. Honest Academic Conduct: Procedure 3100.3

5. Academic Accommodations and Disability Discrimination for Students with Disabilities: Procedure 3105.1
6. Prohibition of Harassment: Policy 3430
7. Nondiscrimination: Policy 3410
8. Fraud/Whistle Blower: Policy 6125
9. Grade Challenge: Procedure 3001.2

Board Policies and Administrative Procedures are available to Individuals online at <http://www.sdccd.edu/public/district/policies/>.

Most complaints, grievances or disciplinary matters should be resolved at the campus level. Individuals are strongly encouraged to make every attempt to resolve matters through the appropriate administrative processes.

More information on the complaint processes can be found online at <http://studentweb.sdccd.edu/complaintprocess>.

## Academic Complaint

An academic complaint may be filed with the department chair or instructional dean when a student feels that a faculty member has violated state law, federal law, or College policies and procedures relative to grading or other academic matters\*. Students may directly contact the department chair or instructional dean or submit their complaint online at: <http://studentweb.sdccd.edu/complaintprocess>.

**\*Please note:** All grades awarded by the instructor of record shall be final. The California Code of Regulations, Title 5 §55025, states “the determination of the student’s grade by the instructor shall be final in the absence of mistake, fraud, bad faith, or incompetency.”

## Academic Accommodation Due to Disability Complaint (Section 504/ADA)

Students who have a complaint regarding access to, or quality of, their academic accommodations should go through the informal resolution process with the DSPS counselor. If there is no agreement with the informal resolution, students may submit a complaint online at <http://studentweb.sdccd.edu/complaintprocess> or contact the campus 504 Officer.

Students with disabilities who want to file a formal complaint under Section 504 of the 1973 Federal Rehabilitation Act and Americans with Disabilities Act (ADA) may do so online at <http://studentweb.sdccd.edu/complaintprocess> or contact the campus 504 Officer:

<b>Campus 504 Officer</b>
<b>San Diego City College (Room L-117)</b>
Bernice Lorenzo
blorenzo@sdccd.edu (619) 388-3246
<b>San Diego Mesa College (Room G-301)</b>
Jill Moreno Ikari
jmorenoi@sdccd.edu (619) 388-2345 Mailbox, Room G-248
<b>San Diego Miramar College (Room N-203)</b>
Gerald Ramsey
gramsey@sdccd.edu (619) 388-7810
<b>San Diego Continuing Education (Room 104, Educational Cultural Complex (ECC))</b>
Star Rivera-Lacey
srivera@sdccd.edu (619) 388-4845

## General Complaint

A general student complaint may be filed by a student who feels an action of a College staff member, office, or group violates existing College rules, policy, or procedures or other local, state, and federal laws. A complaint of gender discrimination or sexual assault or harassment is not included in this category; please see Title IX complaint below.

The complaint procedures are formalized procedures to ensure timely resolution at the lowest possible level. The first step is the informal resolution stage, which involves the student who has a complaint and the faculty/staff member or specific group with whom the student has a complaint. The student must notify the faculty/staff person or representative of a group that he or she wishes to make an appointment for an informal meeting to review an action. In the absence of the instructor or staff person and after a good faith effort to make contact, the student may directly contact the instructional dean or appropriate

administrator or submit their complaint online at: <http://studentweb.sdccd.edu/complaintprocess>.

## Gender Discrimination, Sexual Harassment and/or Violence Complaint (Title IX)

San Diego City, Mesa and Miramar Colleges do not discriminate on the basis of sex, gender, or sexual orientation in its education programs or activities. Title IX of the Education Amendments of 1972, and certain other federal and state laws, prohibit discrimination on the basis of gender, gender identity, or sexual orientation in employment, as well as all education programs and activities, and protect all people regardless of their gender or gender identity from sex discrimination, which includes sexual harassment and sexual violence. These procedures are used when a complaint concerns discrimination on the basis of gender, including sexual harassment.

The sexual harassment of students, including the crime of sexual violence, is a form of sex discrimination and interferes with students' right to receive an education free from discrimination and, in the case of sexual violence, is a crime.

Students who wish to file a Title IX complaint may do so online at: <http://studentweb.sdccd.edu/complaintprocess> or contact your college Title IX coordinator:

<b>Campus Title IX Coordinator</b>
<b>San Diego City College (E-Building)</b>
Denise Whisenhunt
dwhisenh@sdccd.edu (619) 388-3464
<b>San Diego Mesa College (Room I-400)</b>
Julianna Barnes
jbarnes@sdccd.edu (619) 388-2678
<b>San Diego Miramar College (Room N-203)</b>
Gerald Ramsey
gramsey@sdccd.edu (619) 388-7810
<b>San Diego Continuing Education (Room 104, Educational Cultural Complex (ECC))</b>
Brian Ellison
bellison@sdccd.edu (619) 388-4850

## Unlawful Harassment or Discrimination Complaint

San Diego City, Mesa and Miramar Colleges are committed to providing an academic environment free of unlawful harassment and unlawful discrimination. Board Policy 3100 defines verbal, physical, visual or written, environmental and harassment and other forms of harassment on campus, and sets forth a procedure for the investigation and resolution of complaints of harassment by or against any staff, or faculty member, or student within the District.

These procedures are used when a complaint concerns matters of discrimination or failure to comply with College policy or procedures or federal and/or state regulations including the Civil Rights Act; Executive Orders 11246 and 11375; the Vietnam Era Veterans Readjustment Act of 1974; the Age Discrimination and Employment Act of 1967; Section 504 of the 1973 Federal Rehabilitation Act and Americans with Disabilities Act (ADA); and the nondiscrimination laws of the State of California.

Students who wish to file a complaint may do so online at:  
<http://studentweb.sdccd.edu/complaintprocess> or contact your college Site Compliance Officer (SCO):

<b>Campus Site Compliance Officer</b>
<b>San Diego City College (Room A-110E)</b>
Edwin Hiel
ehiel@sdccd.edu (619) 388-3036
<b>San Diego Mesa College (Room G-301)</b>
Jill Moreno Ikari
jmorenoi@sdccd.edu (619) 388-2345 Mailbox, Room G-248
<b>San Diego Miramar College (Room A-201D)</b>
George Beitey
gbeitey@sdccd.edu (619) 388-7860
<b>San Diego Continuing Education (Room 115F, North City Campus)</b>
Lynda Reeves
lreeves@sdccd.edu (619) 388-1827

Students wishing to pursue a civil rights complaint beyond the college/district level should direct their inquiries to the Office of Civil Rights, United States Department of Education, 50 Beale Street, Suite 7200, San Francisco, CA 94105-1813.

## Other Complaint Process

If your complaint is associated with the institution's compliance with academic program quality and accrediting standards, you may contact the Accrediting Commission for Community and Junior Colleges (ACCJC) at <http://www.accjc.org/complaint-process> ACCJC is the agency that accredits the academic programs of the California Community Colleges.

If your complaint does not concern the California Community College's compliance with academic program quality and accrediting standards, you may contact the California Community College Chancellor's Office by completing the web form found at: <http://californiacommunitycolleges.cccco.edu/ComplaintsForm.aspx>



# 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	K1-205	619-388-7326	Child Development Center	F-200	858-536-7851 619-388-7851
Admissions (General Inquiries, Applications/Enrollment)	K1-207	858-536-7844 619-388-7844	College Police	T-100	858-536-7353 619-388-7353
Adds/Drops/Student Petitions	K1-207	858-536-7844 619-388-7844	Counseling Department	K1-203	858-536-7840 619-388-7840
Help Line		858-536-4300 619-388-7300	Disability Support Programs & Services	K1-204	858-536-7212 619-388-7312 tty# 858-536-4301 619-388-7301
Enrollment			EOPS	K1-305	858-536-7869 619-388-7869
Verifications	K1-207	858-536-7844	Evaluations	K1-207	858-536-7371 619-388-7371
Reg-e		619-388-7844 <a href="http://studentweb.sdccd.edu">http://studentweb.sdccd.edu</a>	Financial Aid	K1-312	858-536-7864 619-388-7864
Residency	K1-207	858-536-7844 619-388-7844	Health Services	K2-102	858-536-7881 619-388-7881
Special Programs	K1-207	858-536-7848 619-388-7848	High Tech Center	LLRC	858-536-4303 619-388-7303
Student Records	K1-207	858-536-7844 619-388-7844	International Student Information	K1-207	858-536-7844 619-388-7844
Assessment	K-2	858-536-7379 619-388-7379	Library	L-200	858-536-7310 619-388-7310
Associated Students	K1-208	858-536-7877 619-388-7877	Mental Health Counseling	K2-102	858-536-7567 619-388-7567
Bookstore	K1-105	858-536-7866 619-388-7866	Outreach	K-2	858-536-7367 619-388-7357
CalWORKS	K1-305	858-388-7378 619-388-7378	Records Office	K1-207	858-536-7844 619-388-7844
Career/Student Employment Center	K1-308	858-536-7235 619-388-7335	Student Affairs	K1-210	858-536-4313
			Student Development	K1-303	619-388-7313
			Transfer Center	K1-306	858-536-7380 619-388-7380
			Tutoring (The PLACe)	LLRC	858-536-7852 619-388-7852
			Veterans Affairs	K1-207	858-536-7862 619-388-7862
			V. P., Student Services	N-203	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 K1-203. 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 K1-306, is dedicated to helping Miramar students successfully transfer to a four-year institution. Transferring can be a confusing process at times. The Transfer Center is here to provide information and resources to assist students in making the transition a smooth and easy one. Transfer Center resources include: workshops, transfer fairs, meetings with college representatives, campus tours, a library of catalogs and publications, information on transfer guarantees, computer software for college research, and transfer advising. For more information, please contact 858-536-7380 or 619-388-7380 or visit our website at: [www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer).

## English for Speakers of Other Languages (ESOL)

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

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

## Disability Support Programs and Services (DSPS)

Miramar College provides programs and services for students with disabilities in compliance with State and Federal legislation including Section 504 and 508 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act Amendments Act (ADAAA). Student participation in the program is voluntary.

Eligible students who have a **verified** 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 **may include, but are not limited to:** priority enrollment, assistive technology and alternate media, interpreters and captioning for students who are deaf or hard of hearing, note taking materials, test taking accommodations, audio recorders, use of specialized equipment and adaptive devices, and disability related counseling and referral. Liaison with community agencies is also an important component of the program. The campus is physically accessible. Students are encouraged to apply early for timely services.

## 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 3105.2) *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 (Procedure 3105.2) in compliance with state and federal law.

Anyone interested in applying for services or obtaining further information may contact the Disability Support Programs and Services Department in K1-204 by calling 858-536-7212 or 619-388-7312; tty 619-388-7301, or email [miradsps@sdccd.edu](mailto:miradsps@sdccd.edu)  
Web: [www.sdmiramar.edu/dsps](http://www.sdmiramar.edu/dsps)

## 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 K1-305, or email [miracw@sdccd.edu](mailto: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 K1-305, or call 858-536-7869 or 619-388-7869, or email [miraeops@sdccd.edu](mailto:miraeops@sdccd.edu).

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

You may be eligible for EOPS if you are enrolled full-time (at least 12 units). At least 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 (AB 540 Students are eligible).
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 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 K1-305. 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

On a yearly basis, all financial aid applicants must complete the Free Application for Federal Student Aid (FAFSA), or a California Dream Act application for all financial aid, including the Board of Governor's fee Waiver (BOGW). To complete your FAFSA, go to [www.fafsa.gov](http://www.fafsa.gov). To complete a California Dream Act application, go to <https://dream.csac.ca.gov>. FAFSA Application materials are available on January 1st for the following academic year. The priority filing deadline for aid is April 15th. Students filing their application by this date will be considered first in the award process. Deadline to apply: The Central Processing System (CPS) must receive your application by your last day of classes for the term or June 30, 2016 whichever date comes first. The Deadline for Cal Grant application is March 2nd.

A current Admission's Application to the College must be on file before we can process your FAFSA application. Complete the application using your personal information as it appears on your Social Security card or our office will not be able to process your financial aid.

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

## Eligibility

In order to be eligible to apply for financial aid, a student must be a citizen or permanent resident of the United States or be in the country for other than 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 68).

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.

The student will be responsible for paying back the Bookstore Pell Grant used 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 information about the timeframe to repay, the consequences of not paying and a sample Return of Funds calculation, go to:

<http://www.sdmiramar.edu/students/financial/title4>

## 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).

A Free Application for Federal Student Aid (FAFSA) or a California Dream Act application is required for all financial aid, including the BOGW.

**Effective Fall 2016:** Students who are academically disqualified or disqualified for lack of progress will lose their BOGW and must return to good academic standing to become eligible again.

If you are a California resident or have been designated an AB-540 student, you may 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 or California DREAM Act application. You must have at least \$1,104 on “unmet” need to qualify.
- 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 as main source of income 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:

<b>Number In Household</b> (including yourself)	<b>Total Family Income for 2014</b> (adjusted gross income and/or untaxed income)
1	\$17,505 or less
2	\$23,595 or less
3	\$29,685 or less

<b>Number In Household</b> (including yourself)	<b>Total Family Income for 2014</b> (adjusted gross income and/or untaxed income)
4	\$35,775 or less
5	\$41,865 or less
6	\$47,955 or less
7	\$54,045 or less
8	\$60,135 or less

Add \$6,090 for each additional family member.

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

- You do not live with your parents or your parent’s registered domestic partner.
- You were not claimed as an exemption on any federal income tax filed by your parents or your parent’s registered domestic partner in 2014.

### 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.

Effective July 1st, 2012, all financial aid applicants are subject to 6 years maximum of Pell Grant lifetime eligibility or 600%.

Enrollment status will be frozen at the time of disbursement after the add/drop period and will be the basis for Pell award. Once the Pell Grant award has been processed it will not be adjusted for additional units added during the semester. 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, eligible AB-540 designated student 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 or eligible AB-540 designated students from a low- or middle-income family.
- See the Financial Aid Bulletin for important dates and deadlines.
- Cal Grant Program is not available for students accepted into the comprehensive Transitional Program C2C.

## 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 4.66% for loans disbursed from July 1, 2015 to June 30, 2016. 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 1.073%. The fees are deducted from the proceeds of your loan. The origination fee will change for any loan disbursed after October 1, 2015.

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](http://www.studentloans.gov).

Congress approved a new lifetime limit on Subsidized Direct Loans for subsidized loans disbursed on or after July 1, 2013. Students will be limited to 150% of subsidized loan eligibility based on their program.

The Financial Aid Office will be notified when the session has successfully been completed. In addition, you must fill out a Loan Request Form form your Financial Aid Office. You must complete an online multi-year Master Promissory Note at: [www.studentloans.gov](http://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.

### **Unsubsidized Loan (Under Experimental Site Provisions – Elimination for Certain Groups of Students)**

Effective within the 2012–2013 school year, San Diego City College along with Mesa College and Miramar College has been approved by the U.S. Department of Education to participate in an experimental initiative regarding “Overborrowing” that allows our college to reduce or eliminate Unsubsidized Loan eligibility and borrowing for certain groups or categories of students.

Based on this initiative, the following groups or categories of students will not be eligible to borrow Unsubsidized Loans:

#### **1st Year Students**

- 1st year is defined as students who have completed less than 24 units in their current program or major based on their educational plan.
- Units that will be counted towards the 24 units will be units that fulfill the major, general education and district requirements for the current program or major based on the educational plan.
- Units that will not be counted towards the 24 units are units that are basic skills or remedial, ESOL, electives or any other units that are not applicable to the current program or major based on the educational plan.

#### **Students Approved on a Financial Aid Appeal**

Students who have an “Unsatisfactory” status (Disqualified) for any reason and who are approved on appeal will not be eligible for an Unsubsidized Loan.

### **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. Student and 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 K1-312.

### **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 K1-308, 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 and assists them in the selection of educational programs which qualify for veterans benefits. The final responsibility for monitoring the process of qualification for educational benefits resides with the individual. Each veteran must read, understand, and comply with the many rules, regulations, and procedures that influence the benefit process.

Students on active duty and veterans who have been discharged within the past 15 years may be eligible for up to 4 years priority registration. Check with the college Admissions Office for eligibility. An Active Duty Military ID card or DD214 are required for verification.

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

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## Disabled Veterans

Veterans who qualify for educational benefits as disabled veterans may be entitled to special educational benefits. Veterans 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 term**; 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. All other chapters, tuition and fees only.

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

## Rate of Pursuit (Chapter 33)

The Chapter 33 housing allowance is paid if the rate of pursuit is more than 50%. The Department of Veterans Affairs calculates the rate of pursuit by dividing the credit hours/units (or credit hour equivalent) enrolled by the number of credit hours/units considered to be full-time by the school. The resulting percentage is the student's rate of pursuit.

Please visit [www.gibill.va.gov](http://www.gibill.va.gov) for additional information and updates.

## 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 will be disqualified when his/her semester grade point average (GPA) falls below 2.0 the 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 readmission 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, DD2685, Joint Service Transcript, or Smart Transcript 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 L Building (L-111), the AV Department primarily serves the instructional media needs of the faculty and staff at Miramar College. Services range from equipment checkout to training sessions on how to utilize the AV equipment in the classrooms, campus event setup, audio & video production. In addition, the AV Department provides students with media viewing stations for course-related media viewing. For department information and hours, please check the website online: [www.sdmiramar.edu](http://www.sdmiramar.edu). Click "Academics" 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 L-Building (L-200), 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 366).

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](http://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 on the first floor of the LLRC in L-101. The PLACe provides students with academic support in a number of areas: math, writing, and college reading/study skills as well as various subjects.

One-on-one tutoring is available by appointment. Please call **(619) 388-7852** and/or come to room **L-101** to schedule an appointment. Walk-in tutoring (tutoring without an appointment) may be available provided that a tutor does not have a scheduled appointment.

Currently enrolled Miramar students may use our facility and any of our learning resources, including our computer lab, to improve their math, writing, and college reading/study skills. Please call **619-388-7852** and/or stop by **L-101** for further information about additional services that may be available and to pick up a brochure.

# SDCCD Online Learning Pathways

## San Diego City, Mesa, and Miramar Colleges

### QUALITY ONLINE LEARNING

Learn anytime, anywhere with our convenient, flexible online courses that fit your busy schedule.

Enjoy interactive communication with your classmates and instructor as you complete your coursework in an engaging, supportive learning environment. Our quality online courses are developed and taught by experienced instructors from our three colleges—City College, Mesa College, and Miramar College.

Want to get started? Find out if online learning is for you at: [www.sdccdonline.net/newstudents.htm](http://www.sdccdonline.net/newstudents.htm).

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

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

# Child Development Center

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

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

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

The Center is 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 the California and San Diego Public Health Departments.

Building K-2      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 exercise science (*formerly 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 K1-210, 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 at 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 services, 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 Student Affairs at 858-536-4313 or 619-388-7313 and visit K1-208, the ASC Office.

## 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:

- Anthropology Club

- Child Development Professionals (CDP)
- Coordinate Club
- Filipino American Student Association (FASA)
- Find Inspiration Today (F.I.T.) Club
- Iranian Student Association
- League of Musical Arts
- Miramar Business Club
- Miramar Pay it Forward (MCPIF)
- MUSES
- MOCEANS Water Activities Club
- Paralegal Club
- Parent Student Advisory Board (PSAB)
- Phi Theta Kappa
- Pre-Health Student Alliance
- Science Club
- Student Veterans Organization
- Vocal Tones – The Glee Experience

## Phi Theta Kappa ( $\Phi\Theta\K$ )

### 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 K1-203A

## Athletics

The exercise science (*formerly 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.

## **Exercise Science (formerly Physical Education) Classes/Intercollegiate Sports Disclaimer**

Participation in all sports and exercise science (formerly 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 exercise science (formerly Physical Education) classes/intercollegiate sports.

Students are strongly advised to consult a physician prior to participating in any exercise science (formerly Physical Education) activity.

## **Journalism**

The widely recognized College newspaper, The Sage, provides students the opportunity for class workshops and actual experience in photography, 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**

K1-105

(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 K1-104, 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.

For police officer assistance, call 619-388-6405. Emergency services are provided 24 hours a day, 7 days a week. The police business office is located in T-100. For information and general assistance, call 619-388-7353 or 858-536-7353. 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. Parking permits are required the first day of each semester.

- Parking permits are not required on Saturdays, Sundays or college holidays.
- **Parking permits are required Monday through Friday, 7:00 am to 11:00 pm.**
- **Parking between the hours of 11:00 pm and 6:00 am requires an overnight permit issued in College Police.**
- 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 parking meters and/or time limited visitor parking at each campus reserved for visitors use only. Students may not utilize visitor parking. 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 lots.

**Motorcycles** must display a motorcycle permit and be parked in designated motorcycle parking.

**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.

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

## Vehicle Immobilization/Booting/Towing/Hold

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

## Emergency 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 Students with Disabilities

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 of Arts degree or the Associate of Science degree.

The Associate of 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 and AA-T and AS-T 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](http://www.cccco.edu/1440) for more information.

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**Students intending to transfer to a CSU should consult a counselor and visit [www.assist.org](http://www.assist.org) for guidance on appropriate transfer coursework.**

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### AA-T/AS-T Majors

- Administration of Justice for Transfer (page 135)
- Anthropology for Transfer (page 215)
- Art History for Transfer (page 141)
- Business Administration for Transfer (page 160)
- Communication Studies for Transfer (page 171)
- English for Transfer (page 184)
- History for Transfer (page 216)
- Kinesiology for Transfer (page 188)
- Mathematics for Transfer (page 204)
- Philosophy for Transfer (page 196)
- Physics for Transfer (page 212)
- Political Science for Transfer (page 217)

- Sociology for Transfer (page 219)
- Spanish for Transfer (page 223)
- Studio Arts for Transfer (page 138)

## Degree Requirements

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

1. Maximum 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.
4. Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 109 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 100 for more information).

## Associate of Arts and Associate of Science Degree Requirements

### Minimum 60 Units Required

All degrees require a minimum of 60 degree applicable semester units. See course descriptions.

### 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 82).

## 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 82)
- **Option 2**—CSU General Education Breadth (CSU GE Pattern). (See Miramar College Catalog page 109)
- **Option 3**—Intersegmental General Education Transfer Curriculum (IGETC) pattern. (See Miramar College Catalog page 100)
- **Option 4**—San Diego Community College District General Education Requirements. (See Miramar College Catalog page 85) 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 139)
- Biology Studies (see page 157)
- Chemistry Studies (see page 164)
- Earth Science Studies (see page 212)
- English/Literature Studies (see page 183)
- Health and Physical Education Studies (see page 187)
- Human Development Studies (see page 169)
- Humanities Studies (see page 195)
- Mathematics Studies (see page 203)
- Music Studies (see page 207)
- Occupational/Technical Studies (see page 199)
- Pre-Engineering Studies (see page 213)
- Psychology (see page 218)
- Social and Behavioral Sciences (see page 220)
- World Language Studies (see page 222)

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. SDCCD 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 U.S., Black Perspectives (C,M,MMR)	✓	✓	
^BLAS 140B History of the U.S., 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,MMR)	✓	✓	
^HIST 115B History of the Americas II (C,M,MMR)	✓		✓
^HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)	✓		✓

Course	Area US-1: Development of American Institutions	Area US-2: US Constitution	Area US-3: California State & Local Governments
HIST 141 Women in United States History I (M,MMR)	✓	✓	
HIST 142 Women in United States History II (M,MMR)	✓		✓
^HIST 150 Native Americans in U.S. History (M)	✓	✓	
^HIST 151 Native Americans in U.S. History (M)	✓		✓
HIST 175 California History (M)			✓
POLI 102 The American Political System (C,M,MMR)		✓	✓

**NOTES:**

- **Three units of coursework used to fulfill the American Institutions/California Government requirement may also be used to fulfill 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 caret (^) 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 Joint Services Transcript (JST) or CCAF Transcript covering all periods of military service must be on file in the Records Office.**

#### 5. Exercise Science Activity (formerly Physical Education)

Students must complete two activity courses. Exercise Science (formerly Physical Education) courses numbered below PHYE 240 or below EXSC 229 are acceptable. Dance courses are also acceptable, except for DANC 127, 181, 183 and 253. Administration of Justice 127A, 127B, 127C, 127D, 128A, 128B, 128C, 128D, 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 exercise science (formerly Physical Education) activity classes must file a physician's statement with the College Evaluations Office. Adapted Exercise Science (formerly 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 Exercise Science Activity (formerly Physical Education) requirement if service has been continuous for at least six months. Copies of form DD-214 or DD-295 or Joint Services Transcript (JST) 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 150 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 111 Cultural Influences on African Art (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, Film and the Media (C,M)
- ^ BLAS 155 African 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,MMR)
- ^ HIST 115B History of the Americas II (C,M,MMR)
- ^ HIST 120 Introduction to Asian Civilizations (C,M,MMR)
- ^ HIST 121 Asian Civilizations in Modern Times (C,M,MMR)
- ^ HIST 123 U.S. History from the Asian Pacific American Perspective (C,M)
- ^ HIST 130 The Modern Middle East (M)
- ^ HIST 150 Native Americans in United States History (M)
- ^ HIST 151 Native Americans in United States History (M)
- ^ INTE 125 History of Furniture and Interiors (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 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 55063:

- a. Natural Sciences.** Courses in the natural sciences are those that examine the physical universe, its life forms, and its natural phenomena. To satisfy the General Education Requirement in natural sciences, a course shall be designed to help the student develop an appreciation and understanding of the scientific method, and encourage an understanding of the relationships between science and other human activities. This category would include introductory or integrative courses in astronomy, biology, chemistry, general physical science, geology, meteorology, oceanography, physical geography, physical anthropology, physics and other scientific disciplines.
- b. Social and Behavioral Sciences.** Courses in the social and behavioral sciences are those which focus on people as members of society. To satisfy the general education requirement in social and behavioral sciences, a course shall be designed to develop an awareness of the method of inquiry used by the social and behavioral sciences. It shall be designed to stimulate critical thinking about the ways people act and have acted in response to their societies and should promote appreciation of how societies and social subgroups operate. This category would include introductory or integrative survey courses in cultural anthropology, cultural geography, economics, history, political science, psychology, sociology and related disciplines.
- c. Humanities.** Courses in the humanities are those which study the cultural activities and artistic expressions of human beings. To satisfy the general education requirement in the humanities, a course shall be designed to help the student develop an awareness of the ways in which people throughout the ages and in different cultures have

responded to themselves, help the student develop aesthetic understanding and an ability to make value judgments. Such courses could include introductory or integrative courses in the arts, foreign languages, literature, philosophy, and religion.

- d. Language and Rationality.** Courses in language and rationality are those which develop for the student the principles and applications of language toward logical thought, clear and precise expression and critical evaluation of communication in whatever symbol system the student uses.
  - 1. English Composition.** Courses fulfilling the written composition requirement shall be designed to include both expository and argumentative writing.
  - 2. Communication and Analytical Thinking.** Courses fulfilling the communication and analytical thinking requirement include oral communication, mathematics, logic, statistics, computer languages and programming, and related disciplines.

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

## General Education Requirements (Option 4)

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- () 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.
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Only one course in a student's major discipline may be used to meet the San Diego Community College District General Education Requirements. AA-T and AS-T degrees allow for double counting of courses in the major discipline.

The following information is based on 2015–2016 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)
BUSE 115	Statistics for Business (M)
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)
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)
PHIL 100	Logic and Critical Thinking (C,M,MMR)
PHIL 101	Symbolic Logic (C,M,MMR)
PHIL 205	Critical Thinking and Writing in Philosophy (C,M,MMR)
PSYC 258	Behavioral Science Statistics (C,M,MMR)

## B. Natural Sciences

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

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**1. Life Sciences**


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ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
ANTH 104	Laboratory in Physical Anthropology (C,M,MMR)
BIOL 100	Natural History - Environmental Biology - Lecture/Laboratory (M,MMR)
BIOL 101	Issues in Environmental Biology - Lecture/Laboratory (C)
BIOL 107	General Biology - Lecture/Laboratory (C,M,MMR)
BIOL 109	Introduction to Applied Biology (C)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
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 135	Biology of Human Nutrition (C,MMR)
BIOL 160	Elements of Human Anatomy & Physiology - Lecture/Laboratory (M,MMR)
BIOL 180	Plants and People (C,M,MMR)
BIOL 205	General Microbiology (C,M,MMR)
BIOL 210A	Introduction to the Biological Sciences I - Lecture/Laboratory (C,M,MMR)
BIOL 210B	Introduction to the Biological Sciences II - Lecture/Laboratory (C,M,MMR)
BIOL 215	Introduction to Zoology (C,M)
BIOL 230	Human Anatomy (C,M,MMR)
BIOL 235	Human Physiology (C,M,MMR)
BIOL 250	Introduction to Botany (M)
BIOL 285	Tropical Biology Field Experience (MMR)
CHEM 103	General, Organic, and Biological Chemistry (MMR)
MEDA 55	Fundamentals Human Anatomy and Physiology (M)
NUTR 150	Nutrition (C,M,MMR)
NUTR 155	Advanced Nutrition (M,MMR)
PSYC 260	Introduction to Physiological Psychology (C,M,MMR)

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**2. Physical Sciences**


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ASTR 101	Descriptive Astronomy (C,M,MMR)
ASTR 109	Practice in Observing - Laboratory (C,M)

ASTR 111	Astronomy Laboratory (C,M,MMR)
AVIA 115	Aviation Weather (MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)
CHEM 100L	Fundamentals of Chemistry - Laboratory (C,M,MMR)
CHEM 103	General, Organic, and Biological Chemistry (MMR)
CHEM 111	Chemistry in Society (C,M,MMR)
CHEM 111L	Chemistry and Society Laboratory (C,M,MMR)
CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
CHEM 130L	Introduction to Organic & Biological Chemistry - Laboratory (C,M,MMR)
CHEM 152	Introduction to General Chemistry (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)
CHEM 200	General Chemistry I - Lecture (C,M,MMR)
CHEM 200L	General Chemistry I - Laboratory (C,M,MMR)
CHEM 201	General Chemistry II - Lecture (C,M,MMR)
CHEM 201L	General Chemistry II - Laboratory (C,M,MMR)
CHEM 231	Organic Chemistry I - Lecture (C,M,MMR)
CHEM 231L	Organic Chemistry I - Laboratory (C,M,MMR)
CHEM 233	Organic Chemistry II - Lecture (C,M,MMR)
CHEM 233L	Organic Chemistry II - Laboratory (C,M,MMR)
CHEM 251	Quantitative 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	Physical Geology - Laboratory (C,M,MMR)
GEOL 104	Earth Science (C,M,MMR)
GEOL 111	The Earth Through Time (C,M,MMR)
GEOL 120	Earth Science Laboratory (C,M)
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)	^	ARTF 115	African Art (C,M)
PHYN 101	Survey of Physical Science - Laboratory (C,M,MMR)	^	ARTF 120	Native American Art (M)
PHYN 105	Physical Science for Elementary Education (M,MMR)		ARTF 125	Art History: Arts of the Asian Continent (C,M,MMR)
PHYN 120	The Oceans (M,MMR)		ARTF 191	Cultural Influences on Photography (M)
PHYS 100	Introductory Physics Lecture/Laboratory (C,M)		ARTF 194	Critical Photography (M)
PHYS 125	General Physics (C,M,MMR)	^	ARTG 118	Graphic Design History (C,MMR)
PHYS 126	General Physics II (C,M,MMR)	^	BLAS 110	African American Art (C,M)
PHYS 180A	General Physics I (C,MMR)	^	BLAS 111	Cultural Influences on African Art (M)
PHYS 180B	General Physics II (C,MMR)	^	BLAS 120	Black Music (C,M)
PHYS 181A	General Physics Lab I (C,MMR)	^	BLAS 150	Black Women in Literature, Film and the Media (C,M)
PHYS 181B	General Physics Lab II (C,MMR)	^	BLAS 155	African American Literature (C,M)
PHYS 195	Mechanics (C,M,MMR)		CHIC 130	Mexican Literature in Translation (C,M)
PHYS 196	Electricity and Magnetism (C,M,MMR)	^	CHIC 135	Chicana/o Literature (C,M)
PHYS 197	Waves, Optics and Modern Physics (C,M,MMR)		CHIC 138	Literature of La Raza in Latin America in Translation (C,M)

## 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)		CHIC 190	Chicano Images in Film (C,M)	
AMSL 116	American Sign Language Level II (C,M)		^	CHIC 210	Chicano Culture (C,M)
AMSL 215	American Sign Language Level III (C,M)		CHIC 230	Chicano Art (C,M)	
AMSL 216	American Sign Language Level IV (C,M)		CHIN 101	First Course in Mandarin Chinese (M)	
ARAB 101	First Course in Arabic (C)		CHIN 102	Second Course in Mandarin Chinese (M)	
ARAB 102	Second Course in Arabic (C)		CHIN 201	Third Course in Mandarin Chinese (M)	
ARAB 201A	Third Course in Arabic (C)		CHIN 202	Fourth Course in Mandarin Chinese (M)	
ARCH 126	History of Ancient World Architecture (M)		DANC 181	History of Dance (C,M)	
ARCH 127	History of World Architecture: Renaissance Through Contemporary (M)		DFLM 101	Introduction to Film (MMR)	
ARTF 100	Art Orientation (C,M,MMR)		DFLM 102	The American Cinema (MMR)	
ARTF 107	Contemporary Art (M,MMR)		DRAM 105	Introduction to Dramatic Arts (C,M)	
ARTF 109	Modern Art (C,M,MMR)		DRAM 107	Study of Filmed Plays (C)	
ARTF 110	Art History: Prehistoric to Gothic (C,M,MMR)		DRAM 108	Playwriting (C)	
ARTF 111	Art History: Renaissance to Modern (C,M,MMR)		^	DRAM 109	Theatre and Social Issues (C)
^	ARTF 113	Arts of Africa, Oceania, and the Americas (M,MMR)	DRAM 136	History of Canonized Theatre - Ancient Greece to the Restoration (C)	
			DRAM 137	History of Canonized Western Theatre - Restoration to the Present (C)	
			DRAM 150	Cinema as Art and Communication I (M)	
			DRAM 151	Cinema as Art and Communication II (M)	
			ENGL 207	The Art of the Sentence (M)	
			ENGL 208	Introduction to Literature (C,M,MMR)	

ENGL 209	Literary Approaches to Film (C,M,MMR)	HUMA 201	Mythology (C,M,MMR)
ENGL 210	American Literature I (C,M,MMR)	HUMA 202	Mythology: Hero's Journey (C)
ENGL 211	American Literature II (C,M,MMR)	HUMA 205	Exploring Human Values Through Film (M)
ENGL 215	English Literature I: 800–1799 (C,M,MMR)	^ INTE 125	History of Furniture and Interiors (M)
ENGL 216	English Literature II: 1800–Present (C,M,MMR)	ITAL 101	First Course in Italian (C,M)
ENGL 220	Masterpieces of World Literature I: 1500 BCE–1600 CE (C,M,MMR)	ITAL 102	Second Course in Italian (C,M)
ENGL 221	Masterpieces of World Literature II: 1600–Present (C,M,MMR)	ITAL 201	Third Course in Italian (C,M)
^ ENGL 230	Asian American Literature (M,MMR)	JAPN 101	First Course in Japanese (M)
ENGL 237	Women in Literature (C,MMR)	JAPN 102	Second Course in Japanese (M)
ENGL 238	Evaluating Children's Literature (C,M)	JAPN 201	Third Course in Japanese (M)
ENGL 240	Shakespeare (C,M)	JAPN 202	Fourth Course in Japanese (M)
FASH 120	Fashion History and Trends (M)	LATI 101	First Course in Latin (M)
FREN 101	First Course in French (C,M)	LATI 102	Second Course in Latin (M)
FREN 102	Second Course in French (C,M)	LATI 201	Third Course in Latin (M)
FREN 201	Third Course in French (C,M)	MULT 116	Flash Game Development (M)
FREN 202	Fourth Course in French (C,M)	MUSI 100	Introduction to Music (C,M,MMR)
GERM 101	First Course in German (C,M)	MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)
GERM 102	Second Course in German (C,M)	MUSI 102	Music History II: Mid 18th to Early 20th Century (M)
GERM 201	Third Course in German (C,M)	MUSI 103	History of Rock Music (M,MMR)
* HIST 100	World History I (C,M,MMR)	MUSI 105	Music of Our Time (M)
* HIST 101	World History II (C,M,MMR)	^ MUSI 109	World Music (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	MUSI 111	Jazz - History and Development (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	MUSI 125	Music, the Arts and Humanity (M)
^* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	PHIL 102A	Introduction to Philosophy: Reality and Knowledge (C,M,MMR)
^* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
^* HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)	PHIL 103	Historical Introduction to Philosophy (M)
* HIST 131	Latin America Before Independence (M)	PHIL 104A	History of Western Philosophy (C,M)
* HIST 132	Latin America Since Independence (M)	PHIL 104B	History of Western Philosophy (C,M)
HUMA 101	Introduction to the Humanities I (C,M,MMR)	PHIL 105	Contemporary Philosophy (C)
HUMA 102	Introduction to the Humanities II (C,M,MMR)	PHIL 106	Asian Philosophy (C,M)
HUMA 103	Introduction to the New Testament (C,M)	PHIL 107	Reflections on Human Nature (C,M,MMR)
HUMA 104	Introduction to the Old Testament (M)	* PHIL 108	Perspectives on Human Nature and Society (C,M)
HUMA 106	World Religions (C,M,MMR)	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)	BLAS 100	Introduction to Black Studies (C,M)
PHOT 150	History of Photography (C)	^ BLAS 104	Black Psychology (C,M)
RTVF 160	Introduction to Cinema (C)	^ BLAS 115	Sociology from a Black Perspective (C)
RUSS 101	First Course in Russian (C,M)	^ BLAS 116	Contemporary Social Problems from a Black Perspective (C,M)
RUSS 102	Second Course in Russian (M)	^ BLAS 125	Dynamics of the Black Community (M)
RUSS 201	Third Course in Russian (M)	^ BLAS 130	The Black Family (C,M)
SPAN 101	First Course in Spanish (C,M,MMR)	^ BLAS 135	Introduction to Black Politics (C)
SPAN 102	Second Course in Spanish (C,M,MMR)	^ BLAS 140A	History of the U.S., Black Perspectives (C,M,MMR)
SPAN 201	Third Course in Spanish (C,M,MMR)	^ BLAS 140B	History of the U.S., Black Perspectives (C,M,MMR)
SPAN 202	Fourth Course in Spanish (C,M,MMR)	^ BLAS 145A	Introduction to African History (C,M)
SPAN 215	Spanish for Spanish Speakers I (C,M)	^ BLAS 145B	Introduction to African History (C)
SPAN 216	Spanish for Spanish Speakers II (C,M)	BLAS 165	Sexuality and Black Culture (C,M)
SUST 102	Environmental Ethics (C)	BLAS 175	Psycho-History of Racism and Sexism (M)
TAGA 101	First Course in Tagalog (M,MMR)	BUSE 100	Introduction to Business (C,M,MMR)
TAGA 102	Second Course in Tagalog (M,MMR)	BUSE 140	Business Law and the Legal Environment (C,M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)	^ CHIC 110A	Introduction to Chicano Studies (C,M)
VIET 101	First Course in Vietnamese (M)	^ CHIC 110B	Introduction to Chicano Studies (C,M)
VIET 102	Second Course in Vietnamese (M)	^ CHIC 141A	United States History from a Chicano Perspective (C,M)
VIET 201	Third Course in Vietnamese (M)	^ CHIC 141B	United States History from a Chicano Perspective (C,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)	CHIC 150	History of Mexico (C,M)
^ ADJU 106	Diversity and Community Relations (MMR)	CHIC 170	La Chicana (C,M)
ADJU 193	Concepts of Criminal Law (MMR)	CHIC 201	The Indigenous Tradition of Mexico and Ancient Mesoamerica (C,M)
ADJU 230	Constitutional Law I (MMR)	CHIL 101	Human Growth and Development (C,M,MMR)
AGRI 100	Principles of Sustainable Agriculture (C)	CHIL 103	Lifespan Growth and Development (MMR)
^ AMSL 150	Introduction to Deaf Culture (M)	^ CHIL 141	The Child, Family and Community (C,M,MMR)
^ ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)	CRES 101	Conflict Resolution and Mediation (C)
ANTH 107	Introduction to Archaeology (C,M,MMR)	DJRN 100	Mass Media in the Digital Age (C)
ANTH 110	Anthropology of Magic, Witchcraft, and Religion (M)	ECON 120	Principles of Macroeconomics (C,M,MMR)
^ ANTH 200	Introduction to North American Indians (M)	ECON 121	Principles of Microeconomics (C,M,MMR)
ANTH 205	Introduction to Medical Anthropology (M)	^ ENGL 202	Introduction to Linguistics (C,M)
^ ANTH 210	Introduction to California Indians (C,M)	^ FILI 100	Filipino American Experience (MMR)
ANTH 215	Cultures of Latin America (C,M)	FUTR 101	Introduction to Futures Studies (C)

FUTR 102	Creating Futures: Methods and Tools (C)	PEAC 201	Environmental Sustainability, Justice and Ethics (C)
FUTR 103	Emerging Technologies (C)	* PHIL 108	Perspectives on Human Nature and Society (C,M)
GEND 101	Introduction to Gender Studies (C)	PHIL 109	Issues in Social Philosophy (M)
^ GEOG 102	Cultural Geography (C,M,MMR)	^* PHIL 125	Philosophy of Women (C,M)
GEOG 104	World Regional Geography (C,M,MMR)	PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
GEOG 154	Introduction to Urban Geography (C,M)	POLI 101	Introduction to Political Science (C,M,MMR)
* HIST 100	World History I (C,M,MMR)	POLI 102	The American Political System (C,M,MMR)
* HIST 101	World History II (C,M,MMR)	^ POLI 103	Comparative Politics (C,M,MMR)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	^ POLI 140	Contemporary International Politics (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	PSYC 101	General Psychology (C,M,MMR)
HIST 109	History of the United States I (C,M,MMR)	PSYC 111	Psychological /Social Aspects of Aging, Death and Dying (C,M)
HIST 110	History of the United States II (C,M,MMR)	PSYC 121	Introduction to Child Psychology (M)
^ HIST 115A	History of the Americas I (C,M,MMR)	PSYC 123	Adolescent Psychology (MMR)
^ HIST 115B	History of the Americas II (C,M,MMR)	PSYC 133	Psychology of Women (M,MMR)
^* HIST 120	Introduction to Asian Civilization (C,M,MMR)	PSYC 135	Marriage and Family Relations (C,M,MMR)
^* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	PSYC 137	Human Sexual Behavior (C,M,MMR)
^* HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)	PSYC 155	Introduction to Personality (C,M,MMR)
^ HIST 130	The Modern Middle East (M)	PSYC 166	Introduction to Social Psychology (C,M,MMR)
* HIST 131	Latin America Before Independence (M)	PSYC 211	Learning (C,M,MMR)
* HIST 132	Latin America Since Independence (M)	PSYC 230	Psychology of Lifespan Development (C,M,MMR)
HIST 141	Women in United States History I (M,MMR)	PSYC 245	Abnormal Psychology (C,M,MMR)
HIST 142	Women in United States History II (M,MMR)	^ SOCO 101	Principles of Sociology (C,M,MMR)
^ HIST 150	Native Americans in United States History (M)	^ SOCO 110	Contemporary Social Problems (C,M,MMR)
^ HIST 151	Native Americans in United States History (M)	^ SOCO 125	Sociology of the Family (C,M)
HIST 154	Ancient Egypt (M)	^ SOCO 150	Sociology of Latinos/Latinas (C,M)
HIST 175	California History (M)	SOCO 201	Advanced Principles of Sociology (C,M,MMR)
HUMS 101	Introduction to Human Aging (C)	SOCO 220	Introduction to Research Methods in Sociology (C,MMR)
JOUR 202	Introduction to Mass Communication (C,M,MMR)	^ SOCO 223	Globalization and Social Change (C,M,MMR)
^ NUTR 153	Cultural Foods (M)	SUST 101	Introduction to Sustainability (C)
PEAC 101	Introduction to Peace Studies (C)		
PEAC 102	Nonviolence and Conflict Resolution (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.
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

Students 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.

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

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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.

## 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.

## Associate Degree Initiative

The San Diego Community College District proactively reviews student academic records to determine if program requirements for an associate degree have been met.

Student academic records will be reviewed if the student:

- completed at least 70 degree applicable units,
- submitted all transcripts from other institutions attended, and
- has an education plan on file.

If the degree requirements are met, students will be notified via email and awarded a diploma. Students have until the end of the semester to decline the degree.

All students may participate in the commencement ceremony which occurs annually at the end of the spring semester. Note that students who plan to transfer to a California State University (CSU), may want to consider an *Associate Degree for Transfer* and should consult a counselor or the Transfer Center for options.

## Diplomas

Diplomas are issued only after completion of all graduation requirements has 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 of Arts or Associate of 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 at City, Mesa and/or Miramar.
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. Counselors will review all previous college work to determine the student's eligibility for a second degree.

## Transfer Programs

(See "Transfer Guide" on page 95)

## High School Courses for College Credit (Credit by Exam)

As part of an early college program called CTE Transitions (formerly known as 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

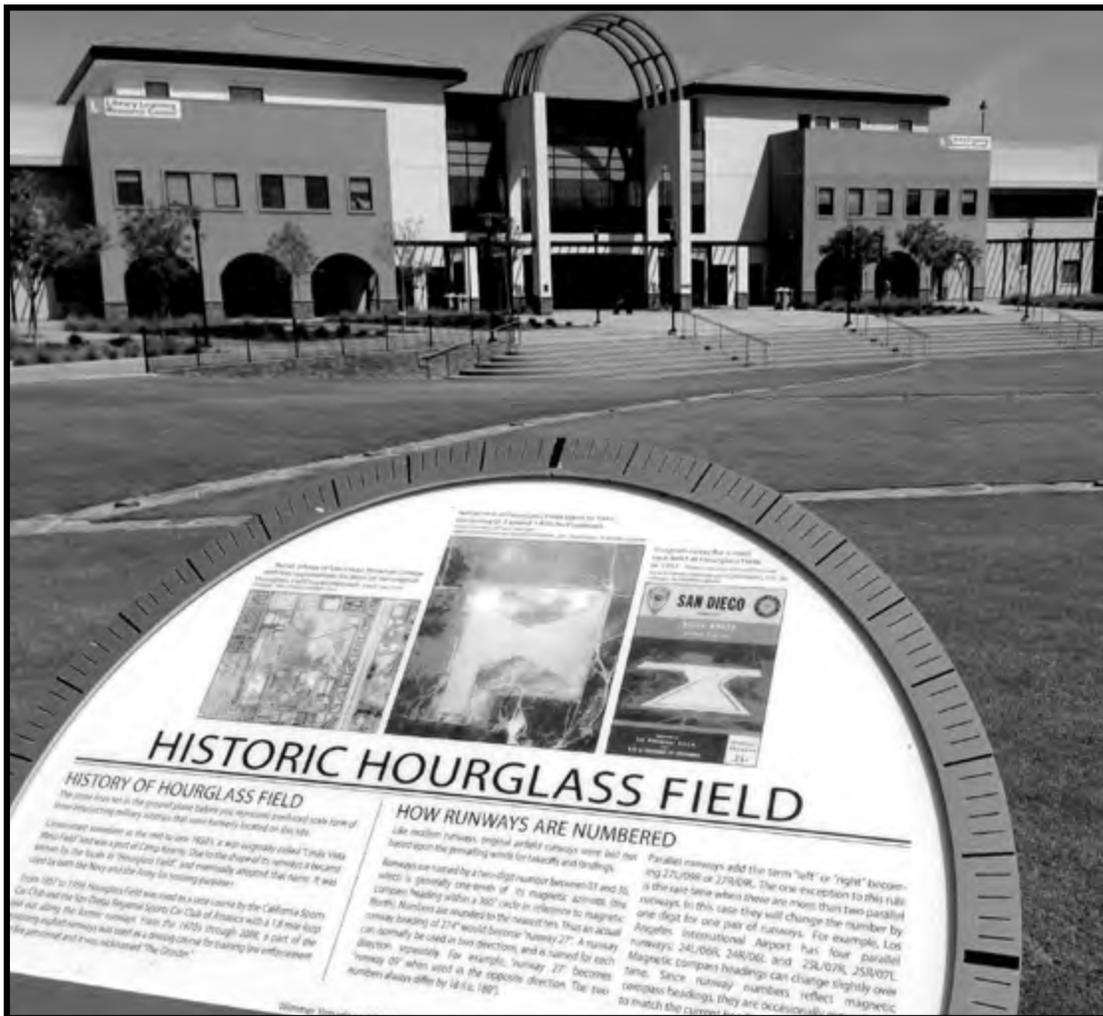
complete the SDCCD online college application and CTE Transitions certification process. The high school instructor must verify grades, ensure successful completion of enrollment process and assists students with submitting requests for grades to the CTE Transitions Office. Approved requests are processed annually each July. Students may request an SDCCD transcript after July 31st. For questions and more information, contact the CTE Transitions Program at 619-388-6572.

## CTE (Career Technical Education) Transitions Program (formerly known as 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 NATEF Introduction to Automotive Technology, OR ROP Auto Body Repair & Refinishing	Crawford Educational Complex, La Jolla, Madison, Mira Mesa, Clairemont	AUTO 053	3
Air Force ROTC, Aerospace 1-3	Scripps Ranch, Mira Mesa	AVIA 290	Up to 3
Air Force ROTC, Aerospace 4	Scripps Ranch	AVIA 101	3
Computer Applications OR Computer Applications in Business	Crawford Educational Complex, Twain, University City, Clairemont	CBTE 120	up to 3
Computerized Graphic Design	Crawford Educational Complex, Morse, Patrick Henry, Point Loma, DMD & International Business at Kearny Educational Complex, Scripps Ranch, Serra, Twain, Mira Mesa, Mission Bay	CBTE 162 CBTE 170	4
Biotechnology 1 & 2 OR Biomedical Technology 1-2 OR Human Biology OR Medical Interventions	Crawford Educational Complex, High Tech High, Sci Tech at San Diego Educational Complex, SCT at Kearny Educational Complex, Mira Mesa, Mount Carmel and Westview (Poway Unified) Rancho Bernardo (PUSD), Eastlake and Castle Park (SUHSD)	BIOL 131	4
Developmental Psychology of Children 1-4	Garfield, Morse, Patrick Henry, Scripps Ranch, Twain, University City, Point Loma	CHIL 160 CHIL 161 CHIL 270	up to 6
Introduction to Teaching and Learning	Morse, Patrick Henry, Point Loma, Scripps Ranch, Garfield, University City, Twain	CHIL 270	up to 4
Accounting 1-2	School of Business at San Diego Educational Complex, Hoover	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

Students are advised to plan transfer pathways as early as possible and enroll in transferable courses in both general education and in courses that prepare students for specific university majors. Questions related to transfer programs should be discussed with a counselor in the Transfer Center or campus counseling office.

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
- Field Trips

For additional information regarding specific services, contact the San Diego Miramar College

Transfer Center at 619-388-7380 located in K1-306 or visit [www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer).

## Steps to Transfer

### Step 1: Career Exploration

Your career objective will determine the type of degree you need and your choices for selecting a major. See the Career Center in K1-308 for assistance.

### Step 2: 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 Career Center in K1-308 for assistance in researching career fields.
- If you know what university you want to attend, you can select from the list of majors at that university. Lists of majors at California public universities are available at [www.assist.org](http://www.assist.org) (click on “Explore Majors”).
- If you think you might be interested in a particular major but are not sure, try taking a general education class in the major and see how you like it. Students often select their major based simply on the courses that are the most interesting to them.
- For descriptions of the 75 most popular majors, visit [www.petersons.com/majordecision/](http://www.petersons.com/majordecision/).

## Step 3: Choosing Your Transfer University

Each university may have different transfer requirements, so choosing a transfer university (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 universities 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 ten universities in the University of California system. See [www.UniversityOfCalifornia.edu](http://www.UniversityOfCalifornia.edu) for details.

#### 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 preparation 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.

### UC Transfer and Physical Education Activity Courses

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

### UC Transfer and Variable Topics Courses

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

### California 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. See [www.csumentor.edu](http://www.csumentor.edu) for details.

### 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 such 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.

Associate Degrees for transfer are another option to transfer to the CSU system. Refer to page 80 or see your counselor or Transfer Center for details.

### 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. Useful websites: [www.aiccu.edu](http://www.aiccu.edu), [www.sandiegocolleges.info](http://www.sandiegocolleges.info)

### 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. [www.hbcumentor.org](http://www.hbcumentor.org)

### 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. [www.hacu.net](http://www.hacu.net)

### 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. [www.aihec.org](http://www.aihec.org)

### Out-of-State Colleges and Universities

Colleges and universities that are not in California. May be public or private. Useful websites: [www.wiche.edu](http://www.wiche.edu), [www.regionaladmissions.com](http://www.regionaladmissions.com), [www.collegesource.org](http://www.collegesource.org).

## Step 4: Academic Preparation

### Preparation for Major Courses

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

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

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

## General Education Courses

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

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

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

### The IGETC pattern (see page 101)

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 109)

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 117)

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 198). Students who complete one of these patterns and additional transfer coursework may also qualify for one of the following Miramar College associate degrees:

- Administration of Justice for Transfer (see page 135)
- Anthropology for Transfer (see page 215)
- Art History for Transfer (see page 141)
- Art/Visual Studies (see page 139)
- Biology Studies (see page 157)
- Business Administration for Transfer (see page 160)
- Chemistry Studies (see page 164)
- Communication Studies for Transfer (see page 171)
- Earth Science Studies (see page 212)
- English for Transfer (see page 184)
- English/Literature Studies (see page 183)
- Health and Physical Education Studies (see page 187)
- History for Transfer (see page 216)
- Human Development Studies (see page 169)
- Humanities Studies (see page 195)
- Kinesiology for Transfer (see page 188)
- Mathematics Studies (see page 203)
- Mathematics for Transfer (see page 204)
- Music Studies (see page 207)
- Occupational/Technical Studies (see page 199)
- Philosophy for Transfer (see page 196)
- Physics for Transfer (see page 212)
- Pre-Engineering Studies (see page 213)

- Psychology (see page 218)
- Political Science for Transfer (see page 217)
- Sociology for Transfer (see page 219)
- Spanish for Transfer (see page 223)
- Social and Behavioral Sciences (see page 220)
- Studio Arts for Transfer (see page 138)
- World Language Studies (see page 222)

### 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 198).

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 117)

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 117.

## Transfer General Education Options

### University of California and California State University

#### Intersegmental General Education Transfer Curriculum (IGETC) (Option 3)

##### 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.

Students pursuing an Associate Degree for Transfer (ADT) in Biology or Chemistry have the option of selecting the IGETC for STEM pattern. The IGETC for STEM general education option permits students to delay one general education course in Area 3 (Arts and Humanities) and one course in Area 4 (Social and Behavioral Sciences) until after 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.**

##### Additional IGETC Information and Restrictions

- Each course must have been IGETC approved at the time it was completed. See [www.assist.org](http://www.assist.org) for a list of certified courses and approval dates.

- Courses may be approved for more than one IGETC area. However, each course may be used to certify only one of the areas it is approved for.
- Students should apply for IGETC certification at the last community college attended prior to transfer. IGETC certification requests will be processed for students who have completed at least one course at a SDCCD college. Certification forms are available at the Counseling or Evaluations Office.
- AP credit and coursework completed at accredited U.S. colleges and universities may be used to fulfill some IGETC requirements. All such credit must be evaluated through the Evaluations office. Foreign coursework is not acceptable.
- All courses must be passed with a "C" or higher. 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](http://www.assist.org) for more information.

**IGETC is not recommended for the following transfer destinations:**

- UC San Diego Eleanor Roosevelt College
- 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

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

## Area 1—English Communication

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

### 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,M)

## 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)
- BUSE 115 Statistics for Business (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 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 (C,M,MMR)
- ARTF 130 Pre-Columbian Art (M)

- \* 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 Cultural Influences on African Art (M)
- BLAS 120 Black Music (C,M)
- CHIC 230 Chicano Art (C,M)
- DFLM 101 Introduction to Film (MMR)
- DFLM 102 The American Cinema (MMR)
- DRAM 105 Introduction to Dramatic Arts (C,M)
- DRAM 107 Study of Filmed Plays (C)
- DRAM 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 (M,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)
- RTVF 160 Introduction to Cinema (C)

#### 3B: Humanities Courses

- AMSL 116 American Sign Language Level II (C,M)
- \* AMSL 150 Introduction to Deaf Culture (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)
- ARAB 201A Third Course in Arabic (C)
- ARCH 126 History of Ancient World Architecture (M)
- ARCH 127 History of World Architecture: Romanesque through Contemporary (M)
- \* ARTF 191 Cultural Influences on Photography (M)

* BLAS 145A	Introduction to African History (C,M)	HUMA 101	Introduction to the Humanities I (C,M,MMR)
* BLAS 145B	Introduction to African History (C)	HUMA 102	Introduction to the Humanities II (C,M,MMR)
BLAS 150	Black Women in Literature, Film and the Media (C,M)	HUMA 103	Introduction to the New Testament (C,M)
BLAS 155	African American Literature (C,M)	HUMA 104	Introduction to the Old Testament (M)
CHIC 130	Mexican Literature in Translation (C,M)	HUMA 106	World Religions (C,M,MMR)
CHIC 135	Chicana/o Literature (C,M)	HUMA 201	Mythology (C,M,MMR)
CHIC 138	Literature of La Raza in Latin America in Translation (C,M)	HUMA 205	Exploring Human Values through Film (M)
CHIC 190	Chicano Images in Film (C,M)	ITAL 102	Second Course in Italian (C,M)
* CHIC 210	Chicano Culture (C,M)	ITAL 201	Third Course in Italian (C,M)
CHIN 102	Second Course in Mandarin Chinese (M)	JAPN 102	Second Course in Japanese (M)
CHIN 201	Third Course Mandarin Chinese (M)	JAPN 201	Third Course in Japanese (M)
CHIN 202	Fourth Course in Mandarin Chinese (M)	JAPN 202	Fourth Course in Japanese (M)
ENGL 208	Introduction to Literature (C,M,MMR)	LATI 102	Second Course in Latin (M)
ENGL 209	Literary Approaches to Film (C,M,MMR)	LATI 201	Third Course in Latin (M)
ENGL 210	American Literature I (C,M,MMR)	PHIL 102A	Introduction to Philosophy: Reality & Knowledge (C,M,MMR)
ENGL 211	American Literature II (C,M,MMR)	PHIL 102B	Introduction to Philosophy: Values (C,M,MMR)
ENGL 215	English Literature I: 800–1799 (C,M,MMR)	PHIL 103	Historical Introduction to Philosophy (M)
ENGL 216	English Literature II: 1800–Present (C,M,MMR)	PHIL 104A	History of Western Philosophy (C,M)
ENGL 220	Masterpieces of World Literature I: 1500 BCE–1600 CE (C,M,MMR)	PHIL 104B	History of Western Philosophy (C,M)
ENGL 221	Masterpieces of World Literature II: 1600–Present (C,M,MMR)	PHIL 105	Contemporary Philosophy (C)
ENGL 230	Asian American Literature (M,MMR)	PHIL 106	Asian Philosophy (C,M)
ENGL 237	Women in Literature (C,MMR)	PHIL 107	Reflections on Human Nature (C,M,MMR)
ENGL 240	Shakespeare (C,M)	PHIL 108	Perspectives on Human Nature & Society (C,M)
FREN 102	Second Course in French (C,M)	PHIL 110	Philosophy of Religion (M)
FREN 201	Third Course in French (C,M)	PHIL 111	Philosophy in Literature (C,M)
FREN 202	Fourth Course in French (C,M)	PHIL 112	Philosophy of Science (M)
GERM 102	Second Course in German (C,M)	PHIL 125	Philosophy of Women (C,M)
GERM 201	Third Course in German (C,M)	* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
* HIST 100	World History I (C,M,MMR)	PHIL 130	Philosophy of Art and Music (C,M)
* HIST 101	World History II (C,M,MMR)	RUSS 102	Second Course in Russian (M)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	RUSS 201	Third Course in Russian (M)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	+ SPAN 102	Second Course in Spanish (C,M,MMR)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	+ SPAN 201	Third Course in Spanish (C,M,MMR)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	SPAN 202	Fourth Course in Spanish (C,M,MMR)
* HIST 131	Latin America Before Independence (M)	SPAN 215	Spanish for Spanish Speakers I (C,M)
* HIST 132	Latin America Since Independence (M)	SPAN 216	Spanish for Spanish Speakers II (C,M)
		SUST 102	Environmental Ethics (C)

TAGA 102	Second Course in Tagalog (M,MMR)
TAGA 201	Third Course in Tagalog (M,MMR)
VIET 102	Second Course in Vietnamese (M)
VIET 201	Third Course in Vietnamese (M)

## Area 4—Social and Behavioral Sciences

### 3 courses, 9 semester/12–15 quarter units

Courses from at least two disciplines or an interdisciplinary sequence.

#### 4A: Anthropology and Archaeology Courses

ANTH 103	Introduction to Cultural Anthropology (C,M,MMR)
ANTH 107	Introduction to Archaeology (C,M,MMR)
ANTH 110	Anthropology of Magic, Witchcraft, and Religion (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)
CHIC 201	The Indigenous Tradition of Mexico and Ancient Mesoamerica (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 150	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 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)
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 (C,M)
CHIC 201	The Indigenous Tradition of Mexico and Ancient Mesoamerica (C,M)
* CHIC 210	Chicano Culture (C,M)
FILI 100	Filipino American Experience (MMR)
+ HIST 150	Native Americans in United States History (M)
+ HIST 151	Native Americans in United States History (M)
* SOCO 150	Sociology of Latinos/Latinas (C,M)

#### 4D: Gender Studies

BLAS 175	Psycho-History of Racism and Sexism (M)
* CHIC 170	La Chicana (C,M)
GEND 101	Introduction to Gender Studies (C)
+ HIST 141	Women in United States History I (M,MMR)
+ HIST 142	Women in United States History II (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

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	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,MMR)
HIST 115B	History of the Americas II (C,M,MMR)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)
HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)
HIST 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 (M,MMR)
+ HIST 142	Women in United States History II (M,MMR)
+ HIST 150	Native Americans in United States History (M)
+ HIST 151	Native Americans in United States History (M)
HIST 154	Ancient Egypt (M)
HIST 175	California History (M)

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#### 4G: Interdisciplinary, Social & Behavioral Sciences

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AGRI 100	Principles of Sustainable Agriculture (C)
+ CHIL 101	Human Growth and Development (C,M,MMR)
+ CHIL 103	Lifespan Growth and Development (C,MMR)
* COMS 135	Interpersonal Communication (C,M,MMR)
CRES 101	Conflict Resolution and Mediation (C)
DJRN 100	Mass Media in the Digital Age (C)
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,MMR)
PEAC 101	Introduction to Peace Studies (C)
PEAC 102	Nonviolence and Conflict Resolution (C)
PEAC 201	Environmental Sustainability, Justice and Ethics (C)
* SOCO 220	Introduction to Research Methods in Sociology (C,MMR)
SOCO 223	Globalization and Social Change (C,M,MMR)
SUST 101	Introduction to Sustainability (C,MMR)

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

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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)

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#### 4I: Psychology Courses

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BLAS 175	Psycho-History of Racism and Sexism (M)
+ PSYC 101	General Psychology (C,M,MMR)
PSYC 111	Psychological/Social Aspects of Aging, Death and Dying (C,M)
+ 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)

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**4J: Sociology & Criminology Courses**


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	BLAS 125	Dynamics of the Black Community (M)
	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,M)
	SOCO 201	Advanced Principles of Sociology (C,M,MMR)
*	SOCO 220	Introduction to Research Methods in Sociology (C,MMR)
	SOCO 223	Globalization and Social Change (C,M,MMR)

**Area 5—Physical and Biological Sciences**

**At least 2 courses required, 7–9 semester/9–12 quarter units.**

One Physical Science course and one Biological Science course; at least one must include a laboratory.

- 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.

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**5A: Physical Science Courses**


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	ASTR 101	Descriptive Astronomy (C,M,MMR)
	AVIA 115	Aviation Weather (MMR)
+	CHEM 100	Fundamentals of Chemistry (C,M,MMR)
	<u>CHEM 103</u>	General, Organic, and Biological Chemistry (MMR)
	CHEM 111	Chemistry in Society (C,M,MMR)
+	CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
+	CHEM 152	Introduction to General Chemistry (C,M,MMR)
	CHEM 200	General Chemistry I - Lecture (C,M,MMR)

	CHEM 201	General Chemistry II - Lecture (C,M,MMR)
+	CHEM 231	Organic Chemistry I - Lecture (C,M,MMR)
	CHEM 233	Organic Chemistry II - Lecture (C,M,MMR)
	<u>CHEM 251</u>	Quantitative 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 105	Physical Science for Elementary Education (M,MMR)
	PHYN 120	The Oceans (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, Optics and Modern Physics (C,M,MMR)

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**5B: Biological Science Courses**


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	ANTH 102	Introduction to Physical Anthropology (C,M,MMR)
+	<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 Lab (C,M,MMR)
	BIOL 110	Introduction to Oceanography (C,M)
	<u>BIOL 115</u>	Marine Biology (C,M,MMR)
+	BIOL 120	The Environment of Man (M)
	BIOL 130	Human Heredity (C,M,MMR)
	<u>BIOL 131</u>	Introduction to Biotechnology (MMR)
+	BIOL 180	Plants and People (C,M,MMR)
	<u>BIOL 205</u>	General Microbiology (C,M,MMR)
	<u>BIOL 210A</u>	Introduction to the Biological Sciences I (C,M,MMR)
	<u>BIOL 210B</u>	Introduction to the Biological Sciences II (C,M,MMR)
+	<u>BIOL 215</u>	Introduction to Zoology (C,M)
	<u>BIOL 230</u>	Human Anatomy (C,M,MMR)

- BIOL 235 Human Physiology (C,M,MMR)  
 + BIOL 250 Introduction to Botany (M)  
 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,MMR)  
 + 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)  
 GEOL 101 Physical 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)  
 ARAB 201A Third 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)  
 FREN 102 Second Course in French (C,M)  
 FREN 201 Third Course in French (C,M)  
 FREN 202 Fourth Course in French (C,M)  
 GERM 101 First Course in German (C,M)  
 GERM 102 Second Course in German (C,M)  
 GERM 201 Third Course in German (C,M)  
 ITAL 101 First Course in Italian (C,M)  
 ITAL 102 Second Course in Italian (C,M)  
 ITAL 201 Third Course in Italian (C,M)  
 JAPN 101 First Course in Japanese (M)  
 JAPN 102 Second Course in Japanese (M)  
 JAPN 201 Third Course in Japanese (M)  
 JAPN 202 Fourth Course in Japanese (M)  
 LATI 101 First Course in Latin (M)  
 LATI 102 Second Course in Latin (M)  
 LATI 201 Third Course in Latin (M)  
 RUSS 101 First Course in Russian (C,M)  
 RUSS 102 Second Course in Russian (M)  
 RUSS 201 Third Course in Russian (M)  
 + SPAN 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)  
 SPAN 216 Spanish for Spanish Speakers II (C,M)  
 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)

Achieve a satisfactory score on the SAT Subject Test in languages other than English, as listed below. If the test was taken before May 1995, the first score is the minimum; if the test was taken after May 1995, the second score is the minimum:

- Chinese With Listening: not offered before 1995/520
  - French/French With Listening: 500/540
  - German/German With Listening: 500/510
  - Hebrew (Modern): 500/470
  - Italian: 500/520
  - Japanese With Listening: 500/510
  - Korean/Korean With Listening: not offered before 1995/500
  - Latin: 500/530
  - Spanish/Spanish With Listening: 500/520
3. Achieve a score of 3, 4 or 5 on a College Board Advanced Placement (AP) Examination in a language other than English.
  4. Achieve a score of 5 or higher on an International Baccalaureate (IB) Higher Level Examination in a language other than English.
  5. 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.
  6. 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.

7. Earn a passing grade on the international A level or O level exam in a language other than English.
8. 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 (CSUGE-B)

### About the CSUGE-Breadth Pattern

The California State University General Education - Breadth (CSUGE-B) 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.

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

### Certification of CSUGE-Breadth 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 CSUGE-Breadth 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.
- Students pursuing an Associate Degree for Transfer (ADT) in Biology or Chemistry have the option of using the CSUGE-B for STEM pattern. The CSUGE-B for STEM general education option permits students to delay one general education course in Area C (Arts and Humanities) and one course in Area D (Social Sciences) until after transfer.
- 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 2015–2016 agreement and is distributed as follows:

- 
- ( ) Colleges in parenthesis indicate where the course is approved for CSU GE Requirements.  
C—City College  
M—Mesa College  
MMR—Miramar College
  - \* Courses with asterisks are listed in more than one area but shall not be certified in more than one area.
  - # 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.*

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### 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.*

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#### A1: Oral Communication

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

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#### A2: Written Communication

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

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#### A3: Critical Thinking

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- |          |  |
|----------|--|
| 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)
AVIA 115	Aviation Weather (MMR)
CHEM 100	Fundamentals of Chemistry (C,M,MMR)
<u>CHEM 103</u>	General, Organic, and Biological Chemistry (MMR)
CHEM 111	Chemistry in Society (C,M,MMR)
CHEM 130	Introduction to Organic & Biological Chemistry (C,M,MMR)
CHEM 152	Introduction to General Chemistry (C,M,MMR)
CHEM 200	General Chemistry I - Lecture (C,M,MMR)
CHEM 201	General Chemistry II - Lecture (C,M,MMR)
CHEM 231	Organic Chemistry I - Lecture (C,M,MMR)
CHEM 233	Organic Chemistry II - Lecture (C,M,MMR)
<u>CHEM 251</u>	Quantitative 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)
<u>GEOL 111</u>	The Earth Through Time (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 105	Physical Science for Elementary Education (M,MMR)
PHYN 120	The Oceans (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 109	Preparation for Biotechnology (C)
BIOL 110	Introduction to Oceanography (C,M)
BIOL 111	Cancer Biology (C)
<u>BIOL 115</u>	Marine Biology (C,M,MMR)
BIOL 130	Human Heredity (C,M,MMR)
<u>BIOL 131</u>	Introduction to Biotechnology (MMR)
<u>BIOL 160</u>	Elements of Human Anatomy & Physiology (M,MMR)
BIOL 180	Plants and People (C,M,MMR)
<u>BIOL 205</u>	General Microbiology (C,M,MMR)
<u>BIOL 210A</u>	Introduction to the Biological Sciences I (C,M,MMR)
<u>BIOL 210B</u>	Introduction to the Biological Sciences II (C,M,MMR)
<u>BIOL 215</u>	Introduction to Zoology (C,M)
<u>BIOL 230</u>	Human Anatomy (C,M,MMR)
<u>BIOL 235</u>	Human Physiology (C,M,MMR)
<u>BIOL 250</u>	Introduction to Botany (M)
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,MMR)
CHEM 130L	Introduction to Organic & Biological Chemistry Laboratory (C,M,MMR)
CHEM 152L	Introduction to General Chemistry Laboratory (C,M,MMR)
CHEM 200L	General Chemistry I - Laboratory (C,M,MMR)
CHEM 201L	General Chemistry II - Laboratory (C,M,MMR)
CHEM 231L	Organic Chemistry I - Laboratory (C,M,MMR)
CHEM 233L	Organic Chemistry II - Laboratory (C,M,MMR)
GEOG 101L	Physical Geography Laboratory (C,M,MMR)
GEOL 101	Physical 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)
BUSE 115	Statistics for Business (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	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 (C,M,MMR)
ARTF 130	Pre-Columbian Art (M)
* 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)	ARCH 127	History of World Architecture: Romanesque through Contemporary (M)
BLAS 111	Cultural Influences on African Art (M)	* ARTF 191	Cultural Influences on Photography (M)
BLAS 120	Black Music (C,M)	BLAS 150	Black Women in Literature, Film and the Media (C,M)
CHIC 230	Chicano Art (C,M)	BLAS 155	African American Literature (C,M)
DANC 181	History of Dance (C,M)	CHIC 130	Mexican Literature in Translation (C,M)
DFLM 101	Introduction to Film (MMR)	CHIC 135	Chicana/o Literature (C,M)
DFLM 102	The American Cinema (MMR)	CHIC 138	Literature of La Raza in Latin America in Translation (C,M)
DRAM 105	Introduction to Dramatic Arts (C,M)	CHIC 190	Chicano Images in Film (C,M)
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)
INTE 125	History of Furniture and Interiors (M)	ENGL 210	American Literature I (C,M,MMR)
MUSI 100	Introduction to Music (C,M,MMR)	ENGL 211	American Literature II (C,M,MMR)
MUSI 101	Music History I: Middle Ages to Mid 18th Century (M)	ENGL 215	English Literature I: 800–1799 (C,M,MMR)
MUSI 102	Music History II: Mid 18th to Early 20th Century (M)	ENGL 216	English Literature II: 1800–Present (C,M,MMR)
MUSI 103	History of Rock Music (M,MMR)	ENGL 220	Masterpieces of World Literature I: 1500 BCE–1600 CE (C,M,MMR)
MUSI 105	Music of Our Time (M)	ENGL 221	Masterpieces of World Literature II: 1600–Present (C,M,MMR)
MUSI 109	World Music (C,M,MMR)	ENGL 230	Asian American Literature (M,MMR)
MUSI 111	Jazz - History and Development (C,M,MMR)	ENGL 237	Women in Literature (C,MMR)
MUSI 125	Music, the Arts and Humanity (M)	ENGL 238	Evaluating Children's Literature (C,M)
PHOT 150	History of Photography (C)	ENGL 240	Shakespeare (C,M)
RTVF 160	Introduction to Cinema (C)	FREN 101	First Course in French (C,M)
		FREN 102	Second Course in French (C,M)
		FREN 201	Third Course in French (C,M)
		FREN 202	Fourth Course in French (C,M)
		GERM 101	First Course in German (C,M)
		GERM 102	Second Course in German (C,M)
		GERM 201	Third Course in German (C,M)
		* HIST 100	World History I (C,M,MMR)
		* HIST 101	World History II (C,M,MMR)
		* HIST 105	Introduction to Western Civilization I (C,M,MMR)

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### C2: Humanities (Literature, Philosophy, Languages Other than English)

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AMSL 115	American Sign Language Level I (C,M)		
AMSL 116	American Sign Language Level II (C,M)		
* AMSL 150	Introduction to Deaf Culture (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)		
ARAB 201A	Third Course in Arabic (C)		
ARCH 126	History of Ancient World Architecture (M)		

* HIST 106	Introduction to Western Civilization II (C,M,MMR)	PHIL 112	Philosophy of Science (M)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	PHIL 125	Philosophy of Women (C,M)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	* PHIL 126	Introduction to Philosophy of Contemporary Gender Issues (C,M)
* HIST 131	Latin America Before Independence (M)	PHIL 130	Philosophy of Art and Music (C,M)
* HIST 132	Latin America Since Independence (M)	RUSS 101	First Course in Russian (C,M)
* HIST 154	Ancient Egypt (M)	RUSS 102	Second Course in Russian (M)
HUMA 101	Introduction to the Humanities I (C,M,MMR)	RUSS 201	Third Course in Russian (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)
HUMA 202	Mythology: Hero's Journey (C)	SPAN 216	Spanish for Spanish Speakers II (C,M)
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)		
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)		

## Area D. Social Sciences:

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

### **DO: 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,M)
	SOCO 201	Advanced Principles of Sociology (C,M,MMR)
*	SOCO 220	Introduction to Research Methods in Sociology (C,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 110	Anthropology of Magic, Witchcraft, and Religion (M)
#	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)
#	CHIC 201	The Indigenous Tradition of Mexico and Ancient Mesoamerica (C,M)

**D2: Economics**

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

**D3: Ethnic Studies**

*	AMSL 150	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 150	History of Mexico (C,M)
#	CHIC 170	La Chicana (C,M)
#	CHIC 201	The Indigenous Tradition of Mexico and Ancient 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)
#	HIST 151	Native Americans in United States History (M)
*#	SOCO 150	Sociology of Latinos/Latinas (C,M)

**D4: Gender Studies**

	BLAS 175	Psycho-History of Racism and Sexism (M)
#	CHIC 170	La Chicana (C,M)
	GEND 101	Introduction to Gender Studies (C)
#	HIST 141	Women in United States History I (M,MMR)
#	HIST 142	Women in United States History II (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)	FUTR 102	Creating Futures: Methods and Tools (C)
* HIST 101	World History II (C,M,MMR)	FUTR 103	Emerging Technologies (C)
* HIST 105	Introduction to Western Civilization I (C,M,MMR)	JOUR 202	Introduction to Mass Communication (C,M,MMR)
* HIST 106	Introduction to Western Civilization II (C,M,MMR)	* HUMS 101	Introduction to Human Aging (C)
HIST 109	History of the United States I (C,M,MMR)	* NUTR 153	Cultural Foods (M,MMR)
HIST 110	History of the United States II (C,M,MMR)	PEAC 101	Introduction to Peace Studies (C)
HIST 115A	History of the Americas I (C,M,MMR)	PEAC 102	Nonviolence and Conflict Resolution (C)
HIST 115B	History of the Americas II (C,M,MMR)	PEAC 201	Environmental Sustainability, Justice and Ethics (C)
* HIST 120	Introduction to Asian Civilizations (C,M,MMR)	PHIL 109	Issues in Social Philosophy (M)
* HIST 121	Asian Civilizations in Modern Times (C,M,MMR)	* SOCO 220	Introduction to Research Methods in Sociology (C,MMR)
# HIST 123	U.S. History from the Asian Pacific American Perspective (C,M)	# SOCO 223	Globalization and Social Change (C,M,MMR)
HIST 130	The Modern Middle East (M)	SUST 101	Introduction to Sustainability (C,MMR)
* HIST 131	Latin America Before Independence (M)		
* HIST 132	Latin America Since Independence (M)		
# HIST 141	Women in United States History I (M,MMR)		
# HIST 142	Women in United States History II (M,MMR)		
# HIST 150	Native Americans in United States History (M)		
# HIST 151	Native Americans in United States History (M)		
* HIST 154	Ancient Egypt (M)		
HIST 175	California History (M)		

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### D7: Interdisciplinary Social or Behavioral Science

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AGRI 100	Principles of Sustainable Agriculture (C)
* CHIL 101	Human Growth and Development (C,M,MMR)
* CHIL 103	Lifespan Growth and Development (C,MMR)
CHIL 141	The Child, Family and Community (C,M,MMR)
* COMS 135	Interpersonal Communication (C,M,MMR)
CRES 101	Conflict Resolution and Mediation (C)
DJRN 100	Mass Media in the Digital Age (C)
ENGL 202	Introduction to Linguistics (C,M)
FUTR 101	Introduction to Futures Studies (C)

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

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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)

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### D9: Psychology

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# BLAS 104	Black Psychology (C,M)
BLAS 175	Psycho-History of Racism and Sexism (M)
PSYC 101	General Psychology (C,M,MMR)
PSYC 111	Psychological/Social Aspects of Aging, Death and Dying (C,M)
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), not all in physical activity.

- ADJU 205 Leadership Theory and Practice (MMR)
- AVIA 133 Human Factors in Aviation (MMR)
- BIOL 120 The Environment of Man (M)
- BIOL 135 Biology of Human Nutrition (MMR)
- BLAS 165 Sexuality and Black Culture (C,M)
- \* CHIL 101 Human Growth and Development (C,M,MMR)
- \* CHIL 103 Lifespan Growth and Development (C,MMR)

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 U.S., Black Perspectives (C,M,MMR)	✓	✓	
BLAS 140B History of the U.S., 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 (M,MMR)	✓	✓	
HIST 142 Women in United States History II (M,MMR)	✓		✓
HIST 150 Native Americans in U.S. History (M)	✓	✓	
HIST 151 Native Americans in U.S. History (M)	✓		✓
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.**

COMS 180	Intercultural Communication (C,M,MMR)
HEAL 101	Health and Life Style (C,M,MMR)
* HUMS 101	Introduction to Human Aging (C)
NUTR 150	Nutrition (C,M,MMR)
* NUTR 153	Cultural Foods (M,MMR)
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)
EXSC 125A	Aerobic Dance I (C,M,MMR)
EXSC 125B	Aerobic Dance II (C,M,MMR)
EXSC 125C	Aerobic Dance III (C,M,MMR)
EXSC 125D	Aerobic Dance IV (C,M,MMR)
EXSC 126A	Cardio Conditioning I (C,M,MMR)
EXSC 126B	Cardio Conditioning II (C,M,MMR)
EXSC 126C	Cardio Conditioning III (C,M,MMR)
EXSC 126D	Cardio Conditioning IV (C,M,MMR)
EXSC 134	Adapted Weight Training (C,M,MMR)
EXSC 135A	Individual Conditioning I - Fundamentals (C,M,MMR)
EXSC 135B	Individual Conditioning II - Beginning (C,M,MMR)
EXSC 135C	Individual Conditioning III - Intermediate (C,M,MMR)
EXSC 135D	Individual Conditioning IV - Advanced (C,M,MMR)
EXSC 145A	Yoga I - Fundamentals of Yoga (C,M,MMR)
EXSC 145B	Yoga II - Beginning Yoga (C,M,MMR)
EXSC 145C	Yoga III - Intermediate (C,M,MMR)
EXSC 145D	Yoga IV - Advanced Level (C,M,MMR)
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.**

## Other Transfer General Education Options

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

### 1) Students entering high unit majors such as an engineering or science discipline.

Major preparation for the engineering and science fields typically consists of a high number of units. Most universities prefer (and some require) that these preparation for major courses be completed

prior to transfer. Therefore, it may be more beneficial for students entering these majors to complete relatively fewer GE courses and more major preparation courses at the community college, while still meeting the minimum admission requirements of the university. Students should review the catalog or other published advising materials of the university and major to which they intend to transfer and then consult a Miramar counselor for assistance in selecting appropriate courses.

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

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

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

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

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

## Transfer Admission Guarantee (TAG)

Miramar College offers a number of Guarantee Admission Programs. Come to the

Transfer Center (K1-306) or visit the website ([www.sdmiramar.edu/transfer](http://www.sdmiramar.edu/transfer)) for program requirements. Plan early as some agreements must be submitted at least a year in advance of the transfer semester/quarter.

The most popular Guarantee Admission programs are:

- San Diego State University Transfer Admission Guarantee (TAG)
- University of California, San Diego University Link Program (ULINK)
- AA-T, AS-T for CSU system (see counselor for details)

Other transfer programs include:

- UC Davis Transfer Admission Guarantee (TAG)
- UC Irvine Transfer Admission Guarantee (TAG)
- UC Merced Transfer Admission Guarantee (TAG)
- UC Riverside Transfer Admission Guarantee (TAG)
- UC Santa Barbara Transfer Admission Guarantee (TAG)
- UC Santa Cruz Transfer Admission Guarantee (TAG)

## Step 5: Applying to a University

### About applying for admission

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

### Application dates and deadlines

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

## California State University

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

## University of California

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

All campuses are open for any given Fall term. For Winter/Spring terms, students should verify that the specific campus accepts transfers for that specific term. Check [www.csumentor.edu](http://www.csumentor.edu) for CSU campuses and [www.universityofcalifornia.edu](http://www.universityofcalifornia.edu) for UC campuses.

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

### How to apply

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

**The UC application is available at:**  
[www.universityofcalifornia.edu/apply](http://www.universityofcalifornia.edu/apply)

**The CSU application is available at:**  
[www.csumentor.edu/admissionapp/undergrad\\_apply.asp](http://www.csumentor.edu/admissionapp/undergrad_apply.asp)

## Step 6: 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 K1-207 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 198) and/or an Associate degree in a transfer-related subject area (see page 80). 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 completion or part of completion of the IGETC or CSU GE patterns (for more information, see page 99). 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 198). 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 K1-207.

### Attend Graduation

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

### Find Out How to Get There

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

**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 on Reg-e. Click on the transcript tab.

**Attend New Student Orientation**

Most universities offer a new student orientation day, where you learn about university services and requirements, get academic advising, register for classes, 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 on Reg-e. Click on the transcript tab.

**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. Course Identification Numbering System (C-ID)

**Course Identification Numbering System (C-ID)**

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. The purpose of a C-ID designation is to identify comparable courses

within the California community college system and participating four-year institutions. When a C-ID number is listed in the catalog in association with a course, students can be assured that it will be accepted in lieu of a course bearing the same C-ID designation at another California community college. Many universities, including the University of California (UC) do not participate in the C-ID system. Therefore, students should always reference [www.assist.org](http://www.assist.org) to confirm how each community college's course will be accepted at a specific four-year college or university for transfer credit.

Course	C-ID Descriptor
ACCT 116A Financial Accounting (C,M,MMR)	ACCT 110
ACCT 116B Managerial Accounting (C,M,MMR)	ACCT 120
ADJU 101 Introduction to Administration of Justice (C,MMR)	AJ 110
ADJU 102 Criminal Law I (C,MMR)	AJ 120
ADJU 162 Criminal Investigation (MMR)	AJ 140
ADJU 194 Introduction to Correctional Science (MMR)	AJ 200
ADJU 161 Juvenile Procedures (MMR)	AJ 220
ADJU 201 California Criminal Procedure (MMR)	AJ 122
ADJU 210 Rules of Evidence (MMR)	AJ 124
ADJU 220 Law Enforcement Forensics (MMR)	AJ 150
ANTH 107 Introduction to Archaeology (C,M,MMR)	ANTH 150
ARTF 111 Art History: Renaissance to Modern (C,M,MMR)	ARTH 120
ARTF 150A Two-Dimensional Design (C,M,MMR)	ARTS 100
ARTF 151 Three-Dimensional Design (C,M,MMR)	ARTS 101
ARTF 152 Color Theory (M)	ARTS 270
ARTF 155A Freehand Drawing I (C,M,MMR)	ARTS 110
ARTF 155B Freehand Drawing II (C,M,MMR)	ARTS 205
ARTF 170A Contemporary Crafts I (C,MMR)	ARTS 280
ARTF 210A Life Drawing I (C,M,MMR)	ARTS 200
BIOL 200 Biological Statistics (C,M)	SOCI 125
BIOL 230 Human Anatomy (C,M,MMR)	BIOL 110B

<b>Course</b>	<b>C-ID Descriptor</b>	<b>Course</b>	<b>C-ID Descriptor</b>
BUSE 119 Business Communications (C,M,MMR)	BUS 115	DRAM 242A Rehearsal and Performance I (C)	THTR 191
BUSE 140 Business Law and the Legal Environment (C,M,MMR)	BUS 120	ECON 120 Principles of Macroeconomics (C,M,MMR)	ECON 202
BUSE 140 Business Law and the Legal Environment (C,M,MMR)	BUS 125	ECON 121 Principles of Microeconomics (C,M,MMR)	ECON 201
CHEM 200 General Chemistry I - Lecture (C,M,MMR)	CHEM 110 CHEM 120S	ENGL 205 Critical Thinking and Intermediate Composition (C,M,MMR)	ENGL 105
CHEM 200L General Chemistry I - Laboratory (C,M,MMR)	CHEM 110 CHEM 120S	ENGL 208 Introduction to Literature (C,M,MMR)	ENGL 120
CHEM 201 General Chemistry II - Lecture (C,M,MMR)	CHEM 120S	ENGL 210 American Literature I (C,M,MMR)	ENGL 130
CHEM 201L General Chemistry II - Laboratory (C,M,MMR)	CHEM 120S	ENGL 211 American Literature II (C,M,MMR)	ENGL 135
COMS 103 Oral Communication (C,M,MMR)	COMM 110	ENGL 215 English Literature I: 800 - 1799 (C,M,MMR)	ENGL 160
COMS 135 Interpersonal Communication (C,M,MMR)	COMM 130	ENGL 216 English Literature II: 1800 - Present (C,M,MMR)	ENGL 165
COMS 160 Argumentation (C,M,MMR)	COMM 120	ENGL 220 Masterpieces of World Literature I: 1500 BCE - 1600 CE (C,M,MMR)	ENGL 140
COMS 170 Small Group Communication (C,M)	COMM 140	ENGL 221 Masterpieces of World Literature II: 1600 - Present (C,M,MMR)	ENGL 145
DJRN 100 Mass Media in the Digital Age (C)	JOUR 100	EXSC 241B Introduction to Kinesiology (C,M,MMR)	KIN 100
DJRN 200 Newswriting for Multimedia (C)	JOUR 110	GEND 101 Introduction to Gender Studies (C)	SOCI 140
DJRN 205 Community Journalism for Multimedia (C)	JOUR 210	GEOG 101 Physical Geography (C,M,MMR)	GEOG 110
DJRN 210 News Reporting and Editing for Publication (C)	JOUR 130	GEOG 101L Physical Geography Laboratory (C,M,MMR)	GEOG 111
DJRN 211 Online News Concepts for Publication (C)	JOUR 131	GEOG 102 Cultural Geography (C,M,MMR)	GEOG 120
DJRN 215 Photo Journalism and Documentary Photography (C)	JOUR 160	GEOG 104 World Regional Geography (C,M,MMR)	GEOG 125
DRAM 105 Introduction to Dramatic Arts (C,M)	THTR 111	GEOL 100 Physical Geology (C,M,MMR)	GEOL 100
DRAM 112 Introduction to Script Analysis (M)	THTR 114	GEOL 101 Physical Geology Laboratory (C,M,MMR)	GEOL 100L
DRAM 123 Beginning Stagecraft (C)	THTR 171	GEOL 111 The Earth Through Time (C,M,MMR)	GEOL 111
DRAM 132 Beginning Acting (C,M)	THTR 151	GISG 104 Geographic Information Science and Spatial Reasoning (C,M)	GEOG 155
DRAM 133 Intermediate Acting (C,M)	THTR 152	GISG 110 Introduction to Mapping and Geographic Information Systems (C,M)	GEOG 155
DRAM 136 History of Canonized Theatre-Ancient Greece to the Restoration (C)	THTR 113	HEAL 131 Emergency Response (First Aid/CPR/AED) (M)	KIN 101
DRAM 143 Beginning Costuming (C)	THTR 174		

<b>Course</b>	<b>C-ID Descriptor</b>	<b>Course</b>	<b>C-ID Descriptor</b>
HIST 101 World History II (C,M,MMR)	HIST 160	SOCO 110 Contemporary Social Problems (C,M,MMR)	SOCI 115
HIST 105 Introduction to Western Civilization I (C,M,MMR)	HIST 170	SOCO 220 Introduction to Research Methods in Sociology (C,MMR)	SOCI 120
HIST 106 Introduction to Western Civilization II (C,M,MMR)	HIST 180	SOCO 125 Sociology of the Family (C,M)	SOCI 130
JOUR 200 Introduction to Newswriting and Reporting (C,M)	JOUR 110	SPAN 101 First Course in Spanish (C,M,MMR)	SPAN 100
JOUR 202 Introduction to Mass Communication (C,M,MMR)	JOUR 100	SPAN 202 Fourth Course in Spanish (C,M,MMR)	SPAN 210
JOUR 206 Online Journalism (C,M)	JOUR 120		
JOUR 210A Newspaper Production 1 (C,M,MMR)	JOUR 130		
JOUR 220 Principles of Public Relations (M)	JOUR 150		
MATH 121 Basic Techniques of Applied Calculus I (C,M,MMR)	MATH 140		
PHIL 101 Symbolic Logic (C,M,MMR)	PHIL 210		
PHIL 102A Introduction to Philosophy (C,M,MMR)	PHIL 100		
PHIL 102B Introduction to Philosophy: Values (C,M,MMR)	PHIL 120		
POLI 101 Introduction to Political Science (C,M,MMR)	POLS 150		
POLI 102 The American Political System (C,M,MMR)	POLS 110		
POLI 140 Contemporary International Politics (C,M,MMR)	POLS 140		
PHYS 125 General Physics (C,M,MMR)	PHYS 105		
PHYS 195 Mechanics (C,M,MMR)	PHYS 205		
PHYS 196 Electricity and Magnetism (C,M,MMR)	PHYS 210		
PHYS 197 Waves, Optics and Modern Physics (C,M,MMR)	PHYS 215		
POLI 103 Comparative Politics (C,M,MMR)	POLS 130		
PSYC 101 General Psychology (C,M,MMR)	PSY 110		
PSYC 166 Introduction to Social Psychology (C,M,MMR)	PSY 170		
PSYC 255 Introduction to Psychological Research (C,M)	PSY 200		
PSYC 258 Behavioral Science Statistics (C,M,MMR)	SOCI 125		
PSYC 260 Introduction to Physiological Psychology (C,M,MMR)	PSY 150		
SOCO 101 Principles of Sociology (C,M,MMR)	SOCI 110		

# Degree Curricula and Certificate Programs



# Degree and Certificate List

Degree Title	A.A. Degree	A.S. Degree	Associate Degree for Transfer	Certificate of Achievement	Certificate of Performance	Page
<b>Accountancy</b>						
Accountancy		X		X		129
Accounting Bookkeeping					X	129
<b>Administration of Justice</b>						
Administration of Justice			X			135
Advanced Traffic Accident Investigation				X		132
Contemporary Police Technologies		X		X		132
Correctional Technologies		X		X		133
Correctional Training for Deputy Sheriffs				X		133
Investigations Specialization		X		X		133
Law Enforcement		X		X		133
Law Enforcement Supervision				X		134
Law Enforcement Technologies				X		134
P.C. 832 Laws of Arrest					X	132
P.C. 832 Laws of Arrest – Firearms					X	132
Technical Achievement for Field Training Officers				X		134
Transportation Security					X	132
<b>Art</b>						
Art/Visual Studies	X					139
Art History			X			141
Combined Drawing/Painting	X					137
Craft Skills	X				X	137
Graphics	X			X		140
Studio Arts	X		X			138
<b>Automotive Technology</b>						
Advanced Emission Specialist					X	142
Automotive Chassis				X		142
Automotive Electrical				X		143
Automotive Engine Performance				X		143
Automotive Technology		X				143
Automotive Transmissions				X		143
<b>Aviation Maintenance Technology</b>						
Airframe		X		X		146
Airframe & Powerplant		X		X		145

# Degree and Certificate List

Degree Title	A.A. Degree	A.S. Degree	Associate Degree for Transfer	Certificate of Achievement	Certificate of Performance	Page
Aviation General Studies		X		X		147
Aviation Work Skills					X	145
Pilot Studies		X		X		147
Powerplant		X		X		146
<b>Aviation Operations</b>						
Aviation Business Administration		X				153
Aviation Operations Management				X		153
Commercial Pilot					X	151
Flight Instructor					X	151
Helicopter Operations					X	152
Instrument Pilot					X	152
Private Pilot					X	152
Professional Aeronautics		X				153
Professional Piloting				X		153
Team Resource Management					X	152
<b>Biology</b>						
Allied Health Track		X				156
Applied Biology Track		X				157
Applied Biotechnology–Analytical Chemistry					X	156
Applied Biotechnology–Molecular Biology					X	156
Biology Studies		X				157
Biotechnology				X		156
<b>Business</b>						
Business Administration		X	X	X		159
Business Management		X		X		161
Loan Closer					X	162
Loan Processor					X	162
Loan Underwriter					X	162
Mortgage Brokerage & Banking		X		X		162
<b>Chemistry</b>						
Chemistry Studies		X				164
<b>Child Development</b>						
Assistant Teacher					X	166
Associate Teacher				X		167
Child Development		X				168

# Degree and Certificate List

Degree Title	A.A. Degree	A.S. Degree	Associate Degree for Transfer	Certificate of Achievement	Certificate of Performance	Page
Family Child Care					X	166
Family and Child Relations					X	166
Human Development Studies	X					169
Infant/Toddler Care					X	166
Master Teacher				X		167
Residential Care Workers					X	167
Site Supervisor		X				169
Teacher				X		167
<b>Communication Studies</b>						
Communication Studies			X			171
<b>Computer Business Technology</b>						
Administrative Assistant		X		X	X	173
Website Designer					X	173
<b>Computer and Information Sciences</b>						
Computer and Information Sciences		X		X		175
Computer Programming					X	175
<b>Diesel Technology</b>						
Diesel Fuel Injection Systems					X	177
Engine Overhaul, Caterpillar				X		178
Engine Overhaul, Cummins				X		178
Engine Overhaul, Detroit Diesel				X		178
Engine Repair, Caterpillar				X		179
Engine Repair, Cummins				X		179
Engine Repair, Detroit Diesel				X		179
Heavy Equipment Powertrains					X	177
Heavy Duty Diesel and Advanced Transportation Technology (HDDAT)				X		178
Heavy Duty Transportation Technology (HDTT) (Day Program)		X		X		179
Heavy Equipment Technology (HET) (Day Program)		X		X		180
Heavy Equipment Undercarriage Systems					X	177
Mobile Hydraulics Technician					X	177
San Diego City Civil Service Equipment Mechanic Apprenticeship		X		X		181
San Diego Transit General Mechanic		X		X		181

# Degree and Certificate List

Degree Title	A.A. Degree	A.S. Degree	Associate Degree for Transfer	Certificate of Achievement	Certificate of Performance	Page
Steering, Suspension, and Drivelines					X	178
Truck Air Brake Systems					X	178
Truck Drive Axles					X	178
Truck and Equipment Electrical Systems					X	178
Truck Transmission and Clutches					X	178
<b>English</b>						
Advanced ESOL					X	183
English/Literature Studies	X					183
English			X			184
<b>Exercise Science</b>						
Health and Physical Education Studies		X				187
Kinesiology			X			188
Personal Training				X		190
<b>Fire Protection Technology</b>						
Fire Officer Certification		X		X		192
Fire Prevention		X		X		192
Fire Technology		X		X		192
Open Water Lifeguard Professional		X		X		193
Seasonal Ocean Lifeguard					X	192
<b>Humanities</b>						
Humanities Studies	X					195
Philosophy			X			196
<b>Interdisciplinary Studies</b>						
CSU General Education - Breadth				X		198
Honors Global Competencies Certificate					X	199
Intersegmental General Education Transfer (IGETC)				X		198
Occupational/Technical Studies		X				199
Selected Studies	X					201
Sustainability					X	199
<b>Mathematics</b>						
Mathematics			X			204
Mathematics Studies	X					203

# Degree and Certificate List

Degree Title	A.A. Degree	A.S. Degree	Associate Degree for Transfer	Certificate of Achievement	Certificate of Performance	Page
<b>Medical Laboratory Technology</b>						
Medical Laboratory Technology		X		X		206
Medical Laboratory Technician Training					X	205
<b>Music</b>						
Music Production and Engineering					X	207
Music Studies	X					207
<b>Paralegal</b>						
Paralegal		X		X		210
<b>Physical Science</b>						
Earth Science Studies		X				212
Physics			X			212
Pre-Engineering Studies		X				213
<b>Social and Behavioral Sciences</b>						
Anthropology			X			215
History			X			216
Political Science			X			217
Psychology	X					218
Social and Behavioral Sciences	X					220
Sociology			X			219
<b>World Language Studies</b>						
Spanish			X			223
World Language Studies	X					222

# Accountancy

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Performance:</b>	
Accounting Bookkeeping	12–13
<b>Certificate of Achievement:</b>	
Accountancy	22
<b>Associate of Science Degree:</b>	
Accountancy	37*

\* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

## 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.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Alan Viersen	M-107K	619-388-7693

## Program Learning Outcomes

- To demonstrate an understanding of basic accounting terminology and the process by which transactions are analyzed, evaluated, and communicated into the financial statements.
- To demonstrate the ability to compute, record, and verify quantitative and qualitative information in order to maintain financial records.
- To create accurate, reliable, and relevant accounting documents and reports for decision makers using the information.
- To demonstrate effective use of accounting software applications considered applicable to the current accounting environment.
- To understand and practice high ethical standards with internal and external stakeholders.

## Certificate of Performance: Accounting Bookkeeping

<b>Courses:</b>	<b>Units</b>
ACCT 102 Basic Accounting	3
<b>or</b>	
ACCT 116A Financial Accounting	4
ACCT 150 Computer Accounting Applications	3
BUSE 101 Business Mathematics	3
CBTE 143 Intermediate Microsoft Excel	3
<b>Total Units = 12–13</b>	

\*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: Accountancy

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

<b>Courses:</b>	<b>Units</b>
ACCT 116A Financial Accounting	4
ACCT 116B Managerial Accounting	4

ACCT 120	Federal Income Tax	3
ACCT 121	California Income Tax	1
ACCT 150	Computer Accounting Applications	3
ACCT 201A	Intermediate Accounting I	3
CISC 181	Principles of Information Systems	4

**Total Units = 22**

## Associate of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
ACCT 116A	Financial Accounting	4
ACCT 116B	Managerial Accounting	4
ACCT 120	Federal Income Tax	3
ACCT 121	California Income Tax	1
ACCT 150	Computer Accounting Applications	3
ACCT 201A	Intermediate Accounting I	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 = 37**

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

**Recommended Electives:** Accounting 201B, 270; Business 150, 201; Communication Studies 135; Computer Business Technology 140; Psychology 101.

<b>Semester Sequence</b>		<b>Units</b>
<b>First</b>		
ACCT 116A	Financial Accounting	4
BUSE 100	Introduction to Business	3
BUSE 119	Business Communications	3
<b>Second</b>		
ACCT 116B	Managerial Accounting	4
BUSE 140	Business Law and the Legal Environment	3
CISC 181	Principles of Information Systems	4
<b>Third</b>		
ACCT 150	Computer Accounting Applications	3
ACCT 201A	Intermediate Accounting I	3

ECON 120	Principles of Macroeconomics	3
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### Fourth

ACCT 120	Federal Income Tax	3
ACCT 201B	Intermediate Accounting II	3
ECON 121	Principles of Microeconomics	3

# Administration of Justice

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Performance:</b>	
P.C. 832 Laws of Arrest	1
P.C. 832 Laws of Arrest – Firearms	0.5
Transportation Security	9
<b>Certificate of Achievement:</b>	
Advanced Traffic Accident Investigation	29.7
Contemporary Police Technologies	34.5
Correctional Technologies	33
Correctional Training for Deputy Sheriffs	28.5
Investigations Specialization	33
Law Enforcement	33
Law Enforcement Supervision	28.5
Law Enforcement Technologies	25.5
Technical Achievement for Field Training Officers	30

### Associate of Science Degree:

Contemporary Police Technologies	34.5*
Correctional Technologies	33*
Investigations Specialization	33*
Law Enforcement	33*
Occupational/Technical Studies (see page 199)	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

### Associate in Science for Transfer Degree:

Administration of Justice	18
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## 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 of 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 Goals:

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.

### Program Emphasis:

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

### Career Options:

The following list is a small sample of the variety of city, county, state and federal career options available for the administration of justice major: Arson investigator, Border Patrol officer, Communications officer, Community service officer, Correctional officer, Court Clerk, Crime prevention specialist, Customs agent, Deputy Sheriff, Evidence technician, Marshal, Parking enforcement, Parole officer, Police officer, Postal inspector, Private and industrial security officer, Probation officer.

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

### Program 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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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 357A 832 PC Laws of Arrest	1
<b>Total Units = 1</b>	

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

Courses:	Units
ADJU 357B 832 PC Firearms	0.5
<b>Total Units = 0.5</b>	

## 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
<b>Total Units = 9</b>	

\*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
ADJU 322A Basic Traffic Accident Investigation	1
ADJU 304A Intermediate Traffic Accident Investigation	0.5
ADJU 305A Advanced Traffic Accident Investigation	1.5
ADJU 332A POST Certified Driving Under the Influence Course	0.5
ADJU 366 Radar-Laser Operator (LIDAR)	0.2
ADJU 367 Traffic Collision Computer Aided Diagramming	0.5
<b>Total Units = 29.7</b>	

## Certificate of Achievement: Administration of Justice

### Correctional Training for Deputy Sheriffs

Courses Required for the Major:	Units
ADJU 190 Legal Aspects of Corrections	3
ADJU 381 P.O.S.T. Certified Regional Academy Module 1	15
ADJU 382 P.O.S.T. Certified Regional Academy Module 2	4.5
ADJU 383 P.O.S.T. Certified Regional Academy Module 3	2

ADJU 384	P.O.S.T. Certified Regional Academy Module 4	4
<b>Total Units = 28.5</b>		

## Certificate of Achievement: Administration of Justice

### Contemporary Police Technologies

<b>Courses Required for the Major:</b>		<b>Units</b>
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 9 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

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

**Total Units = 33**

## Certificate of Achievement: Administration of Justice

### Investigations Specialization

<b>Courses Required for the Major:</b>		<b>Units</b>
ADJU 101	Introduction to Administration of Justice	3

ADJU 102	Criminal Law I	3
ADJU 106	Diversity and Community Relations	3
ADJU 160	Criminal Law II	3
ADJU 161	Juvenile Procedures	3
ADJU 162	Criminal Investigation	3
ADJU 167	Report Writing	3
ADJU 201	California Criminal Procedures	3
ADJU 210	Rules of Evidence	3
ADJU 220	Law Enforcement Forensics	3

#### Select 3 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**

## Certificate of Achievement: Administration of Justice

### Law Enforcement

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

#### Select 9 units from the following:

ADJU 127A	Physical Conditioning I	1
ADJU 127B	Physical Conditioning II	1
ADJU 127C	Physical Conditioning III	1
ADJU 127D	Physical Conditioning IV	1
ADJU 128A	Defensive Tactics I	1
ADJU 128B	Defensive Tactics II	1
ADJU 128C	Defensive Tactics III	1
ADJU 128D	Defensive Tactics IV	1
ADJU 129A	Firearms I	1
ADJU 129B	Firearms II	1
ADJU 129C	Firearms III	1
ADJU 129D	Firearms IV	1
ADJU 140	Patrol Procedures	3
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 357A	832 PC Laws of Arrest	1

ADJU 357B 832 PC Firearms 0.5

**Total Units = 33****Certificate of Achievement:  
Administration of Justice****Law Enforcement Supervision**

<b>Courses Required for the Major:</b>		<b>Units</b>
ADJU 312	Basic Supervisory Course	3
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 = 28.5****Certificate of Achievement:  
Administration of Justice****Law Enforcement Technologies**

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

<b>Courses Required for the Major:</b>		<b>Units</b>
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 of Science Degree:  
Administration of Justice****Contemporary Police Technologies**

<b>Courses Required for the Major:</b>		<b>Units</b>
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 9 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 of Science Degree:  
Administration of Justice****Correctional Technologies**

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

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

<b>Courses Required for the Major:</b>		<b>Units</b>
ADJU 101	Introduction to Administration of Justice	3

ADJU 102	Criminal Law I	3
ADJU 106	Diversity and Community Relations	3
ADJU 160	Criminal Law II	3
ADJU 161	Juvenile Procedures	3
ADJU 162	Criminal Investigation	3
ADJU 167	Report Writing	3
ADJU 201	California Criminal Procedures	3
ADJU 210	Rules of Evidence	3
ADJU 220	Law Enforcement Forensics	3

**Select 3 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 of Science Degree:  
Administration of Justice****Law Enforcement****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 9 units from the following:**

ADJU 127A	Physical Conditioning I	1
ADJU 127B	Physical Conditioning II	1
ADJU 127C	Physical Conditioning III	1
ADJU 127D	Physical Conditioning IV	1
ADJU 128A	Defensive Tactics I	1
ADJU 128B	Defensive Tactics II	1
ADJU 128C	Defensive Tactics III	1
ADJU 128D	Defensive Tactics IV	1
ADJU 129A	Firearms I	1
ADJU 129B	Firearms II	1
ADJU 129C	Firearms III	1
ADJU 129D	Firearms IV	1
ADJU 140	Patrol Procedures	3
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 357A	832 PC Laws of Arrest	1

ADJU 357B	832 PC Firearms	0.5
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**Total Units = 33**

For graduation requirements see **Associate Degree Requirements** on page 80.

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

**Associate in Science in  
Administration of Justice for  
Transfer Degree:**

The Associate in Science in Administration of Justice for Transfer Degree is intended for students who plan to complete a bachelor's degree in Criminal Justice 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.

**Courses Required for the Major: Units**

ADJU 101	Introduction to Administration of Justice*	3
ADJU 102	Criminal Law I	3

**Select two of the following courses:**

ADJU 161	Juvenile Procedures	3
ADJU 162	Criminal Investigation	3
ADJU 194	Introduction to Correctional Science	3
ADJU 201	California Criminal Procedure	3
ADJU 210	Rules of Evidence	3
ADJU 220	Law Enforcement Forensics	3

**Select two of the following courses (minimum 6 units):**

MATH 119	Elementary Statistics or	
PSYC 258	Behavioral Science Statistics	3
POLI 102	The American Political System	3
SOCO 101	Principles of Sociology	3
SOCO 110	Contemporary Social Problems	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 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum of 60 CSU-transferable units required for the degree.**

## Anthropology

See “Social and Behavioral Sciences” on page 214.

# Art

Award Type	Units
<b>Certificate of Performance:</b>	
Craft Skills	10–12
<b>Certificate of Achievement:</b>	
Graphics	36
<b>Associate of Arts Degree:</b>	
Art/Visual Studies	18*
Combined Drawing/Painting	27*
Craft Skills	27*
Graphics	36*
Studio Arts	48*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Arts for Transfer Degree:</b>	
Art History	18
Studio Arts	24

## 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.

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

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.

## Program Emphasis

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.

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

## 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.

## Program 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 139). 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 = 10–12**

\*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 of 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 6 units from the following:

ARTF 109 Modern Art	3
ARTF 110 Art History: Prehistoric to Gothic	3
ARTF 111 Art History: Renaissance to Modern	3

### Select 3 units from:

ARTF 107 Contemporary Art	3
ARTF 151 Three-Dimensional Design	3
ARTF 198A Introduction to Printmaking I	3
ARTF 198B Introduction to Printmaking II	3
ARTF 198C Introduction to Printmaking III	3
ARTF 210B Life Drawing II	3

**Total Units = 27**

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

**Recommended Electives:** Art–Fine Art 165C/D, 170B/C, 198B/C, 220B/C, 270, 280A, 290, 296.

## Associate of Arts Degree: Art–Fine Art

### Craft Skills

<b>Courses Required for the Major:</b>		<b>Units</b>
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 6 units from:

ARTF 109	History of Modern Art <b>or</b>	
ARTF 110	Art History: Prehistoric to Gothic <b>or</b>	
ARTF 111	Art History: Renaissance to Modern	6

### Select 3 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 (City, Mesa)	
ARTF 195B	Ceramics II	
ARTF 195C	Ceramics III	
ARTF 196	Clay and Glaze Technology (City, Mesa)	
ARTF 220A	Life Sculpture I	
Any art history course <b>or</b>		
PHOT 105	Introduction to Photography* (City)	3

**Total Units = 27**

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

**Recommended Electives:** Art–Fine Art 109, 165C/D, 170B/C, 198B/C, 220B/C, 270, 280C, 290 and 296.

## Associate of Arts Degree: Art–Fine Art

### Studio Arts

<b>Courses Required for the Major:</b>		<b>Units</b>
ARTF 100	Art Orientation <b>or</b>	
ARTF 161A	Museum Studies/Gallery Exhibition Skills I* (Mesa)	3
ARTF 150A	Two-Dimensional Design	3
ARTF 150B	Design II	3
ARTF 151 <b>or</b> 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 <b>or</b>	
ARTF 220A	Life Sculpture I	3

### Select 6 units from:

ARTF 109	History of Modern Art <b>or</b>	
ARTF 110	Art History: Prehistoric to Gothic <b>or</b>	
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:** Students may not be able to take all courses listed at this campus. You may wish to consult a counselor or department chairperson.

**Recommended Electives:** Art–Fine Art 109, 165C/D, 170B/C, 198B/C, 220B/C, 270, 290, 296.

## Associate in Arts in Studio Arts for Transfer Degree:

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

The Associate in Arts for Transfer Degree in Studio Arts is intended for students who plan to complete a bachelor's degree in Studio Arts 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 complete 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.

Students completing this major gain knowledge and skills in the study of Studio Arts, including:

- The theoretical, cultural, and historical context of art.
- The significance of visual expression and use of materials in art throughout history.
- Critical analysis, interpretation, and evaluation of works of art.

- Art theory, basic art elements, and compositional strategies.
- The organization of visual space into vivid and coherent images and structures.
- The perception and translation of visual relationships from 3-dimensional (3-D) space into 2-dimensional (2-D) drawings.
- Oil and acrylic painting methods and techniques using various subjects and stylistic approaches.

<b>Courses Required for the Major:</b>		<b>Units</b>
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 150A	Two-Dimensional Design	3
ARTF 151	Three-Dimensional Design	3
ARTF 155A	Freehand Drawing I	3
ARTF 155B	Freehand Drawing II <b>or</b>	
ARTF 210A	Life Drawing I	3
ARTF 165A	Composition in Painting I	3
ARTF 165B	Composition in Painting II <b>or</b>	
ARTF 210B	Life Drawing II	3

**Total Units = 24**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum of 60 CSU-transferable units required for the degree.**

## Associate of Arts Degree: Art/Visual Studies

The Associate of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
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	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 81:

- The IGETC pattern (page 101) 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 109) 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 82) 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.

<b>Courses Required for the Major:</b>	<b>Units</b>
ARTF 150A Two-Dimensional Design	3
ARTF 150B Beginning Graphic Design	3
ARTF 155A Freehand Drawing I	3
ARTD 160 Vector Art 01: Illustration <b>or</b>	
ARTD 160A Vector Art 01: Illustration Tools	1.5
<b>and</b>	
ARTD 160B Vector Art 01: Illustration Tasks	1.5
ARTD 170 Raster Art 01: Image Editing <b>or</b>	
ARTD 170A Raster Art 01A: Image Editing Tools	1.5
<b>and</b>	
ARTD 170B Raster Art 01B: Image Editing Tasks	1.5
ARTD 180 Composition 01: Page Building Tools	
<b>or</b>	
ARTG 126 Intermediate Digital Media	3

ARTD 181 Projects 01: Multi-modal productions	3
ARTG 106 Typography	3
ARTG 148A Portfolio A	3
ARTG 149 Studio Practices	3

### Complete 6 units from the following list of elective courses:

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

**Total Units = 36**

### Associate of 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.

<b>Courses Required for the Major:</b>	<b>Units</b>
ARTF 150A Two-Dimensional Design	3
ARTF 150B Beginning Graphic Design	3
ARTF 155A Freehand Drawing I	3
ARTD 160 Vector Art 01: Illustration <b>or</b>	
ARTD 160A Vector Art 01: Illustration Tools	1.5
<b>and</b>	
ARTD 160B Vector Art 01: Illustration Tasks	1.5
ARTD 170 Raster Art 01: Image Editing <b>or</b>	
ARTD 170A Raster Art 01A: Image Editing Tools	1.5
<b>and</b>	
ARTD 170B Raster Art 01B: Image Editing Tasks	1.5
ARTD 180 Composition 01: Page Building Tools	
<b>or</b>	
ARTG 126 Intermediate Digital Media	3
ARTD 181 Projects 01: Multi-modal productions	3
ARTG 106 Typography	3
ARTG 148A Portfolio A	3
ARTG 149 Studio Practices	3

**Select 6 units from the following list of elective courses:**

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

**Total Units = 36**

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

**Associate in Arts in Art History for Transfer Degree:**

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

The Associate in Arts in Art History for Transfer Degree is intended for students who plan to complete a bachelor's degree in Art History 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.

Students completing this major gain knowledge and skills in the study of Art History, including:

- The theoretical, cultural, and historical context of art
- The significance of visual expression and use of materials in art throughout history
- Critical analysis, interpretation, and evaluation of works of art
- The social, religious, and political highlights of Western and Asian cultures and their effects on art forms from prehistoric to modern times

- The perception and translation of visual space from 3-dimensional (3-D) space into 2-dimensional (2-D) drawings or other images.

**Courses Required for the Major:**

		<b>Units</b>
ARTF 110	Art History: Prehistoric to Gothic	3
ARTF 111	Art History: Renaissance to Modern	3
ARTF 125	Art History: Arts of the Asian Continent	3
ARTF 150A	Two-Dimensional Design	3
ARTF 155A	Freehand Drawing I	3

**Select one course (3 units minimum) from the following:**

ARTF 107	Contemporary Art	3
ARTF 109	Modern Art	3
ARTF 113	Arts of Africa, Oceania, and the Americas	3
DFLM 101	Introduction to Film	3

**Total Units = 18**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum 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.*

## Astronomy

See "Physical Science" on page 211.

# Automotive Technology

Award Type	Units
<b>Certificate of Performance:</b>	
Advanced Emission Specialist	5–8
<b>Certificate of Achievement:</b>	
Automotive Chassis	16
Automotive Electrical	16
Automotive Engine Performance	20
Automotive Transmissions	20
<b>Associate of Science Degree:</b>	
Automotive Technology	40*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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

## Program 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 Performance: Advanced Emission Specialist\*

Courses:	Units
AUTO 86    BAR Specified Diagnostic, Repair, and Level 2 Inspection Training	4
AUTO 270    Work Experience	1–4
<b>Total Units = 5–8</b>	

\*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: Automotive Chassis

<b>Courses Required for the Major:</b>		<b>Units</b>
AUTO 61	Basic Electricity and Electrical Systems Fundamentals <b>or</b>	
AUTO 61T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 62	Advanced Electrical <b>or</b>	
AUTO 62T	Honda/Toyota Advanced Electrical	4
AUTO 76	Automotive Brake Systems <b>or</b>	
AUTO 76T	Honda/Toyota Automotive Brake Systems	4
AUTO 78	Suspension, Steering and Handling <b>or</b>	
AUTO 78T	Honda/Toyota Suspension, Steering and Handling	4
		<b>Total Units = 16</b>

## Certificate of Achievement: Automotive Electrical

<b>Courses Required for the Major:</b>		<b>Units</b>
AUTO 61	Basic Electricity and Electrical Systems Fundamentals <b>or</b>	
AUTO 61T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 62	Advanced Electrical <b>or</b>	
AUTO 62T	Honda/Toyota Advanced Electrical	4
AUTO 65	Engine Performance <b>or</b>	
AUTO 65T	Honda/Toyota Engine Performance	4
AUTO 69	Climate Control Systems <b>or</b>	
AUTO 69T	Honda/Toyota Climate Control Systems	4
		<b>Total Units = 16</b>

## Certificate of Achievement: Automotive Engine Performance

<b>Courses Required for the Major:</b>		<b>Units</b>
AUTO 56	Engine and Related Systems <b>or</b>	
AUTO 56T	Honda/Toyota Engine and Related Systems	4
AUTO 61	Basic Electricity and Electrical Systems Fundamentals <b>or</b>	
AUTO 61T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 62	Advanced Electrical <b>or</b>	
AUTO 62T	Honda/Toyota Advanced Electrical	4

AUTO 65	Engine Performance <b>or</b>	
AUTO 65T	Honda/Toyota Engine Performance	4
AUTO 67	Advanced Engine Performance <b>or</b>	
AUTO 67T	Honda/Toyota Advanced Engine Performance	4
		<b>Total Units = 20</b>

## Certificate of Achievement: Automotive Transmissions

<b>Courses Required for the Major:</b>		<b>Units</b>
AUTO 61	Basic Electricity and Electrical Systems Fundamentals <b>or</b>	
AUTO 61T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 62	Advanced Electrical <b>or</b>	
AUTO 62T	Honda/Toyota Advanced Electrical	4
AUTO 65	Engine Performance <b>or</b>	
AUTO 65T	Honda/Toyota Engine Performance	4
AUTO 72	Manual Drive Train and Axles <b>or</b>	
AUTO 72T	Honda/Toyota Manual Drive Train and Axles	4
AUTO 74	Automatic Transmissions/Axles <b>or</b>	
AUTO 74T	Honda/Toyota Automatic Transmissions/Axles	4
		<b>Total Units = 20</b>

## Associate of Science Degree: Automotive Technology

<b>Courses Required for the Major:</b>		<b>Units</b>
AUTO 56	Engine and Related Systems <b>or</b>	
AUTO 56T	Honda/Toyota Engine and Related Systems	4
AUTO 61	Basic Electricity and Electrical Systems Fundamentals <b>or</b>	
AUTO 61T	Honda/Toyota Basic Electricity and Electrical Systems Fundamentals	4
AUTO 62	Advanced Electrical <b>or</b>	
AUTO 62T	Honda/Toyota Advanced Electrical	4
AUTO 65	Engine Performance <b>or</b>	
AUTO 65T	Honda/Toyota Engine Performance	4
AUTO 67	Advanced Engine Performance <b>or</b>	
AUTO 67T	Honda/Toyota Advanced Engine Performance	4
AUTO 69	Climate Control Systems <b>or</b>	
AUTO 69T	Honda/Toyota Climate Control Systems	4
AUTO 72	Manual Drive Train and Axles <b>or</b>	
AUTO 72T	Honda/Toyota Manual Drive Train and Axles	4
AUTO 74	Automatic Transmissions/Axles <b>or</b>	

AUTO 74T	Honda/Toyota Automatic Transmissions Axles	4
AUTO 76	Automotive Brake Systems <b>or</b>	
AUTO 76T	Honda/Toyota Automotive Brake Systems	4
AUTO 78	Suspension, Steering and Handling <b>or</b>	
AUTO 78T	Honda/Toyota Suspension, Steering and Handling	4
<b>Total Units = 40</b>		

For graduation requirements see **Associate Degree Requirements** on page 80.

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

**Recommended Electives:** Automotive Technology 270.

## Aviation Maintenance Technology

Award Type	Units
<b>Certificate of Performance:</b>	
Aviation Work Skills	2.5
<b>Certificate of Achievement:</b>	
Airframe	47
Airframe & Powerplant	78
Aviation General Studies	18
Pilot Studies	21
Powerplant	52.5
<b>Associate of Science Degree:</b>	
Airframe	47*
Airframe & Powerplant	78*
Aviation General Studies	18*
Pilot Studies	21*
Powerplant	52.5*
Occupational/Technical Studies (see page 199)	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 for 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 of 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

### Program 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 of 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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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
<b>Total Units = 2.5</b>		

**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
<b>General Curriculum</b>		
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
<b>Airframe Curriculum</b>		
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	Applied Turbine Engines	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
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**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 = 47****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	Applied Turbine Engines	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
<b>Total Units = 52.5</b>		

## 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
<b>General Curriculum</b>		
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
<b>Total Units = 21</b>		

**Recommended Electives:** Aviation 105; Aviation Maintenance Technology 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.

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

AVIM 107B	Turbine Engines	3
AVIM 108B	Applied Turbine Engines	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 of 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	Applied Turbine Engines	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 80.

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

## Associate of 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	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 = 47**

For graduation requirements see **Associate Degree Requirements** on page 80.

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

## Associate of Science Degree: Aviation Maintenance Technology

### Powerplant

Qualifies the student for the FAA Powerplant exam.

<b>Courses Required for the Major:</b>	<b>Units</b>	
<b>General Curriculum</b>		
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	Applied Turbine Engines	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
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**Total Units = 52.5**

For graduation requirements see **Associate Degree Requirements** on page 80.

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

## Associate of 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

<b>General Curriculum</b>		
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 80.

**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 of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
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	Applied Turbine Engines	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
		<b>Total Units = 18</b>

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

# Aviation Operations

<b>Award Type</b>	<b>Units</b>
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**Certificate of Performance:**

Commercial Pilot	6
Flight Instructor	7
Helicopter Operations	9
Instrument Pilot	8–11
Private Pilot	6
Team Resource Management	9

**Certificate of Achievement:**

Aviation Operations Management	18
Professional Piloting	18–21

**Associate of Science Degree:**

Aviation Business Administration	27–30*
Professional Aeronautics	27–33*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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
Max Moore	F1-103H	619-388-7660

## Program 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 195) Instrument Ground School, (AVIA 201) Commercial Pilot Ground School, (AVIA 211) 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, 195, 201, 211) 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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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 Pilot Ground School	3
		<b>Total Units = 6</b>

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 211	Flight Instructor Ground School	3
AVIA 211L	Basic Visual Flight Instructor Lab <b>or</b>	
AVIA 215L	Basic Instrument Flight Instructor Lab	1
		<b>Total Units = 7</b>

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

\*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
<b>Total Units = 9</b>		

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 195	Instrument Ground School	3
AVIA 195L	Basic Instrument Flight Lab	1
AVIA 196L	Advanced Instrument Flight Lab	1
<b>Total Units = 8–11</b>		

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
<b>Total Units = 6</b>		

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
<b>Total Units = 9</b>		

\*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 Operations Management

The Aviation Operations Management Certificate of Achievement is designed to prepare a student for employment as an entry-level line supervisor or manager in an aviation operations-related field.

Courses Required for the Major:		Units
AVIA 101	Private Pilot Ground School	3
AVIA 105	Introduction to Aviation and Aerospace	3
AVIA 125	Aviation and Airport Management	3
AVIA 133	Human Factors in Aviation	3
BUSE 119	Business Communications	3

#### Select one of the following leadership/ management-related courses:

AVIA 128	Group Dynamics for High Risk Teams	3
ADJU 205	Leadership Theory and Practice	3
BUSE 201	Business Organization and Management	3
<b>Total Units = 18</b>		

**Note:** FAA-issued Private Pilot certificate satisfies the AVIA 101 requirement.

Students satisfying requirements via FAA certificates must complete alternate coursework approved by

the department in order to satisfy the requirement for 18 units in the major.

## Associate of Science Degree: Aviation Business Administration

<b>Courses Required for the Major:</b>		<b>Units</b>
AVIA 101	Private Pilot Ground School	3
AVIA 105	Introduction to Aviation and Aerospace	3
AVIA 125	Aviation and Airport Management	3
AVIA 133	Human Factors in Aviation	3
BUSE 119	Business Communications	3

**Note:** FAA-issued Private Pilot certificate satisfies the AVIA 101 requirement.

### Select one of the following leadership/ management-related courses:

AVIA 128	Group Dynamics for High Risk Teams	3
ADJU 205	Leadership Theory and Practice	3
BUSE 201	Business Organization and Management	3

### Select one of the following business information systems-related courses:

CBTE 180	Microsoft Office	3
CBTE 210	Computers in Business	3
CISC 181	Principles of Information Systems	4

### Select one of the following business economics- related courses:

ACCT 116A	Financial Accounting	4
ECON 121	Principles of Microeconomics	3

### Select an additional 3 units from the following:

AVIA 101L	Private Pilot Flight Lab	1
AVIA 115	Aviation Weather	3
AVIA 128	Group Dynamics for High Risk Teams	3
AVIA 228	Group Dynamics II	3
AVIA 270	Work Experience	1-4
AVIA 277D	Aviation Service Learning -- on Campus	1-3
ACCT 116A	Financial Accounting	4
ACCT 116B	Managerial Accounting	4
ADJU 205	Leadership Theory and Practice	3
BUSE 140	Business Law and the Legal Environment	3
BUSE 201	Business Organization and Management	3
CBTE 180	Microsoft Office	3
CBTE 210	Computers in Business	3
CISC 181	Principles of Information Systems	4
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3

**Total Units = 27–30**

**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 80.

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

## Certificate of Achievement: Professional Piloting

The Professional Piloting Certificate of Achievement, when combined with in-aircraft flight training, is designed to prepare a student for employment as an entry-level commercial pilot.

<b>Courses Required for the Major:</b>		<b>Units</b>
AVIA 101	Private Pilot Ground School	3
AVIA 101L	Private Pilot Flight Lab	1
AVIA 105	Introduction to Aviation and Aerospace	3
AVIA 133	Human Factors in Aviation	3
AVIA 195	Instrument Ground School	3
AVIA 195L	Basic Instrument Flight Lab	1
AVIA 196L	Advanced Instrument Flight Lab	1
<b>or</b>		
AVIA 199	Instrument Ground School	4
AVIA 201	Commercial Pilot Ground School	3

**Total Units = 18–21**

**Note:** FAA-issued Private Pilot certificate satisfies the AVIA 101 and 101L requirements. FAA-issued Instrument Pilot certificate satisfies the AVIA 195, 195L, and 196L requirements. FAA-issued Commercial Pilot certificate satisfies the AVIA 201 requirement.

Students satisfying requirements via FAA certificates must complete alternate coursework approved by the department in order to satisfy the requirement for 18 units in the major.

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

## Associate of Science Degree: Professional Aeronautics

The Professional Aeronautics degree combines the requirements for the Professional Piloting Certificate of Achievement with additional academic coursework in preparation for upper division study in aeronautics or a related field.

<b>Courses Required for the Major:</b>		<b>Units</b>
AVIA 101	Private Pilot Ground School	3
AVIA 101L	Private Pilot Flight Lab	1
AVIA 105	Introduction to Aviation and Aerospace	3
AVIA 133	Human Factors in Aviation	3
AVIA 195	Instrument Ground School	3
AVIA 195L	Basic Instrument Flight Lab	1
AVIA 196L	Advanced Instrument Flight Lab	1
<b>or</b>		
AVIA 199	Instrument Ground School	4
AVIA 201	Commercial Pilot Ground School	3

**Select one of the following aviation breadth courses:**

AVIA 125	Aviation and Airport Management	3
AVIA 128	Group Dynamics for High Risk Teams	3
AVIA 151	Helicopter Pilot Ground School	3
AVIA 211	Flight Instructor Ground School	3

<b>and</b>		
AVIA 211L	Basic Visual Flight Instructor Lab	1

**Select one of the following physical science courses:**

AVIA 115	Aviation Weather	3
GEOG 101	Physical Geography	3
GEOL 104	Earth Science	3
PHYS 125	General Physics	5
PHYS 180A	General Physics I	4
PHYS 195	Mechanics	5

**Select an additional 3 units from the following:**

AVIA 115	Aviation Weather	3
AVIA 125	Aviation and Airport Management	3
AVIA 128	Group Dynamics for High Risk Teams	3
AVIA 151	Helicopter Pilot Ground School	3
AVIA 211	Flight Instructor Ground School	3
AVIA 211L	Basic Visual Flight Instructor Lab	1
AVIA 215L	Basic Instrument Flight Instructor Lab	1
AVIA 216L	Advanced Instrument Flight Instructor Lab	1
AVIA 228	Group Dynamics II	3
AVIA 270	Work Experience	1-4
AVIA 277D	Aviation Service Learning -- on Campus	1-3
ACCT 116A	Financial Accounting	4
ADJU 205	Leadership Theory and Practice	3
BUSE 201	Business Organization and Management	3
ECON 121	Principles of Microeconomics	3
PHYS 125	General Physics	5
PHYS 180A	General Physics I	4
PHYS 195	Mechanics	5

**Total Units = 27-33**

**Note:** FAA-issued Private Pilot certificate satisfies the AVIA 101 and 101L requirements. FAA-issued Instrument Pilot certificate satisfies the AVIA 195, 195L, and 196L requirements. FAA-issued Commercial Pilot certificate satisfies the AVIA 201 requirement.

Students satisfying requirements via FAA certificates may need to complete alternate coursework approved by the department in order to satisfy the requirement for 18 units in the major.

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

## Biology

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Performance:</b>	
Applied Biotechnology--Analytical Chemistry	9
Applied Biotechnology--Molecular Biology	8
<b>Certificate of Achievement</b>	
Biotechnology	12
<b>Associate of Science Degree:</b>	
Allied Health Track	21*
Applied Biology Track	35*
Biology Studies	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Goals

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	S6-112L	619-388-7241 rbowersg@sdccd.edu
Patricia Flower	S6-112Q	619-388-7489 pflower@sdccd.edu
Buran Haidar	S6-112S	619-388-7412 bhaidar@sdccd.edu
Andrew Lowe	S6-112P	619-388-7536 alowe@sdccd.edu
Marie McMahon	S6-115L	619-388-7497 mmcmahon@sdccd.edu
Laura Murphy	S6-115J	619-388-7539 lmurphy@sdccd.edu
Kevin Petti	S6-115E	619-388-7491 kpetti@sdccd.edu
Sandra Slivka	S6-115K	619-388-7490/7422 sslivka@sdccd.edu
Dan Trubovitz	S6-115H	619-388-7495 dtrubovi@sdccd.edu
Alex J. Sanchez	S6-115I	619-388-7890 ajsanche@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.

### Program 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 of 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 Quantitative Analytical Chemistry	5
<b>Total Units = 9</b>	

\*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
<b>Total Units = 8</b>	

\*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: Biotechnology

Courses Required for the Major:	Units
BIOL 131 Introduction to Biotechnology	4
BIOL 132 Applied Biotechnology I	4
BIOL 133 Applied Biotechnology II	4
<b>Total Units = 12</b>	

### Associate of Science Degree: Biology

#### Allied Health Track

Consult the Nursing Education faculty (City College) or a counselor to verify current course requirements for associate degree and baccalaureate nursing program preparation.

Courses Required for the Major:	Units
BIOL 107 General Biology – Lecture & Lab	4
BIOL 205 General Microbiology	5
BIOL 230 Human Anatomy	4
BIOL 235 Human Physiology	4
CHEM 100 Fundamentals of Chemistry	3
CHEM 100L Fundamentals of Chemistry Lab	1
<b>Total Units = 21</b>	

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

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

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

\***Note:** Only one Biology (BIOL) course, from the above list may be used to satisfy SDCCD general education requirements. BIOL 101 and 215 are not currently offered at Miramar College, but they are offered at City and/or Mesa College.

## Associate of Science Degree: Biology

### Applied Biology Track

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

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

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

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

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

## Associate of Science Degree: Biology Studies

The Associate of 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:		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
<b>Total Units = 18</b>		

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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

Award Type	Units
<b>Certificate of Performance:</b>	
Loan Closer	8
Loan Processor	9
Loan Underwriter	9
<b>Certificate of Achievement:</b>	
Business Administration	26–29
Business Management	35
Mortgage Brokerage & Banking	18
<b>Associate of Science Degree:</b>	
Business Administration	33*
Business Management	47*
Mortgage Brokerage & Banking	27*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Science for Transfer Degree:</b>	
Business Administration	27

### Description

Business professionals ensure that resources – people, money, equipment, information, and work processes – are used effectively and efficiently. They work in almost every size and type of human enterprise, from small businesses to large multinational corporations and from private companies to government agencies to nonprofit organizations.

### Program Emphasis

The Business Program offers the following:

- Certificate of Achievement and Associate of Science Degree in Business Administration, intended to prepare students for baccalaureate level study at a variety of transfer institutions in a business-related major;
- Associate in Science for Transfer Degree in Business Administration, intended to prepare students for baccalaureate level study at participating CSU campuses and majors;
- Certificate of Achievement and Associate of Science Degree in Business Management, intended to prepare students for a business-related occupation or business ownership and management;

- Certificate of Achievement and Associate of Science Degree in Mortgage Brokerage and Banking, intended to prepare students for careers in loan processing, underwriting, and closing; and
- Various Certificates of Performance intended to prepare students with knowledge, skills, and abilities in specific business-related fields.

### Career Options

A wide variety of career options are available to students educated in business. Many require a bachelor's degree or higher level of education, while others are available to those with an associate degree or certificate. Examples of business-related careers include:

- Advertising Agent
- Business Operations Manager
- Compliance Officer
- Entrepreneur
- Financial Analyst
- Human Resources Specialist
- Insurance Agent
- Loan Officer
- Logistician
- Market Research Analyst
- Marketing Manager
- Office Supervisor
- Retail Manager
- Sales Representative
- Service Manager
- Small Business Owner
- Wholesale and Retail Buyer

Faculty	Office	Telephone
Duane Short	M-107-D	619-388-7812
David Wilhelm	M-107-G	619-388-7465

### Program 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. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Achievement: Business Administration

The Business Administration degree/certificate is intended for students who plan to complete a bachelor's degree at a transfer institution in a business-related major. Common university majors in this field include: Accounting, Business

Administration, Business Economics, Business Information Systems, E-Business, Entrepreneurship, Finance, Financial Services, Human Resources, Industrial Engineering, International Business, Management, Marketing, Public Administration, and Real Estate.

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

<b>Courses Required for the Major:</b>	<b>Units</b>
ACCT 116A Financial Accounting	4
ACCT 116B Managerial Accounting	4
ECON 120 Principles of Macroeconomics	3
ECON 121 Principles of Microeconomics	3

**Select at least three courses from the following:**

BUSE 100 <sup>1</sup> Introduction to Business	3
BUSE 119 Business Communications	3
BUSE 140 Business Law and the Legal Environment	3
BUSE 201 Business Organization and Management	3
CISC 181 Principles of Information Systems	4
MARK 100 Principles of Marketing	3

**Select at least one course from the following:**

MATH 119 Elementary Statistics	3
MATH 121 Basic Techniques of Applied Calculus I	3
MATH 150 Calculus with Analytic Geometry I	5

**Total Units = 26–29**

<sup>1</sup>BUSE 100 is recommended as a first semester course.

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

## Associate of Science Degree: Business Administration

<b>Courses Required for the Major:</b>	<b>Units</b>
BUSE 100 Introduction to Business (recommended as a first semester course) <b>or</b>	
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 80.

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

**Recommended Electives:** Business 92\*, 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 92 is not offered currently at Miramar College, but is offered at City College.

## Associate in Science in Business Administration for Transfer Degree:

The Associate in Science in Business Administration for Transfer Degree is intended for students who plan to complete a bachelor's degree in Business Administration 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.

Students completing this major gain knowledge and skills in the study of Business Administration, including:

- The laws and ethical principles that govern business in America
- Accounting information systems and their use in external reporting and internal decision-making, planning, and controlling
- Computer business software applications

- Principles of market systems and economic sectors
- Mathematical methods to analyze and solve problems in business.

**Note:**

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

- Completion of 60 CSU-transferable semester units. No more than 60 units are required.
- 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.
- 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. A "P" (Pass) grade is not acceptable for courses in the major.
- Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 109 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 101 for more information).

<b>Courses Required for the Major:</b>		<b>Units</b>
BUSE 140	Business Law and 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 <b>or</b>	
PSYC 258	Behavioral Science Statistics	3
MATH 121	Basic Techniques of Applied Calculus I	3
<b>Total Units = 27</b>		

## Business Management

### 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.

### Certificate of Achievement: Business Management

<b>Courses Required for the Major:</b>		<b>Units</b>
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
<b>Total Units = 35</b>		

### Associate of Science Degree: Business Management

<b>Courses Required for the Major:</b>		<b>Units</b>
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
<b>Total Units = 47</b>		

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

For graduation requirements, see **Requirements for the Associate Degree** on page 80.

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

**Recommended Electives:** Accounting 116B; Business 155 (City, Mesa), 270; Computer Business Technology 180; Marketing 105 (Mesa).

\*\*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.

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

\*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.

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

\*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.

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

\*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: Mortgage Brokerage and Banking

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

### Associate of Science Degree: Mortgage Brokerage and Banking

<b>Courses Required for the Major:</b>	<b>Units</b>
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 80.

**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
<b>Associate of Science Degree:</b> Chemistry Studies	18*
* and courses to meet graduation requirements, general education and electives as needed to meet the 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.

### Program Goals

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.

### 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.

### Program 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	S6-112 L	619-388-7241 rbowersg@sdccd.edu
Daphne Figueroa	S6-112 A	619-388-7494 dfiguero@sdccd.edu
Fred Garces	S6-112 F	619-388-7493 fgarces@sdccd.edu
Cynthia Gilley	S6-112 J	619-388-7938 cgilley@sdccd.edu
Namphol Sinkaset	S6-112 N	619-388-7644 nsinkase@sdccd.edu
Gary Smith	S6-112 H	619-388-7888 gsmith@sdccd.edu
Linda Woods	S6-112 D	619-388-7434 lwoods@sdccd.edu

### 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 of 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 of Science Degree: Chemistry Studies

The Associate of 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 8 units from the following:

ASTR 101	Descriptive Astronomy
CISC 192	C/C++ Programming
GEOL 100	Physical Geology
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	Quantitative 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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Performance:</b>	
Assistant Teacher	10–13
Family and Child Relations	13
Family Child Care	9
Infant/Toddler Care	9
Residential Care Workers	12
<b>Certificate of Achievement:</b>	
Associate Teacher	18–19
Teacher	26–29
Master Teacher	35–39
<b>Associate of Arts Degree:</b>	
Human Development Studies	18*
<b>Associate of Science Degree:</b>	
Child Development	26–29*
Site Supervisor	35–38*

\* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

## Description

Child Development offers programs for career and transfer students. Certificates of Performance, Certificates of Achievement and Associate Degree programs are available to students interested in a range of child development opportunities and in meeting the requirements for the State of California Child Development permits and the California State Department of Social Services, Title 22, Community Care Licensing.

## Program Emphasis

The Child Development program offers course work, training and supervised practicum experiences to meet state licensing requirements for working in centers, schools, child care homes and service related agencies. This skills and knowledge gained in beginning courses provide the framework and foundation for more specialized courses.

## 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 settings 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 of Science Degrees prepare for teacher, master teacher, director, and site supervisory positions.

## Program 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.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Dawn DiMarzo	Child Dev. Center F-207	619-388-7678
Patricia Hunter	M-107 H	619-388-7464
Wai-Ling Rubic	M-107 J	619-388-7700

## 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 of Arts degree with an area of emphasis in Human Development Studies (see page 169). This degree is designed to accommodate the differing requirements of a wide variety of transfer institutions and major options in order to provide the most efficient path to transfer. More information on transfer programs and procedures is available in the Transfer Guide section of the catalog.

### Certificate of Performance: 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.

<b>Courses:</b>		<b>Units</b>
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
<b>Total Units = 12</b>		

## 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
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
<b>Total Units = 18–19</b>		

## Certificate of Achievement: Child Development

### Teacher

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

### Courses Required for the Major:

		<b>Units</b>
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 <b>or</b>	
CHIL 275	Supervised Field Study	2–4

### Select one of the following three options:

CHIL 160	Observing & Understanding Children <b>and</b>	
CHIL 161	Observation & Issues in Child Development <b>or</b>	
CHIL 165	Children with Special Needs <b>or</b>	
CHIL 175	Infant–Toddler Growth and Development	
<b>Total Units = 26–29</b>		

## Certificate of Achievement: Child Development

### Master Teacher

This certificate prepares students to provide instruction to children and supervised Assistant/ Associate Teachers and Teachers. It further prepares the Master Teacher to coordinate curriculum and

staff development. Child Development courses must be completed with a grade of "C" or better.

<b>Courses Required for the Major:</b>		<b>Units</b>
CHIL 101	Human Growth and Development	3
CHIL 111	Curriculum: Music/Motor Skills	3
CHIL 121	Creative Art	3
CHIL 131	Curriculum: Language/Science	3
CHIL 141	The Child, Family and Community	3
CHIL 180	Nutrition, Health and Safety for Children	3
CHIL 151	Program Planning	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 and Understanding Children	2
<b>and</b>		
CHIL 161	Observations and Issues in Child Development	2
<b>or</b>		
CHIL 165	Children With Special Needs	3
<b>or</b>		
CHIL 175	Infant–Toddler Growth and Development	3

#### AND

CHIL 215	Adult Supervision and Mentoring in Early Childhood Settings	3
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#### AND

CHIL 270	Work Experience	1–4
<b>or</b>		
CHIL 275	Supervised Field Study	1–3

**Note:** Must select 2–4 units in CHIL 270 or 275

#### AND

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

##### Guiding Young Children

CHIL 160	Observing and Understanding Children	2
CHIL 161	Observations and Issues in Child Development	2
CHIL 162	Observing and Guiding Child Behavior	3

#### OR

##### Special Needs

CHIL 165	Children With Special Needs	3
CHIL 166	Special Needs Curriculum	3

#### OR

##### School Age

MATH 210A	Concepts of Elementary School Mathematics I	or
MUSI 110	Music for Elementary School Teachers	3

#### OR

##### Infant/Toddler

CHIL 175	Infant–Toddler Growth and Development	3
CHIL 176	Principles of Infant/Toddler Caregiving	3

#### OR

##### Family Life

CHIL 160	Observing and Understanding Children	2
CHIL 161	Observations and Issues in Child Development	2
CHIL 188	Violence in the Lives of Children and Families	3

**Total Units = 35–39**

## Associate of 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:

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

##### Concurrent enrollment in (2–4 units total):

CHIL 270	Work Experience	1–4
<b>or</b>		
CHIL 275	Supervised Field Study	1–3

##### Select one of the following three options:

CHIL 160	Observing and Understanding Children	<b>and</b>
----------	--------------------------------------	------------

CHIL 161	Observation & Issues in Child Development <b>or</b>	
CHIL 165	Children with Special Needs <b>or</b>	
CHIL 175	Infant-Toddler Growth and Development	3-4
<b>Total Units = 26-29</b>		

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

## Associate of Science Degree: Child Development

### Site Supervisor

This degree prepares students to supervise single site programs, provide instruction to children and coordinate curriculum and staff development. Child Development courses must be completed with a grade of "C" or better. Additional general education and graduation requirements are listed in the Academic Requirements section of this catalog. The Associate Degree requires a minimum of 60 units.

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

### Concurrent enrollment in (2-4 units total):

CHIL 270	Work Experience	1-4
<b>or</b>		
CHIL 275	Supervised Field Study	1-3

### Select one of the following three options:

CHIL 160	Observing and Understanding Children <b>and</b>	
CHIL 161	Observations and Issues in Child Development <b>or</b>	
CHIL 165	Children with Special Needs <b>or</b>	

CHIL 175	Infant-Toddler Growth and Development	3-4
<b>Total Units = 35-38</b>		

**Recommended Electives:** (select from courses not already taken): Child Development 160, 161, 162, 165, 166, 175, 176, 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 of Arts Degree: Human Development Studies

The Associate of 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 12 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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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
<b>Associate in Arts for Transfer Degree:</b> Communication Studies	18–22

**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 Goals

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.

### Program 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
Paul Martin	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 in Communication Studies for Transfer Degree:

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

The Associate in Arts in Communication Studies for Transfer Degree 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](http://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 that students select courses that meet lower division major preparation requirements for their transfer university)*

COMS 180	Intercultural Communication*
JOUR 202	Introduction to Mass Communication*
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*
MATH 119	Elementary Statistics* <b>or</b>
PSYC 258	Behavioral Science Statistics*
PSYC 101	General Psychology*

6–8

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

*(It is recommended that students select courses that meet lower division major preparation requirements for their transfer university)*

COMS 180	Intercultural Communication*
JOUR 202	Introduction to Mass Communication*
ANTH 103	Introduction to Cultural Anthropology*
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*
MATH 119	Elementary Statistics* <b>or</b>
PSYC 258	Behavioral Science Statistics*
PSYC 101	General Psychology*
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 101) 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 109) 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 maximum 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
<b>Certificate of Performance:</b>	
Administrative Assistant	11
Website Designer	11
<b>Certificate of Achievement:</b>	
Administrative Assistant	20
<b>Associate of Science Degree:</b>	
Administrative Assistant	33*
Occupational/Technical Studies (see page 199)	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Goals:

Prepare students to enter a variety of business-related occupational fields.

**Program Emphasis:**

Emphasis is on modern methods and updated software and equipment.

**Career Options:**

Prepare students to work in various positions upon graduation, such as entry-level administrative assistants, entry-level webpage designers, desktop publishers, and word processors in a variety of occupations.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
Wahid Hamidy	M-107-M	619-388-7702

**Program 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.

**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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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.

<b>Courses:</b>	<b>Units</b>
CBTE 114 Introduction to Microsoft Windows	1
CBTE 120 Beginning Microsoft Word	2
CBTE 140 Microsoft Excel	2
CBTE 180 Microsoft Office	3
CBTE 205 Records Management	3
<b>Total Units = 11</b>	

\*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.

<b>Courses:</b>	<b>Units</b>
CBTE 127 Introduction to PowerPoint	2
CBTE 152 Beginning Microsoft Access	2
CBTE 162 Web Page Creation	2
CBTE 165 Webpage Creation with Dreamweaver	3
CBTE 170 Desktop Publishing	2
<b>Total Units = 11</b>	

\*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 114	Introduction to Microsoft Windows	1
CBTE 120	Beginning Microsoft Word	2
CBTE 127	Introduction to PowerPoint	2
CBTE 140	Microsoft Excel	2
CBTE 152	Beginning Microsoft Access	2
CBTE 170	Desktop Publishing	2
CBTE 205	Records Management	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
<b>Total Units = 20</b>		

## Associate of Science Degree: Computer Business Technology

### Administrative Assistant

Courses Required for the Major:		Units
CBTE 114	Introduction to Microsoft Windows	1
CBTE 122	Intermediate Microsoft Word	3
CBTE 128	Comprehensive Microsoft PowerPoint	3
CBTE 143	Intermediate Microsoft Excel	3
CBTE 153	Intermediate Microsoft Access	3
CBTE 165	Webpage Creation with Dreamweaver	3
CBTE 170	Desktop Publishing	2
CBTE 180	Microsoft Office	3
CBTE 205	Records Management	3
CBTE 210	Computers in Business	3
BUSE 101	Business Mathematics	3
BUSE 119	Business Communications	3
<b>Total Units = 33</b>		

For graduation requirements see **Associate Degree Requirements** on page 80.

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

**Recommended Electives:** Computer Business Technology 270; Business 150.

# Computer and Information Sciences

Award Type	Units
<b>Certificate of Performance:</b> Computer Programming	12
<b>Certificate of Achievement:</b> Computer and Information Sciences	31
<b>Associate of Science Degree:</b> Computer and Information Sciences	31*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Emphasis

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.

## Program 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, databases, presentations, and web pages.

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

Faculty	Office	Telephone
John Couture	M-107L	619-388-7698

## 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 203). 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
<b>Total Units = 12</b>		

\*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
<b>Total Units = 31</b>		

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

## Associate of 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
<b>Total Units = 31</b>		

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

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

For graduation requirements, see the **Requirements for the Associate Degree** on page 80.

**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
<b>Certificate of Performance:</b>	
Diesel Fuel Injection Systems	7
Heavy Equipment Powertrains	13
Heavy Equipment Undercarriage Systems	7
Mobile Hydraulics Technician	7
Steering, Suspension, and Drivelines	7
Truck & Equipment Electrical Systems	8
Truck Air Brake Systems	7
Truck Drive Axles	7
Truck Transmissions and Clutches	13
<b>Certificate of Achievement:</b>	
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 Diesel and Advanced Transportation Technology (HDDAT) (Evening Program)	32
Heavy Duty Transportation Technology (HDDT) —(Day Program)	47
Heavy Equipment Technology (HET)—(Day Program)	44
San Diego City Civil Service Equipment Mechanic Apprenticeship	27
San Diego Transit General Mechanic	37
<b>Associate of Science Degree:</b>	
Heavy Duty Transportation Technology (HDDT)—(Day Program)	47*
Heavy Equipment Technology (HET)—(Day Program)	44*
Occupational/Technical Studies (see page 199)	18*
San Diego City Civil Service Equipment Mechanic Apprenticeship	27*
San Diego Transit General Mechanic	37*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 and alternatively (Compressed

Natural Gas) powered highway trucks, off-road heavy equipment, stationary engines, and marine craft. The two-year curriculum has three tracks leading to a Certificate of Achievement, and two tracks leading to an Associate in Science degree. In addition, the diesel program offers the Certificate of Completion in ten specialty areas. These certificates can be applied toward the Certificate of Achievement or the Associate in Science degree.

### Program Emphasis

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.

### Program 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	C3-103	619-388-7526
Dan Willkie	C3-104	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
<b>Total Units = 7</b>	

### 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
<b>Total Units = 13</b>	

### 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
<b>Total Units = 7</b>	

### 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
		<b>Total Units = 7</b>

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

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

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

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

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

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

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

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

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

Courses:		Units
DIES 100	Introduction to Diesel Technology	2
DIES 105	Measuring Tools & Applied Mathematics	2

DIES 160	Heavy Duty Manual Transmissions	3
DIES 165	Truck Automatic Transmissions	3
DIES 175	Truck Chassis R&R	3
		<b>Total Units = 13</b>

\*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

#### Engine Overhaul, Caterpillar

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

### Certificate of Achievement: Diesel Technology

#### Engine Overhaul, Cummins

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

### Certificate of Achievement: Diesel Technology

#### Engine Overhaul, Detroit Diesel

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
		<b>Total Units = 18</b>

## Certificate of Achievement: Diesel Technology

### Engine Repair, Caterpillar

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

**Total Units = 19**

## Certificate of Achievement: Diesel Technology

### Engine Repair, Cummins

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

**Total Units = 19**

## Certificate of Achievement: Diesel Technology

### Engine Repair, Detroit Diesel

<b>Courses Required for the Major:</b>		<b>Units</b>
DIES 100	Introduction to Diesel Technology	2
DIES 105	Measuring Tools & Applied Mathematics	2
DIES 125	Diesel Engines I	4
DIES 135	Applied Failure Analysis	3
DIES 137	Diesel Fuel Injection Systems	2
DIES 138	Electrical Systems	3
DIES 144	Electronics for Diesel Technology	3

**Total Units = 19**

## Certificate of Achievement: Diesel Technology

### Diesel Equipment Repair Technology (Evening Program)

<b>Courses Required for the Major:</b>		<b>Units</b>
DIES 100	Introduction to Diesel Technology	2
DIES 105	Measuring Tools & Applied Mathematics	2
DIES 131	Alternative-Fueled Engine Overhaul	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
DIES 155	Air Brake Systems	3
DIES 160	Heavy Duty Manual Transmissions	3
DIES 170	Truck Drive Axles and Specifications	3

#### Select one course from:

DIES 125	Diesel Engines I	4
<b>or</b>		
DIES 126	Diesel Engines II	4
<b>or</b>		
DIES 128	Diesel Engines III	4

#### Select one course from:

DIES 160	Heavy Duty Manual Transmissions	3
<b>or</b>		
DIES 165	Truck Automatic Transmissions	3

**Total Units = 32**

## Certificate of Achievement: Diesel Technology

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

<b>Courses Required for the Major:</b>		<b>Units</b>
DIES 100	Introduction to Diesel Technology	2
DIES 105	Measuring Tools & Applied Mathematics	2
DIES 123	Diesel Engines C	2
DIES 138	Electrical Systems	3
DIES 144	Electronics for Diesel Technology	3
DIES 155	Air Brake Systems	3
DIES 160	Heavy Duty Manual Transmissions <b>and</b>	
DIES 175	Truck Chassis R&R	6
DIES 165	Truck Automatic Transmissions <b>and</b>	
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 <b>and</b>	
DIES 240	Equipment Chassis R&R	6
DIES 200	Mobile Hydraulic Systems <b>and</b>	
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 of 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 <b>and</b>	
DIES 175	Truck Chassis R&R	6
DIES 165	Truck Automatic Transmissions <b>and</b>	
DIES 200	Mobile Hydraulic Systems	6
DIES 170	Truck Drive Axles and Specifications	3

DIES 180	Steering, Suspension and Driveline Systems	3
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**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 80.

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

**Recommended Electives:** Diesel Technology 90, 125, 126, 128, 131, 135, 137, 137A, 160 or 165, 210, 220, 230, 240, 270.

## Associate of 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 <b>and</b>	
DIES 240	Equipment Chassis R&R	6
DIES 200	Mobile Hydraulic Systems <b>and</b>	
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 80.

**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 78	Suspension, Steering and Handling	4
AUTO 56	Engine and Related Systems	4
DIES 100	Introduction to Diesel Technology	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
<b>Total Units = 27</b>		

### Associate of Science Degree: San Diego City Civil Service

#### Equipment Mechanic Apprenticeship

Courses Required for the Major:		Units
AUTO 78	Suspension, Steering and Handling	4
AUTO 56	Engine and Related Systems	4
DIES 100	Introduction to Diesel Technology	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
<b>Total Units = 27</b>		

**Recommended Electives:** Diesel Technology 105, 144; Automotive Technology 65, 76.

Additional general education and graduation requirements for the associate degree are listed in the Academic Requirements section of catalog. **The associate degree requires a minimum of 60 units.**

## San Diego 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/sdct/](http://www.sdcommute.com/Jobs/sdct/).

### 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
<b>Total Units = 37</b>		

### Associate of 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 211)

## Engineering

(See "Associate of Science Degree: Pre-Engineering Studies" on page 213)

# English

Award Type	Units
<b>Certificate of Performance:</b>	
Advanced ESOL	15
<b>Associate of Arts Degree:</b>	
English/Literature Studies	18*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Arts for Transfer Degree:</b>	
English	18

## 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 Goals

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.

## Program 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
Sheryl Gobble	H-110-M	619-388-7428
Rich Halliday	H-110-R	619-388-7517

Faculty	Office	Telephone
Carmen Jay	H-110-J	619-388-7532
Stefanie Johnson	H-110-S	619-388-7516
Lisa Munoz	H-110-P	619-388-7360
Cheryl Reed	H-110-T	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 of 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 40 Reading & Writing for Non-Native Speakers of English III	6
<b>Select nine units from:</b>	
ESOL 30 Writing for Non-native Speakers of English II	6
ESOL 31 Reading for Non-native Speakers of English II <b>or</b>	
ESOL 32 Listening and Speaking for Non-Native Speakers of English II	3
<b>Total Units = 15</b>	

\*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 of Arts Degree: English/Literature Studies

**This degree is intended for transfer.**

The Associate of 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.

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

**Select 12 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 I	
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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in English for Transfer Degree:

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

The Associate in Arts for Transfer Degree in English is intended for students who plan to complete a bachelor's degree in English 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.

Students completing this major gain knowledge and skills in the study of English, including:

- The principles of rhetoric
- Research and critical thinking skills applied to reading, evaluating, and writing argumentative prose
- Representative literary works in fiction, non-fiction, poetry, and drama from various cultures and periods
- Masterpiece works of English literature from the Old English period to the Modern period
- Representative works of American literature

- Relevant social, political, cultural, and religious issues that have influenced English and American literature.

<b>Courses Required for the Major:</b>		<b>Units</b>
ENGL 205	Critical Thinking and Intermediate Composition	3
ENGL 208	Introduction to Literature	3
ENGL 215	English Literature I: 800 – 1799	3
ENGL 216	English Literature II: 1800 – Present	3

**Select one course (three units) from the following:** (*It is recommended that students select courses that meet lower division major preparation requirements for their transfer university*):

ENGL 210	American Literature I	3
ENGL 211	American Literature II	3

**Select one course (three units minimum) from the following** (*It is recommended that students select courses that meet lower division major preparation requirements for their transfer university*):

ENGL 101	Reading and Composition	3
ENGL 105	Composition and Literature	3
ENGL 209	Literary Approaches to Film	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
ENGL 230	Asian American Literature	3
ENGL 237	Women in Literature	3
ENGL 249	Introduction to Creative Writing I	3

**Total Units = 18**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum 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.**

# Exercise Science

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Achievement:</b> Personal Training	18–22
<b>Associate of Science Degree:</b> Health and Physical Education Studies	18*
<b>Associate in Arts for Transfer Degree:</b> Kinesiology	22–24

\* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

## Description

Exercise Science focuses 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 Exercise Science program offers a variety of activity courses. Facilities include 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 program 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. The Fitness Specialist certificate trains students as group exercise leaders and personal trainers. In addition, an intercollegiate program offers performance-oriented students opportunities for intercollegiate competition.

### Career Options

Most Exercise Science career options require baccalaureate degrees and some may require graduate degrees. Some of the exciting fields open to exercise science graduates include: Athletic Training/Sports Medicine, Physical or Occupational Therapists, Group Fitness Instructors, Physical Education Teachers, Program Directors of Corporate Fitness Center/Resorts, Yoga and Pilates Instructors, Personal Trainers, Community-Based Sport and Fitness Instructors, Adapted Physical Activity Specialists, Aquatics Directors, Sport Coaches, Dance Teachers, Athletic Administrators, Biomechanists, Cardiac Rehabilitation Specialists, Chiropractic Therapists, Directors of Youth Camps/Sport Programs, Epidemiologists- Physical Activity, Exercise Physiologists, Physician's Assistants, Professors of Kinesiology/Physical Education, Recreational Therapists, Respiration Therapists, Sports Managers, Sport Psychologists for Performance Enhancement, Sports Information Directors, Sports Journalists, Sports Marketing Professionals, Sports Officiators, Strength and Conditioning Coaches.

### Program Learning Outcomes

The Department of Exercise Science 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 Kinesiology.

### Program 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
Sean Bowers	J-222C	619-388-7232 sbowers@sdccd.edu
Kathryn Ferraro	J-222B	619-388-7925 kferraro@sdccd.edu
Nicolas Gehler	J-222E	619-388-7715 ngehler@sdccd.edu
John Landicho	J-222D	619-388-7893 jlandich@sdccd.edu
Jessica Matthews	J-222B	619-388-7767 jmatthew@sdccd.edu
Kevin Petti	S5-115E	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 of 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 of Science Degree: Health and Physical Education Studies

The Associate of 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
NUTR 150	Nutrition	3
NUTR 170	Nutrition and Fitness	3
EXSC 241B	Introduction to Kinesiology	3
EXSC 242B	Care and Prevention of Injuries	3

#### **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
EXSC 113A	Swimming I	0.5–1
EXSC 113B	Swimming II	0.5–1
EXSC 113C	Swimming III	0.5–1
EXSC 113D	Swimming IV	0.5–1
EXSC 114A	Aquatic Fitness I	0.5–1
EXSC 114B	Aquatic Fitness II	0.5–1
EXSC 114C	Aquatic Fitness III	0.5–1
EXSC 114D	Aquatic Fitness IV	0.5–1
EXSC 115A	Water Exercise I	0.5–1
EXSC 115B	Water Exercise II	0.5–1
EXSC 115C	Water Exercise III	0.5–1
EXSC 115D	Water Exercise IV	0.5–1
EXSC 124A	Aerobic and Core Conditioning I	0.5–1
EXSC 124B	Aerobic and Core Conditioning II	0.5–1
EXSC 124C	Aerobic and Core Conditioning III	0.5–1
EXSC 124D	Aerobic and Core Conditioning IV	0.5–1
EXSC 125A	Aerobic Dance I	0.5–1
EXSC 125B	Aerobic Dance II	0.5–1
EXSC 125C	Aerobic Dance III	0.5–1
EXSC 125D	Aerobic Dance IV	0.5–1
EXSC 126A	Cardio Conditioning I	0.5–1
EXSC 126B	Cardio Conditioning II	0.5–1
EXSC 126C	Cardio Conditioning III	0.5–1
EXSC 126D	Cardio Conditioning IV	0.5–1
EXSC 135A	Individual Conditioning I – Fundamentals	0.5–1
EXSC 135B	Individual Conditioning II – Beginning	0.5–1
EXSC 135C	Individual Conditioning III – Intermediate	0.5–1
EXSC 135D	Individual Conditioning IV – Advanced	0.5–1
EXSC 136A	Off-Season Conditioning for Sport I	0.5–1
EXSC 136B	Off-Season Conditioning for Sport II	0.5–1
EXSC 139A	Weight Training I	0.5–1
EXSC 139B	Weight Training II	0.5–1
EXSC 139C	Weight Training III	0.5–1
EXSC 139D	Weight Training IV	0.5–1
EXSC 145A	Yoga I-Fundamentals of Yoga	0.5–1
EXSC 145B	Yoga II-Beginning Yoga	0.5–1
EXSC 145C	Yoga III-Intermediate	0.5–1
EXSC 145D	Yoga IV - Advanced Level	0.5–1
EXSC 147A	Kickboxing I – Fundamental	0.5–1
EXSC 147B	Kickboxing II – Beginning	0.5–1
EXSC 147C	Kickboxing III – Intermediate	0.5–1
EXSC 147D	Kickboxing IV – Advanced	0.5–1
EXSC 148A	Martial Arts I – Fundamental	0.5–1

EXSC 148B	Martial Arts II – Beginning	0.5–1
EXSC 148C	Martial Arts III – Intermediate	0.5–1
EXSC 148D	Martial Arts IV – Advanced	0.5–1
EXSC 154A	Badminton I	0.5–1
EXSC 154B	Badminton II	0.5–1
EXSC 154C	Badminton III	0.5–1
EXSC 154D	Badminton IV	0.5–1
EXSC 158A	Basketball I	0.5–1
EXSC 158B	Basketball II	0.5–1
EXSC 158C	Basketball III	0.5–1
EXSC 158D	Basketball IV	0.5–1
EXSC 174A	Soccer I	0.5–1
EXSC 174B	Soccer II	0.5–1
EXSC 174C	Soccer III	0.5–1
EXSC 174D	Soccer IV	0.5–1
EXSC 176A	Softball I	0.5–1
EXSC 176B	Softball II	0.5–1
EXSC 176C	Softball III	0.5–1
EXSC 176D	Softball IV	0.5–1
EXSC 178A	Tennis I	0.5–1
EXSC 178B	Tennis II	0.5–1
EXSC 178C	Tennis III	0.5–1
EXSC 178D	Tennis IV	0.5–1
EXSC 182A	Volleyball I	0.5–1
EXSC 182B	Volleyball II	0.5–1
EXSC 182C	Volleyball III	0.5–1
EXSC 182D	Volleyball IV	0.5–1
EXSC 184A	Water Polo I	0.5–1
EXSC 184B	Water Polo II	0.5–1
EXSC 184C	Water Polo III	0.5–1
EXSC 184D	Water Polo IV	0.5–1
EXSC 204	Intercollegiate Basketball I	2 - 3.5
EXSC 205	Intercollegiate Basketball II	2 - 3.5
EXSC 214	Intercollegiate Soccer I	2 - 3.5
EXSC 215	Intercollegiate Soccer II	2 - 3.5
EXSC 216	Intercollegiate Softball I	2 - 3.5
EXSC 220	Intercollegiate Tennis I	2 - 3.5
EXSC 221	Intercollegiate Tennis II	2 - 3.5
EXSC 226	Intercollegiate Water Polo I	2 - 3.5
EXSC 227	Intercollegiate Water Polo II	2 - 3.5
HEAL 101	Health and Life-Style	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
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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Kinesiology for Transfer Degree:

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

The Associate in Arts in Kinesiology for Transfer Degree is intended for students who plan to complete a bachelor's degree in Kinesiology 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
BIOL 230	Human Anatomy	4
BIOL 235	Human Physiology*	4
EXSC 241B	Introduction to Kinesiology	3

Select a maximum of one course from any three of the following areas for a minimum of 3 units:

#### Aquatics

EXSC 113A	Swimming I	1
EXSC 114A	Aquatic Fitness I	1

#### Combatives

ADJU 128A	Defensive Tactics I	1
EXSC 147A	Kickboxing I–Fundamental	1
EXSC 148A	Martial Arts I–Fundamental	1

#### Dance

EXSC 125A	Aerobic Dance I*	1
EXSC 125B	Aerobic Dance II	1
EXSC 125C	Aerobic Dance III	1
EXSC 125D	Aerobic Dance IV	1

#### Fitness

EXSC 126A	Cardio Conditioning I	1
EXSC 126B	Cardio Conditioning II	1
EXSC 126C	Cardio Conditioning III	1
EXSC 126D	Cardio Conditioning IV	1
EXSC 135A	Individual Conditioning I – Fundamentals	1
EXSC 139A	Weight Training I	1
EXSC 139B	Weight Training II	1
EXSC 139C	Weight Training III	1
EXSC 139D	Weight Training IV	1

#### Individual Sports

EXSC 154A	Badminton I	1
EXSC 178A	Tennis I	1

#### Team Sports

EXSC 158A	Basketball I	1
EXSC 174A	Soccer I	1
EXSC 176A	Softball I	1
EXSC 182A	Volleyball I	1
EXSC 234A	Theories and Strategies of Soccer I	2

Select two of the following courses (minimum 6 units)

MATH 119	Elementary Statistics* or	
PSYC 258	Behavioral Science Statistics*	3
CHEM 200	General Chemistry I – Lecture*	3
	<b>and</b>	
CHEM 200L	General Chemistry I – Laboratory*	2
PHYS 125	General Physics* or	
PHYS 195	Mechanics*	5

**Total Units = 22–24**

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

**Recommended Electives:** Exercise Science 242B; Health Education 101; Nutrition 150.

**Note:** It is recommended to select courses that meet lower division major preparation requirements for your transfer university.

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 maximum 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.**

## Personal Training

### Description

The Certificate of Achievement in Personal Training prepares students as group exercise leaders and personal trainers. Students learn the principles of exercise and physical conditioning; techniques of leading individual and group exercise classes; appropriate methods for establishing healthy behavior; and the design of safe and effective personalized exercise plans for a variety of clients. The program trains students for positions, entry-level or higher, in the growing fitness industry. Graduates will be qualified to be exercise testing technicians, fitness instructors, strength training instructors, aerobic instructors, and personal fitness trainers.

### Certificate of Achievement: Personal Training

<b>Courses Required for the Major:</b>		<b>Units</b>
EXSC 242B	Care and Prevention of Injuries	3
<b>or</b>		
EXSC 289	Injury Care and Prevention for Personal Trainers	2
EXSC 280	Applied Exercise Physiology	2
EXSC 281	Applied Kinesiology	2
EXSC 282	Techniques of Weight Training	2
EXSC 283	Exercise and Fitness Assessment	2
EXSC 284	Fitness and Sports Nutrition	2
EXSC 285	Exercise for Special Populations	2
EXSC 286	Techniques of Exercise Leadership	2
EXSC 288	Fitness Specialist Internship Lecture	1
<b>and</b>		
EXSC 270	Fitness Specialist Work Experience	1-4
<b>Total Units =</b>		<b>18-22</b>

### Filipino

See "World Language Studies" on page 222.

## Fire Protection Technology

### Fire – Emergency Medical – Lifeguards

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Performance:</b>	
Seasonal Ocean Lifeguard	10.5
<b>Certificate of Achievement:</b>	
Fire Prevention	21.5
Fire Officer Certification	27.5
Fire Technology	36.2
Open Water Lifeguard Professional	28
<b>Associate of Science Degree:</b>	
Fire Prevention	21.5*
Fire Officer Certification	27.5*
Fire Technology	36.2*
Open Water Lifeguard Professional	24*
Occupational/Technical Studies (see page 199)	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Emphasis

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 101,102,103, 104, 105, 120, 150A 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.

### Program 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	R-1 108 F	619-388-7969
Mary Kjartanson	R-1 108 C	619-388-7968
Dennis Sheean	R-1 108 G	619-388-7969
John Salinsky	R-1 108 D	619-388-7936
Marty Walsh	R-1 108 C	619-388-7935

Additional Information may be obtained from the program's website: [www.MiramarFireTechnology.com](http://www.MiramarFireTechnology.com)

### 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 technicians, lifeguards, and fire protection engineers.

### 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 16 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.

### San Diego County Fire Authority:

In order to be eligible for entry level employment, students must complete FIPT 101, FIPT 110, FIPT 150A, FIPT 323B, FIPT 308C in addition to EMGM 105A. These courses cover mandatory training requirements to be eligible for employment for most Fire Departments. These courses prepare the students to enter a fire academy, depending upon the employer.

Successful completion of these courses are required to apply to the San Diego Country Fire Authority and are highly suggested for the entry level students. A full time student may complete all of these in a little as one semester.

### 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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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: Seasonal Ocean Lifeguard\*

#### Fire Prevention

<b>Courses Required for the Major:</b>	<b>Units</b>
EMGM 105A Emergency Medical Technician - National Registry	7
FIPT 160 Introduction to Open Water Lifeguarding	3
FIPT 365 All Terrain Vehicle Operations - Lifeguards	0.5
<b>Total Units = 10.5</b>	

\*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: Fire Protection Technology

#### Fire Prevention

<b>Courses Required for the Major:</b>		<b>Units</b>
ENGL 101	Reading and Composition	3
FIPT 101	Fire Protection Organization	3
FIPT 102	Fire Prevention Technology	3
FIPT 103	Fire Protection Equipment and Systems	3
FIPT 104	Building Construction for Fire Protection	3
FIPT 105	Fire Behavior and Combustion	3
FIPT 330A	Fire Prevention I	0.5
FIPT 203A	Fire Investigation IA	2
ADJU 357A	832 PC Laws of Arrest	1
<b>Total Units = 21.5</b>		

### Certificate of Achievement: Fire Protection Technology

#### Fire Officer Certification

<b>Courses Required for the Major:</b>		<b>Units</b>
FIPT 320A	Command 1A	1
FIPT 320B	Fire Command 1B	1
FIPT 320C	Command 1C	1
FIPT 330A	Fire Prevention I	0.5
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 328A	Fire Management I	2
FIPT 381F	Basic Fire Fighter 1 Academy	9
EMGM 105A	Emergency Medical Technician National Registry	7
<b>Total Units = 27.5</b>		

### Certificate of Achievement: Fire Protection Technology

#### Fire Technology

<b>Courses Required for the Major:</b>		<b>Units</b>
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
FIPT 120	Firefighter Safety and Survival	3
FIPT 323B	Haz Mat Emergency Response First Responder Operational	0.5
FIPT 308C	Confined Space Awareness	0.2
EMGM 105A	Emergency Medical Technician - National Registry	7
		<b>Total Units = 36.2</b>

## Certificate of Achievement: Fire Protection Technology

### Open Water Lifeguard Professional

<b>Courses Required for the Major:</b>		<b>Units</b>
ADJU 102	Criminal Law I	3
ADJU 167	Report Writing	3
ADJU 357A	832 PC Laws of Arrest	1
ADJU 357B	832 PC Firearms	0.5
EMGM 105A	Emergency Medical Technician - National Registry	7
FIPT 63	Personal Watercraft Operations	1
FIPT 115	Low Angle Rope Rescue	0.5
FIPT 121	Vertical Rescue	1.5
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 243	Rescue Systems I - Fundamentals of Heavy Rescue	1.5
FIPT 308A	Confined Space Technician	1
FIPT 311M	Swiftwater Rescue Technician I	1
		<b>Total Units = 28</b>

## Associate of Science Degree: Fire Protection Technology

### Fire Prevention

<b>Courses Required for the Major:</b>		<b>Units</b>
ENGL 101	Reading and Composition	3
FIPT 101	Fire Protection Organization	3
FIPT 102	Fire Prevention Technology	3
FIPT 103	Fire Protection Equipment and Systems	3

FIPT 104	Building Construction for Fire Protection	3
FIPT 105	Fire Behavior and Combustion	3
FIPT 330A	Fire Prevention I	0.5
FIPT 203A	Fire Investigation IA	2
ADJU 357A	832 PC Laws of Arrest	1
		<b>Total Units = 21.5</b>

## Associate of Science Degree: Fire Protection Technology

### Fire Officer Certification

<b>Courses Required for the Major:</b>		<b>Units</b>
FIPT 320A	Command 1A	1
FIPT 320B	Fire Command 1B	1
FIPT 320C	Command 1C	1
FIPT 330A	Fire Prevention I	0.5
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 328A	Fire Management I	2
FIPT 381F	Basic Fire Fighter 1 Academy	9
EMGM 105A	Emergency Medical Technician - National Registry	7
		<b>Total Units = 27.5</b>

## Associate of Science Degree: Fire Protection Technology

### Fire Technology

<b>Courses Required for the Major:</b>		<b>Units</b>
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
FIPT 120	Firefighter Safety and Survival	3
FIPT 323B	Haz Mat Emergency Response First Responder Operational	0.5
FIPT 308C	Confined Space Awareness	0.2

EMGM 105A Emergency Medical Technician National Registry	7
<b>Total Units = 36.2</b>	

## Associate of Science Degree: Fire Protection Technology

### Open Water Lifeguard Professional

<u>Courses Required for the Major:</u>	<u>Units</u>
ADJU 102 Criminal Law I	3
ADJU 167 Report Writing	3
ADJU 357A 832 PC Laws of Arrest	1
EMGM 105A Emergency Medical Technician - National Registry	7
FIPT 115 Low Angle Rope Rescue	0.5
FIPT 121 Vertical Rescue	1.5
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
<b>Total Units = 24</b>	

### Geology

See "Physical Science" on page 211.

### Geography

See "Social and Behavioral Sciences" on page 214.

### History

See "Social and Behavioral Sciences" on page 214.

## Humanities

<u>Award Type</u>	<u>Units</u>
<b>Associate of Arts Degree:</b>	
Humanities Studies	18*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Arts for Transfer Degree:</b>	
Philosophy	18–20

### 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 Goals

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.

### Program 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.

<b>Faculty</b>	<b>Office</b>	<b>Telephone</b>
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 of 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 of Arts Degree: Humanities Studies

The Associate of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
PHIL 205	Critical Thinking and Writing in Philosophy <b>or</b>	
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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Philosophy for Transfer Degree:

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

The Associate in Arts in Philosophy for Transfer Degree is intended for students who plan to complete a bachelor's degree in Philosophy 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.

Students completing this major gain knowledge and skills in the study of Philosophy, including:

- Aims, methods, issues, and problems associated with philosophy
- Philosophical concepts, principles, and theories
- Logical analysis
- Deductive and inductive argument forms
- Fallacies commonly identified as impediments to good reasoning
- Elements of symbolic logic, sentential calculus, and quantification theory
- Critical thinking, writing, and research skills.

### Award Notes:

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

- Completion of 60 CSU-transferable semester units. No more than 60 units are required.
- 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.
- 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. A "P" (Pass) grade is not acceptable for courses in the major.

- Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 109 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 101 for more information).

<b>Courses Required for the Major:</b>		<b>Units</b>
PHIL 100	Logic and Critical Thinking	3
PHIL 101	Symbolic Logic	3
PHIL 102B	Introduction To Philosophy: Values	3
PHIL 205	Critical Thinking and Writing in Philosophy	3

**Select one course (3 units) from the following:** (*It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.*)

PHIL 102A	Introduction To Philosophy: Reality and Knowledge	3
PHIL 107	Reflections on Human Nature	3

**Select one course (3 units minimum) from the following:** (*It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.*)

PHIL 102A	Introduction To Philosophy: Reality and Knowledge	3
PHIL 107	Reflections on Human Nature	3
ENGL 209	Literary Approaches to Film	3
ENGL 220	Masterpieces of World Literature I: 1500 BCE – 1600 CE	3
ENGL 221	Masterpieces of World Literature II: 1600 – Present	3
ENGL 230	Asian American Literature	3
ENGL 237	Women in Literature	3
HIST 105	Introduction to Western Civilization I	3
HIST 106	Introduction to Western Civilization II	3
HIST 120	Introduction to Asian Civilizations	3
HIST 121	Asian Civilizations in Modern Times	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
SPAN 101	First Course in Spanish	5
SPAN 102	Second Course in Spanish	5
SPAN 201	Third Course in Spanish	5
TAGA 101	First Course in Tagalog	5
TAGA 102	Second Course in Tagalog	5
TAGA 201	Third Course in Tagalog	5

**Total Units = 18–20**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum 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.**

### Human Development

See "Child Development" on page 165.

# Interdisciplinary Studies

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

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Goals

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.

### Program 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 109 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 101 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.

<b>Courses:</b>	<b>Units</b>
ENGL 205 Critical Thinking and Intermediate Composition	3

### Select 3-5 units from the following introductory or higher level foreign languages:

SPAN 101 First Course in Spanish	5
TAGA 101 First Course in Tagalog	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
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 109 World Music	3
COMS 180 Intercultural Communication	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.

## Certificate of Performance: Sustainability\*

This certificate provides students the tools to critically analyze the environmental, social, and economic issues related to sustainability.

<b>Courses:</b>	<b>Units</b>
SUST 101 Introduction to Sustainability	3
BIOL 100 Natural History - Environmental Biology	4
ECON 120 Principles of Macroeconomics	3
PHIL 100 Logic and Critical Thinking	3
PHIL 102B Introduction To Philosophy: Values	3
BIOL 277D Service Learning -- on Campus	1

**Total Units = 17**

\*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.

## Occupational/Technical Studies

### Program Description

The field of Occupational/Technical Studies encompasses a variety of subject areas that provide specialized skills applicable to transfer students entering an applied or technical field of study

### Program Goals

The Occupational/Technical Studies program is designed to prepare students to transfer

to a four-year university in an applied or technical-related discipline.

### Career Options

This program is designed to prepare students for applied or technical education beyond the associate degree level.

### Associate of Science Degree: Occupational/Technical Studies

The Associate of 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	3
ACCT 150	Computer Accounting Applications	3
ADJU 101	Introduction to Administration of Justice	3
ADJU 102	Criminal Law I	3
ADJU 106	Diversity and Community Relations	3
ADJU 140	Patrol Procedures	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 Procedure	3
ADJU 205	Leadership Theory and Practice	3
ADJU 210	Rules of Evidence	3
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
BUSE 100	Introduction to Business	3
BUSE 101	Business Mathematics	3

BUSE 119	Business Communications	3
BUSE 150	Human Relations in Business	3
BUSE 201	Business Organization and Management	3
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
MARK 100	Principles of Marketing	3
PERG 130	Career - Life Planning	3
REAL 101	Real Estate Principles	3
REAL 105	Legal Aspects of Real Estate I	3
REAL 110	Principles of Real Estate Appraisal I	3
REAL 115	Real Estate Finance I	3
REAL 120	Real Estate Practice	3
REAL 125	Real Estate Economics	3
REAL 140	Real Estate Appraisal II	3

#### 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	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 151	Helicopter Pilot Ground School	3
AVIA 228	Group Dynamics II	3
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 103B	Aircraft Welding and Sheetmetal Structures	3
AVIM 103D	Aircraft Landing Gear Systems	3
AVIM 104B	Applied Aircraft Welding and Sheetmetal Structures	1.5
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 109A	Airframe Electrical Systems	3
AVIM 109B	Powerplant Ignition Systems	2
AVIM 110A	Applied Airframe Electrical Systems	1
AVIM 107B	Turbine Engines	3
AVIM 108B	Applied Turbine Engines	1
AVIM 109D	Aircraft Fire Protection and Digital Logic	1

AVIM 111C	Reciprocating Engines I	3
AVIM 111D	Reciprocating Engines II	3
AVIM 112C	Applied Reciprocating Engines I	2
AVIM 112D	Applied Reciprocating Engines II	1
AVIM 120	Basic D.C. Electronics Theory	3
AVIM 121A	Applied Basic D.C. Electronics	1.5
AVIM 249	Induction and Fuel Metering	3
BIOL 131	Introduction to Biotechnology	4
BIOL 132	Applied Biotechnology I	4
BIOL 133	Applied Biotechnology II	4
BIOL 134	Introduction to the Biotechnology Lab	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 Microsoft PowerPoint	3
CBTE 140	Microsoft Excel	2
CBTE 143	Intermediate Microsoft Excel	3
CBTE 152	Beginning Microsoft Access	2
CBTE 153	Intermediate Microsoft Access	3
CBTE 162	Web Page Creation	2
CBTE 165	Webpage Creation with Dreamweaver	3
CBTE 170	Desktop Publishing	2
CBTE 180	Microsoft Office	3
DIES 100	Introduction to Diesel Technology	2
DIES 121	Diesel Engines A <b>or</b>	7
DIES 122	Diesel Engines B <b>or</b>	7
DIES 124	Diesel Engines D	7
DIES 135	Applied Failure Analysis	3
DIES 144	Electronics for Diesel Technology	3
DIES 160	Heavy Duty Manual Transmissions	3
DIES 170	Truck Drive Axles and Specifications	3
EMGM 105A	Emergency Medical Technician National Registry	7
EMGM 106	Emergency Medical Technician Defibrillation/Combitude	0.5
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
FIPT 160	Introduction to Open Water Lifeguarding	3
MLTT 201	Clinical Chemistry and Urinalysis	4
MLTT 202	Clinical Hematology and Immunology	4

MLTT 203 Clinical Microbiology 4

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 of 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 of

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 80.

**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 208.

# Mathematics

Award Type	Units
<b>Associate of Arts Degree:</b>	
Mathematics Studies	18*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Science for Transfer Degree:</b>	
Mathematics	19

### 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 Goals

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.

### 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.

### Program 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-211E	619-388-7503 fbereaud@sdccd.edu
Anne Gloag	M-211D	619-388-7688 agloag@sdccd.edu
Julia Gordon	M-211F	619-388-7690 jgordon@sdccd.edu
Ryan Moore	M-211M	619-388-7980 rmoore@sdccd.edu
Wayne Sherman	M-211H	619-388-7689 wsherman@sdccd.edu
Christopher Silva	M-211G	619-388-7691 cmsilva@sdccd.edu
Becky Stephens	M-211P	619-388-7993 bstephens@sdccd.edu
Donnie Tran	M-211I	619-388-7510 dtran@sdccd.edu
Shayne Vargo	M-211O	619-388-7987 svargo@sdccd.edu

### 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 of 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 of Arts Degree: Mathematics Studies

The Associate of 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 5 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 190	Java Programming
CISC 192	C/C++ Programming
ECON 120	Principles of Macroeconomics
ECON 121	Principles of Microeconomics
GEOL 100	Physical Geology
GEOL 101	Physical 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	
<b>Total Units = 18</b>	

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Mathematics for Transfer Degree:

The Associate in Science in Mathematics for Transfer Degree is intended for students who plan to complete a bachelor's degree in Mathematics 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
MATH 119	Elementary Statistics*	3
MATH 150	Calculus with Analytic Geometry I*	5
MATH 151	Calculus with Analytic Geometry II*	4
MATH 252	Calculus with Analytic Geometry III*	4
MATH 254	Introduction to Linear Algebra*	3
<b>Total Units = 19</b>		

\*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 101) 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 109) 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 maximum 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
<b>Certificate of Performance:</b>	
Medical Laboratory Technician Training	12–13
<b>Certificate of Achievement:</b>	
Medical Laboratory Technology	20
<b>Associate of Science Degree:</b>	
Medical Laboratory Technology	20*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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. The program curriculum integrates basic concepts, technical procedures, and laboratory exercises. This provides practical experience for students to master the competencies, skills, and knowledge required in this profession.

**Note:** Limited enrollment requires application process. Visit website for more information: [www.sdmiramar.edu/instruction/mltt](http://www.sdmiramar.edu/instruction/mltt).

## Program Goals

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

- Exhibit theoretical comprehension and competence in all didactic 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.

Faculty	Office	Phone/Email
J. Wayne Cherry	S6-1120	619-388-7932 wcherry@sdccd.edu

## 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. The Certificate of Performance option is best for those seeking work in an unlicensed capacity.

## Award Notes

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

Students must complete a series of biology and chemistry prerequisites prior to enrolling in the courses required for this certificate. Please consult the course description section of the catalog and a Miramar College counselor 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. The Certificate of Performance option is recommended for those seeking employment in an unlicensed capacity, for example in the biotechnology industry.

Courses:	Units
MLTT 201 Clinical Chemistry and Urinalysis	4
MLTT 202 Clinical Hematology and Immunology	4
MLTT 203 Clinical Microbiology	4
<b>or</b>	

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
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 Immunohematology	2
MLTT 54	Directed Clinical Practice in Clinical Microbiology	2
		<b>Total Units = 20</b>

**Note:** 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.

## Associate of 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	4
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 Immunohematology	2
MLTT 54	Directed Clinical Practice in Clinical Microbiology	2
		<b>Total Units = 20</b>

## 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.**

## Music

Award Type	Units
<b>Certificate of Performance:</b>	
Music Production and Engineering	15
<b>Associate of Arts Degree:</b>	
Music Studies	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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 Goals

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.

## Program 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 of 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
		<b>Total Units = 15</b>

\*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 of Arts: Music Studies

The Associate of Arts degree with an area of emphasis in Music Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in music-related major. Common university majors in this field include: Creative Arts, Music, Music Business, Music Education, and Music Performance.

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

<b>Courses Required for the Major:</b>		<b>Units</b>
MUSI 100	Introduction to Music	3

**Select at least 15 units, including at least two MUSI courses, from the following:**

BUSE 140	Business Law and the Legal Environment	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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 197.

# Paralegal

## Legal Assistant

<b>Award Type</b>	<b>Units</b>
<b>Certificate of Achievement:</b> Paralegal	30
<b>Associate of Science Degree:</b> Paralegal	30*
Occupational/Technical Studies (see page 199)	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the 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.

### Program 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.** Students with transfer credits from accredited institutions that are ABA approved may transfer up to 12 credits toward their major. Substantive Legal courses taken more than 6 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 of Science degree and a Certificate of Achievement in compliance with the American Bar Association (ABA).

### Career Options

Paralegal, Title Examiners, Claim Adjusters, Investigators, OSHA Specialists, Contract Specialists, Compliance Officers to name a few.

### Objectives of Program

- To enable students to think critically, reason abstractly, use oral and written language effectively.
- To provide students with the knowledge of legal theory, practice and ethics.
- To help students develop the organizational and interpersonal skills necessary to work as part of a legal team.

- To foster computer literacy.
- To provide transfer potential to continue their education.

### Program 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 7457  
daharris@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 of Science degree with an area of emphasis in Occupational/Technical Studies (see page 199). 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.

<b>Courses required for the Major:</b>		<b>Units</b>
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 <sup>1</sup>	California Workers Compensation	3
ACCT 116A	Financial Accounting	4

ACCT 120 Federal Income Tax 3

<sup>1</sup>Labor Studies 112 is offered only at City College.

**Total Units = 30**

## Associate of Science Degree: Paralegal

In addition to the 30 units of general education and graduation requirements listed in this catalog, the Associate of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
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 <sup>1</sup> California Workers Compensation	3
ACCT 116A Financial Accounting	4
ACCT 120 Federal Income Tax	3

<sup>1</sup>Labor 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 185.

# Physical Science

Award Type	Units
<b>Associate of Science Degree:</b>	
Earth Science Studies	18*
Pre-Engineering Studies	18*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Science for Transfer Degree:</b>	
Physics	28

## Description

Physical Science is the study of the physical environment, 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 and investigative tools.

The Physical Science program is designed to prepare students to transfer to a four-year university in a physical science-related discipline.

## Career Options

Careers in the physical sciences typically require education beyond the associate degree level. A baccalaureate degree in engineering leads to careers in the engineering disciplines. A baccalaureate degree in geology is preparation for entrance into professions such as oil, natural gas, and mineral exploration, environmental geology, hydrogeology,

and engineering geology technician. Other physical science disciplines usually require education beyond the baccalaureate degree.

## Program 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/Email
Regina	S6-115 A	619-388-7496
Bochicchio		gbochicc@sdccd.edu
Sadayoshi	S6-115 B	619-388-7540
Okumoto		sokumoto@sdccd.edu

## 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 of Science degree with an area of emphasis in Earth Science Studies or Physics for Transfer (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 of Science: Earth Science Studies

The Associate of Science degree with an area of emphasis in Earth Science Studies is intended for students who plan to complete a bachelor's degree at a transfer institution in a physical or earth science-related major. Common university majors in this field include: Earth Sciences, Environmental Sciences, Geographic Information Science, Geology, Hydrologic Sciences, Meteorology, Natural Sciences, Oceanography, Physical Geography, and Physical Sciences.

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

<b>Courses Required for the Major:</b>	<b>Units</b>
CHEM 200 General Chemistry I – Lecture	3
CHEM 200L General Chemistry I – Laboratory	2
GEOL 100 Physical Geology	3
GEOL 101 Physical Geology Laboratory	1
PHYS 125 General Physics <b>or</b>	
PHYS 180A General Physics I	4
<b>and</b>	
PHYS 181A General Physics Laboratory I	1
<b>or</b>	
PHYS 195 Mechanics	5

### Select at least 4 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	
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 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 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 The Oceans	
PHYS 126 General Physics II	
PHYS 180B General Physics II	
PHYS 181B General Physics Laboratory II	
PHYS 196 Electricity and Magnetism	
PHYS 197 Waves, Optics, and Modern Physics	
PSYC 258 Behavioral Science Statistics	

**Total Units = 18**

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Physics for Transfer Degree:

The Associate in Science in Physics for Transfer Degree is intended for students who plan to complete a bachelor's degree in Physics 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
PHYS 195	Mechanics*	5
PHYS 196	Electricity and Magnetism*	5
PHYS 197	Waves, Optics and Modern Physics*	5
MATH 150	Calculus with Analytic Geometry I*	5
MATH 151	Calculus with Analytic Geometry II*	4
MATH 252	Calculus with Analytic Geometry III*	4
<b>Total Units = 28</b>		

\*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 101) 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 109) 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 maximum of 60 units required for the degree.**

## Associate of Science: Pre-Engineering Studies

The Associate of 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.

<b>Courses Required for the Major:</b>		<b>Units</b>
CHEM 200	General Chemistry I – Lecture	3
MATH 150	Calculus with Analytic Geometry I	5

### Select 10 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 190	Java Programming	
CISC 192	C/C++ Programming	
ECON 121	Principles to Microeconomics	
GEOL 100	Physical Geology	
GEOL 101	Physical 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	
		<b>10</b>
<b>Total Units = 18</b>		

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 214.

### Selected Studies

See "Interdisciplinary Studies" on page 197.

# Social and Behavioral Sciences

Award Type	Units
<b>Associate of Arts Degree:</b>	
Psychology	18*
Social and Behavioral Sciences	18*

\* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.

<b>Associate in Arts for Transfer Degree:</b>	
Anthropology	19–21
History	18–20
Political Science	18
Sociology	18

### 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 Goals

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.

### Program Emphasis

The Social and Behavioral Sciences program is designed to prepare students to transfer to a four-year university in a social science-related discipline.

### Careers

Careers related to this field typically require education beyond the associate degree level.

### Program 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

### 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 of 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 in Anthropology for Transfer Degree:

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

The Associate in Arts in Anthropology for Transfer Degree is intended for students who plan to complete a bachelor's degree in Anthropology 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.

Courses Required for the Major:		Units
ANTH 102	Introduction to Physical Anthropology	3
ANTH 103	Introduction to Cultural Anthropology	3
ANTH 107	Introduction to Archaeology	3
MATH 119	Elementary Statistics <b>or</b>	
PSYC 258	Behavioral Science Statistics	3

**Select one to two courses (4–5 units) from the following:**

ANTH 104	Laboratory in Physical Anthropology	1
BIOL 230	Human Anatomy	4
GEOL 100	Physical Geology	3
GEOL 101	Physical Geology Laboratory	1

**Select one or more courses (3 units minimum) from the following:**

ANTH 104	Laboratory in Physical Anthropology	1
BIOL 230	Human Anatomy	4
BLAS 140A	History of the U.S., Black Perspectives	3
BLAS 140B	History of the U.S., Black Perspectives	3
COMS 180	Intercultural Communication	3
FILI 100	Filipino American Experience	3
GEOG 102	Cultural Geography	3
GEOG 104	World Regional Geography	3
GEOL 100	Physical Geology	3
GEOL 101	Physical Geology Laboratory	1
HIST 120	Introduction to Asian Civilizations	3
HIST 121	Asian Civilizations in Modern Times	3
HUMA 106	World Religions	3
MUSI 109	World Music	3
SOCO 223	Globalization and Social Change	3

**Total Units = 19–21**

**Note:** It is recommended to select courses that meet lower division major preparation requirements for your transfer university.

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

- The IGETC pattern (page 101) 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 109) 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 maximum of 60 CSU-transferable units required for the degree.**

**Associate in Arts in History for Transfer Degree:**

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

The Associate in Arts in History for Transfer Degree is intended for students who plan to complete a bachelor's degree in History 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.

**Courses Required for the Major: Units**

HIST 100	World History I*	3
HIST 101	World History II*	3
HIST 109	History of the United States I*	3
HIST 110	History of the United States II*	3

**Select one of the following courses:**

*(It is recommended that students select courses that meet lower division major preparation requirements for their transfer university; a Spanish course is strongly recommended for students planning to transfer to San Diego State University)*

HIST 120	Introduction to Asian Civilizations*	3
HIST 121	Asian Civilizations in Modern Times*	3
GEOG 102	Cultural Geography*	3
GEOG 104	World Regional Geography*	3
SPAN 101	First Course in Spanish*	5
SPAN 102	Second Course in Spanish*	5
SPAN 201	Third Course in Spanish*	5
SPAN 202	Fourth Course in Spanish*	5

**Select one of the following courses:**

*(It is recommended that students select courses that meet lower division major preparation requirements for their transfer university)*

HIST 105	Introduction to Western Civilization I*	3
HIST 106	Introduction to Western Civilization II*	3
HIST 120	Introduction to Asian Civilizations*	3
HIST 121	Asian Civilizations in Modern Times*	3
ANTH 103	Introduction to Cultural Anthropology*	3
ARTF 107	Contemporary Art*	3
ARTF 109	Modern Art*	3
ARTF 110	Art History: Prehistoric to Gothic*	3
ARTF 111	Art History: Renaissance to Modern*	3
GEOG 102	Cultural Geography*	3
GEOG 104	World Regional Geography*	3
MUSI 103	History of Rock Music*	3

MUSI 111	Jazz - History and Development*	3
POLI 101	Introduction to Political Science*	3
PSYC 101	General Psychology*	3
SOCO 101	Principles of Sociology*	3

**Total Units = 18–20**

\*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 101) 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 109) 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 maximum of 60 CSU-transferable units required for the degree.**

## Associate in Arts in Political Science for Transfer Degree:

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

The Associate in Arts in Political Science for Transfer Degree is intended for students who plan to complete a bachelor's degree in Political Science or a related major in the California State University (CSU) system. Students completing this major gain knowledge and skills in the study of Political Science, including:

- Concepts and methodologies used in the study of political institutions, political participation, public opinion, and the international political system
- Political theory
- The history of American political ideology and culture
- U.S. and California government, including constitutional frameworks, institutions, issues, and policies

- Various political systems in use throughout the world
- Statistical methods, analyses, principles, and research approaches used in the field of Political Science

Students also select from several supporting courses that are related to the field of Political Science and/or articulated to major preparation requirements for the Political Science major at a CSU campus. The supporting courses provide breadth of experience in supporting interdisciplinary subject areas.

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.

<b>Courses Required for the Major:</b>		<b>Units</b>
POLI 101	Introduction to Political Science	3
POLI 102	The American Political System	3
POLI 103	Comparative Politics	3
MATH 119	Elementary Statistics <b>or</b>	
PSYC 258	Behavioral Science Statistics	3

**Select two courses (6 units) from the following** (*It is recommended that students select courses that meet lower division major preparation requirements for their transfer university*).

POLI 140	Contemporary International Politics	3
ACCT 116A	Financial Accounting	4
ANTH 103	Introduction to Cultural Anthropology	3
BUSE 140	Business Law and the Legal Environment	3
COMS 135	Interpersonal Communication	3
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3
GEOG 102	Cultural Geography	3
HIST 100	World History I	3
HIST 101	World History II	3
HIST 105	Introduction to Western Civilization I	3
HIST 106	Introduction to Western Civilization II	3
HIST 109	History of the United States I	3
HIST 110	History of the United States II	3
HIST 120	Introduction to Asian Civilizations	3
HIST 121	Asian Civilizations in Modern Times	3
HIST 141	Women in United States History I	3

HIST 142 Women in United States History II 3

**Total Units = 18**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum of 60 CSU-transferable units required for the degree.**

### Associate of Arts Degree: Psychology

The Associate of Arts degree with an area of emphasis in Psychology is intended for students who plan to complete a bachelor's degree at a transfer institution in a psychology-related major. Common university majors in this field include: Behavioral Science, Cognitive Science, Social Work, Psychobiology, and Psychology.

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

Courses Required for the Major:		Units
PSYC 101	General Psychology	3
MATH 119	Elementary Statistics <b>or</b>	
PSYC 258	Behavioral Science and Statistics	3

**Select at least 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 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 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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Sociology for Transfer Degree:

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

The Associate in Arts in Sociology for Transfer Degree 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](http://www.assist.org) for guidance on appropriate transfer coursework.

<b>Courses Required for the Major:</b>		<b>Units</b>
SOCO 101	Principles of Sociology	3
SOCO 110	Contemporary Social Problems	3
SOCO 220	Introduction to Research Methods in Sociology	3
PSYC 166	Introduction to Social Psychology	3
PSYC 258	Behavioral Science Statistics <b>or</b>	
MATH 119	Elementary Statistics	3

#### Select one of the following courses:

*(It is recommended that students select courses that meet lower division major preparation requirements for their 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
<b>Total Units = 18</b>		

\*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 101) 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 109) 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 maximum of 60 CSU-transferable units required for the degree.**



PHIL 205	Critical Thinking and Writing in Philosophy	3
PHYN 100	Survey of Physical Science	3
<b>Total Units = 18</b>		

**General Education:** In addition to the courses listed above, students must complete one of the general education options listed on page 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 222.

### Speech Communications

See "Communication Studies" on page 170.

### Tagalog

See "World Language Studies" on page 222.

## World Language Studies

Award Type	Units
<b>Associate of Arts Degree:</b>	
World Language Studies	18–20*
* and courses to meet graduation requirements, general education and electives as needed to meet the minimum of 60 units required for the degree.	
<b>Associate in Arts for Transfer Degree:</b>	
Spanish	23

### 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 Goals

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.

### Program 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 of 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 of Arts: World Language Studies

The Associate of 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:

SPAN 101	First Course in Spanish <b>and</b>
SPAN 102	Second Course in Spanish <b>and</b>
SPAN 201	Third Course in Spanish <b>and</b>
SPAN 202	Fourth Course in Spanish

#### OR

TAGA 101	First Course in Tagalog <b>and</b>
TAGA 102	Second Course in Tagalog <b>and</b>
TAGA 201	Third Course in Tagalog*

#### 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 = 18–20**

**\*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 81:

- The IGETC pattern (page 101) 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 109) 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 85) 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 in Spanish for Transfer Degree:

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

The Associate in Art in Spanish for Transfer Degree is intended for students who plan to complete a bachelor's degree in Spanish 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.

Students completing this major gain knowledge and skills in the study of Spanish, which include:

- The ability to speak, comprehend spoken output, read, and write in Spanish.

- The language structures and vocabulary of the Spanish language to develop the skills listed above.
- The comprehension and analysis of cultural norms, values, customs, and events of the Spanish-speaking world.
- The comprehension and analysis of literary works and other culturally relevant readings of the Spanish-speaking world.

### Award Notes:

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

- Completion of 60 CSU-transferable semester units. No more than 60 units are required.
- 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.
- 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. A "P" (Pass) grade is not acceptable for courses in the major.
- Certified completion of the California State University General Education-Breadth pattern (CSU GE; see page 109 for more information); OR the Intersegmental General Education Transfer Curriculum pattern (IGETC; see page 101 for more information).

Courses Required for the Major:		Units
SPAN 101	First Course in Spanish	5
SPAN 102	Second Course in Spanish	5
SPAN 201	Third Course in Spanish	5
SPAN 202	Fourth Course in Spanish	5

### Select one course (3 units) from the following:

*(It is recommended that students select courses that meet lower division major preparation requirements for their transfer university).*

SPAN 210	Conversation and Composition Spanish I	3
SPAN 211	Conversation and Composition Spanish II	3

**Total Units = 23**

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

- The IGETC pattern (page 101) 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 109) 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.

**Note:** It is recommended that students select courses that meet lower division major preparation requirements for their transfer university.

**Electives as needed to meet maximum 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.***

# 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 65, 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 20.

***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 4 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

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

and in cooperation with college counselors and staff. Projects may include collaboration with college classes, educational projects for college students, mentoring, and shadowing. This course is intended for students from any discipline who are interested in project development, development of teaching skills, or enhancement of communication and planning skills. Course segments may be taken in any order. The combined credit for all 277D discipline courses may not exceed three units. 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. 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 Limitation. 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.

### Exercise Science (formerly Physical Education) Classes/Intercollegiate Sports – Disclaimer

Participation in all sports and exercise science (formerly 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 exercise science (formerly Physical Education) activity.

## UC Transfer and Exercise Science (formerly 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 exercise science (formerly Physical Education) courses and their associated unit limitations are listed on Web ASSIST at: [www.assist.org](http://www.assist.org).

## UC Transfer and Variable Topics Courses

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

## Course Identification Numbering System (C-ID)

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. The purpose of a C-ID designation is to identify comparable courses within the California community college system and participating four-year institutions. When a C-ID number is listed in the catalog in association with a course, students can be assured that it will be accepted in lieu of a course bearing the same C-ID designation at another California community college. Many universities, including the University of California (UC) do not participate in the C-ID system. Therefore, students should always reference [www.assist.org](http://www.assist.org) to confirm how each community college's course will be accepted at a specific four-year college or university for transfer credit.

## Accounting (ACCT)

### 102 Basic Accounting

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of “C” or better, or equivalent or Assessment Skill Level 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 intended for students interested in 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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of “C” or better, or equivalent or Assessment Skill Level M40.

This introductory course is an overview of financial accounting, 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 (GAAP), the classified financial statements, and statement analysis. Other topics include issues related to asset, liability, and equity valuation; revenue and expense recognition; cash flows; internal controls; and ethics. This course is intended for students majoring in accounting or other fields related to business administration. (FT) AA/AS; CSU; UC; C-ID ACCT 110.

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**116B Managerial Accounting****4 hours lecture, 4 units  
Grade Only**

*Prerequisite:* Accounting 116A with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40.

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. Other topics include profit planning, standard costs, operations and capital budgeting, cost control, and accounting for costs in manufacturing organizations. This course is intended for students majoring in accounting or other fields related to business administration. (FT) AA/AS; CSU; UC; C-ID ACCT 120.

**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 tax concepts and tax laws that govern individuals who pay federal income taxes. Emphasis is placed on recognizing the social, economic, and political factors that Congress considers when they create tax laws. This course relates tax codes to the individual and identifies how tax planning skills can determine economic outcomes. In addition, it demonstrates and differentiates between tax avoidance and tax evasion. This course is intended for students majoring in Accounting or anyone interested in federal income tax concepts and laws. (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 how to use accounting computer programs in a commercial business enterprise. 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 (QuickBooks Pro) on a personal computer. 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. In addition, financial statements are constructed, evaluated, and reviewed for accuracy and completeness. This course is intended for students majoring in Accounting or those interested in computer accounting programs. (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 students majoring in Accounting and those 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 students who are majoring in accounting. (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 226. 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.***

### **101 Introduction to Administration of Justice** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or 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, 101B 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; C-ID AJ 110.

### **102 Criminal Law I** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or 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 against persons, property, morals, and public welfare. Topics include classification and general elements of crime, the definitions of common and statutory law, acceptable evidence, types of intent, capacity to commit crimes, legal defenses, criminal culpability, parties to crime, laws of arrest, and Constitutional background. This course is intended for students majoring in Administration of Justice or anyone interested in criminal law. (FT) AA/AS; CSU; C-ID AJ 120.

### **106 Diversity and Community Relations** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or 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 complex, dynamic relationship between communities and the justice system in addressing crime and conflict. The course emphasizes the challenges and prospects of administering justice within a diverse multicultural population from the perspective of the individual peace officer as well as the broader perspective of the criminal justice system including the police, courts, and corrections. Subject matter emphasizes the major cultural groups in California and the community relations problems facing law enforcement personnel. This course is intended for students majoring in Administration of Justice or anyone interested in law enforcement community relations. (FT) AA/AS; CSU.

### **127A Physical Conditioning I** 3 hours lab, 1 unit Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or 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 147, 147A or Criminal Justice 120A.

This course is an introduction to physical conditioning skills and techniques used in public safety occupations. Topics include introductory-level stretching, cardiovascular, and strength conditioning

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**UC** = University of California Applicable

exercises to develop physical skills required in criminal justice, fire protection, and other public safety fields. This course is intended for students preparing for employment in a public safety-related field. AA/AS; CSU.

### 127B Physical Conditioning II

**2 hours lab, 1 unit**

#### Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 127A with a grade of “C” or better, or equivalent.

This course provides introductory-level students with beginning-level physical conditioning skills and techniques used in public safety occupations. Techniques from the introductory course are developed into a full beginning-level workout routine. Additional topics include the importance of fitness to lifelong well-being; injury prevention; and the relationship between physical fitness training and work tasks in criminal justice, fire protection, and related occupations. This course is intended for students preparing for employment in a public safety-related field. AA/AS; CSU.

### 127C Physical Conditioning III

**3 hours lab, 1 unit**

#### Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 127B with a grade of “C” or better, or equivalent.

This course provides beginning-level students with intermediate-level physical conditioning skills and techniques used in public safety occupations. Techniques and workout routines from the beginning course are expanded into task-specific exercises related to work requirements in public safety occupations. In addition, students are introduced to fitness self-assessments in several fundamental physical conditioning categories. Other topics include nutritional guidelines; injury prevention practices and treatment; and the importance of lifelong physical fitness practices in criminal justice, fire protection, and related occupations. This course is intended for students preparing for employment in a public safety-related field. AA/AS; CSU.

### 127D Physical Conditioning IV

**3 hours lab, 1 unit**

#### Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 127C with a grade of “C” or better, or equivalent.

This course provides intermediate-level students with advanced-level physical conditioning skills and techniques used in public safety occupations. Students integrate techniques and workout routines from the intermediate course to develop individual workout routines designed to meet the lifelong occupational requirements of a public safety field. Students also expand their self-assessment skills into a comprehensive fitness, nutrition, and health self-evaluation. This course is intended for students preparing for employment in a public safety-related field. AA/AS; CSU.

### 128A Defensive Tactics I

**3 hours lab, 1 unit**

#### Grade Only

*Advisory:* English 47A or 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 148, 148A, Criminal Justice 121, or 121A.

This course provides introductory-level skills and practice in protection against persons armed with dangerous weapons. Students are introduced to demonstration and drill in a limited number of control holds and take downs. In addition, related California Penal Code sections are introduced. This course is intended for students majoring in Administration of Justice or practicing peace officers. (FT) AA/AS; CSU.

### 128B Defensive Tactics II

**3 hours lab, 1 unit**

#### Grade Only

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 128A with a grade of “C” or better, or equivalent.

This course provides introductory-level students with beginning level skills and practice in protection against persons armed with dangerous weapons. Techniques from the introductory course are developed and expanded to include single subject

searches during arrest and the restraint of single and multiple prisoners. In addition, students expand their knowledge of related California Penal Code sections. This course is intended for students majoring in Administration of Justice or practicing peace officers. (FT) AA/AS; CSU.

### 128C Defensive Tactics III

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 128B with a grade of "C" or better, or equivalent.

This course provides beginning-level students with intermediate-level skills and practice in protection against persons armed with dangerous weapons. Techniques from the beginning course are developed and expanded to include multiple subject searches during arrest and the restraint of multiple prisoners. Other topics include the psychological and physiological effects of the use of force; the transportation of single and multiple prisoners; and an introduction to the use of the police baton. This course is intended for students majoring in Administration of Justice or practicing peace officers. (FT) AA/AS; CSU.

### 128D Defensive Tactics IV

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 128C with a grade of "C" or better, or equivalent.

This course provides intermediate-level students with advanced-level skills and practice in protection against persons armed with dangerous weapons. Students learn to integrate techniques and concepts from the intermediate course in order to evaluate arrest and control situations, determine the appropriate use of force, and avoid illegal use of force. Other topics include advanced use of the police baton; liabilities arising from the use of force; and weapon retention and disarming. This course is intended for students majoring in Administration of Justice or practicing peace officers. (FT) AA/AS; CSU.

### 129A Firearms I

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or 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 149, Administration of Justice 149A or Criminal Justice 122A.

This course provides introductory-level skills and practice in the use, handling, and care of firearms including 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. (FT) AA/AS; CSU.

### 129B Firearms II

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 129A with a grade of "C" or better, or equivalent.

This course provides introductory-level students with beginning-level skills and practice in the use, handling, and care of firearms including the pistol and shotgun. Students develop basic techniques and skills from the introductory course to improve marksmanship. Other topics include specific types of firearms used in law enforcement; restrictions; safety precautions; and cleaning and transportation of firearms. 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. (FT) AA/AS; CSU.

### 129C Firearms III

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Administration

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of Justice 129B with a grade of “C” or better, or equivalent.

This course provides beginning-level students with intermediate-level skills and practice in the use, handling, and care of firearms including the pistol and shotgun. Students further develop basic techniques and skills from the beginning course to improve marksmanship and rate of fire. Students also learn to evaluate their shooting technique and effectiveness. Other topics include legal and moral issues related to firearm use and expanded knowledge and skills in the safe use, cleaning, and transportation of firearms and ammunition. 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. (FT) AA/AS; CSU.

### 129D Firearms IV

**3 hours lab, 1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Administration of Justice 129C with a grade of “C” or better, or equivalent.

This course provides intermediate-level students with advanced-level skills and practice in the use, handling, and care of firearms including the pistol and shotgun. Students integrate the knowledge, techniques, and skills from the intermediate course to select and safely use appropriate firearms for a given law enforcement situation. Other topics include moral aspects, legal provisions, and civil liability related to firearm use. 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. (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 Level R5 and W5.

This course covers techniques and methods used by peace officers while on patrol. Topics include 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. This course is intended for students majoring in Administration of Justice. (FT) AA/AS; CSU.

### 160 Criminal Law II

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 dangerous weapons control laws, homicide, and miscellaneous offenses. Other topics include 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. This course is intended for students majoring in Administration of Justice or anyone interested in criminal law. (FT) AA/AS; CSU.

### 161 Juvenile Procedures

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 the history, development, and organization of the juvenile justice system in the U.S. Topics include the organization, functions, and jurisdiction of juvenile agencies; juvenile law; the processing and detention of juveniles; juvenile dispositions, statutes, and court procedures; and the Constitutional protections extended to juveniles. 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 47A or 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 the techniques, procedures, and ethical issues in crime scene investigations. Topics include the organization of the investigative process; crime scene searches; interviewing and interrogating; surveillance; sources of information; utility of evidence; scientific analysis of evidence; and the role of the investigator in the case development and trial processes. Students

also learn how to collect and preserve physical evidence, gather information, and identify, collect, and preserve fingerprints. This course is intended for students majoring in Administration of Justice or anyone interested in the criminal investigations process. (FT) AA/AS; CSU; C-ID AJ 140.

### 167 Report Writing

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 forms and formats of written communications 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, data processing preparation, criminal records, and other types of law enforcement statistical material utilized in case preparation. This course is intended for students majoring in Administration of Justice or preparing for employment in a public safety-related occupation. (FT) AA/AS; CSU.

### 180 Drug Abuse and Law Enforcement

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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.

This course offers students the opportunity to analyze and effectively address drug abuse issues that are encountered in law enforcement. Topics include drug laws and major drug categories, their effects, and associated types of paraphernalia. This course is intended for students majoring in Administration of Justice or anyone interested in drug abuse issues. (FT) AA/AS; CSU.

### 181 Vice and Organized Crime

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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.

This course is an introduction 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. This course is intended for students majoring in Administration of Justice or anyone interested in organized crime enforcement. (FT) AA/AS; CSU.

### 182 Street Gangs and Law Enforcement

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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.

This course presents an overview of street gang issues. Topics include 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. This course is intended for students majoring in Administration of Justice or anyone interested in law enforcement. (FT) AA/AS; CSU.

### 190 Legal Aspects of Corrections

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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. This course is intended for current or prospective correctional officers. (FT) AA/AS; CSU.

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**UC** = University of California Applicable

### 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 47A or 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. Other topics include the effects of violence, overcrowding, gangs, substance abuse, legislation, and other factors that impact the offender, employee, and facility. This course is intended for current or prospective correctional officers. (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 47A or 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 47A or 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. This course is intended for current or prospective correctional officers or anyone interested in U.S. criminal law. (FT) AA/AS; CSU; UC.

### 194 Introduction to Correctional Science 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or 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 at the federal, state, and local levels. Other topics include the relationship between corrections and other components of the criminal justice system, alternatives to incarceration, contemporary correctional issues, and employment opportunities within the field. This course is intended for current or prospective correctional officers. (FT) AA/AS; CSU; C-ID AJ 200.

### 201 California Criminal Procedure 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 or W5.

This course introduces students to the origin, development, philosophy, and legal basis of criminal procedures in California. Students examine procedural statute law, state and Constitutional case law, the California court system, the California grand jury system, pretrial 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. This course is intended for students majoring in Administration of Justice or anyone interested in the criminal court process. (FT) AA/AS; CSU; C-ID AJ 122.

### 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 47A or 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, categories, 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. This course is intended for students majoring in Administration of Justice or anyone interested in criminal legal processes. (FT) AA/AS; CSU; C-ID AJ 124.

### 220 Law Enforcement Forensics

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 introduction to the role of forensics in criminal investigations. It examines the methods utilized in the forensic analysis of crime scenes, pattern evidence, instruments, firearms, questioned documents, and controlled substances. Other topics include 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. This course is intended for students majoring in Administration of Justice or anyone

interested in law enforcement forensics. (FT) AA/AS; CSU; C-ID AJ 150.

### 230 Constitutional Law I

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 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. This course is intended for students majoring in Administration of Justice or anyone interested in U.S. law or law enforcement. (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. AA/AS; CSU.

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**300 First Aid****8–9 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 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. (FT) AA/AS.

**304A Intermediate Traffic Accident Investigation****24–48 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.

*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 Administration of Justice 304.

This P.O.S.T. certified course provides students with the skills and knowledge to identify and analyze tire marks at traffic accident scenes. Topics include tire mark documentation, measurements, and terms; definitions relating to tire mark investigations; case preparation; courtroom testimony; and the determination of coefficient of friction, drag factor, and speed estimates using various equations. This course is intended for practicing law enforcement officers. (FT) AA/AS.

**305A Advanced Traffic Accident Investigation****72–88 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 304A, 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 305.

This P.O.S.T. certified course provides students with advanced traffic accident investigative skills and knowledge. Students learn how to determine the sequence of events that result in a traffic collision

and how to document a collision. This course is intended for practicing law enforcement officers. (FT) AA/AS.

**307A Traffic Enforcement Radar Certification****24–48 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.

*Advisory:* Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 307.

This Peace Officer Standards & Training (P.O.S.T.) 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. This course is intended for practicing law enforcement officers. (FT) AA/AS.

**310A Deputy Leadership Session 1:  
Leadership, Power, and Authority****24–27 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 is the first in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students' professional and personal lives. Session 1 topics include leadership paradigms, values, loyalty, power, authority, and group attitudes. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310B Deputy Leadership Session 2: Learning,  
Goal Setting, and Value Systems****24–27 hours lab, 0.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 310A with a grade of "C" or better, or equivalent.

This is the second in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students' professional and personal lives. Session 2 topics include adult learning

theory, personal goal setting, value systems, loyalty, and management versus leadership. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310C Deputy Leadership Session 3:  
Development, Integrity, and Ethics**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310B with a grade of “C” or better, or equivalent. This is the third in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 3 topics include development, integrity, ethics, the Pygmalion Effect, and empowerment. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310D Deputy Leadership Session 4:  
Principles, Preferences, and Perspectives**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310C with a grade of “C” or better, or equivalent. This is the fourth in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 4 topics include principles, ethical perspectives, and management change. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310E Deputy Leadership Session 5: Time  
Management, Motives, and Discipline**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310D with a grade of “C” or better, or equivalent. This is the fifth in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 5 topics include time management, motives, community leadership, discipline, organizational values, and personal moral conviction. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310F Deputy Leadership Session 6: Trends,  
Change, and Group Dynamics**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310E with a grade of “C” or better, or equivalent. This is the sixth in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 6 topics include community trends, the nominal group technique, dynamics of change, and group dynamics. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310G Deputy Leadership Session 7: Future  
Files, Politics, and Risk Taking**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310F with a grade of “C” or better, or equivalent. This is the seventh in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 7 topics include future files, economic and political issues, success, respect, and discipline. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

**310H Deputy Leadership Session 8: Teams,  
Technology, and Program Effectiveness**  
24–27 hours lab, 0.5 units  
Grade Only

*Prerequisite:* Administration of Justice 310G with a grade of “C” or better, or equivalent. This is the last in a series of eight courses designed to develop and enhance the leadership abilities of law enforcement officers. Throughout the series emphasis is placed on leadership values, traits, and skills applicable to students’ professional and personal lives. Session 8 topics include effective team building, technology, group projects, and

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program effectiveness. This course is intended for practicing law enforcement officers. (FT) AA/AS; CSU.

### 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

**48–54 hours lab, 1 unit**

**Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, 348, each with a grade of "C" or better, or equivalent POST Certification.

*Advisory:* English 47A or 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 (POST)-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 baton; Orcutt Police Nunchaku (OPN); flashlight; and sap. This course meets Regional Baton Instructor application requirements. It is intended for practicing peace officers. (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, Administration of Justice 383, and 384, each with a grade of "C" or better, or equivalent.

This course is an introduction to the characteristics and use 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 using both basic and combat-oriented firing exercises. This course is intended for practicing law enforcement officers. (FT) AA/AS.

### 322A Basic Traffic Accident Investigation

**8 hours lecture, 24–40 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.

*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 Administration of Justice 322.

This Peace Officer Standards & Training (P.O.S.T.) certified course provides the student with skills and knowledge to properly investigate and document traffic collisions. Students learn 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 law enforcement 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 (P.O.S.T. 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 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 (P.O.S.T. 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. (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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 331.

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 practicing 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. (FT) AA/AS.

### **332A POST Certified Driving Under the Influence Course**

**24–27 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.

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**UC** = University of California Applicable

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 332.

This Peace Officer Standards and Training (POST) 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.

### **333B POST Certified Firearms Instructors Course**

**32–40 hours lab, 0.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 381, 382, 383, 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 333 or 333A.

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**

**72–81 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 384 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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. This course is intended for practicing law enforcement officers. (FT) AA/AS.

### **343A Peace Officer's Guide to Internal Affairs 0–1 hour lecture, 7–15 hours lab, 0.2 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 343.

This course provides law enforcement officers with a thorough working knowledge of department Internal Affairs investigative procedures. Topics include Constitutional rights, the Peace Officer's Bill of Rights, rules of conduct, investigative techniques, internal affairs case law, and employee representation. This course is intended for practicing law enforcement officers. (FT) AA/AS.

### **344 Strategies for Advanced Officers 24–27 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 covers the three fundamentals 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. It is intended for practicing law enforcement officers. AA/AS.

### **346 Juvenile Counselor Basic Core Course 128–144 hours lecture, 96–108 hours lab, 10 units Grade Only**

This course provides initial training for Department of Corrections Juvenile Counselors. Completion of this course certifies that the student has completed the entry-level training requirements for juvenile institution staff. Topics include limited duty peace officer training; codes and statutes; psychological, mental, and sociological issues; Cardiopulmonary Resuscitation (CPR); and first aid. This course is

intended for students entering initial employment as Juvenile Counselors in correctional settings. (FT) AA/AS.

### 347 Narcotics Investigation

**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 provides investigators with the knowledge, basic training, and skills to successfully investigate narcotics related crimes. Students will be exposed to a variety of field exercises pertaining to the investigation and prosecution of narcotics-related crimes, including undercover operations, case-making exercises, and court testimony. Topics include search warrants; search and seizure; drug identification; health and safety code laws; packaging, weights, and measures of controlled substances; undercover techniques; informant management; Colombian and Mexican drug trafficking organizations; entry and search considerations; asset forfeiture; clandestine laboratories; reverse sting investigations; medical aspects of addiction; surveillance techniques; rave and club drug investigations; and ethical issues in law enforcement. This course is intended for practicing peace officers assigned to investigative duties. (FT) AA/AS.

### 348A Essentials of Investigation

**24–48 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 348.

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. This course is intended for practicing law enforcement officers. (FT) AA/AS.

### 350A Weapons and Safety Training for Probation Officers

**120–135 hours lab, 2.5 units  
Grade Only**

*Prerequisite:* Administration of Justice 357A 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 personnel assigned to special operations, intensive supervision, or home supervision. Students must have successfully completed a P.O.S.T. approved Penal Code (P.C.) Laws of Arrest course prior to enrollment. Subjects include legal update liability, shooting skills, deadly force, survival skills, and chemical agents. Students who successfully complete the course satisfy the firearms requirement for peace officers pursuant to Penal Code section 832. This course is intended for practicing Probation staff. (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.

### 357A 832 PC Laws of Arrest

**4–4.5 hours lecture, 36–40.5 hours lab, 1 units  
Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 356A.

This course meets the Peace Officer Standards and Training (P.O.S.T.) requirements for the Laws of Arrest portion of Section 832 of the California Penal Code. Topics include professional orientation, ethics, administration of justice components,

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California court system, discretionary decision making, community relations, introduction to law, laws of arrest, laws of evidence, communications, investigations, arrest, and control. This course is intended for students preparing for employment as peace officers. AA/AS.

**357B 832 PC Firearms**  
**24–27 hours lab, 0.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Administration of Justice 356B.

This course meets the Peace Officer Standards and Training (P.O.S.T.) requirements for the Firearms portion of Section 832 of the California Penal Code. Topics include firearms safety; care, cleaning, and storage; shooting principles; laws of evidence; and range qualification procedures. This course is intended for students preparing for employment as peace officers. (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. (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. (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. (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. (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. (FT) Not applicable to the Associate Degree.

### **361T Block 20: Force Options / Internal Affairs for Correctional Deputies**

**1–4 hours 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 324A or 265A, each with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* Health and Safety. Must be free of injuries and on full duty status.

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. (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 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. (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. (FT) Not applicable to the Associate Degree.

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### 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 (P.O.S.T.) 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. (FT) Not applicable to the Associate Degree.

### 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. (FT) Not applicable to the Associate Degree.

### 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; P.O.S.T. 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. (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. (FT) AA/AS.

### **383 P.O.S.T. Certified Regional Academy Module 3**

**26.5–30 hours lecture,  
36–47 hours lab, 2 units  
Grade Only**

*Prerequisite:* Administration of Justice 382 with a grade of “C” or better, or equivalent.  
*Advisory:* English 47A or 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 is intended for students entering initial employment as peace officers. (FT) AA/AS.

### **384 P.O.S.T. Certified Regional Academy Module 4**

**2.5 hours lecture, 4.5 hours lab, 4 units  
Grade Only**

*Prerequisite:* Administration of Justice 383 with a grade of “C” or better, or equivalent.  
*Advisory:* English 47A or 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 is intended for students entering initial employment as peace officers. (FT) AA/AS.

### **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. (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,

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organized crime enforcement, or prisoner control, among others. Focus areas are listed in the class schedule and student transcripts. (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. (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 226. 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 intended for students who are majoring in Anthropology. (FT) AA/AS; CSU; UC; C-ID ANTH 150.

**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 226. 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**

*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. Art-Fine Art 150B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for the combination of Digital Media 160A and Digital Media 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. (FT) AA/AS; CSU.

**160A Vector Art 01: Illustration Tools****0.75 hours lecture, 2.25 hours lab, 1.5 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. Art-Fine Art 150B with a grade of “C” or better, or equivalent.

*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. (FT) AA/AS; CSU.

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**160B Vector Art 01: Illustration Tasks**  
**0.75 hours lecture, 2.25 hours lab, 1.5 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. Art–Fine Art 150A and 150B, each with a grade of “C” or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in: Digital Media 160A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Digital Art 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 majoring in Graphics or anyone interested in the field of graphics, business, or art. (FT) AA/AS; CSU.

**170 Raster Art 01: Image Editing**  
**1.5 hours lecture, 4.5 hours lab, 3 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. Art–Fine Art 150B with a grade of “C” or better, or equivalent.

*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. (FT) AA/AS; CSU.

**170A Raster Art 01A: Image Editing Tools**  
**0.75 hours lecture, 2.25 hours lab, 1.5 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. Art–Fine Art 150B with a grade of “C” or better, or equivalent.

*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. (FT) AA/AS; CSU.

**170B Raster Art 01B: Image Editing Tasks**  
**12–13.5 hours lecture, 36–40.5 hours lab,**  
**1.5 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. Art–Fine Art 150A and 150B, each with a grade of “C” or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in: Digital Media 170A with a grade of “C” or better, or equivalent.

*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. (FT) AA/AS; CSU.

**180 Composition 01: Page Building Tools**  
**1.5 hours lecture, 4.5 hours lab, 3 units**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 or W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Art-Fine Art 150B and Digital Media 160, each with a grade of "C" or better, or equivalent or Digital Media 160A, 160B and 170, each with a grade of "C" or better, or equivalent or Digital Media 170A, 170B and Art-Graphic Design 106, each with a grade of "C" or better, or equivalent. This course is an introduction to building distinctive, attractive, and meaningful pages composed with typographic, raster art, and vector graphic elements. Students produce effective graphic solutions for the current local market: periodicals, web sites, direct marketing, and corporate or institutional communications. Major topics include page structure (grids based on international screen and press standards) and readability (layouts based on human factors) using composition software such as InDesign®, Dreamweaver®, and Keynote®/PowerPoint®. This course is intended for students majoring in Graphics or those seeking a foundation in page design. (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.

**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 Modern Art**

**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; Art-Fine Art 110 and 111, each with a grade of "C" or better, or equivalent. This course provides a survey of modern art and architecture examining theoretical and cultural influences on art from the mid-19th century to mid 20th century. The course is designed for students interested in modern art history, as well as for art majors who are focusing on modern design, painting, sculpture or ceramics. (FT) AA/AS; CSU; UC.

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**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; C-ID ARTH 120.

**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.

**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; C-ID ARTS 100.

**150B Beginning Graphic 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 Level R6 and W6; 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. 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 course would be useful for anyone interested in computer graphic design applications. (FT) AA/AS; CSU; UC.

**151 Three-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.

*Advisory:* Completion of or concurrent enrollment in Art-Fine Art 150A with a grade of "C" or better, or equivalent.

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; C-ID ARTS 101.

### **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; C-ID ARTS 110.

### **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; C-ID ARTS 205.

### **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 majoring 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 majoring 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

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majoring 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 majoring in art and those who wish to improve their artistic skills. (FT) AA/AS; CSU; UC.

**170A Contemporary Crafts 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; 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; C-ID ARTS 280.

**170B Contemporary Crafts II**  
**2 hours lecture, 4 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 Levels 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 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**

*Prerequisite:* Art–Fine Art 170B with a grade of “C” or better, or equivalent.

This course continues the study of various crafts media at an advanced level. Emphasis is placed on structured development of media and preparation of work for public exhibition. This course is intended for students pursuing careers or future studies in Studio Art, Applied Design or Industrial Design. Provides advanced studies in two areas with structured development of the media. (FT) AA/AS; CSU.

**195A Ceramics 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 course is an introductory level ceramics course in which students design and construct hand-built and wheel-thrown ceramic objects. This course is designed for art majors and all students interested in developing ceramic skills. (FT) AA/AS; CSU; UC.

**195B Ceramics II**  
**2 hours lecture, 4 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 101 with a grade of “C” or better, or equivalent or Assessment Skill Level R6 and W6. This course is an intermediate level ceramics course in which students design and construct wheel thrown and hand-built ceramic objects. Emphasis is placed on form and surface enrichment. This course is designed for art majors for students interested in developing ceramic skills. (FT) AA/AS; CSU; UC.

**195C Ceramics III**  
**2 hours lecture, 4 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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This is an advanced level ceramics course in which students design and construct wheel thrown and handbuilt ceramic forms selecting an area of focus emphasizing form and surface enrichment. Students develop, mix, and use clay and glazes as well as load and fire gas and electric kilns. This course is

intended for art majors and all students interested in developing ceramics skills. (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; C-ID ARTS 200.

### **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**

**32–36 hours lecture, 64–71 hours lab, 3 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* Art-Fine Art 150A and Art-Fine Art 151, each 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

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interested in the problems inherent in representing what they see. (FT) AA/AS; CSU; UC.

### 220B Life Sculpture II

**32–36 hours lecture, 64–71 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.

*Advisory:* Art-Fine Art 150A and Art-Fine Art 151, each 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. 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

**32–36 hours lecture, 64–71 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.

*Advisory:* Art-Fine Art 150A and Art-Fine Art 151, each 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 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.

### 280A 2-Dimensional Art Studio Lab

**3 hours lab, 1 unit  
Pass/No Pass**

*Corequisite:* Art-Fine Art 150A, 152, 155A, 155B, 165A, 165B, 165C, 165D, 174A, 198A, 198B, 198C, 210A, 210B or 210C.

This course is a supervised studio laboratory in 2-dimensional media. Emphasis is placed on

technical refinement of personal drawing and painting skills. This course is designed for fine art majors. (FT) AA/AS; CSU.

### 280C Ceramics Studio Lab

**3 hours lab, 1 unit  
Pass/No Pass**

*Corequisite:* Art-Fine Art 195A, 195B, 197A or 197B.

This course is a supervised studio laboratory in ceramics. Emphasis is placed on technical refinement of personal ceramic skills. This course is designed for fine arts majors. This course may be taken four times for credit. Students must demonstrate increased proficiency with each repetition. AA/AS; CSU.

### 280D Digital Art Studio Lab

**3 hours lab, 1 unit  
Pass/No Pass**

*Corequisite:* Art-Fine Art 231 or Art-Fine Art 232 or Art-Fine Art 233.

This is a supervised studio laboratory in digital art and graphic design. Emphasis is placed on the technical refinement of digital imaging skills. This course is designed for fine art majors. 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 226. 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 students majoring in graphic design

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 students majoring in graphic design and anyone interested in design history. (FT) AA/AS; CSU; UC.

**124 Page Layout**  
**1.5 hours lecture, 4.5 hours lab, 3 units**  
**Grade Only**

*Advisory:* Art-Graphic Design 106 and 125, each 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 124.

This course is a study of design layout for two dimensional graphic projects, such as business systems, brochures, advertisements, and posters. The primary tool is the computer, but traditional methods are also used. Topics include grids, principles and procedures of effective layout. This course is intended for graphic design majors and anyone interested in page layout. (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 students majoring in graphic design 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level 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. This course is intended for students majoring in graphic arts or anyone interested in digital media. (FT) AA/AS; CSU.

**133 Intermediate Graphic Design II (Identity Systems and Packaging)**  
**1.5 hours lecture, 4.5 hours lab, 3 units**  
**Grade Only**

*Advisory:* Art-Graphic Design 106 and Art-Graphic Design 125, each with a grade of "C" or better, or equivalent.

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 intended for graphic design majors and anyone interested in logo and packaging 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 a portfolio for evaluation demonstrating advanced graphic design skills per department policy before an add code is issued.

*Limitation on Enrollment:* This course is not open to students with previous credit for Art-Graphic Design 155 or Art-Graphic Design 147.

This advanced course covers the design and layout of personal identity to a stationary package,

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resume, cover letter, library sheets and portfolio layout preparation for a book portfolio. Analysis of existing work, issues of format and content, and implementation of a portfolio development plan culminate in completed portfolio spreads. This course is designed for graphic design majors and students interested in advanced 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. Must obtain an Add Code from the instructor for enrollment. Students must submit a portfolio for evaluation demonstrating advanced graphic design skills per department policy before an add code is issued.

This advanced course applies portfolio strategies 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 graphic design majors and students interested in advanced 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 intended for students majoring in graphic design. (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 226. 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. (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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Automotive Technology (AUTO)

### 51 Quick Service Lube, Pre-Delivery Inspection Technician

**1.75 hours lecture, 3.75 hours lab, 3 units  
Grade Only**

*Advisory:* Automotive Technology 53 and Mathematics 38, each 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 or English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Level 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.

### 51T Honda/Toyota Quick Service Lube, Pre-Delivery Inspection Technician

**2 hours lecture, 6 hours lab, 4 units  
Pass/No Pass**

*Advisory:* Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and Automotive Technology 53 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 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 or 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 Auto Technology 112 or the combination of Auto Technology 53A, 53B and 53C.

This course provides 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.

### 56 Engine and Related Systems

**2 hours lecture, 6 hours lab, 4 units  
Grade Only**

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and Automotive Technology 53 with a grade of "C" or better, or equivalent.

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

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

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.

### **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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Automotive Technology 53 with a grade of "C" or better, or equivalent.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and Automotive Technology 53 with a grade of "C" or better, or equivalent.

This course prepares students to diagnose and repair complex electrical/electronic systems used in modern automobiles. Topics include 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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**

*Corequisite:* Completion of or concurrent enrollment in: Automotive Technology 61 with a grade of "C" or better, or equivalent.

*Advisory:* Automotive Technology 53 and 56 with a grade of "C" or better; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and 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.

*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 and 61T, each 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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 Level R4 and W4, Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Automotive Technology 62, 53 and 65, each with a grade of "C" or better, or equivalent.

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 (O<sub>2</sub>) 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.

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

## 67T Honda/Toyota Advanced Engine Performance

**2 hours lecture, 6 hours lab, 4 units  
Grade Only**

*Prerequisite:* Automotive Technology 62T and Automotive Technology 65T, each with a grade of "C" or better, or equivalent.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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 (O<sub>2</sub>) 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30. Automotive Technology 53 and 61, each with a grade of "C" or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in Automotive Technology 62 with a grade of "C" or better, or equivalent.

This course introduces students to automotive 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**

*Prerequisite:* Automotive Technology 61T 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30. Automotive Technology 53 and 61, each with a grade of "C" or better, or equivalent.

*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**

*Prerequisite:* Automotive Technology 61T 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Automotive Technology 53, 61, and 62, each with a grade of "C" or better, or equivalent.

*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**

*Prerequisite:* Automotive Technology 65T with a grade of "C" or better, or equivalent.

*Corequisite:* Completion of or concurrent enrollment in Automotive Technology 67T with a grade of "C" or better, or equivalent.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30. Automotive Technology 53 and 61, each with a grade of "C" or better, or equivalent.

*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

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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**

*Prerequisite:* Automotive Technology 61T 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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Automotive Technology 53 with a grade of "C" or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in: Automotive Technology 61 with a grade of "C" or better, or equivalent.

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, tires and wheels, 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**

*Prerequisite:* Automotive Technology 51T with a grade of "C" or better, or equivalent.

*Corequisite:* Completion of or concurrent enrollment in Automotive Technology 61T with a grade of "C" or better, or equivalent.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

### **86 BAR Specified Diagnostic, Repair, and Level 2 Inspection Training**

**2 hours lecture, 6 hours lab, 4 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5, Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Automotive Technology 85 or the combination of Automotive Technology 65 and 67.

This course provides Bureau of Automotive Repair (BAR) Specified Diagnostic and Repair training and Level 2 Procedures training. Students develop a high level of competency in the diagnosis and repair of Smog Check failures, including electrical/electronic systems and engine and emission control performance. Students with at least two years of engine performance repair experience who successfully complete this course may apply to the BAR for approval to take the state Smog Check

Repair Technician License examination. Students also develop the knowledge, skills, and abilities needed to perform Smog Check inspections. Students who successfully complete this course meet the BAR training requirements to take the Smog Check Inspector state licensing examination. This course is intended for current or future automotive technicians. (FT) AA/AS.

## 270 Work Experience

**60–300 hours other, 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 goal. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Aviation (AVIA)

### 101 Private Pilot Ground School

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30.

*Advisory:* Concurrent enrollment in Aviation 101L and Aviation 133, each with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 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  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation 101 with a grade of “C” or better, or equivalent or FAA-issued Private Pilot Certificate. *Advisory:* Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30. *Advisory:* Completion of or concurrent enrollment in Aviation 133 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 flight simulator. Topics include ground operations, flight maneuvers, airplane control, flight by reference to instruments, and communications. This course is intended for students majoring in Aviation Operations or those pursuing a private pilot’s license. (FT) AA/AS; CSU.

### 105 Introduction to Aviation and Aerospace

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 introduction to the aviation and aerospace industry. Topics include an overview of aviation history, regulation, and legislation; U.S. air carriers; aviation operations; aviation employment and career paths; and future developments. This course is intended for students majoring in Aviation Operations or anyone interested in the aviation industry. (FT) AA/AS; CSU.

### 115 Aviation Weather

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics

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38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is an introduction to atmospheric science, including applications to flight. Topics include the composition and structure of the atmosphere, atmospheric pressure, air circulation, winds, turbulence, precipitation, air masses, severe weather, clouds, air stability, and climate. Through examination of these topics, students gain an understanding of the scientific method and the methodologies of scientific investigation used to explain and predict weather phenomena. Other topics include the relationships between meteorology, technology, and economics; global climate change; and the interpretation and use of aviation weather charts, briefs, reports, and forecasts. This course is intended for students majoring in Aviation Operations or anyone interested in weather phenomena. (FT) AA/AS; CSU; UC.

### **125 Aviation and Airport Management**

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 120. This course introduces students to the major aspects of aviation and airport management. Topics include the airport-airway system, airport planning and development, aviation operations and management, community relations, governing regulations, security, and careers. 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 47A or 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 47A or 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.

This course is about decision-making and the causes of human error. Students learn to identify, assess, and mitigate potential hazards by analyzing the physiological, psychological, and sociological factors contributing to accidents in aviation and other high-risk fields. Topics include human factors theories and models; Crew Resource Management (CRM); flight physiology; health and lifestyle choices; hazardous attitudes, mental, and emotional states; cognitive processes; communication; group dynamics; social norms; organizational culture; leadership; and decision-making. Students integrate these concepts into strategies designed to reduce errors, manage risk, develop safe habits, and make effective decisions throughout their professional and personal lives. 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level 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 Instrument Ground School

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation 101 with a grade of "C" or better, or equivalent or FAA-issued Private Pilot Certificate.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Aviation 101L with a grade of "C" or better, or equivalent or FAA-issued Private Pilot Certificate.

*Advisory:* Concurrent enrollment in Aviation 195L.

*Advisory:* Completion of or concurrent enrollment in Aviation 133 with a grade of "C" or better, or equivalent.

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.

### 195L Basic Instrument Flight Lab

**3 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Aviation 101 and Aviation 101L, each with a grade of "C" or better, or equivalent or FAA-issued Private Pilot Certificate.

*Corequisite:* Completion of or concurrent enrollment in Aviation 195 with a grade of "C" or better, or equivalent or FAA-issued Instrument Pilot Certificate.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Aviation 133 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 196.

This laboratory course provides an introduction to basic Instrument Flight Rules (IFR) procedures, regulations, and techniques through the use of an airplane flight simulator. 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 (FARs), IFR weather and weather services, aeromedical factors and decision making in instrument conditions, and IFR flight planning. It is intended for students majoring in Aviation Operations or anyone interested in flight training. (FT) AA/AS; CSU.

### 196L Advanced Instrument Flight Lab

**3 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Aviation 195 and Aviation 195L, each with a grade of "C" or better, or equivalent or FAA-issued Instrument Pilot Certificate.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30; Aviation 133 with a grade of "C" or better, or equivalent.

This laboratory course provides advanced study and practice in basic Instrument Flight Rules (IFR) procedures, regulations, and techniques through the use of an airplane flight simulator. Designed for students seeking instrument flight certification, this course provides advanced practice in airplane instruments and instrument flying techniques, flight into IFR airspace, instrument navigation, and instrument approach procedures. It is intended for students majoring in Aviation Operations or anyone interested in flight training. (FT) AA/AS; CSU.

### 201 Commercial Pilot Ground School

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Aviation 101 with a grade of "C" or better, or equivalent FAA-issued Private Pilot Certificate.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or

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Assessment Skill Level M30; Aviation 133 with a grade of "C" or better, or equivalent.

*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 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 (FARs); 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.

### **211 Flight Instructor Ground School**

**3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation 195 and 201, each with a grade of "C" or better, or equivalent, or FAA-issued Commercial Pilot Certificate.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and Aviation 128 with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in Aviation 211L or 215L, each with a grade of "C" or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in Aviation 133 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 212. This course provides an introduction to methods of flight instruction by integrating learning theory with an in-depth study of aeronautical science. Topics include optimum adult learning environments and instructional techniques pertaining to the principles of flight; aircraft systems and performance; Federal Aviation Regulations (FARs); aeromedical factors; weather; and navigation. When combined with AVIA 133 (Human Factors in Aviation) and AVIA 211L (Basic Visual Flight Instructor Lab) or AVIA 215L (Basic Instrument Flight Instructor Lab), 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.

### **211L Basic Visual Flight Instructor Lab**

**3 hours lab, 1 unit  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Aviation 211 with a grade of "C" or better, or equivalent.

*Advisory:* Aviation 128 and 201, each with a grade of "C" or better, or equivalent or FAA-issued Commercial Pilot Certificate. 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.

*Advisory:* Completion of or concurrent enrollment in Aviation 133 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation 212. This course provides an introduction to applied methods of Visual Flight Rules (VFR) flight instruction. The course utilizes a flight simulator lab in which students practice applied flight instruction techniques under the direct supervision of a Certified Flight Instructor. When combined with AVIA 133 (Human Factors in Aviation) and AVIA 211 (Flight Instructor Ground School), 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.

### **215L Basic Instrument Flight Instructor Lab**

**3 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Aviation 196L with a grade of "C" or better, or equivalent.

*Corequisite:* Completion of or concurrent enrollment in Aviation 211 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent

or Assessment Skill Level M30; Aviation 128 and Aviation 201, each with a grade of “C” or better, or equivalent.

This course provides an introduction to applied methods of Instrument Flight Rules (IFR) flight instruction. The course utilizes a flight simulator lab in which students practice applied flight instruction techniques under the direct supervision of a Certified Flight Instructor – Instrument (CFII). It is intended for students majoring in Aviation Operations or those seeking qualification as a flight instructor. (FT) AA/AS; CSU.

### **216L Advanced Instrument Flight Instructor Lab**

**3 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Aviation 215L with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30; Aviation 128 and Aviation 201, each with a grade of “C” or better, or equivalent.

This course provides advanced study of applied methods of Instrument Flight Rules (IFR) flight instruction. The course utilizes a flight simulator lab in which students practice applied flight instruction techniques under the direct supervision of a Certified Flight Instructor - Instrument (CFII). It is intended for students majoring in Aviation Operations or those seeking qualification as a flight instructor. (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 47A or 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.

### **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.

### **277D Aviation Service Learning -- on Campus**

**3–9 hours other, 1–3 units  
Grade Only**

*Prerequisite:* Aviation 105 and 101 or 133, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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.

Students in this course develop and implement service learning projects related to the Aviation (AVIA) subject area 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 college AVIA classes, education projects for college students, mentoring, or shadowing. 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 combined credit for all 277D discipline courses may not exceed three units. (FT) AA/AS; CSU.

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**UC** = University of California Applicable

**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 226. 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, 1.5 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course introduces students to the aviation and aerospace industry and provides them with fundamental knowledge for further study in the field. Topics include the evolution, history, and structure of the aviation and aerospace industry as well as the rules and regulations governing aviation operations. Students 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. This course is intended for students interested in the aviation and aerospace industry. (FT) AA/AS.

#### 101G General Aviation Technology Theory I

**6 hours lecture, 6 units  
Grade Only**

*Prerequisite:* Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Advisory:* English 47A or English 48 and English 49 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 Aviation Maintenance Technology 100, 101A, or 101B. This course introduces 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. Other topics include Federal Aviation Administration (FAA) and manufacturers' aircraft specifications; data sheets;

manuals; publications; and related Federal Aviation Regulations (FARs), forms, and records. The course also covers weight and balance theory and ground operation and servicing. This course is intended for students majoring in Aviation Maintenance. (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 47A or English 48 and English 49 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 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. This course is intended for students majoring in Aviation Maintenance. (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 47A or English 48 and English 49 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 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. This course is intended for students majoring in Aviation Maintenance. (FT) AA/AS; CSU.

### 102H General Aviation Maintenance Technology Practices II

**6 hours lab, 2 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Aviation Maintenance Technology and Aviation Maintenance Technology 102G with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49 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 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; 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. This course is intended for students majoring in Aviation Maintenance. (FT) AA/AS; CSU.

### 103A Aircraft Wood, Fabric, Finishing and Composite Structures

**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.

This course is a study of 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 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

This course is a study of 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 101G, 101H, 102G, and 102H, each with a grade of "C" or better, or equivalent.

This course is a study of 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 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.

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**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.

This applied course is a study of 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.

This applied course is a study of 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.

This applied course is a study of 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 applied 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 101G, 101H, 102G, 102H, each with a grade of "C" or better, or equivalent.

This course is a study of 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 101G, 101H, 102G, 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.

### 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 applied 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 applied 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, 102H, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course covers 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 and 121A, each 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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level 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, 102H, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level M20.

This course is a study of 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, and 121A, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level M20.

This course is a study of 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, 102H, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level 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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level M20.

This course is an applied study of 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is an applied study of 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is an applied study of 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, 102H, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is a study of 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, 102H, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is a study of 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.

**AA/AS** = Associate Degree Applicable  
**CSU** = California State University Applicable  
**UC** = University of California Applicable

## 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is an applied study of 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

This course is an applied study 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**

*Prerequisite:* Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Advisory:* English 47A or 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 Electronic Systems 124 or 124L 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. This course is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe or Powerplant rating. (FT) AA/AS; CSU.

## 121A Applied Basic D.C. Electronics

**4.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Corequisite:* Completion of or concurrent enrollment in Aviation Maintenance Technology 120 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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 Electronic Systems 124 or 124L or Electronics 123 or Electricity 111 or 111L.

This course provides instruction in 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. It is intended for students majoring in Aviation Maintenance Technology or those seeking a Federal Aviation Administration (FAA) Mechanics Certificate with Airframe or Powerplant rating. (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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 or W5.

This course focuses on advanced composite aircraft maintenance and fabrication. Topics include reinforcements, resins, and core materials used in bonded structures. Students also learn about repair strategies and post-cure inspection. This course is intended for students seeking knowledge and skills in aircraft composites. (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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 or W5.

This course provides application of composite aircraft component maintenance and fabrication techniques. Topics include reinforcements, resins, and core materials used in bonded structures. Students also perform post-cure inspection and use approved fasteners. This course is intended for students seeking knowledge and skills in aircraft composites. (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 47A or 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 sheet metal. It covers welding of various aircraft metals using traditional and modern welding techniques and strategies. This course is intended for students seeking advanced knowledge and skills in aircraft fabrication and repair. (FT) AA/AS; CSU.

### **206 Advanced Sheet Metal Forming and Welding Laboratory**

**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Aviation Maintenance Technology 205 with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 sheet metal. It encompasses the application of various welding techniques based on different aircraft metals. Students also learn to perform post-weld inspections. This course is intended for students seeking advanced knowledge and skills in aircraft fabrication and repair. AA/AS; CSU.

### **241 Aircraft Propeller Systems** **3 hours lecture, 3 units** **Grade Only**

*Prerequisite:* Aviation Maintenance Technology 101G, 101H, 102G, 102H, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level 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.

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

## 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 108A.

The course is an applied study of the 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, 102H, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 111A.

This course is a study of 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 112A.

This applied course covers 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. 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, 102H, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 111B.

This course is a study 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Aviation Maintenance Technology 112B.

This applied course covers 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**

**60–300 hours other, 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 226. 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level 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 as well as the functions of the many participants in a loan transaction. Other topics include information on the state of the economy and its effects on 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 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:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Advisory:* Completion of or concurrent enrollment in Banking and Finance 102 with a grade of "C" or better, or equivalent.

This practical, hands-on course teaches the basics of loan processing from application to submission for Conventional and Government loans. Topics include applicable laws; qualifying and preliminary tax analysis; fraud detection; and how to obtain sufficient documentation for underwriters.

**AA/AS** = Associate Degree Applicable  
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Additionally, students will learn the importance of setting time priorities, quality customer service, follow-through, and ethics as they relate to the mortgage banking industry. Course content relates specifically to California regulations for residential 1-4 unit properties. This course is intended for students interested in real estate, banking, and finance. (FT) AA/AS; CSU.

### 106 Loan Underwriting

**5 hours lecture, 5 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Advisory:* Completion of or concurrent enrollment in Banking and Finance 102 and 104, each with a grade of "C" or better, or equivalent.

This course introduces Federal Housing Administration (FHA), Veterans Administration (VA), Conventional, and other loan underwriting processes. Other topics include the place of underwriting in the mortgage process; underwriting components, risks, comparative state laws, rules, and regulations; appraisal review and analysis; and quality control and the fundamental importance of ethics in loan underwriting. Course content relates specifically to California regulations for residential 1-4 unit properties. This course is intended for students interested in real estate, banking, and finance. (FT) AA/AS; CSU.

### 108 Principles of Loan Closing

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and 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 effectively 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 226. 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:* English 47A or 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 the basic principles of ecology. Emphasis is placed on the biological systems and plants and animals of Southern California through lecture, laboratory and field trips. Topics include the nature of the physical environment, terrestrial and aquatic ecosystems, evolution and biodiversity, species interactions, and human impacts on natural systems. This course is intended for students interested in environmental biology. (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  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40; Chemistry 152, Chemistry 152L or Chemistry 100 and Chemistry 100L, each with a grade of "C" or better, or equivalent.

This course provides students with entry-level skills common to the biotechnology industry, such as aseptic techniques, laboratory safety, and biological media and solution preparation. Other topics include microbial growth, solutions, buffers, separation of cellular components, and macromolecules. This course is intended for students preparing for a career in biotechnology. (FT) AA/AS; CSU.

### 133 Applied Biotechnology II

**3 hours lecture, 3 hours lab, 4 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40; Biology 132 or Biology 210A, each with a grade of "C" or better, or equivalent; Chemistry 100 and Chemistry 100L

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**UC** = University of California Applicable

or Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent.

In this advanced biotechnology training course, students learn about transformation, restriction analysis of Deoxyribonucleic Acid (DNA), protein analysis, and immunological applications. In the lab, students practice mastering current techniques used in the biotechnology industry. This course is intended for students preparing for a career in biotechnology. (FT) AA/AS; CSU.

**134 Introduction to the Biotechnology Lab**  
**3 hours lab, 1 unit**  
**Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or 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 the measurement of 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 provides context for how and why these techniques are used in the industry. This course is intended for students majoring in Applied Biology or Allied Health, or those seeking careers in the biotechnology industry. (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:* Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent completed within five years of enrollment in BIOL 210A and Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50 completed within five years of enrollment in BIOL 210A.

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

*Advisory:* Concurrent enrollment in Chemistry 200 and Chemistry 200L, each with a grade of "C" or better, or equivalent.

This course covers biological chemistry, cell structure and function, cellular metabolism, classical and molecular genetics, and the molecular basis of 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.

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This course covers the three Domains of life, including the phylogenetic relationships of major groups of organisms. Topics include adaptive radiation, anatomy, physiology, development, behavior, and ecology. This is the second semester

of a two-semester sequence designed for biological science and pre-professional majors. (FT) AA/AS; CSU; UC.

**230 Human Anatomy****2 hours lecture, 6 hours lab, 4 units  
Grade Only**

*Prerequisite:* Biology 107, 160 or 210A, 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 a systems approach to the study of human body structure from the microscopic level of organization to the gross level. Students relate body structures to their functions by studying histological slides and photomicrographs, anatomical models and charts, and mammalian dissection that may include using prosector cadavers for studying and testing. 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; C-ID BIOL 110B.

**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 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.

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

*Advisory:* Biology 230 completed within five years of enrollment in Biology 232. 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.

### **BIOL 277D Service Learning -- On Campus**

**48–162 hours other, 1–3 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:* Must obtain an add code from the instructor for enrollment.

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 college classes, education projects for college students, mentoring and shadowing. 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. 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. (FT) AA/AS; CSU.

### **290 Independent Study**

**3–9 hours other, 1–3 units**

**Letter Grade or Pass/No Pass Option**

*Limitation on Enrollment:* Must obtain an Add Code from the instructor for enrollment.

A student may sign up for 1 to 3 units each semester for a maximum of 6 units. For advanced students in biology who wish to continue with a special investigation. The course consists of individualized research problems, conferences with the instructor at prearranged intervals and a final report on the work completed. This course may be taken four times with different content for a maximum of six units. 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 226. 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 47A or 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 United States History from the Colonial period to 1877 with emphasis on African American experiences and contributions. Course content focuses on political, social, economic, and cultural development of the country. This course is intended for all students interested in the history of the U.S. from an African American perspective. (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 47A or 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 of the United States from Reconstruction to the present with emphasis on African American experience and contributions. Course content focuses on political, social, economic, cultural, and intellectual trends, the persistence of racism, and the struggle for full equality for all Americans. This course is intended for all students interested in the history of the U.S. from an African American perspective. 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 317 for complete English course descriptions and page 298 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 226. 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:* Business 92 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4.

This introductory course for both business and non-business majors provides a broad understanding of the business community, including how culture; society; economic systems; legal, international, political, and financial institutions; and human behavior interact to affect a business organization's policy and practices within the U.S. and a global society. Topics include business functions and terminology; organizational structure and design; leadership; human resource management; organized labor practices; marketing; organizational communication; technology; entrepreneurship; legal, accounting, and financial practices; the stock and securities market; and occupational choices. This course is intended for students majoring in Business or anyone interested in the function and role of the business community. (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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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 who work or intend to work in a business setting such as managers, supervisors, or work team members. (FT) AA/AS; CSU.

### 119 Business Communications

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course applies the principles of effective and ethical communication to the creation of letters; memos; emails; and written and oral reports for a variety of business situations. The course

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**UC** = University of California Applicable

emphasizes the development, analysis, organization, and composition of various types of professional-level written messages, analytical reports, and business presentations using word processing and presentation-graphics software. Other topics include interpersonal communication, electronic media, and international/cross-cultural communication. This course is intended for students majoring in business and for others working in a business environment. (FT) AA/AS; CSU; C-ID BUS 115.

**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 and ownership types; government agencies and regulation; protection of intellectual property interest; and the international business environment. This course is intended for students majoring in business and for others interested in business law. (FT) AA/AS; CSU; UC; C-ID BUS 120, BUS 125.

**150 Human Relations in Business**  
**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 who work or intend to work 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 47A or 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 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 who work or intend to work 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 226. 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 or 92, each with a grade of "C" or better, or equivalent or Assessment Skill Levels M40 or M45.

*Corequisite:* Completion of or concurrent enrollment in Chemistry 100L with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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 200 or 152.

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 intended for 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, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L 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**

*Prerequisite:* Mathematics 46 or 92, each with a grade of "C" or better, or equivalent or Assessment Skill Levels M40 or M45.

*Corequisite:* Chemistry 100.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5.

This laboratory course is designed to illustrate the principles of inorganic and physical chemistry and to familiarize students with scientific reasoning, basic laboratory equipment and safe practices, scientific data collection methods and interpretation. This laboratory course is intended for students majoring in nursing, nutrition and allied health sciences, and provides a foundation for future lab work in chemistry. (FT) AA/AS; CSU; UC Transfer Limitation: Chemistry (CHEM) 100, 100L, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L or 152, 152L if taken after CHEM 200.

**103 General, Organic, and Biological Chemistry**

**4 hours lecture, 3 hours lab, 5 units**  
**Grade Only**

*Prerequisite:* Mathematics 46 or 92, each with a grade of "C" or better, or equivalent or Assessment Skill Levels M40 or M45.

*Advisory:* English 47A or English 48 and English 49 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 the combination of Chemistry 100, 100L, 130 and 130L.

This course is a one-semester survey of general, organic, and biological chemistry for nursing and other health-related fields. Topics include general

chemistry, organic chemistry, and biological chemistry as they apply to the human body. The laboratory component includes qualitative and quantitative experiments as well as analysis of data. This course is intended for students majoring in nursing, nutrition, or allied health fields. (FT) AA/AS; CSU; UC.

**111 Chemistry in Society**

**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; Chemistry 111L with a grade of "C" or better, or equivalent.

This is an introductory chemistry course for non-science majors. The course emphasizes conceptual topics in chemistry and scientific thinking. Students learn to understand how society uses chemistry-based technologies and how to analyze current trends or news involving chemistry. Topics include a basic understanding of matter and energy, physical and chemical changes, the atom, nuclear chemistry, bonding, acids and bases, organic chemistry, and biochemistry. Current issues in environmental chemistry such as energy resources, air and water pollution are explored. Students discuss the effects and controversy surrounding the use of different forms of energy. In addition, current issues in organic and biochemistry are examined including trends in diets, certain medicines and drugs, and personal care items. Students planning on taking further courses in chemistry should take Chemistry 100 or Chemistry 152. (FT) AA/AS; CSU; UC Transfer Limitation: Chemistry (CHEM) 100, 100L, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L or 152, 152L if taken after CHEM 200.

**111L Chemistry in Society Laboratory**

**3 hours lab, 1 unit**  
**Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Chemistry 111 with a grade of "C" or better, or equivalent.

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*Advisory:* English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

This laboratory course is intended for non-science majors. It is designed to illustrate the principles of chemistry presented in Chemistry 111 in order for the student to understand how chemistry is used in our society. Experiments explore not only basic concepts in chemistry such as matter, energy, and the atom, but also explore real world applications of chemistry. This includes performing experiments related to the chemistry of the environment, household products, and biochemistry. Students learn how to work safely within the laboratory. Students who need to take further chemistry courses should enroll in Chemistry 152L or Chemistry 100L. (FT) AA/AS; CSU; UC Transfer Limitation: Chemistry (CHEM) 100, 100L, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L 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 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, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L 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, 111, 111L and 152, 152L combined: maximum credit, four units. No credit will be given for 100, 100L, 111, 111L 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:* Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50; Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent.

*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; C-ID CHEM 110; C-ID CHEM 120S (CHEM 200, 200L, 201, 201L).

## 200L General Chemistry I – Laboratory

**6 hours lab, 2 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Chemistry 152 and Chemistry 152L, each with a grade of "C" or better, or equivalent; Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

*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; C-ID CHEM 110; C-ID CHEM 120S (CHEM 200, 200L, 201, 201L).

## 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; Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

*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; C-ID CHEM 120S (CHEM 200, 200L, 201, 201L).

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**201L General Chemistry II – Laboratory**  
**6 hours lab, 2 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Chemistry 200 and Chemistry 200L, each with a grade of “C” or better, or equivalent; Mathematics 96 with a grade of “C” or better, or equivalent or Assessment Skill Level M50.

*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, acids, bases, and salts, thermochemistry, electrochemistry, coordination chemistry. Computer skills are introduced and applied to data analysis, laboratory simulations, and computer interfacing with laboratory equipment. (FT) AA/AS; CSU; UC; C-ID CHEM 1205 (CHEM 200, 200L, 201, 201L).

**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, 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 Quantitative Analytical Chemistry**  
**3 hours lecture, 6 hours lab, 5 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Chemistry 201 and 201L, each with a grade of "C" or better, or equivalent.

*Corequisite:* Completion of or concurrent enrollment in Mathematics 122 or 150, each 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 Levels 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. This course is intended for students majoring in chemistry or biochemistry and others who need the course for career advancement. (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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

**Child Development (CHIL)**

**89 Childcare as a Business**  
**1 hour lecture, 1 unit**  
**Grade Only**

*Advisory:* English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4; Mathematics 34A with a grade of "C" or better, or equivalent or Assessment Skill Level 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;

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**UC** = University of California Applicable

fee collection; 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 47A or 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 47A or 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 47A or 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 music and perceptual motor activities in child development from infancy through kindergarten. Emphasis is placed on basic teaching techniques and suitable materials and equipment for toddlers and preschool children. This course is designed for students who have an interest in working with children ages 0–5 in early childhood environments. (FT) AA/AS; CSU.

**121 Creative Art**  
**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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.

**133 Curriculum: 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 is intended for students interested in licensing, child development permits, transfer, or general interest in working with children. (FT) AA/AS; CSU.

**135 Curriculum: Science and Math**  
**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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 47A or 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 22 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 with a grade of "C" or better, or equivalent and Child Development 111, 121, 131, 133, 135 or 153, each with a grade of "C" or better, or equivalent.

*Corequisite:* Child Development 270.

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course focuses on planning the preschool learning environment to promote optimal development. Emphasis is placed on curriculum planning, guidance, safety, record keeping, observation techniques, project planning, and classroom management. Students enrolled in this course must be concurrently working in a preschool learning environment under the supervision of a person holding a Child Development Master Teacher Permit or the equivalent. This course is intended for students pursuing teaching careers in early care and education settings and partially fulfills State of California Permit and Title 22 teacher requirements. (FT) AA/AS; CSU.

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### **160 Observing and Understanding Children** 1 hour lecture, 3 hours lab, 2 units Grade Only

*Advisory:* English 47A or 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. 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. This course is intended for students majoring in child development and parents of children enrolled in the campus child development center. This course partially fulfills the specialization requirements for the State of California Master Teacher Permit. (FT) AA/AS; CSU.

### **161 Observations and Issues in Child Development** 1 hour lecture, 3 hours lab, 2 units Grade Only

*Advisory:* English 47A or 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. 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. This course is intended for students majoring in child development and parents of children enrolled in the campus child development center. This course partially fulfills the specialization requirements for the State of California Master Teacher Permit. (FT) AA/AS; CSU.

### **162 Observing and Guiding Child Behavior** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A and English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This course explores various behavior management techniques; interpersonal communication; and ideas and suggestions to assist caregivers in guiding a child’s behavior. Students apply developmental,

cultural, and communication principles in combination with observations of real situations. The focus is on children from birth through age 10. This course partially fulfills the specialization requirements for the State of California Master Teacher Permit. It is intended for students who plan careers in early childhood and family support programs. (FT) AA/AS; CSU.

### **165 Children With Special Needs** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or 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 47A or 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 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 47A or 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 fulfills the Infant/Toddler specialization requirement for the State of California Master Teacher Permit when taken in addition to Child Development 176. It is intended for students majoring in child development, parents, or those interested in infant/toddler care. (FT) AA/AS; CSU.

### 176 Principles of Infant/Toddler Caregiving

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 principles of infant/toddler care, including all aspects of infant and toddler development. Students learn to plan appropriate indoor and outdoor curriculum and environments. Other topics include health, nutrition and safety for the very young as well as licensing regulations, staff interactions, parent participation, and program development. This course meets State of California Title 22 licensing regulations for teachers in infant toddler settings and fulfills the Infant/Toddler specialization requirement for the State of California Master Teacher Permit when taken in addition to Child Development 175. It is intended for students majoring in child development, parents, or those interested in infant/toddler care. (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 is a survey of the nutritional, health, and safety needs of children from infant/toddlers

through preschool age. Topics 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 meets the Title XXII, fifteen hour, Health and Safety Training requirement, including signs and symptoms of child abuse. This course is intended for students majoring in child development and practicing child development professionals. (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, English 49 and Mathematics 38, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5, W5 and M30; Child Development 111 and 121 or 131, each with a grade of “C” or better, or equivalent.

This course is an overview of early childhood education program administration. Topics include

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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 intended 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 is a study of the supervisory tools and techniques required to organize and evaluate early childhood programs. Emphasis is placed on supervisory functions, in-service staff training, educational philosophies, program and staff evaluation, models of parent education and involvement, and supportive services. This course is designed for students who intend to go into supervisory positions in early childhood education, and 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. (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 is a study of the methods and principles of supervising adults in early childhood settings. Students study effective models for guiding and evaluating adults, developing positive communication skills and recognizing the role of mentors in teaching environments. This course is designed for students who supervise other adults in classrooms while simultaneously providing appropriate settings for young children. This course partially meets the requirements for the Master Teacher Permit, Site Supervisor and Program

Director permits issued by the California Commission on Teacher Credentialing. AA/AS.

### **270 Work Experience**

**60–300 hours other, 1–4 units  
Grade Only**

This course is for Child Development students to acquire on-the-job training within an early care and education facility and partially fulfills State of California Permit and Title 22 teacher requirements. The combined maximum credit for all work experience course work from all disciplines may not exceed 16 units. (FT) 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**

**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 students with an introduction to the Early Childhood Environmental Rating Scale (ECERS) 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. 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. (FT) AA/AS; CSU.

**291A Child Development Center Practicum**  
**3 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 directed laboratory experience in the campus Child Development Center. 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. It is intended for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. (FT) AA/AS; CSU.

**291B Child Development Center Practicum**  
**3 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 directed laboratory experience in the campus Child Development Center. 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. It is intended 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. (FT) AA/AS; CSU.

**291C Child Development Center Practicum**  
**3 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 directed laboratory experience in the campus Child Development Center. 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. It is intended for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. (FT) AA/AS; CSU.

**291D Child Development Center Practicum**  
**3 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 directed laboratory experience in the campus Child Development Center. 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. It is intended for students who plan careers in early childhood and family support programs and for parents who seek practical experience in guiding and teaching children. (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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**UC** = University of California Applicable

**Independent Study (290), Individualized Instruction (296), Service Learning (277), or Work Experience (270). Detailed course descriptions are listed on page 226. 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; C-ID COMM 110.

### 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; C-ID COMM 130.

### 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; C-ID COMM 120.

### 180 Intercultural Communication

**3 hours lecture, 3 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or 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 Speech Communications 180.

This course is a study of communication between members of differing cultures, including the influence of cultures, languages, and social

patterns on how members of groups relate among themselves and with members of different ethnic and cultural groups. Topics include social psychological variables; verbal and nonverbal 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 or other fields 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Computer and Information Sciences (CISC)

### **181 Principles of Information Systems** **3 hours lecture, 3 hours lab, 4 units** **Grade Only**

*Advisory:* English 47A or 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**

*Prerequisite:* Computer and Information Sciences 181 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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 programming using Visual Basic. It covers the fundamentals of event oriented programming in a Windows environment. Topics include the use and programming of a mouse, windows, forms, menus, dialog boxes, icons, buttons, text fields, files, graphics, and other components of a Windows environment in Visual Basic. This course is intended for students majoring in computer science or anyone interested in computer programming. (FT) AA/AS; CSU; UC.

### **190 Java Programming** **3 hours lecture, 3 hours lab, 4 units** **Grade Only**

*Advisory:* English 47A or 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. Computer and Information Sciences 186 with a grade of "C" or better, or equivalent.

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. This course is intended for students majoring in computer and information sciences or anyone interested in the Java programming language. (FT) AA/AS; CSU; UC.

### **192 C/C++ Programming** **3 hours lecture, 3 hours lab, 4 units** **Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; 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 Input/Output (I/O) classes is emphasized. Structured- and object-oriented programming techniques are presented and used to design and implement a variety of programming problems. This course is intended for students majoring in computer science or anyone interested in computer programming. (FT) AA/AS; CSU; UC.

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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.

**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. 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 226. 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.

**114 Introduction to Microsoft Windows****0.75 hours lecture, 0.75 hours lab, 1 unit****Grade Only**

*Advisory:* English 47A or 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 94, 101 or 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. (FT) AA/AS; CSU.

**120 Beginning Microsoft Word****1.5 hours lecture, 1.5 hours lab, 2 units****Grade Only**

*Advisory:* English 47A or 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 94, 101 or 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 is an introduction to document formatting using Microsoft Word. Students create fliers, letters, memos, reports and office documents. Topics include mail merge and table basics. This course is designed for students intending to use Microsoft Word for academic, professional and/or personal purposes. (FT) AA/AS; CSU.

**122 Intermediate Microsoft Word****2 hours lecture, 3 hours lab, 3 units****Grade Only**

*Advisory:* English 47A or 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 94, 101 or 103 and 120, each with a grade of "C" or better, or equivalent.

This intermediate-level course introduces advanced features and text editing tools of Microsoft Word. Students create reference documents, online forms and newsletters. Topics include the use of macros and collaboration and integration tools. This course is designed for students intending to use Microsoft Word for academic, professional and/or personal purposes. (FT) AA/AS; CSU.

**127 Introduction to PowerPoint****1.5 hours lecture, 1.5 hours lab, 2 units****Grade Only**

*Advisory:* English 47A or 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 94 or 101 and 114, each 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 add and modify both text and graphics; insert and modify information graphics and multimedia; apply, modify, and create master pages; apply, modify, and create templates. Students integrate other Microsoft programs with PowerPoint. This course is designed for students and professionals acquiring or updating basic skills in creating and editing professional presentations. (FT) AA/AS; CSU.

**128 Comprehensive Microsoft PowerPoint**  
**2 hours lecture, 3 hours lab, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Advisory:* Computer Business Technology 101, 102 or 103 and 114, each with a grade of "C" or better, or equivalent; English 47A or 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 Computer Business Technology 126.

This course is a comprehensive hands-on study of the skills required to plan, develop, and deliver PowerPoint presentations on a computer and the Internet. Emphasis is placed on adding and modifying text, graphics, sound, video, and effects such as transitions and custom slide animations. Other topics include adding, modifying and creating templates; adding, importing, and formatting data for tables and charts; customizing presentations; adding interactivity features; and incorporating PowerPoint with other applications. This course is intended for all students and professionals who wish to acquire skills in digital presentations. (FT) AA/AS; CSU.

**140 Microsoft Excel**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A or 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 94, 101, 102 or 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 or 143.

This course is intended for students, office support personnel, and business owners who require a competency in performing tasks in Microsoft Excel. Students receive hand-on instruction on how to

create, modify, and enhance workbooks and charts in addition to more advanced features in Excel such as PivotTables; PivotCharts; macros; and statistical, financial, and IF formulas. (FT) AA/AS; CSU.

**143 Intermediate Microsoft Excel**  
**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 103 and 114, each with a grade of "C" or better, or equivalent.

*Advisory:* Completion of or concurrent enrollment in Computer Business Technology 94, 101 or 102, 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.

This course is designed for students preparing for a career or job in which a competency in intermediate-to-advanced Excel functions is required to perform daily tasks. Students receive hands-on instruction on charts, PivotTables, PivotCharts, functions, formulas, data validation, autofilters, what-if analyses, templates, macros, Visual Basic for applications, and integration of Excel with other programs. (FT) AA/AS; CSU.

**152 Beginning Microsoft Access**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A or 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 94, 101, 102 or 103 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, professionals acquiring or updating basic skills in creating and editing professional databases, or anyone interested

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in learning the fundamental functions of Access. (FT) AA/AS; CSU.

**153 Intermediate Microsoft Access**  
**2.5 hours lecture, 1.5 hours lab, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 94, 101, 102 or 103 and 114, each with a grade of "C" or better, or equivalent. This course is an intermediate level study of Microsoft Access and its use as 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; using field properties; understanding the use of Structured Query Language (SQL) in Access; creating and running macros for automating tasks; and planning and designing user interfaces. This course is designed for students and professionals acquiring or updating skills in creating and editing Access databases. (FT) AA/AS; CSU.

**162 Web Page Creation**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A or 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 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 website. 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 Computer Business Technology and professionals seeking a basic knowledge of HTML. (FT) AA/AS; CSU.

**165 Webpage Creation with Dreamweaver**  
**2.5 hours lecture, 1.5 hours lab, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 is a hands-on study of webpage creation. Students use a HyperText Markup Language (HTML) editor to create HTML and Cascading Style Sheets (CSS). Other topics include adding behaviors; using templates and library items; and embedding hypertext links, video, graphics, and multimedia files. This course is designed for students and professionals acquiring or updating skills in creating and editing simple webpages. (FT) AA/AS; CSU.

**170 Desktop Publishing**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A or 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 students interested in preparing or upgrading skills for a career or job in which desktop publishing competencies are required. Topics include text and table frames, WordArt, images, graphic accents, and Web page functions. (FT) AA/AS; CSU.

**180 Microsoft Office**  
**2 hours lecture, 3 hours lab, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 94, 101 or 114 and 161, each with a grade of "C" or better, or equivalent. This course is designed for students interested in an overview and basic working knowledge of Microsoft Office Professional suite for personal and/or professional purposes. Emphasis is placed on word processing, spreadsheet, database, and presentations, and the integration of data within and between the programs. (FT) AA/AS; CSU.

**205 Object Oriented Programming using C++**  
**3 hours lecture, 3 hours lab, 4 units**  
**Grade Only**

*Advisory:* Computer and Information Sciences 192 with a grade of "C" or better, or equivalent. This course introduces students to Object Oriented Programming (OOP) using the C++ programming language. Emphasis is placed on essential concepts related to OOP, including use of classes and objects, inheritance, templates, polymorphism, pointers and references, and input/output (I/O) streams. This course is intended for students majoring in

computer information technology and all students interested in OOP. (FT) AA/AS; CSU.

## 210 Computers in Business

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 the role and use of computers, computer technology, and electronic communication in business environments. Emphasis is placed on privacy, security, information management, and ethical issues. This course is designed for students and professionals interested in the use and role of technology in business environments. (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**

*Advisory:* English 48 and 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5; Business 101 and Computer Business Technology 103, 161.

The Computer Business Technology Work Experience program is designed to extend occupational learning through employment and coordinate the on-the-job training and the classroom instruction. The goals and learning objectives will be designed by the student cooperatively with the employer and work experience instructor/coordinator. The combined maximum credit for all work experience courses from all disciplines may not exceed 16 units. (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 226. 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, English 49 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5, W5 and M20.

Computer and Information Sciences 186 with a grade of "C" or better, or equivalent.

This course is a study of the theories and techniques for managing personal income. Emphasis is placed on financial goal setting, culminating in the development of a personal financial plan. Topics include practical methods for 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 course is designed for all students interested in personal finance. (FT) AA/AS; CSU.

## Dance (DANC)

### 135A Jazz Dance I

**0.5–0.75 hours lecture, 1.5–2.25 hours lab,  
1–1.5 units**

**Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or 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 Dance 135.

This course is an introduction to Jazz dance. Emphasis is placed on fundamental Jazz dance technique, vocabulary and performance concepts. This course is designed for dance majors and all students interested in Jazz dance. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of turns and combinations. (FT) AA/AS; CSU; UC.

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UC = University of California Applicable**

**135B Jazz Dance II****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 135A with a grade of "C" or better, or equivalent.

This course is the second in a series of Jazz dance courses. Emphasis is placed on beginning Jazz dance technique, turns, rhythms and styles. This course is designed for dance majors and all students interested in Jazz dance. (FT) AA/AS; CSU; UC.

**135C Jazz Dance III****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 135B with a grade of "C" or better, or equivalent.

This course is the third in a series of Jazz dance courses. Emphasis is placed on intermediate Jazz dance technique, turns, rhythms and styles. This course is designed for dance majors and all students interested in Jazz dance. (FT) AA/AS; CSU; UC.

**135D Jazz Dance IV****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 135C with a grade of "C" or better, or equivalent.

This course is the fourth in a series of Jazz dance courses. Emphasis is placed on advanced Jazz dance technique, turns, rhythms and styles. This course is designed for dance majors and all students interested in Jazz dance. (FT) AA/AS; CSU; UC.

**140A Modern Dance I****0.5–0.75 hours lecture, 1.5–2.25 hours lab,  
1–1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or 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 140 or Dance 140.

This course is an introduction to Modern dance. Emphasis is placed on fundamental Modern dance vocabulary, concepts, and techniques. Students are introduced to basic elements of choreography and

history of early Modern dance contributors. This course is designed for dance majors and all students interested in Modern dance. When this course is offered for three hours a week the additional time is utilized in the practice and perfection of style, rhythms and variations. (FT) AA/AS; CSU; UC.

**140B Modern Dance II****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 140A with a grade of "C" or better, or equivalent.

This course is the second in a series of Modern dance courses. Emphasis is placed on beginning dance vocabulary, concepts and techniques. Students manipulate elements of choreography and are introduced to basic anatomy. Topics include perspectives on Modern dance history and techniques with a focus on second generation dance artists and an introduction to African-American artists. This course is designed for dance majors and all students interested in Modern dance. (FT) AA/AS; CSU; UC.

**140C Modern Dance III****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 140B with a grade of "C" or better, or equivalent.

This course is the third in a series of Modern dance courses. Emphasis is placed on intermediate dance vocabulary, concepts, techniques, and anatomy. Students manipulate elements of choreography and rhythmic studies in movement. Topics include perspectives on Modern dance history and techniques with a focus on third generation Modern dance artists and an introduction to post-modern concepts. This course is designed for dance majors and all students interested in Modern dance. (FT) AA/AS; CSU; UC.

**140D Modern Dance IV****0.75 hours lecture, 2.25 hours lab, 1.5 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent, or Assessment Skill Levels R5 and W5; Dance 140C with a grade of "C" or better, or equivalent.

This course is the fourth in a series of Modern dance courses. Emphasis is placed on intermediate-advanced dance vocabulary, concepts, technique, and anatomy. Students manipulate and refine elements of choreography and rhythmic studies in movement. Topics include perspectives on Modern dance history and techniques with a focus on contemporary Modern dance artists. This course is designed for dance majors and all students interested in Modern dance. (FT) AA/AS; CSU; UC.

### Digital Film Production (DFLM)

#### 101 Introduction to Film

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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. This course is intended for anyone interested in cinema or film production. (FT) AA/AS; CSU; UC.

#### 102 The American Cinema

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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. It explores how American films work technically, artistically, and culturally through encounters with the works of such directors as John Ford, Howard Hawks, and Martin Scorsese. This course is intended for anyone interested in cinema or film production. (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 35 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Level R4 and W4; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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 35 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level 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.

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**UC** = University of California Applicable

### 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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, and heavy equipment. Topics include the 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.

### 102 Heavy Duty Truck and Heavy Equipment Heating and Air Conditioning

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course covers the fundamental skills necessary for diagnosing and servicing heavy duty truck and heavy equipment heating, ventilation, and air conditioning (HVAC) systems. Students learn the fundamental operation, diagnosis, and repair of HVAC systems. Topics include HVAC safety, theory of operation, use of HVAC diagnostic tools, and repair procedures. This course is designed for students interested in the commercial diesel vehicle industry. (FT) AA/AS; CSU.

### 105 Measuring Tools and Applied Mathematics

1 hour lecture, 3 hours lab, 2 units  
Grade Only

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Diesel Technology 110 or Diesel Technology 120.

This course covers the care and use of precision measuring tools and common shop measuring tools. Students also learn industry-standard mathematical concepts and applications 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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; use of 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.

### 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.

*Advisory:* 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; Mathematics

38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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; use of 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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; use of 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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 the use of 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Diesel Technology 120, 201A or 122.

Students learn the fundamental skills necessary to perform major overhaul operations on Caterpillar diesel engines. Topics include theory of operation; construction and application; and the use of diesel

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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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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 the use of 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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 the 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**

*Advisory:* 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; Mathematics

38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course covers the theory, principles of operation, laboratory practice, servicing, and maintenance procedures for diesel engine fuel systems used on heavy duty diesel trucks and equipment. Students learn fundamental skills required to repair high-pressure type and electronically controlled fuel systems. Topics include pump timing; nozzle and unit-injector replacement; and cylinder cutout procedures. Students also learn the proper use of electronic tooling used in the diesel industry. This course is intended for students majoring in Diesel Technology. (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.

*Advisory:* English 35 or English 42, each with a grade of "C" or better, or equivalent or Assessment Skill Level R4 and English 43 with a grade of "C" or better, or equivalent or Assessment Skill Level W4; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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. This course is intended for students interested in advanced diesel technology systems. (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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Diesel Technology 130 or 215.

This course covers the theory, principles of operation, laboratory practice, servicing, and maintenance procedures for diesel truck and equipment electrical systems. Topics include starting, charging, cab, and chassis systems. Students learn principles, practices, maintenance, and troubleshooting of batteries; starters; alternators; and truck and trailer wiring systems. This course is intended for students majoring in Diesel Technology. (FT) AA/AS; CSU.

### 144 Electronics for Diesel Technology

**2 hours lecture, 3 hours lab, 3 units  
Grade Only**

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course covers basic electrical and electronic theory related to heavy duty diesel powered equipment. Topics include basic electrical theory, series circuits, parallel circuits, circuit testing, and component identification. Students also learn the function and operation of electronic sensors. This course is intended for students majoring in Diesel Technology. (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 35 or English 42 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and W4; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Diesel Technology 140 or 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, foundation type brakes, S-cam brakes, wedge brakes, disc brakes, air compressors, air reservoir systems, piping, control valves, switches, anti-lock, brake service procedures, reusability 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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, reusability

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**UC** = University of California Applicable

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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, reusability 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for 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, reusability 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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Diesel Technology 130 or 140.

This course covers the theory, laboratory practice, and principles of component removal, overhaul, and servicing of heavy duty clutches used in heavy duty transportation (HDT). Students learn how to use specialized and general shop equipment and hand tools to remove and replace (R&R) components of heavy duty transportation units. Other topics include the operation, installation, and troubleshooting of single and multiple disc clutches. This course is intended for students majoring in Diesel Technology. (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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course covers the theory, principles of operation, laboratory practice, servicing, and maintenance procedures for diesel truck and equipment hydraulic systems. Topics include hydraulic schematics, 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 heavy duty transportation (HDT) mobile hydraulic systems and components. This course is intended for students majoring in Diesel Technology. (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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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; reusability 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.

**AA/AS** = Associate Degree Applicable  
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**UC** = University of California Applicable

**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.

*Advisory:* 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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course covers the theory, laboratory practice, and principles of component removal, overhaul, and servicing of heavy duty clutches used in heavy duty transportation (HDT). Students learn how to use specialized and general shop equipment and hand tools to remove and replace (R&R) components on heavy equipment. Other topics include the operation, installation, and troubleshooting of single and multiple disc clutches. This course is intended for students majoring in Diesel Technology. (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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

**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. 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. (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 226. 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; C-ID ECON 202.

### 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; C-ID ECON 201.

***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 226. 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.

***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 226. 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

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

**AA/AS** = Associate Degree Applicable  
**CSU** = California State University Applicable  
**UC** = University of California Applicable

This course covers basic cardio-pulmonary resuscitation (CPR) based on current American Heart Association standards. Topics include one-person, two-person, child, and infant CPR as well as foreign body airway obstruction; bag-valve-mask and mouth-to-mask ventilation; and automated external defibrillator (AED) use. This course is intended for current or prospective health care providers. (FT) AA/AS.

### **105A Emergency Medical Technician – National Registry**

**6 hours lecture, 3 hours lab, 7 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Emergency Medical Technician 106 with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 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 30 days 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 (EMT). The course content is based upon the State of California Emergency Medical Services (EMS) 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. This course is intended for students preparing for a career as an EMT, paramedic, firefighter, nurse, physician assistant, or medical doctor. (FT) AA/AS; CSU.

### **106 Emergency Medical Technician – Defibrillation/Combitube**

**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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 136.

This course covers the skills required to integrate the use of the Automated External Defibrillator (AED), Esophageal/Tracheal Airway Device “Combitube®,” and Laryngeal/Tracheal Airway “King®” in the prehospital care/management of the victim of cardiac/respiratory arrest. Topics include skill proficiency in basic life support; airway management; use of the AED; and intubation utilizing a San Diego Emergency Medical Services Authority (EMSA)-approved perilyngeal airway adjunct. This course is intended for practicing Emergency Medical Technicians (EMTs), students seeking initial EMT certification, or others working in the healthcare field. Students must be employed with an approved provider agency in order to utilize the airway in the provision of care. (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. (FT) AA/AS; CSU.

### **350 Recertification Course for San Diego County EMT**

**0.5 hours lecture, 1.5 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Emergency Medical Technician 105A with a grade of “C” or better, or equivalent EMT certificate.

*Advisory:* English 47A or 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. Topics include 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 is intended for practicing Emergency Medical Technicians. (FT) Not applicable to the Associate Degree.

### **351 Advanced Cardiac Life Support Inservice** 1 hour lecture, 1 unit Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course provides inservice training for advanced cardiac life support. It is intended for medical doctors, registered nurses, or emergency medical technicians (EMT-P or EMT-B) with a current Basic Life Support (BLS) for Healthcare Provider card. It covers early treatment for cardiopulmonary arrest based on current American Heart Association guidelines. This course is intended for practicing healthcare providers. (FT) Not applicable to the Associate Degree.

### **352 Pediatric Advanced Life Support Inservice** 1 hour lecture, 1 unit Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course provides inservice training in pediatric advanced life support. It is intended for medical doctors, registered nurses, or emergency medical technicians (EMT-P or EMT-B) with a current Basic Life Support (BLS) for Healthcare Provider card. It covers appropriate early treatment for pediatric

emergencies based on current American Heart Association guidelines. This course is intended for practicing healthcare providers. (FT) Not Applicable to Associate Degree.

### **353 Prehospital Trauma Life Support Inservice**

1 hour lecture, 1 unit  
Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course provides inservice training for prehospital trauma life support based on current National Association of Emergency Medical Technicians (NAEMT) guidelines. Students learn appropriate early treatment for trauma patients. This course is intended for practicing healthcare providers. (FT) Not Applicable to 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.*

## **English for Speakers of Other Languages (ESOL)**

The English for Speakers of Other Languages Program is designed to prepare students to read, write, speak and listen at a level that enables them to succeed in college courses.

The program consists of four levels and the student is assigned a level based on the result of his/her placement test.

The first level, L19, is a combined skills class in a lecture/lab format. Students who successfully complete this course are at the intermediate-low level. Some students at the beginning level may find ESOL 19 difficult. For these students, counselors are available to discuss options and resources, including classes at Continuing Education.

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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 score at the assessment skill level L40 on the ESOL placement exam and successfully complete ESOL 40 can read and write at an advanced level, and are prepared to take English courses one level below transfer (ENGL 48 & 49). Students who score lower than level L40 on the placement exam must complete ESOL 40 and ESOL 32 to be able to read and write at an advanced level and be 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. (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 previous credit for English 8 or 60.

This course in writing and grammar prepares students to write at the intermediate-mid ESOL level. Students learn to write compositions which may include paragraphs, essays, and other types of texts. Other topics include critical reasoning in writing, critical reading and understanding for a variety of texts, academic study skills, and grammatical structures in the production and editing of compositions so that errors will not

obscure meaning or distract the reader. This course is intended for non-native speakers of English preparing for college-level coursework. (FT) Not applicable 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 continue to develop communicative competence through listening to and participating in a variety of communicative activities. Topics include grammatical structures specifically related to oral/aural course work to make connections between structure and communicative needs. In addition, students discuss, write about and critically analyze information from oral and written sources. This course is intended for non-native speakers of English preparing for college-level coursework. (FT) Not applicable 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 61.

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 21 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 22 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 English for Speakers of Other Languages (ESOL) level. 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 as well as discuss, write about, and think critically about information from oral and written sources. This course is intended for speakers of other languages pursuing basic skills English instruction. (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 and English for Speakers of Other Languages 31, each with a grade of "C" or better, or equivalent or Assessment Skill Level L40.

*Corequisite:* Completion of or Concurrent Enrollment in English for Speakers of Other Languages 32 with a "C" or better or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for English 10 or English 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 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 reading and writing skills. (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.

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## 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 or Assessment Skill Level R4 and W4.

This course prepares students for successful writing in a variety of career/technical subject areas.

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:* Assessment Skill Level L40 and completion of ESOL 40 with a grade of "C" or better; or completion of ESOL 40 and ESOL 32 each with a

grade of "C" or better; or ENGL 42 with a grade of "C" or better; or Assessment Skill Level R4.

*Limitation on Enrollment:* This course is not open to students with previous credit for English 56. This course not open to students with a "C" or better in English 265B or English 47A.

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:* Assessment Skill Level L40 and completion of ESOL 40 with a grade of "C" or better; or completion of ESOL 40 and ESOL 32 each with a

grade of “C” or better; or ENGL 43 with a grade of “C” or better; or Assessment Skill Level W4.

*Limitation on Enrollment:* This course is not open to students with previous credit for English 51. This course is not open to students with a C or better in English 265B or English 47A.

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. (FT) Not applicable to the Associate Degree.

## English Courses

(Also see Humanities, page 360)

### 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 intended for students majoring in English or those 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 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

This intermediate-level college reading and writing course uses the principles of rhetoric to build research and critical thinking skills required for success at four-year institutions. Emphasis is placed on reading, evaluating and writing argumentative prose. Students locate, evaluate and integrate outside sources into their writing assignments, which total at least 8,000 words for the semester. This course is intended for students majoring in English and all students interested in improving critical thinking and writing skills. (FT) AA/AS; CSU; UC; C-ID ENGL 105.

### 208 Introduction to Literature

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* ENGL 101 or English 105, each with a grade of “C” or better, or equivalent Assessment Skill Levels R6 and W6.

This course provides an inquiry into the basic nature of literature and is designed for students with a general interest as well as for those majoring in the field. Students read and analyze representative literary works in fiction, non-fiction, poetry, and drama from various cultures and periods, applying

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practical critical techniques in essays, reports, and exams. (FT) AA/AS; CSU; UC; C-ID ENGL 120.

## 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 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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), the American Renaissance (1829–1860), and the beginnings of Realism (1860–1880). Students critically analyze and discuss diverse authors of these periods, addressing relevant historical, social, political, philosophical, aesthetic, cultural, and religious issues. This course is intended for English majors and anyone interested in American Literature. (FT) AA/AS; CSU; UC; C-ID ENGL 130.

## 211 American Literature II

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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). Students critically analyze and discuss diverse authors of these periods, addressing relevant historical, social,

political, philosophical, aesthetic, cultural, and religious issues. This course is intended for English majors and anyone interested in American Literature. (FT) AA/AS; CSU; UC; C-ID ENGL 135.

## 215 English Literature I: 800–1799

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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 is intended for English majors and all students interested in literature. (FT) AA/AS; CSU; UC; C-ID ENGL 160.

## 216 English Literature II: 1800 – Present

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course offers a survey of British literature from the Romantic period to the 21st century (approximately 1800 to the present) including representative works from the pre-Romantic and Romantic periods; the Victorian and later Victorian period; the Modern period; the Postmodern period; the postcolonial era; and the contemporary era. Students read and discuss the major authors of these periods, addressing relevant social, political, cultural, and religious issues. Students also critically analyze, in essays and research papers, authors, specific works, and other topics as assigned. This course is intended for students majoring in English and those interested in English Literature. (FT) AA/AS; CSU; UC; C-ID ENGL 165.

## 220 Masterpieces of World Literature I: 1500 BCE – 1600 CE

**3 hours lecture, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

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; C-ID ENGL 140.

## 221 Masterpieces of World Literature II: 1600 – Present

**3 hours lecture, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

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 is intended for English majors and anyone interested in World Literature. (FT) AA/AS; CSU; UC; C-ID ENGL 145.

## 230 Asian American Literature

**3 hours lecture, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is a survey of Asian American literature. The relationship between identity and the creative work of prominent Asian American writers is explored, as well as the ways in which Asian

American writers have been influenced by various artistic, cultural, linguistic, and socio-political forces. Students are introduced to prominent Asian American texts and encouraged to analyze through writing and discussion the defining conversations and controversies in Asian American literary history. This course is intended for all students interested in Asian American Literature and Asian American Studies. (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 or English 47A, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

*Advisory:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is an introduction 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. This course is intended for students majoring in English or anyone interested in literature. (FT) AA/AS; CSU; UC.

## 249 Introduction to Creative Writing I

**3 hours lecture, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

*Limitation on Enrollment:* This course is not open to students with previous credit for English 249A or English 249B.

This course is an introduction to creative writing with a focus on fiction and poetry. Students use the basic elements of poetry and fiction writing to analyze the works of professional writers, to create original pieces, and to critique the work of their peers as well as their own. This course is intended for students majoring in English and all students interested in fiction and fiction writing. (FT) AA/AS; CSU; UC.

***This discipline may offer specialized instruction in one or more of the following areas: Supervised***

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**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 226. Please refer to the class schedule and/or see the dean or department chair for availability.**

## Exercise Science (EXSC)

### Exercise Science (formerly 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.

Exercise Science (formerly Physical Education) classes are offered at the beginning, intermediate and advanced levels.

## Swimming

### 113A Swimming I

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 155 or 155W.

This course is the first in a series of swimming courses. Emphasis is placed on fundamental swimming technique and water safety skills. This is an entry level course for novice swimmers. When this course is offered for three hours per week, the

additional time is utilized for skill development. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 113B Swimming II

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 113A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 155X.

This course is the second in a series of swimming courses. Emphasis is placed on the development of swimming strokes, open turns, entering the water, and aquatic emergency situations. This course is intended for beginning level swimmers with some aquatic experience. When this course is offered for three hours per week, the additional time is utilized for skill development. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 113C Swimming III

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 113B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 155Y.

This course is the third in a series of swimming courses. Emphasis is placed on intermediate swim stroke development, open turns, head first water entry, and pool and open water emergency response. This course is intended for intermediate level swimmers. When this course is offered for three hours per week, the additional time is utilized for skill development. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 113D Swimming IV

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 113C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 155Z.

This course is the fourth in a series of swimming courses. Emphasis is placed on advanced swimming techniques, turns, finishes, and racing starts, swim propulsion and drag theories, and aquatic survival and safety skills. This course is intended for advanced swimmers. When this course is offered for three hours per week, the additional time is utilized for skill development. (FT) AA/AS; CSU. UC Transfer Limitation. See a Counselor.

## Aerobic

### 114A Aquatic Fitness I

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 106.

This course is an introduction to cardiovascular fitness through aquatic activities. Topics include aquatic fitness testing, timed swims, proper warm-up and cool-down, principles of swimming propulsion, and introductory safety. This course is intended for those starting at an entry level of cardiovascular fitness. When this course is offered for three hours per week, the additional time is utilized for skill development and increased cardiovascular conditioning. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 114B Aquatic Fitness II

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 114A with a grade of “C” or better, or equivalent. This course is the second in a series of aquatic fitness courses. This course provides instruction and conditioning for various beginning level aquatic activities. Topics include beginning personal aquatic workout design and implementation, aquatic interval training, heart rate monitoring, using a pace clock, and safety concerns and techniques. This course is intended for those starting at a beginning level of cardiovascular fitness. When this course is offered for three hours per week, the additional time is utilized for skill development and increased cardiovascular conditioning. (FT) AA/AS; CSU.

### 114C Aquatic Fitness III

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 114B with a grade of “C” or better, or equivalent. This course is the third in a series of aquatic fitness courses. This course provides instruction and conditioning for various intermediate level aquatic activities. Topics include analysis of personal health and lifestyle, intermediate level workout design, goal setting and motivation, body specific training for an aquatic environment, individual aquatic activities, and intermediate training types and safety concerns. This course is intended for those starting at an intermediate level of cardiovascular fitness. When this course is offered for three hours per week, the additional time is utilized for skill development and increased cardiovascular conditioning. (FT) AA/AS; CSU.

### 114D Aquatic Fitness IV

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 114C with a grade of “C” or better, or better or equivalent.

This course is the fourth in a series of aquatic fitness courses. This course provides instruction and conditioning for various advanced aquatic activities. Topics include components of aquatic fitness, advanced workout design, aquatic training for specific races, strokes and events, aquatic training with advanced equipment, advanced aquatic conditioning terminology and nutrition and hydration principles. This course is intended for those starting at an advanced level of cardiovascular fitness. When this course is offered for three hours per week, the additional time is utilized for skill development and increased cardiovascular conditioning. (FT) AA/AS; CSU.

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**115A Water Exercise I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 156.

This course provides students with introductory level knowledge and practice in the fundamental elements of fitness through the application of water resistance and buoyancy. Emphasis is placed on fundamental techniques of water exercise for cardiorespiratory fitness, muscular strength, endurance and flexibility. This course is the first in a series of four water exercise courses. It is intended for students seeking to develop introductory physical fitness habits or low impact/rehabilitative physical fitness exercise techniques. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**115B Water Exercise II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 115A with a grade of “C” or better, or equivalent.

This course provides introductory level students with beginning level knowledge and practice in the fundamental elements of fitness through the application of water resistance and buoyancy. Emphasis is placed on a variety of water exercises for cardiorespiratory fitness, muscular strength, endurance and flexibility. This course is the second in a series of four water exercise courses. It is intended for students seeking to develop beginning physical fitness habits or low impact/rehabilitative physical fitness exercise techniques. (FT) AA/AS; CSU.

**115C Water Exercise III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 115B with a grade of “C” or better, or equivalent.

This course provides beginning level students with intermediate level knowledge and practice in the fundamental elements of fitness through the application of water resistance and buoyancy. Emphasis is placed on flexibility. Also included is

a variety of water exercises for cardiorespiratory fitness, muscular strength, and endurance. This course is the third in a series of four water exercise courses. It is intended for students seeking to develop intermediate physical fitness habits or low impact/rehabilitative physical fitness exercise techniques. (FT) AA/AS; CSU.

**115D Water Exercise IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 115C with a grade of “C” or better, or equivalent.

This course provides intermediate level students with advanced level knowledge and practice in the fundamental elements of fitness through the application of water resistance and buoyancy. Emphasis is placed on muscular strength/endurance. Also included is a variety of water exercises for cardiorespiratory fitness and flexibility. This course is the fourth in a series of four water exercise courses. It is intended for students seeking to develop advanced physical fitness habits or low impact/rehabilitative physical fitness exercise techniques. (FT) AA/AS; CSU.

**124A Aerobic and Core Conditioning I****2–3 hours lab, 0.5–1 unit  
Pass/No Pass Only**

*Advisory:* English 47A or 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 153 or 153W.

This course provides students with introductory level knowledge and practice in attaining and maintaining aerobic and core conditioning fitness levels. Instruction will emphasize cardiovascular fitness as well as core fitness through individual and circuit training. This course is the first in a series of four aerobic and core conditioning courses. It is intended for students seeking to develop introductory physical fitness habits. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**124B Aerobic and Core Conditioning II****2–3 hours lab, 0.5–1 unit  
Pass/No Pass Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or

Assessment Skill Levels R5 and W5; Exercise Science 124A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 153X.

This course provides introductory level students with beginning knowledge and practice in attaining and maintaining aerobic and core conditioning fitness levels. Instruction will emphasize beginning cardiovascular fitness as well as core fitness through individual and circuit training. Other topics include a variety of core fitness tests, stability ball exercise routines, and beginning level aerobic and core conditioning program design. This course is the second in a series of four aerobic and core conditioning courses. It is intended for students seeking to develop beginning physical fitness habits. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### **124C Aerobic and Core Conditioning III**

**2–3 hours lab, 0.5–1 unit  
Pass/No Pass Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 124B with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 153Y.

This course provides beginning level students with intermediate knowledge and practice in attaining and maintaining aerobic and core conditioning fitness levels. Instruction will emphasize intermediate cardiovascular fitness as well as core fitness through individual and circuit training. Other topics include fitness level assessment and conditioning for the treadmill; continuous, interval, and fartlek aerobic conditioning elements; beginning plyometric exercises; coronal and oblique plane movements; and clinical evaluations such as blood pressure and blood lipid tests. This course is the third in a series of four aerobic and core conditioning courses. It is intended for students seeking to develop intermediate physical fitness habits. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### **124D Aerobic and Core Conditioning IV**

**2–3 hours lab, 0.5–1 unit  
Pass/No Pass Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or

Assessment Skill Levels R5 and W5; Exercise Science 124C with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 153Z.

This course provides intermediate students with advanced knowledge and practice in attaining and maintaining aerobic and core conditioning fitness levels. Instruction will emphasize advanced cardiovascular fitness as well as core fitness through individual and circuit training. Other topics include cardiovascular and core fitness assessment data comparison; advanced core fitness assessments including plyometric tests; cardiovascular interval and sprint training; advanced plyometric training involving lateral movement; dietary analysis; and identification and incorporation of dietary modifications. This course is the fourth in a series of four aerobic and core conditioning courses. It is intended for students seeking to develop advanced physical fitness habits. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### **125A Aerobic Dance I**

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 103 or Physical Education 103W.

This course is an introduction to all forms of Aerobic Dance and movement. Emphasis is placed on fundamental Aerobic Dance technique, vocabulary, and performance concepts. This course is the first in a series of four aerobic dance courses. It is designed for all students interested in Aerobics as a cardiovascular, movement-oriented sport. (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

**125B Aerobic Dance II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 125A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 103X.

This course provides introductory level students with knowledge and practice in more complicated beginning Aerobic Dance principles. Emphasis is placed on beginning Aerobic Dance technique, vocabulary, strength, and performance concepts. Other topics include additional dance vocabulary, expanded use of weights, and sports nutrition. This course is the second in a series of four aerobic dance courses. It is designed for all students interested in Aerobics as a cardiovascular, movement-oriented sport. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**125C Aerobic Dance III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 125B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 103Y.

This course provides beginning level students with knowledge and practice in intermediate level, complex forms of Aerobic Dance, its variations, and directional changes. Cardio Kickboxing technique and plyometric moves are added for a diverse, dynamic workout. Emphasis is placed on intermediate level Aerobic Dance technique, vocabulary, and performance concepts. This course is the third in a series of four aerobic dance courses. It is designed for all students interested in Aerobics as a cardiovascular, movement-oriented sport, and who have taken the beginning level version of this class. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**125D Aerobic Dance IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 125C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 103Z.

This course provides intermediate level students with knowledge and practice in complex forms of advanced Aerobic Dance and its variations, such as Zumba and Cardio Kickboxing. Emphasis is placed on advanced levels of Aerobic Dance technique, vocabulary, and performance concepts. Other topics include advanced principles of body alignment such as movement combinations and jumps; advanced level plies such as sliding and jumping; and plyometrics. This course is the fourth in a series of four aerobic dance courses. It is designed for all students interested in Aerobics as a cardiovascular, movement-oriented sport, and who have taken the intermediate level version of this class. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**126A Cardio Conditioning I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 123 or 123W.

This course provides instruction in the basic skills necessary to improve aerobic fitness, cardiovascular health, muscular endurance/strength, and static flexibility. Topics include fitness terminology, identifying individual fitness level and areas to improve, basic exercise programming, proper warm up/cool down and resting/exercise heart rate. This class is designed for students interested in a healthy lifestyle as well as Kinesiology majors. When the course is offered three hours per week, the additional time is utilized for increasingly strenuous cardiovascular activities. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**126B Cardio Conditioning II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 126A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 123X.

This course provides instruction in exercise programming through moderately intense activities including cross training, basic boxing, plyometrics, speed and agility, core stability, dynamic flexibility and nutrition. This course is designed to provide students the opportunity to continue the fundamental principles of physical fitness and their impact on life-long health and wellness. When the course is offered three hours per week, the additional time is utilized for increasingly strenuous cardiovascular activities. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**126C Cardio Conditioning III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 126B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 123Y.

This course is designed to provide students the opportunity to develop and implement a personalized fitness plan to help them pursue their lifelong commitment to life-long health and wellness. Topics include goal setting, training zones, and body specific training principles through moderate/highly intense activities. This class is designed for students interested in a healthy lifestyle as well as Kinesiology majors. When the course is offered three hours per week, the additional time is utilized for increasingly strenuous cardiovascular activities. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**126D Cardio Conditioning IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 126C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 123Z.

This course is the fourth in a series of Cardio Conditioning courses. Students develop, analyze and implement advanced group fitness plans. Topics include agility and jump training, running, sports cross training, advanced core training, stress management and nutrition. Data gathering and assessment methods are also covered. This class is designed for students interested in a healthy lifestyle as well as Kinesiology majors. When the course is offered three hours per week, the additional time is utilized for increasingly strenuous cardiovascular activities. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**Anaerobic****134 Adapted Weight Training****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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:* A physician’s medical release form is required. This course is not open to students with previous credit for Physical Education 182.

This course is designed for students with disabilities as an introduction to progressive resistance training. Emphasis is placed on developing cardiorespiratory and muscle endurance, muscle strength and flexibility and a healthy body composition through individualized safe and beneficial exercise programming. The course includes exercises that focus on relaxation, joint mobility, body maintenance, and activities for daily living. A physician’s medical release is required. AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**AA/AS** = Associate Degree Applicable  
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**UC** = University of California Applicable

### 135A Individual Conditioning I – Fundamentals

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 132 or Physical Education 132W.

This course provides individually programmed instruction in the fundamental skills and techniques of strength training and aerobic activity. The positive impact of physical education on health and wellness is explored and emphasized. 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. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 135B Individual Conditioning II – Beginning

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 135A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 132X.

This course provides individually programmed instruction in the beginning level skills of the 5 components of fitness. Students will learn proper body mechanics for basic movement patterns utilizing a variety of different training modalities. Beginning level principles of physiology will be explored including how to train to elicit a desired physiological response. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 135C Individual Conditioning III – Intermediate

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 135B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 132Y.

This course provides individually programmed instruction in the intermediate principles of the 5

components of fitness. Students will learn basic anatomy and build upon the principles of physiology learned in previous levels of this course to create both individual workouts and a long term workout plan to meet individualized conditioning goals. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 135D Individual Conditioning IV – Advanced

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 135C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 132Z.

This course provides individually programmed instruction in the advanced principles of the 5 components of fitness. Students will learn how to instruct others in proper movement patterns and body mechanics for several strength training and cardiovascular training modalities. Students will utilize their knowledge of the advanced principles of anatomy and physiology to create a workout plan for another individual, identifying modifications and variations of exercises depending on the unique needs of the subject they are designing a workout for. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 136A Off-Season Conditioning for Sport I

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 165 or 191.

This course is designed to enhance the physical and mental skills needed to participate in intercollegiate sports activities. Emphasis is placed on weight training, running, skill development games, and individual development for sport. When this course is offered for one unit the additional time is utilized in the practice and perfection of individual sport-specific skills. This course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 136B Off-Season Conditioning for Sport II

**2–3 hours lab, 0.5–1 unit**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 136B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 165 or 191.

This course provides intercollegiate athletes with individually programmed coaching in the fundamental skills of sports-specific training and aerobic conditioning. Through progressive inquiry and practice, students demonstrate more advanced levels of athletic performance. When this course is offered for one unit the additional time is utilized in the development and implementation of sport-specific exercise programs. This course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 139A Weight Training I

**2–3 hours lab, 0.5–1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 166 or 166W.

This course is an introduction to progressive resistive training. Instruction includes proper methods of weight training, use of weight training machines, cardio exercise equipment, lifting of free weights and warm up/cool down. Instruction also includes charting exercises, introduction to major muscle groups and the weight training exercises to improve strength and range of motion. This class is designed for students interested in a healthy lifestyle as well as exercise science majors. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 139B Weight Training II

**2–3 hours lab, 0.5–1 unit**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 139A with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 166X.

This course is the second in a series of four courses in progressive resistive weight training. Emphasis is placed on alternative training methods including circuit and interval training, hill climbing and fat burning. This course includes basic nutrition to help build muscle and/ or reduce body weight utilized in student development of a personal fitness program. This class is designed for students interested in a healthy lifestyle as well as exercise science majors. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 139C Weight Training III

**2–3 hours lab, 0.5–1 unit**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 139B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 166Y.

This course is the third in a series of four courses in progressive resistive weight training. Emphasis is placed on the use of the weight training machines, cardio exercise equipment and Olympic lifts. This course covers alternate methods of resistive training including medicine balls, plyo balls, bosu balls, elastic cords and TRX belts. This class is designed for students interested in a healthy lifestyle as well as exercise science majors. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 139D Weight Training IV

**2–3 hours lab, 0.5–1 unit**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 139C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 166Z.

This course is the fourth in a series of four courses in progressive resistive weight training. This course covers the proper use of weight lifting machines, cardio exercise equipment and alternate methods of resistive training and lifting of the free weights. This

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class is designed for students interested in a healthy lifestyle as well as exercise science majors. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

## General Health

### 145A Yoga I – Fundamentals of Yoga

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 168.

This is the first of four levels of classes relating to yoga. This course is an introduction to fundamental yoga practices and principles. Instruction includes learning the fundamentals of yoga postures. The students will also gain a fundamental understanding of the practices of relaxation techniques and breathing practices. This course is designed for students who want to increase health, longevity and who are interested in understanding the importance of the fitness aspect of their life. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 145B Yoga II – Beginning Yoga

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 145A with a grade of “C” or better, or equivalent.

This is the second of four levels of classes relating to yoga. This course is an introduction to fundamentals of basic yoga practices and principles. Instruction includes basic yoga postures, guided relaxations, and breathing practices, as well as some basic stress reduction techniques. This course is designed for students interested in utilizing basic yoga and stress reduction techniques to help increase their health and longevity. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 145C Yoga III – Intermediate

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 145B with a grade of “C” or better, or equivalent.

This is the third of four levels of classes relating to yoga. This course will cover intermediate yoga practices and principles including some intermediate inversions. Instruction includes intermediate yoga postures, guided relaxations, basic inversions, breathing practices, and basic partner yoga as well as stress reduction techniques and nutritional analysis. This course is designed for students interested in learning about both fitness and nutrition. The students will utilize intermediate yoga to help increase their health and longevity. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 145D Yoga IV – Advanced Level

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 145C with a grade of “C” or better, or equivalent. This is the fourth of four levels of classes relating to yoga. This course will cover advanced yoga practices and principles. Instruction includes advanced yoga postures, guided relaxations, inversions, breathing practices, and partner yoga as well as stress reduction techniques and nutritional analysis. This course is designed for students interested in developing their own workout regime utilizing advanced yoga to help increase their health and longevity. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

## Martial Arts

### 147A Kickboxing I – Fundamental

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 233.

This course is a study and practice of Muay Thai kickboxing at the fundamental level. Emphasis is placed on fundamental kickboxing terminology, safety, physical fitness, controlled sparring, and line combinations. This course is intended for all students interested in the fundamentals of kickboxing with respect to the Muay Thai discipline. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**147B Kickboxing II – Beginning****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 147A with a grade of “C” or better, or equivalent. This course is a study and practice of Muay Thai kickboxing at the beginning level. Emphasis is placed on beginning kickboxing terminology, safety, physical fitness, controlled sparring, and line combinations. This course is intended for all students interested in beginning level kickboxing with respect to the Muay Thai discipline. (FT) AA/AS; CSU.

**147C Kickboxing III – Intermediate****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 147B with a grade of “C” or better, or equivalent. This course is a study and practice of Muay Thai kickboxing at the intermediate level. Emphasis is placed on intermediate kickboxing terminology, safety, physical fitness, controlled sparring, and line combinations. This course is intended for all students interested in intermediate level kickboxing with respect to the Muay Thai discipline. (FT) AA/AS; CSU.

**147D Kickboxing IV – Advanced****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 147C with a grade of “C” or better, or equivalent. This course is a study and practice of Muay Thai kickboxing at the advanced level. Emphasis is placed on advanced kickboxing terminology, safety, physical fitness, controlled sparring, and line combinations. This course is intended for all students interested in advanced level kickboxing with respect to the Muay Thai discipline. (FT) AA/AS; CSU.

**148A Martial Arts I – Fundamental****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 232.

This course is a study and practice of martial arts at the fundamental level. Emphasis is placed on fundamental martial arts terminology, safety, self-defense, etiquette, punches, blocks, strikes, kicks, stances, pressure points, and Kata/forms. This course is intended for all students interested in the fundamentals of martial arts with respect to the International Okinawan Goju-Ryu Karate-Do Federation (IOGKF). (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**148B Martial Arts II – Beginning****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 148A with a grade of “C” or better, or equivalent. This course is a study and practice of martial arts at the beginning level. Emphasis is placed on beginning level martial arts terminology, safety, self-defense, etiquette, punches, blocks, strikes, kicks, stances, pressure points, and Kata/forms. This course is intended for all students interested in the fundamentals of martial arts with respect to the International Okinawan Goju-Ryu Karate-Do Federation (IOGKF). (FT) AA/AS; CSU.

**148C Martial Arts III – Intermediate****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 145D with a grade of “C” or better, or equivalent. This course is a study and practice of martial arts at the intermediate level. Emphasis is placed on intermediate level martial arts terminology, safety, self-defense, etiquette, punches, blocks, strikes, kicks, stances, pressure points, and Kata/forms. This course is intended for all students interested in the fundamentals of martial arts with respect to the International Okinawan Goju-Ryu Karate-Do Federation (IOGKF). (FT) AA/AS; CSU.

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**148D Martial Arts IV – Advanced****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 148C with a grade of “C” or better, or equivalent. This course is a study and practice of martial arts at the advanced level. Emphasis is placed on advanced level martial arts terminology, safety, self-defense, etiquette, punches, blocks, strikes, kicks, stances, pressure points, and Kata/forms. This course is intended for all students interested in the fundamentals of martial arts with respect to the International Okinawan Goju-Ryu Karate-Do Federation (IOGKF). (FT) AA/AS; CSU.

**Badminton****154A Badminton I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 108. This course provides instruction and court experience in the skills, strategies and rules necessary to play badminton at the novice level. Instruction includes the basic strokes, vocabulary and sportsmanship. This course is intended for novice level badminton players. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**154B Badminton II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 154A with a grade of “C” or better, or equivalent. This course is the second of four courses in badminton. Emphasis is placed on beginning level skills, shots, serves, footwork and strategies. This course is intended for kinesiology majors and all students interested in incorporating the game of badminton into an active lifestyle. (FT) AA/AS; CSU.

**154C Badminton III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 154B with a grade of “C” or better, or equivalent. This course is the third of four courses in badminton. Emphasis is placed on intermediate level skills, shots, serves, footwork and strategies for singles and doubles play. This course is intended for kinesiology majors and all students interested in incorporating the game of badminton into an active lifestyle. (FT) AA/AS; CSU.

**154D Badminton IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 154C with a grade of “C” or better, or equivalent. This course is the fourth of four courses in badminton. Emphasis is placed on advanced level skills and strategies for singles and doubles tournament play. This course is intended for kinesiology majors and all students interested in incorporating the game of badminton into an active lifestyle. (FT) AA/AS; CSU.

**Basketball****158A Basketball I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 112. This course introduces students to the game of basketball. Instruction includes basic individual offensive and defensive fundamental skills, history of the game, terminology, rules, etiquette, proper warm-up and cool down and safety. Emphasis is placed on games using less than full teams and half court situations. This course is designed for anyone who has an interest in playing basketball. When this course is offered for three hours per week, the additional time is utilized on individual development of technique and performance. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**158B Basketball II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 158A with a grade of “C” or better, or equivalent. This course provides students the opportunity to improve individual beginning skills and introduces individual offensive moves and team concepts. Topics include transition basketball, team offense and defense as well as theories of basketball conditioning. Emphasis is placed on 5-5 play and full court situations and strategies of team play. This class is designed for those with a basic knowledge and ability to play basketball. When this course is offered for three hours per week, the additional time is utilized on individual development of technique and performance. (FT) AA/AS; CSU.

**158C Basketball III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Level W5/R5; Exercise Science 158B with a grade of “C” or better, or equivalent. This course provides students the opportunity to improve individual intermediate skills through self analysis of strengths and weaknesses and introduces full court pressure play. Students are expected to write programs to improve individual skills. Topics include full court zone and man pressure, full court offense and specialty plays. Emphasis is placed on skill work drills, 5-5 play and full court situations. This class is designed for those that have above an intermediate knowledge and skill level in basketball. When this course is offered for three hours per week, the additional time is utilized on individual analysis of technique and performance. (FT) AA/AS; CSU.

**158D Basketball IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 158C with a grade of “C” or better, or equivalent. This course provides students the opportunity to develop technical skills necessary to coach the game of basketball and stresses the development of advanced skills and team play. Topics include analysis of team play, writing a practice plan, how to

scout an opponent and evaluation of individual play. Emphasis is placed on skill work drills and full court tournament play. This class is designed for those that have an intermediate knowledge of basketball and possess an advanced skill level. When this course is offered for three hours per week, the additional time is utilized on individual analysis of technique and performance. (FT) AA/AS; CSU.

**Soccer****174A Soccer I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 149 or 149W.

This course provides instruction in basic soccer skill technique, strategies, etiquette and rules necessary to play soccer at the novice level. Topics include basic dribbling, heading and collection with the soccer ball. Students also define, apply and interpret the basic rules and safety procedures within the game of soccer. This class is designed for students interested in an active lifestyle as well as kinesiology majors. When this course is offered for three hours per week, the additional time is utilized for skills development and application of strategies to game situations. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**174B Soccer II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 174A with a grade of “C” or better, or equivalent.  
*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 149X.

This course provides instruction in soccer technique, tactics, and physical skills necessary to play soccer at the beginning level. Topics include dribbling skills

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including scissors and Matthews moves, passing techniques and turning while collecting a soccer ball. Students also define and apply methods of scoring, set pieces and principles of team defense within the game of soccer. This class is designed for students interested in an active lifestyle as well as kinesiology majors. When this course is offered for three hours per week, the additional time is utilized for skills development and application of strategies to game situations. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 174C Soccer III

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 174B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 149Y.

This course provides instruction in individual soccer techniques, tactics, and physical skills necessary to play soccer at the intermediate level. Topics include shooting from both close and far distances, lofted passing techniques and offensive heading of the soccer ball. Students also define, apply and interpret methods of creating space, both offensively and defensively as an individual player. This class is designed for students interested in an active lifestyle as well as kinesiology majors. When the course is offered for 3 hours per week, the additional time is utilized for skills development and application of strategies in game situations. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 174D Soccer IV

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 174C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 149Z.

This course provides instruction in team soccer techniques, tactics, and physical skills necessary to play soccer at the advanced level. Topics include building the offensive through the back, playing through the midfield and attacking from the central and flank positions. Students also define and apply

methods of zonal defending and defending various systems of play as a team. This class is designed for students interested in an active lifestyle as well as kinesiology majors. When this course is offered for three hours per week, the additional time is utilized for skills development and application of strategies to game situations. This course in advanced soccer is designed for all students interested in increasing both skill level and game experience. Instruction includes soccer techniques, skills, strategies, etiquette and rules necessary to play soccer at the advanced level. When the course is offered for 3 hours per week, the additional time is utilized for skills development and application of strategies in game situations. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

## Softball

### 176A Softball I

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 151.

This course provides instruction to develop 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 is intended for all students interested in softball. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 176B Softball II

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 176A with a grade of “C” or better, or equivalent.

This course provides instruction to continue the development of the beginning 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 is intended for all students interested in softball. (FT) AA/AS; CSU.

**176C Softball III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 176B with a grade of “C” or better, or equivalent. This course provides instruction to develop the intermediate 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 is intended for all students interested in softball. (FT) AA/AS; CSU.

**176D Softball IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 176C with a grade of “C” or better, or equivalent. This course provides instruction to develop the advanced skills of throwing, catching, running, hitting and rules of play of softball, as well as, advanced individual and team skill development and strategies involved in competitive game situations. This course is intended for all students interested in softball. (FT) AA/AS; CSU.

**Tennis****178A Tennis I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 159 and 159W. This course is the first in a series of four courses in tennis. Emphasis is placed on introductory level skills, strokes, strategies, rules and etiquette. This course is intended for kinesiology majors and all students interested in incorporating the game of tennis into an active lifestyle. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**178B Tennis II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 178A with a grade of “C” or better, or equivalent.  
*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 159X. This course is the second in a series of four courses in tennis. Emphasis is placed on beginning level skills, strokes, strategies, rules and etiquette as they relate to tournament play. This course is intended for kinesiology majors and all students interested in incorporating the game of tennis into an active lifestyle. All objectives are covered in this course whether offered for 0.5 or 1.0 unit. When this course is offered for three hours per week, the additional time is utilized for skill development. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**178C Tennis III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 178B with a grade of “C” or better, or equivalent.  
*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 159Y. This course is the third in a series of four courses in tennis. Emphasis is placed on intermediate level skills, strokes, strategies, rules and etiquette as they relate to league and tournament play. This course is intended for kinesiology majors and all students interested in incorporating the game of tennis into an active lifestyle. All objectives are covered in this course whether offered for 0.5 or 1.0 unit. When this course is offered for three hours per week, the additional time is utilized for skill development and strategies. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

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**178D Tennis IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 178C with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 159Z.

This course is the fourth in a series of four courses in tennis. Emphasis is placed on advanced skills, strokes, strategies, rules and etiquette as they relate to singles and doubles tournament play. This course is intended for kinesiology majors and all students interested in incorporating the game of tennis into an active lifestyle. All objectives are covered in this course whether offered for 0.5 or 1.0 unit. When this course is offered for three hours per week, the additional time is utilized for skill development and strategies. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**Volleyball****182A Volleyball I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 161.

This course is the first of four courses in volleyball. Emphasis is placed on introductory level skills, basic rules, strategies and etiquette. This course is intended for kinesiology majors and all students interested in incorporating the sport of volleyball into an active lifestyle. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**182B Volleyball II****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 182A with a grade of “C” or better, or equivalent. The course is the second of four courses in volleyball. Emphasis is placed on beginning level skills and offensive and defensive systems as they relate to team play. This course is intended for kinesiology

majors and all students interested in incorporating the sport of volleyball into an active lifestyle. (FT) AA/AS; CSU.

**182C Volleyball III****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 182B with a grade of “C” or better, or equivalent.

This course is the third of four courses in volleyball. Emphasis is placed on intermediate level individual offensive and defensive skills. Topics include offensive team systems and options, and defensive theory and team systems as they relate to league play. This course is intended for kinesiology majors and all students interested in incorporating the sport of volleyball into an active lifestyle. (FT) AA/AS; CSU.

**182D Volleyball IV****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 182C with a grade of “C” or better, or equivalent.

This course is the fourth of four courses in volleyball. Emphasis is placed on advanced level individual offensive and defensive skills. Topics include diversified offensive and defensive team systems as they relate to intercollegiate and international level volleyball. This course is intended for kinesiology majors and all students interested in incorporating the sport of volleyball into an active lifestyle. (FT) AA/AS; CSU.

**Water Polo****184A Water Polo I****2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or 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 163.

This course is an introduction to water polo. Emphasis is placed on fundamental water polo techniques and introductory level skills, including picking up a ball in the water, passing, receiving, shooting, dribbling, and playing in a game. Other

topics include introductory level offensive and defensive positioning and movements; team strategies; and rules of play. This course is the first in a series of four water polo courses. It is intended for students interested in the sport of water polo. (FT) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

### 184B Water Polo II

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 184A with a grade of “C” or better, or equivalent. This course provides introductory level students with beginning level knowledge and practice in the sport of water polo. Emphasis is placed on beginning level water polo techniques and skills, including picking up a ball in the water, passing, receiving, shooting, dribbling, and playing in a game. Other topics include beginning level offensive and defensive positioning and movements; team strategies; and rules of play. This course is the second in a series of four water polo courses. It is intended for students interested in the sport of water polo. (FT) AA/AS; CSU.

### 184C Water Polo III

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 184B with a grade of “C” or better, or equivalent. This course provides beginning level students with intermediate level knowledge and practice in the sport of water polo. Emphasis is placed on intermediate level water polo techniques and skills, including picking up a ball in the water, passing, receiving, shooting, dribbling, and playing in a game. Other topics include intermediate level offensive and defensive positioning and movements; team strategies; and rules of play. This course is the third in a series of four water polo courses. It is intended for students who have been playing water polo for more than 6 months. (FT) AA/AS; CSU.

### 184D Water Polo IV

**2–3 hours lab, 0.5–1 unit  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or

Assessment Skill Levels R5 and W5; Exercise Science 184C with a grade of “C” or better, or equivalent. This course provides intermediate level students with advanced level knowledge and practice in the sport of water polo. Emphasis is placed on advanced level water polo techniques and skills, including passing, receiving, shooting, dribbling, and playing in a game. Other topics include advanced level offensive and defensive positioning and movements; team strategies; and rules of play. This course is the fourth in a series of four water polo courses. It is intended for students who have been playing water polo for more than 12 months. (FT) AA/AS; CSU.

## Intercollegiate Athletics

### 204 Intercollegiate Basketball I

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 204.

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 an introductory course in basketball. This course may be taken two times for credit. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 205 Intercollegiate Basketball II

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 205.

This course is intended for the second season of intercollegiate competition. Basketball skills and game strategies are at the advanced levels of participation. This course may be taken two times for

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credit. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

### 214 Intercollegiate Soccer I

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 214.

This is a course in which students competing in their first intercollegiate soccer season learn and practice the techniques and strategies necessary for successful participation. The topics covered are fundamental through advanced skills as well as offensive and defensive strategies. 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.

### 215 Intercollegiate Soccer II

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 Exercise Science 234B with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 215.

This is a course in which students competing in their second intercollegiate soccer season of competition learn and practice the techniques and strategies necessary for successful participation. Those topics covered are fundamental through advanced soccer skills and both offensive and defensive strategies. This course is offered separately for both 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

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 216.

This course is designed for students competing in their first intercollegiate softball season. Students will 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. Students must demonstrate increased softball skill proficiency and skill attainment with each repetition. This course is offered in the spring semester and may be taken two times for credit. (FT) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

### 220 Intercollegiate Tennis I

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 178D with a grade of “C” or better, or equivalent or previous competitive tennis experience.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 220.

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. Students must demonstrate increased proficiency and skill attainment with each repetition. (FT) AA/AS; CSU; UC Transfer Course Limitation. See a Counselor.

### 221 Intercollegiate Tennis II

**96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; Exercise Science 220 with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 221.

This is a course for students competing in their second intercollegiate tennis season. This course is offered in the spring semester for men and women 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.

**224 Intercollegiate Volleyball I****96–175 hours lab, 2–3.5 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; Exercise Science 182A with a grade of “C” or better, or equivalent and/or previous competitive volleyball experience.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 224.

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.

**225 Intercollegiate Volleyball II****96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A and English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 224 with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 225.

This is the second course in intercollegiate volleyball 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.

**226 Intercollegiate Water Polo I****96–175 hours lab, 2–3.5 units  
Grade Only**

*Advisory:* English 47A or 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 226.

This course is designed for men and women participating in intercollegiate water polo competition. Topics include fundamental techniques of water polo, individual and team offensive tactics, individual and team defensive tactics, and rules of play. This course is designed to improve student

proficiency and skill level with each repetition and may be taken two times for credit. It is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**227 Intercollegiate Water Polo II****96–175 hours lab, 2–3.5 units  
Grade Only**

*Prerequisite:* Exercise Science 226 with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 227.

This course is designed for men and women participating in intercollegiate water polo competition. Topics include advanced techniques of water polo, advanced individual and team offensive tactics, advanced individual and team defensive tactics, and further study in rules of play. This course is designed to improve student proficiency and skill level with each repetition and may be taken two times for credit. It is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**231A Theories and Strategies of Basketball I****1.5 hours lecture, 1.5 hours lab, 2 units  
Grade Only**

*Advisory:* English 47A or 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 251A.

This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate basketball season. Topics include rules, game strategies, history, and game preparation. The physiological requirements for the intercollegiate athlete and importance of nutritional components for optimal performance are emphasized. Separate sections of this course are offered for men and women. The course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

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**231B Theories and Strategies of Basketball II**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Prerequisite:* Exercise Science 231A with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 251B.

This course covers advanced theoretical concepts and techniques for intercollegiate basketball competition. Topics include advanced team strategies, efficient basketball conditioning techniques, goals for game preparation, and leadership qualities for basketball. Concepts of team building and social skills necessary for success at the intercollegiate level are also emphasized. Separate sections of this course are offered for men and women. The course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**234A Theories and Strategies of Soccer I**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A or 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 257A.

This course covers the theoretical concepts necessary for students to compete successfully in their first intercollegiate soccer season. Topics include mechanical analysis of fundamental through advanced soccer skills, offensive and defensive strategies, statistics, rules, and officiating. Separate sections of this course are offered for men and women. The course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**234B Theories and Strategies of Soccer II**  
**1.5 hours lecture, 1.5 hours lab, 2 units**  
**Grade Only**

*Prerequisite:* Exercise Science 234A with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 257B.

This course covers advanced theoretical concepts and techniques for intercollegiate soccer competition. Topics include 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. Separate sections of this course are offered for men and women. The course is intended for intercollegiate athletes. (FT) AA/AS; CSU; UC Transfer Limitation. See a Counselor.

**239A Theories and Strategies of Intercollegiate Volleyball I**  
**24–27 hours lecture, 24–27 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A and 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 Exercise Science 224 or Exercise Science 225.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 255A.

This is a course in which students competing in their first intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include mechanical analysis of fundamentals through advanced volleyball skills, offensive/defensive strategies, statistics, rules and officiating. (FT) AA/AS; CSU; UC.

**239B Theories and Strategies/ Volleyball II**  
**24–27 hours lecture, 24–27 hours lab, 2 units**  
**Grade Only**

*Advisory:* English 47A and English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Exercise Science 239A with a grade of “C” or better, or equivalent.

*Advisory:* Concurrent enrollment in Exercise Science 225 with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 255B.

This is a course in which students competing in their second intercollegiate volleyball season learn the theoretical concepts necessary for successful participation. Topics covered include officiating, statistics, concepts for team building, goals for game

preparation, leadership and social skills for success at the intercollegiate level. (FT) AA/AS; CSU; UC.

## Fitness Specialist Certificate Courses

### 270 Fitness Specialist Work Experience 60–300 hours other, 1–4 units Grade Only

*Advisory:* English 47A or 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 270.

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:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent, or Assessment Skill Levels R5 and W5; 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 Physical Education 280.

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

*Advisory:* English 47A or 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 281.

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

*Advisory:* English 47A or 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 282.

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

*Advisory:* English 47A or 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 283.

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.

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**284 Fitness and Sports Nutrition****2 hours lecture, 2 units  
Grade Only**

*Advisory:* English 47A or 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 284.

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**

*Advisory:* English 47A or 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 285.

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**

*Advisory:* English 47A or 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 286.

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, 3 hours lab, 2 units  
Grade Only**

*Prerequisite:* Exercise Science 280, 281 and 283, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 287, 288 or Exercise Science 288.

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; CSU.

**288 Fitness Specialist Internship Lecture****1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Exercise Science 280, 281 and 283, each with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 Exercise Science 270 with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physical Education 287, 288 or Exercise Science 287.

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; CSU.

**289 Injury Care and Prevention for Personal Trainers****2 hours lecture, 2 units  
Grade Only**

*Advisory:* English 47A or 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, 242B or Exercise Science 242B.

This course covers common acute and chronic injuries encountered by personal trainers. Topics include basic first aid, injury care and prevention and exercise modification. This course is designed for students in the Fitness Specialist Certificate Program. (FT) AA/AS; CSU.

## 290 Independent Study

**3 hours other, 1 unit  
Letter Grade or Pass/No Pass Option**

*Limitation on Enrollment:* Must obtain an Add Code from the instructor for enrollment. This course is not open to students with previous credit for Physical Education 290.

For students who wish to study special problems in Physical Education. AA/AS; CSU.

## Exercise Science (formerly Physical Education) Theory Classes

### 241B Introduction to Kinesiology

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 241B.

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; C-ID KIN 100.

### 242B Care and Prevention of Injuries

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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, 242B or Exercise Science 289.

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; 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Filipino (FILI)

### 100 Filipino American Experience

**3 hours lecture, 3 units  
Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course is a sociological overview of Filipino Americans. Students analyze current Filipino American perspectives by discussing the history of the Philippines, factors contributing to immigration to the U.S., and aspects of the integration experiences that may be unique to Filipino Americans. This course is intended for anyone interested in the history and experiences of 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

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## Fire Protection Technology (FIPT)

### **100D Fire Department Testing Procedures** 1 hour lecture, 3 hours lab, 1.5 units Grade Only

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This course assists students in preparing for the process of competing for an entry-level firefighter position. The course includes simulated written exams, oral interviews and a variety of physical ability tests, including the Candidate Physical Ability Test (CPAT), Biddle, and other firefighter physical ability examinations. Topics include general knowledge of firefighter principles considered for written tests, interview techniques, principles of exercise, and task-specific exercise training. This course is intended for students preparing to enter a firefighter academy, fire academy graduates and students who are interested in sharpening their skills for entry-level fire department testing procedures. (FT) AA/AS; CSU.

### **101 Fire Protection Organization** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 34A with a grade of “C” or better, or equivalent or Assessment Skill Level M20.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Technology 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 47A or English and English 49 with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides fundamental information about the history and philosophy of fire prevention and the organization and operation of fire prevention bureaus. Other topics include the use of fire codes; the identification and correction of fire hazards; and the relationships among fire prevention, fire safety education, and fire detection and suppression systems. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

### **103 Fire Protection Equipment and Systems** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or English 48 and English 49 with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This course provides students with an overview of fire protection equipment and systems. Topics include the 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. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

### **104 Building Construction for Fire Protection** 3 hours lecture, 3 units Grade Only

*Advisory:* English 47A or English 48 and English 49 with a grade of “C” or better, or equivalent or Assessment Skill Level R5 and W5.

This course introduces building-construction components that relate to fire safety. Students learn about key building inspection factors such as construction and structure design; pre-planning fire operations; and operating at fires. Other topics include the development and evolution of building and fire codes in relation to past fires in residential, commercial, and industrial occupancies. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

**105 Fire Behavior and Combustion****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 theory and fundamentals of fire behavior including how fires start; how and why they spread; and how they are controlled. Topics include fire chemistry and physics; fire characteristics of materials; extinguishing agents; and fire control techniques. This course is intended for students majoring in Fire Technology or anyone interested in fire science. (FT) AA/AS; CSU.

**107 Fire Fighting Tactics and Strategy****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5.

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. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

**109 Fire Service Hydraulics****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Technology 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 used for fire department operations. Other topics include the principles of fluid pressure; fire pump operation and design; hose line construction and capability; and community water supply capabilities. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

**110 Wildland Fire Control****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A and 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 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. Course content includes certification in S-130 and S-190; students are required to complete a manipulative 8 hour wildland training session to certify in S-130. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

**111 Fire Apparatus and Equipment****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49 with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This course introduces students to the specifications, design, construction features, and operational capabilities of mobile and fixed firefighting apparatus. Topics include the effective deployment, utilization, and performance of pumpers, ladder trucks, and related specialized equipment under emergency conditions. This course is intended for students majoring in Fire Technology. (FT) AA/AS; CSU.

**115 Low Angle Rope Rescue****1.5 hours lab, 0.5 units  
Grade Only**

*Advisory:* English 47A or 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 Technology 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

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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 emergencies. 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

**1 hour lecture, 1.5 hours lab, 1.5 units  
Grade Only**

*Prerequisite:* Fire Protection Technology 150A and 150B, each with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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 Fire Technology 121.

This course offers advanced training in making vertical rescues. Students learn about current methods of rappelling, cliff rescue, raising and lowering victims, and high-rise rope rescue. Students practice at various locations within the community. This course is intended for students majoring in Open Water Lifeguarding and for current or future emergency services personnel. (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 Technology 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, and 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 47A or 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; 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.

### **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. This course is intended for practicing lifeguards. (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.

### **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.

### **309B Emergency Medical Care of the Sick and Injured** **48–54 hours lab, 1 unit** **Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 309A.

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; determining case histories; maintaining an airway; performing resuscitation and cardiopulmonary resuscitation (CPR); controlling bleeding; and

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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.

**311A Swiftwater Rescue Technician I**  
**24–36 hours lab, 0.5 units**  
**Grade Only**

*Prerequisite:* Fire Protection Technology 160 with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or 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 311M.

This course is an intensive three-day training in swiftwater rescue skills. Course format consists of one day of classroom instruction followed by two days of developing and practicing water rescue skills. Emphasis is on developing self-rescue skills in swift moving water. Other topics include water dynamics, hazards and obstacles, basic rescue equipment, technical rope systems, and in-water contact rescue. This course is intended for practicing lifeguards or other emergency services personnel. (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. (FT) AA/AS.

**320A Command 1A**  
**8–10 hours lecture, 24–30 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 Technology 222A or Fire Protection Technology 200A or 222A. This course provides the fire company officer with information and experience in command and control techniques used at the scene of a structure fire 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 the principles of command; command safety and the risk management process; and post-incident actions. This course is intended for practicing firefighters and others interested in firefighting command and control. (FT) AA/AS.

**320B Fire Command 1B**  
**8–10 hours lecture, 24–30 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or 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 Technology 222B, Fire Protection Technology 200B or 222B. This course provides an in-depth analysis of the tactics, strategies, and scene management principles for multi-casualty incidents, hazardous materials incidents, and wildland fires. Topics include multi-casualty triage; hazardous materials identification; toxicology; offensive and defensive wildland fire fighting strategies; and wildland fire safety. This course is intended for practicing firefighters or others interested in fire fighting command and control. (FT) AA/AS.

**320C Command 1C**  
**8–10 hours lecture, 24–30 hours lab, 1 unit**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 200C.

This course introduces fire company officers to the wildland urban interface (WUI) fire fighting environment. Topics include the WUI environment; fire behavior forecasting; and WUI operation principles; safety and survival; and incident operations. This course is intended for practicing firefighters or others interested in fire fighting command and control. (FT) AA/AS.

**322B Confined Space Rescue Awareness**  
**1 hour lecture, 7 hours lab, 0.2 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 308B or 308C.

This course provides an introduction to the hazards, equipment, and operational positions of safe and legal confined space entry. It also includes a review of California Division of Occupational Safety and Health (Cal-OSHA) regulations with regard to permit-required confined spaces. This course is intended for personnel with confined spaces within their areas of responsibility, including current or future public safety personnel. (FT) AA/AS.

**323B Haz Mat Emergency Response First Responder Operational**  
**4 hours lecture, 12 hours lab, 0.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 306A.

This course provides students with a fundamental knowledge of the factors affecting operating procedures at a Hazardous Material (Haz Mat) Incident. It is intended to 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. It is intended for current or future public safety personnel. (FT) AA/AS.

**324B I-300: Intermediate ICS**  
**8–9 hours lecture, 0.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 310B.

This course consists of Incident Command System (ICS) Training Modules 7-11. It expands on the Basic 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. This course is intended for practicing emergency response personnel. (FT) AA/AS.

**324C I-400: Advanced ICS**  
**16–18 hours lecture, 1 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 310C.

This course consists of Incident Command System (ICS) Training Modules 12-15. It expands on the 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. This course is intended for practicing emergency response personnel. (FT) AA/AS.

**326A Training Instructor 1A: Cognitive Lesson Delivery**  
**32–40 hours lab, 0.5 units**  
**Grade Only**

*Advisory:* English 47A or 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 Technology 226, Fire Protection Technology 226, 204B or 206A.

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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; vocational lesson plan development; and instructional techniques for vocational 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.

### **326B Training Instructor 1B: Psychomotor Lesson Delivery**

**32–40 hours lab, 0.5 units  
Grade Only**

*Advisory:* English 47A or 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 Technology 225, Fire Protection Technology 225, Fire Protection Technology 204A or Fire Protection Technology 206B.

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.

### **326C Training Instructor 1C: Instructional Development Techniques**

**32–40 hours lab, 0.5 units  
Grade Only**

*Advisory:* English 47A or 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 206C.

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 vocational education. This course is intended for active firefighters who wish to teach in the California State Fire Marshal System and work as Training Officers. (FT) AA/AS; CSU.

### **327A Fire Investigation 1A: Fire Origin and Cause Determination**

**32–40 hours lab, 0.5 units  
Grade Only**

*Advisory:* English 47A or 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 Technology 224, Fire Protection Technology 203A, or Fire Protection Technology 224.

This course introduces students to arson investigation. Topics include the causes of fires; recognizing 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.

### **328A Fire Management I**

**40 hours lecture, 2 units  
Grade Only**

*Advisory:* English 47A or 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 Technology 229, Fire Protection Technology 201 or 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. Topics include decision making, time management, leadership styles, personnel evaluations, and counseling guidelines. This course is intended for current or prospective future firefighters. (FT) AA/AS.

### **330A Fire Prevention I**

**32–36 hours lab, 0.5 units  
Grade Only**

*Advisory:* English 47A or 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 fire prevention codes and ordinances, inspection practices, and key hazards. Topics include the Fire Company Officer’s

role in fire prevention, the relationship between life safety and building construction, the elements of a quality company inspection program, and how to address complex hazards encountered during an inspection. This course is part of the California State Fire Training curriculum. It is intended for current firefighters seeking training as entry-level Fire Company Officers. (FT) AA/AS.

**332A Confined Space Rescue Technician**  
**32–40 hours lab, 0.5 units**  
**Grade Only**

*Advisory:* English 47A or 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 308A.

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 between 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.

**332B Rescue Systems 1: Basic Rescue Skills**  
**32–40 hours lab, 0.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Technology 243 or Fire Protection Technology 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. This course is intended for practicing firefighters and other emergency personnel. (FT) AA/AS.

**360A Advanced Open Water Lifeguard Training**

**168–190 hours lab, 3.5 units**  
**Pass/No Pass**

*Prerequisite:* Fire Protection Technology 160 or Fire Protection Technology 363, each with a grade of “C” or better, or equivalent.

*Limitation on Enrollment:* Health and Safety. Must be sponsored by a Regional Lifeguard Agency. This course is not open to students with previous credit for Fire Protection Technology 260 or Fire Protection Technology 360.

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**

**4–40 hours lecture, 12–40 hours lab,**  
**0.5–2.5 units**  
**Grade Only**

*Prerequisite:* 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 Administration (OSHA), California Title 22, California State Fire Marshall, and San Diego Fire Department Training Division. Subjects include recent legislation and legal updates; technical subjects addressing social issues and skill proficiency training in fireground and rescue operations; emergency vehicle operations; hazardous materials training; and the Incident Command System. This course is intended for practicing firefighters. (FT) Not Applicable to Associate Degree.

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**362A Inservice Fire Training Modules****192–240 hours lab, 4 units  
Pass/No Pass**

*Prerequisite:* Fire Protection Technology 381F with a grade of “C” or better, or equivalent Firefighter I card.  
*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 265 or 362.

This inservice 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. (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. (FT) Not applicable to the Associate Degree.

**363 Refresher, Open Water Lifeguard****30–47 hours lab, 0.5 units  
Pass/No Pass**

*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. Students also complete the requirements for lifeguard recertification in Open Water Emergency Medical training. This course is intended for practicing open

water lifeguards. (FT) Not applicable to the Associate Degree.

**364 Marine Firefighting****8–9 hours lecture, 24–39 hours lab, 1 unit  
Grade Only**

*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. (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. (FT) Not applicable to the Associate Degree.

**366 Seamanship – Rescue Boat Handling****0.25 hours lecture, 2.25 hours lab, 1 unit  
Grade Only**

*Prerequisite:* Fire Protection Technology 160 with a grade of “C” or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49 with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

*Limitation on Enrollment:* Health and Safety. 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 162.

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. This course is intended for

current open water lifeguards or other public safety personnel needing to operate a rescue boat. (FT) AA/AS; CSU.

**366A Personal Watercraft Operations**  
**32–40 hours lab, 0.5 units**  
**Grade Only**

*Prerequisite:* Fire Protection Technology 160 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or 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 be sponsored by a lifeguard agency. This course is not open to students with previous credit for Fire Protection Technology 63 or 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 intended for qualified open-water lifeguards only. (FT) AA/AS.

**367A Scuba for Emergency Services I**  
**4–4.5 hours lecture, 60–67.5 hours lab, 1.5 units**  
**Grade Only**

*Limitation on Enrollment:* Health and Safety. Must pass the minimum swimming standards as established by the City of San Diego Lifeguard Service.

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 167A.

This course teaches students with open-water lifeguard experience to use the Self-Contained Underwater Breathing Apparatus (scuba). Other topics include scuba history, equipment, physics, physiology, environment, and safety. Students experience six pool training sessions and six open-water scuba dives. This course is intended for practicing public safety personnel. (FT) AA/AS.

**367B Scuba for Emergency Services II**  
**8–9 hours lecture, 24–27 hours lab, 1 unit**  
**Grade Only**

*Prerequisite:* Fire Protection Technology 367A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* Health and Safety. Must pass the minimum swimming standards as established by the City of San Diego Lifeguard Service. This course is not open to students with previous credit for Fire Protection Technology 167B.

This course teaches students with open-water lifeguard and Self-Contained Underwater Breathing Apparatus (scuba) experience to become part of a dive rescue team. Other topics include 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. This course is intended for practicing public safety personnel with scuba experience. (FT) AA/AS.

**380W Basic Wildland Firefighter Academy**  
**16–18 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. Topics emphasize the safe and efficient performance of tasks expected of wildland firefighters. This course is intended for students currently employed or seeking employment as firefighters. (FT) AA/AS.

**381F Basic Firefighter 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.

*Limitation on Enrollment:* Health and Safety. Must have passed the Firefighter Entrance Exam.

*Limitation on Enrollment:* Health and Safety. Must have a current Candidate Physical Abilities Test (CPAT) card or equivalent.

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 fire fighting 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.

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**392L Special Topics in Fire Management**  
**24–243 hours lab, 0.5–4.5 units**  
**Grade Only**

*Advisory:* English 47A or 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 392.

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. This course is intended for practicing firefighters. (FT) AA/AS.

**394L Special Topics in Firefighting Tactics**  
**24–243 hours lab, 0.5–4.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 394.

This course provides professional training in various kinds of firefighting tactics and related activities. Fundamental skills and techniques used by firefighters 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 various kinds of firefighting tactics, vehicle or equipment operation, or firefighter safety and survival, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing firefighters. (FT) AA/AS.

**395L Special Topics in Open Water Lifeguarding**  
**24–216.5 hours lab, 0.5–4.5 units**  
**Grade Only**

*Limitation on Enrollment:* This course is not open to students with previous credit for Fire Protection Technology 395.

This course provides open water lifeguards with training in various kinds of lifeguarding practices. Fundamental skills and techniques used by lifeguards 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

various kinds of lifeguarding techniques, vehicle or equipment operation, or emergency management, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing open water lifeguards. (FT) AA/AS.

**392S Special Topics in Fire Management**  
**1 hour lecture, 7–20.5 hours lab, 0.2 units**  
**Grade Only**

*Advisory:* English 47A or 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. This course is intended for practicing firefighters. (FT) AA/AS.

**393L Special Topics in Hazardous Materials**  
**24 – 243 hours lab, 0.5–4.5 units**  
**Grade Only**

This course provides students with sound information and practices in dealing with hazardous materials incidents. Hazardous material principles and practices are taught from a variety of different focus areas that may vary from term to term. Focus areas may include: Hazardous Materials Incident Commander, Hazardous Materials Technician, Hazardous Materials Safety Officer, Hazardous Materials Specialist, Hazardous Materials Decontamination, Hazardous Materials Mitigation, or Hazardous Materials Weapons of Mass Destruction, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing firefighters. (FT) AA/AS.

**393S Special Topics in Hazardous Materials**  
**1 hour lecture, 7–20.5 hours lab, 0.2 units**  
**Grade Only**

This course provides students with information and practices in dealing with hazardous materials incidents. Hazardous material principles and practices are taught from a variety of different focus areas that may vary from term to term. Focus areas may include: Hazardous Materials

Incident Commander, Hazardous Materials Technician, Hazardous Materials Safety Officer, Hazardous Materials Specialist, Hazardous Materials Decontamination, Hazardous Materials Mitigation, or Hazardous Materials Weapons of Mass Destruction, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing firefighters. (FT) AA/AS.

**394S Special Topics in Firefighting Tactics**  
**1 hour lecture, 7–20.5 hours lab, 0.2 units**  
**Grade Only**

This course provides professional training in various kinds of firefighting tactics and related activities. Fundamental skills and techniques used by firefighters 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 various kinds of firefighting tactics, vehicle or equipment operation, or firefighter safety and survival, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing firefighters. (FT) AA/AS.

**395S Special Topics in Open Water Lifeguarding**  
**1 hour lecture, 7–20.5 hours lab,**  
**0.2 units**  
**Grade Only**

This course provides open water lifeguards with training in various kinds of lifeguarding practices. Fundamental skills and techniques used by lifeguards 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 various kinds of lifeguarding techniques, vehicle or equipment operation, or emergency management, among others. Focus areas are listed in the class schedule and student transcripts. This course is intended for practicing open water lifeguards. (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 226. 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; C-ID GEOG 110.

**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; C-ID GEOG 111.

**102 Cultural Geography**  
**3 hours lecture, 3 units**  
**Letter Grade or Pass/No Pass Option**

*Advisory:* English 101 or English 105, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is an introduction to thematic cultural geography. Emphasis is placed on population, race, language, religion, settlement patterns, political organization, economic activities, industry, and the regional distribution of these elements. This

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course is for students interested in thematic cultural geography or Social Science majors. (FT) AA/AS; CSU; UC; C-ID GEOG 120.

### 104 World Regional Geography

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

*Advisory:* English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course is a survey of the world's major geographical regions, including Europe, North America, Latin America, Africa, Australia, Oceania, and South, East, and Southeast Asia. Emphasis is placed on the historical, environmental, cultural, economic, and technological factors that impact these geographical areas. This course is intended for students majoring in Geography and all students interested in world geography. (FT) AA/AS; CSU; UC; C-ID GEOG 125.

***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 226. 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; C-ID GEOL 100.

### 101 Physical 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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

This laboratory course is a practical study of mineral and rock identification, landforms, topographic/geologic map interpretation, and geologic structures. 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; C-ID GEOL 100L.

### 104 Earth Science

3 hours lecture, 3 units

Letter Grade or Pass/No Pass Option

*Advisory:* English 47A or 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 Earth's major physical systems, including the lithosphere, hydrosphere, atmosphere, and Earth's place in the solar system. Emphasis is placed on a synthesis of pertinent topics in geology, physical geography, oceanography, meteorology, and astronomy. This course is intended for those with a general interest in the Earth sciences. (FT) AA/AS; CSU; UC.

### 111 The Earth Through Time

3 hours lecture, 3 hours lab, 4 units

Letter Grade or Pass/No Pass Option

*Advisory:* English 101 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30 and Geology 100 or Geology 104, each with a grade of "C" or better, or equivalent.

This course covers the principles of historical geology. Topics include the origin and evolution of Earth and its biosphere, plate tectonics, stratigraphy, paleontology, and geologic dating. This course is intended for students with a general interest in geoscience, as well as those majoring in geology, earth science, or geological engineering. (FT) AA/AS; CSU; C-ID GEOL 111.

***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 226. Please refer to the class schedule and/or see the dean or department chair for availability.**

## Health Education (HEAL)

### 101 Health and Life-Style

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 aspects of mental, emotional, social, environmental, spiritual 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. This course is of interest to all students seeking a healthy lifestyle, and to those pursuing a teaching credential. Satisfies State of California Health Education requirement for teaching credential. (FT) AA/AS; CSU; UC.

### 195 Health Education For Teachers

**2 hours lecture, 2 units  
Grade Only**

*Advisory:* English 47A or 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 Health Education 190.

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, sexually transmitted diseases, illicit substance abuse, alcohol and nicotine use and misuse. This course satisfies the State of California Health Education requirement for

the K-12 Teaching Credential. This course is intended for prospective K-12 teachers. 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 226. 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 101 with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6. This course examines the growth of civilizations and the interrelationships of peoples of Europe, Asia, Africa and the Americas from the birth of civilization to the eve of the Modern Era. Topics in social, intellectual, economic, and political history are covered. This course is intended for history majors and all students interested in 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 101 with a grade of “C” or better, or equivalent or Assessment Skill Levels R6 and W6. 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 intended for history majors as well as anyone seeking a global historical perspective. (FT) AA/AS; CSU; UC; C-ID HIST 160.

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**105 Introduction to Western Civilization I**  
**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 an historical survey of Western Civilization from the early human communities through early modernism. The course is designed to introduce students to the ideas, attitudes, and institutions basic to Western Civilization through primary and secondary source material. This course is intended for students majoring in history as well as any student seeking a broad historical perspective. (FT) AA/AS; CSU; UC; C-ID HIST 170.

**106 Introduction to Western Civilization 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 W6 and R6. This course is an historical survey of Western Civilization from early modernism to the present. Students are introduced to the ideas, attitudes, and institutions basic to Western Civilization. Topics include the political structures, social structures, forms of cultural expression, and patterns of change during key periods of Western history. This course is intended for history majors as well as any student seeking a broad historical perspective. (FT) AA/AS; CSU; UC; C-ID HIST 180.

**109 History of the United States I**  
**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, 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. Students are required to analyze a variety of materials, think critically, and write thesis-based essays. This course is intended for all students interested in United States history. 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 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. 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. Students are required to analyze a variety of materials, think critically, and write thesis-based essays. This course is intended for all students interested in United States history. 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.

**115A History of the Americas I**  
**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 history of the Americas from 1500 through 1870. Emphasis is placed on a comparison of the cultural forms, political institutions, social relations, and economic structures that resulted from the interactions among people of different socially defined cultures, races, ethnicities, and social classes. Topics include the emergence of the independence movements in the Americas, political conflict and civil war in the newly independent countries, and the consolidation of stable nation states by 1870. The United States Constitution and subsequent political institutions in the United States are compared to the other newly independent countries in the Americas. This course is intended for students majoring in History and those interested in the history of the Americas. (FT) AA/AS; CSU; UC.

**115B History of the Americas 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 course is a history of the Americas from 1865 to the present. Emphasis is placed on the application of classical liberalism during the late nineteenth century, construction of corporatist states during the mid-twentieth century, and the advent of neo-liberalism in the late twentieth century. Topics include the development of the California State Constitution, the expansion of commerce, and

international relations among nations in the Western Hemisphere. This course is intended for students majoring in History and those interested in the history of the Americas. (FT) AA/AS; CSU; UC.

### 120 Introduction to Asian Civilizations

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 examines the social, cultural, and political evolution of distinct civilizations in East, South, and Southeast Asia from prehistory to the end of the sixteenth century. Emphasis is placed on topics such as the development of indigenous religions/philosophies, the rise and decline of regional kingdoms/dynasties, cultural achievements, and gender roles. This course is intended for all students interested in Asian history and culture. (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 101 with a grade of “C” or better, or equivalent or Assessment Skill Level R6 and W6. 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. This course is intended for all students interested in Asian history and culture. (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 101 with a grade of “C” or better, or equivalent or Assessment Skill Level R6 and W6. This course covers the history of the United States from its colonial origins through the period of Reconstruction with a special emphasis on the history and role of women. Topics include the diverse contributions of women that 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 is intended for students interested in history or 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 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 Reconstruction to the present with a special emphasis on the history and role of women. Topics include the diverse peoples who influenced the history of the nation and its maturing economic, social and political institutions. This course requires students to analyze a variety of materials, think critically, and write thesis-based essays. It is intended for students interested in history or 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.

***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 226. 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 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

**AA/AS** = Associate Degree Applicable  
**CSU** = California State University Applicable  
**UC** = University of California Applicable

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 47A or 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 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 47A or 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 226. 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 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 the Upper Paleolithic (ca. 40,000 BCE) to approximately 1400 CE. 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 226. 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 is a survey of mass communication in the United States. Emphasis is placed on the historical and contemporary impact of the media on society and culture as well as on the ways that social institutions shape the media. Students examine media related issues as they relate to social and

cultural constructs, economics, technology, law and ethics, and social issues. This course is designed for journalism majors and all students interested in the relationship between mass media and society. (FT) AA/AS; CSU; UC Transfer Limitation: Digital Journalism (DJRN) 100 and Journalism (JOUR) 202 combined: maximum credit, one course; C-ID JOUR 100.

***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 226. 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,

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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**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 100A 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.

*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 research methods, primary and secondary sources, official and unofficial opinions, binding and persuasive authority, the Shepard's system of validating cases and statutes, 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)

**1 hour lecture, 1 unit  
Grade Only**

*Prerequisite:* Legal Assistant 105 with a grade of "C" or better, or equivalent.

This course 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**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 105 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.

*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**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 100A 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.

*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 100A 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.

*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 100A 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 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 100A with a grade of "C" or better, or equivalent.

*Advisory:* Legal Assistant 105 with a grade of "C" or better, or equivalent and 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 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 100A 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.

*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 100A with a grade of "C" or better, or equivalent.

*Advisory:* Legal Assistant 105 or 110 with a grade of "C" or better, or equivalent and English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

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**

*Corequisite:* Completion of or concurrent enrollment in: Legal Assistant 100A 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.

*Advisory:* Completion of or concurrent enrollment in: Legal Assistant 105 or 110 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Business 265: Bankruptcy Law.

This course is a specialty elective in the Legal Assistant program that focuses on bankruptcy law and procedures. Topics include 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.

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**165 Family Law****3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in: Legal Assistant 100A 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Business 265: Family Law.

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 100A 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.

*Limitation on Enrollment:* This course is not open to students with previous credit for Business 265: Corporate Law.

This course introduces students to the various forms of business enterprises, including sole proprietorships, partnerships, and corporations. The course focuses on the legal steps and forms needed to create, maintain, and dissolve each type of business with an emphasis on corporations.

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 100A 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 the responsibilities and duties that paralegals perform under estate attorney supervision. Topics include estate administration legal principles; terminology; and procedural steps, 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 100A 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 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 100A with a grade of "C" or better, or equivalent.

*Advisory:* Legal Assistant 105 or 110 with a grade of "C" or better, or equivalent and English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

This legal specialty elective 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 100A 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 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 course 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 100A with a grade of "C" or better, or equivalent.

*Advisory:* Legal Assistant 105 with a grade of "C" or better, or equivalent and English 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6.

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.

## 215 Administrative Law

**3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 100A 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 legal specialty course presents basic concepts of administrative law and procedure in federal and state agencies, with emphasis on the paralegal's role in the administrative process. Students learn both formal and informal advocacy techniques, including representing clients before administrative bodies. Substantive topics include administrative delegation of power, rule making, agency discretionary powers, remedies, and judicial review. Procedural topics include agency operation; adjudication; hearing preparation; and administrative and judicial appeals. This course is intended for students majoring in Paralegal or anyone interested in administrative law. (FT) AA/AS; CSU.

## 220 Intellectual Property Law

**3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 100A 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 legal specialty course provides the student with an in-depth analysis of the law pertaining to the fields of intellectual property: trademarks, copyrights, patents, trade secrets, and unfair competition. The methods by which each topic is created and protected will also be explored. This course is intended for students majoring in Paralegal or anyone interested in intellectual property law. (FT) AA/AS; CSU.

## 225 Real Estate Law

**3 hours lecture, 3 units  
Grade Only**

*Corequisite:* Completion of or concurrent enrollment in Legal Assistant 100A 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 legal specialty elective course is an introduction to real estate law and practice. Topics include property rights; types of land ownership/estates; the effects of easements and rights-of-way on title and use of real estate; agreements for leasing; agreements for sale; financing; conveyancing; title insurance; settlement procedures; recording; and post-closing matters that deal with residential, commercial, condominiums, and planned communities. Ethics will be discussed throughout the course in relation to specific scenarios that may occur during the practice of real estate law. This course is intended for students majoring in Paralegal or anyone interested in real estate 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.

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**UC** = University of California Applicable

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.

## 290 Independent Study

3–9 hours other, 1–3 units  
Pass/No Pass

*Limitation on Enrollment:* Must obtain an Add Code from the instructor for enrollment.

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. 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 226. 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 226.***

## Lifeguarding

See Fire Protection Technology (FIPT), page 344.

## 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 226. 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

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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 and Mathematics 34A, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R4 and M20 or English for Speakers of Other Languages 31 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 previous credit for Mathematics 35. This course is a study of the fundamentals of arithmetic operations with signed numbers, 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.

**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 48 and English 43, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W4.

*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 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. It 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. (FT) Not applicable to Associate Degree.

## Associate Degree Courses

### 96 Intermediate Algebra and Geometry 3 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 or English 47A with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5. 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; UC Transfer Limitation: Mathematics 115, 119 and PSYC 258 combined: maximum credit, one course. Students must complete both Statway courses UC-transferable for students applying to UC for Fall 2016 and later. Please see a Counselor.

### 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

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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; 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 Math for the Liberal Arts Student

**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.

*Advisory:* English 101 with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6. This course covers a selection of topics from logical reasoning, quantitative literacy, the history of mathematics, statistics, probability, number theory, problem-solving techniques, and applications of mathematics to the liberal arts curriculum. Emphasis is placed on the development of an understanding and life long appreciation for critical thinking and mathematical problem solving. This is a general education mathematics course designed for students majoring in the liberal arts. (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 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. (FT) AA/AS; CSU; UC Transfer Limitation: Mathematics (MATH) 121 and 150 combined: maximum credit, one course; C-ID MATH 140.

### 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 an introduction to university-level calculus requiring a strong background in algebra and trigonometry. The topics of study include analytic geometry, limits, differentiation and integration of algebraic and transcendental functions, and applications of derivatives and integrals. Emphasis is placed on calculus applications involving motion, optimization, graphing, and applications in the physical and life sciences. This course incorporates the use of technology. Analytical reading and problem solving are strongly emphasized in this course. This course is intended for students majoring 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.

**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 or English 105, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

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.

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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.

### 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.  
This course includes the algebra and geometry of 2 and 3 dimensional Euclidean vectors, the algebra and calculus of multivariable functions including composition of functions, limits, continuity, partial differentiation, gradients, higher order derivatives, the chain rule, constrained and unconstrained optimization including 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. This course is essential for most upper division courses in mathematics and forms part of the foundation for engineering and physics. The course is intended for the students interested and/or planning to major in mathematics, physics, astronomy, 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, eigenvectors, the rank and nullity of matrices and introduction to 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 226. 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, 202 and 203, each with a grade of "C" or better, or equivalent. All prerequisites must be completed within five years prior to enrollment.

*Limitation on Enrollment:* Health and Safety. Certified Phlebotomy Technician Level I (CPT-1 License CA). Must obtain an Add Code from the instructor for enrollment. Required to verify CPT-1 License and clinical placement.

This course provides clinical laboratory practice and experience in the laboratory of general and specialized chemistry. Various instrumentation, as well as bench and manual methods, will be introduced. 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. (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, 202, and 203, each with a grade of "C" or better, or equivalent. All prerequisites must be completed within five years prior to enrollment.

*Limitation on Enrollment:* Health and Safety. Certified Phlebotomy Technician Level I (CPT-1 License CA). Must obtain an Add Code from the instructor for enrollment. Required to verify CPT-1 License and clinical placement.

This course provides laboratory practice and experience in the laboratory of hematology, urinalysis and coagulation. Various instrumentation, as well as bench and manual methods, will be introduced. 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. (FT) AA/AS.

### 53 Directed Clinical Practice in Clinical Immunology and Immunohematology

160 hours other, 2 units  
Grade Only

*Prerequisite:* Medical Laboratory Technician Training 201, 202, and 203, each with a grade of "C" or better, or equivalent. All prerequisites must be completed within five years prior to enrollment.

*Limitation on Enrollment:* Health and Safety. Certified Phlebotomy Technician Level I (CPT-1 License CA). Must obtain an Add Code from the instructor for enrollment. Required to verify CPT-1 License and clinical placement.

This course provides clinical laboratory practice and experience in the laboratory of serology and blood banking, including syphilis serology and general immunology. Various instrumentation, as well as bench and manual methods, will be introduced. 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. (FT) AA/AS.

### 54 Directed Clinical Practice in Clinical Microbiology

160 hours other, 2 units  
Grade Only

*Prerequisite:* Medical Laboratory Technician Training 201, 202, 203, each with a grade of "C" or better, or equivalent. All prerequisites must be completed within five years prior to enrollment.

*Limitation on Enrollment:* Health and Safety. Certified Phlebotomy Technician Level I (CPT-1 License CA). Must obtain an Add Code from the instructor for enrollment. Required to verify CPT-1 License and clinical placement.

This course provides laboratory practice and experience in the clinical laboratory of microbiology. Various instrumentation, as well as bench and manual methods, will be introduced. Emphasizes technique, accuracy and precision. This practicum will take place at a clinical affiliate site that will be

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assigned by the Medical Laboratory Technician Training Program Director. This course is intended for students majoring in Medical Laboratory Technology. (FT) AA/AS.

**201 Clinical Chemistry and Urinalysis**  
**1 hour lecture, 9 hours lab, 4 units**  
**Grade Only**

*Prerequisite:* Biology 107 or Biology 131, each with a grade of "C" or better, or equivalent; Chemistry 130, Chemistry 130L, Biology 230, and Biology 235, each with a grade of "C" or better, or equivalent completed within seven years prior to enrollment.

*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:* Must obtain an Add Code from the instructor for enrollment. Required to verify recency of prerequisite coursework.

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 Biology 131, each with a grade of "C" or better, or equivalent; Chemistry 130, Chemistry 130L, Biology 230, and Biology 235, each with a grade of "C" or better, or equivalent completed within seven years prior to enrollment.

*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:* Must obtain an Add Code from the instructor for enrollment. Required to verify recency of prerequisite coursework.

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 Biology 131, each with a grade of "C" or better, or equivalent; Chemistry 130, Chemistry 130L, Biology 230, and Biology 235, each with a grade of "C" or better, or equivalent completed within seven years prior to enrollment.

*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:* Must obtain an Add Code from the instructor for enrollment. Required to verify recency of prerequisite coursework.

This course introduces the theory and methods used in clinical microbiology laboratory. Lecture covers an introduction to the dynamics of infectious disease including clinical, epidemiologic, and therapeutic features of clinically relevant organisms. Laboratory covers principles and techniques commonly used in 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.

**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 Level R5 and W5.

This course is designed to develop aural and analytical musical skills. Emphasis is placed on conceptual, contextual, and stylistic elements of music from various periods and cultures, and encompassing a range of genres and styles. 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.

### 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 include songwriting; music publishing; copywriting; 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. This course is intended for students majoring in music or anyone interested in the music industry. (FT) AA/AS; CSU.

### 109 World Music

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or 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. This course is intended for students majoring in music or anyone interested in music and culture. (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 101 with a grade of "C" or better, or equivalent or Assessment Skill Level R6 and W6. 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 and twenty-first centuries, current trends and outstanding performers and composers. This course is intended for students majoring in music and all students interested in the history of jazz. (FT) AA/AS; CSU; UC.

### 116A College Piano I

**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 115A.

This course is an introduction to theoretical and practical piano and keyboard skills. Emphasis is placed on developing repertoire, articulations, sight reading, transposition, harmonization, and

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consistency of tempo. This course is designed for music majors and all students interested in developing fundamental piano and keyboard skills. (FT) AA/AS; CSU, UC.

**116B College Piano II**

**1.5 hours lecture, 1.5 hours lab, 2 units  
Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 116A with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Music 115B. This is the second course in the college piano sequence. Emphasis is placed on basic piano and keyboard experience through music reading, notation, scales, chords and their inversions, transposition, and sight-reading. Students play a repertoire of beginning and intermediate songs and piano literature, with emphasis on keyboard harmony. This course is designed for music majors and all students interested in developing fundamental piano and keyboard skills. (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. This course focuses on developing right and left-

hand technique and sight-reading. Lectures are followed by practical application on the instrument. The course is intended for students who are interested in learning the fundamentals of classical guitar and elementary music skills. (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. This course is intended for students who are interested in learning classical guitar and music skills. (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 of the "common practice" period (1600-1900). The emphasis is

on continued development of four-part writing skills using seventh chords and borrowed chords (secondary dominants and secondary leading tone chords), the process of modulation; melodic construction using non-harmonic tones; analysis of Bach Chorales and of binary and ternary forms. 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.

### 158B Music Theory II

**4 hours lecture, 4 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 158A with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in: Music 268B.

This course is an intensive study of diatonic harmony in major and minor modes and includes structural and stylistic analysis of music from 1700 to 1900. The emphasis is on continued development of four-part writing skills using seventh and borrowed chords, non-harmonic tones, suspensions, retardations, figured bass, 6/4 chords, modulation and tonicization. The course will include analysis of Baroque and classical pieces of music and an examination of structural elements, large-scale events, analysis, and form. The course will also include identifying, creating, and composing with the modes of the major scale. 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 47A or 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 Music 150A with a grade of "C" or better, or equivalent.

This course is a study of simple electronic and acoustic theory as it applies to sequencing Musical Instrument Digital Interface (MIDI), hard disk recording and other computer music applications. Students design and create projects using microphones, recorders, mixing boards, synthesizers, and samplers. This course is designed for all students interested in making electronic music in a recording studio. (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 47A or 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 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. Emphasis is placed on the various applications of advanced recording, microphone use, and mixing, such as editing, effects processing, music concrete composition, and other techniques for music composition. This course is intended for advanced music students who work with recording equipment. (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.

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.

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**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.

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/or production applications in a variety of media environments. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music created. This course is intended for advanced music students working in the electronic music studio. (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 190 with a grade of "C" or better, or equivalent.

*Advisory:* 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. Students analyze the nature of sound, sound production, sound enhancement, and the resulting music and sound recordings created. This course is intended for advanced music students working in the electronic studio. (FT) AA/AS; CSU.

**216 College Piano III**

**1.5 hours lecture, 1.5 hours lab, 2 units  
Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 115B or Music 116B, each with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Music 215B.

This course is an intensive study of practical and theoretical keyboard techniques. Emphasis is placed on music reading, notation, scales, chords, harmonization and sight-reading. Students play intermediate level piano literature and four-part scores. This course is designed for music majors and all students who want to deepen their piano skills. (FT) AA/AS; CSU; UC.

**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.

**258A Music Theory III**

**4 hours lecture, 4 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 158B with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in Music 269A.

This course is the third in a four semester sequence.

It includes a detailed study of compositional techniques and structure in the music of the 18th and 19th centuries. The emphasis is on further development of analysis and writing skills using chromatic harmonies including secondary dominants, secondary leading tone chords, chromatic thirds, modulations, expanded tonicization, modal borrowing, modal mixture, altered predominants and altered dominant chords. The course includes analysis and writing of two-part tonal counterpoint and the analysis of Sonata form, binary and ternary forms. 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.

**258B Music Theory IV**

**4 hours lecture, 4 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 258A with a grade of "C" or better, or equivalent.

*Advisory:* Concurrent enrollment in Music 269B.

This course is the fourth of a four semester sequence.

It includes a detailed structural analysis and study of compositional techniques in the music of the 19th, 20th and 21st centuries. The emphasis is on the study and composition of music using the new compositional techniques that emerged in the music of the late 19th and early 20th centuries including non-functional harmony, polytonality, atonality, serial techniques and jazz. The course includes analysis of music by Wagner, Debussy, Bartok, Stravinsky and Schoenberg. 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.

**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.

*Corequisite:* Completion of or concurrent enrollment in Music 158A with a grade of "C" or better, or equivalent.

The course is designed to facilitate perception, performance and identification of melodic, harmonic and rhythmic patterns in music. This course consists of sight singing scales, melodies, and rhythms, notating melodies, harmonies, and rhythms, and identifying chords and intervals. The emphasis is on the development of basic skills in sight singing and dictation: the sight singing and notating of short diatonic melodies containing seconds, thirds, fourths, fifths and octaves, the identification of major, minor, augmented and diminished triads in root position, harmonic dictation of primary triads in major keys, and rhythmic dictation with duple, triple and quadruple 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.

**268B Beginning Ear Training Laboratory II**  
**3 hours lab, 1 unit**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 268A with a grade of "C" or better, or equivalent.

This course is the second of a four-course sequence in ear training. Emphasis is placed on continued development of skill in sight singing major and minor melodies which contain seconds, thirds, fourths, fifths, sixths, sevenths, octaves and the tritone; melodic dictation containing triadic arpeggiations; harmonic identification of all diatonic triads in root position and inversions and in major and minor keys; rhythmic dictation with duple, triple, and quadruple subdivisions of the beat in simple and compound meters; notation of two-part and four-part dictation; and identification of errors in melodic phrases. 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.

**269A Advanced Ear Training Laboratory III**  
**3 hours lab, 1 unit**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 268B with a grade of "C" or better, or equivalent.

This course is the third semester of a four semester series. Emphasis is on continued development of skills in sight singing melodies which contain all intervals; melodic dictation of longer phrases which contain modulations; harmonic identification of all diatonic seventh chords and harmonic dictation of chorale phrases which modulate; rhythmic dictation with quarter and eighth beat values and in simple and compound meters; and identification of all triads in all inversions and seventh chords in root position. This course is designed for the student pursuing a music major or the student interested in enhancing technical knowledge and skills. (FT) AA/AS; CSU; UC.

**269B Advanced Ear Training Laboratory IV**  
**3 hours lab, 1 unit**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Music 269A with a grade of "C" or better, or equivalent.

This course is the fourth semester of a four semester series. Emphasis is on continued development of skills in sight singing melodies which contain all intervals, larger leaps, modality, and non-diatonic tones; melodic dictation of longer phrases which contain modulations, modality, and non-diatonic tone; harmonic identification of all diatonic seventh chords and harmonic dictation of chorale phrases which modulate, and contain secondary dominants, secondary leading tone chords, augmented sixth and neapolitan sixth chords; rhythmic dictation with quarter, eighth, and sixteenth note value, ties, and rests in simple and compound meters; and identification of all triads and seventh chords in all inversions; two-part dictation and error detection. 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

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## Nutrition (NUTR)

### 150 Nutrition

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 101 and Mathematics 38, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6, W6 and M30.

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. (FT) AA/AS; CSU; UC Transfer Limitation: Nutrition (NUTR) 150 and 155 combined: maximum credit, one course.

### 153 Cultural Foods

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or 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 Culinary Arts/ Culinary Management 150.

This course examines the regional, ethnic, cultural, religious, historical and social influences on food patterns and cuisine, as well as how food is viewed as an expression of cultural diversity. Traditional foods of geographic areas and cultures, geographic factors in food availability, global food issues, dietary habits, religious influences and an overview of nutritional problems of ethnic groups are discussed and assessed. Connection is drawn between major historical events and how and why these events affected and defined the culinary traditions of different societies. Also presented are nutrition consequences of ethnic food choices, sanitation and safety practices, and applications of food and nutrition services. This course is for students interested in a career in nutrition, dietary service supervisor certificate, culinary, hospitality management, and those with an interest in ethnic cuisine. (FT) AA/AS; CSU; UC.

### 155 Advanced Nutrition

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Nutrition 150, Biology 107, Chemistry 100 and 100L, 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 in-depth study of the functioning of nutrients in the basic life processes from a biochemical and cellular approach. Emphasis is placed on the investigation of certain diets in relation to disease, current legislation relating to nutritional issues, and consumer nutritional practices. This course is intended for Nutrition and Allied Health majors. (FT) AA/AS; CSU; UC.

### 170 Nutrition and Fitness

**3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

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.

### 180 Nutrition and Diet Therapy

**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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is a study of the concepts of nutrition in relationship to diet therapy. Emphasis is placed on nutrition assessments of individuals with various diseases and/or conditions and related therapeutic diets. Topics include nutritional support for patients who cannot or will not eat and drug/nutrient interactions. This course is intended for nutrition and allied health majors. (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 226. 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 300.

### Paralegal

See Legal Assistant (LEGL), page 361.

## Personal Growth (PERG)

### 120 College Success and Lifelong Learning

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Music 150A with a grade of "C" or better, or equivalent.

*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 discovering self-motivation, accepting personal responsibility, mastering self-management, employing interdependence, gaining self-awareness, goal setting, decision-making strategies, critical and creative thinking, personal health topics, interpersonal communication, developing emotional intelligence, 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 personal and professional self-development and to the discovery of many new options for improving all aspects of their lives. This course is intended for new college students or those seeking to develop their academic and lifelong learning skills. (FT) AA/AS; CSU; UC Transfer Limitation: Personal Growth (PERG) 120 and 127 combined: maximum credit, 3 units.

### 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 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 self-exploration, career transitions and career-life planning in order to achieve success in a diverse society. Various assessments are utilized through a systematic approach to career development by examining values, interests, skills, and personality types. Other topics include life roles, personal self-management, decision-making and goal-setting throughout the life span. (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 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Level R5 and W5.

In this course students develop their emotional, social, educational, and professional life skills. It 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. This course is intended for students beginning college or anyone seeking to balance 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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

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## 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 and Mathematics 96, each with a grade of "C" or better, or equivalent or Assessment Skill Levels W6, R6 and 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; C-ID PHIL 210.

### 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; C-ID PHIL 100.

### 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; C-ID PHIL 120.

### 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 226. 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 47A or English 48 and English 49, each with

a grade of "C" or better, or equivalent or Assessment Skill Levels R5 or W5; Mathematics 46 with a grade of "C" or better, or equivalent or Assessment Skill Level M40.

This course introduces students to the physical science laboratory and is designed to demonstrate the fundamental concepts of astronomy, geology, chemistry, physics and/or the earth sciences. Emphasis is placed on scientific method and collaborative learning. This course is designed for all students interested in the physical sciences. (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; UC Transfer Limitation: PHYN 105 and 215 combined: maximum credit, one course.

### 120 The Oceans

**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; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is a study of the major features and processes of the world's oceans. Emphasis is placed on the origin and history of ocean basins, atmospheric and ocean circulation, and the dynamics of waves, tides, and coastlines. Students explore the oceans as a resource for people and analyze and evaluate human impacts on marine

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environments. This course is intended for all students interested in the world's oceans. (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 226. 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 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, 124A, 125A, 181A 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; C-ID PHYS 105.

### 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, 124B, 125B, 181B, 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 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.

*Advisory:* English 47A or 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 Mathematics 151 with a grade of "C" or better, or equivalent.

*Limitation on Enrollment:* This course is not open to students with previous credit for Physics 195A and Physics 196A.

This is the first of a three semester calculus-based general physics sequence designed for scientists and engineers. Topics include linear kinematics, Newton's Laws, energy, rotational kinematics, 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; C-ID PHYS 205.

**196 Electricity and Magnetism**  
**4 hours lecture, 3 hours lab, 5 units**  
**Grade Only**

*Prerequisite:* Physics 195 and Mathematics 151, each with a grade of "C" or better, or equivalent.

*Advisory:* Mathematics 252 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. Topics 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 (DC) and alternating current (AC) circuits is included. This course is intended for students majoring in the physical sciences or engineering. (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; C-ID PHYS 210.

**197 Waves, Optics and Modern Physics**  
**4 hours lecture, 3 hours lab, 5 units**  
**Letter Grade or Pass/No Pass Option**

*Prerequisite:* 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 196C.

This is the third semester of a three semester calculus-based Physics 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. (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; C-ID PHYS 215.

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## 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 intended for students majoring in Political Science and those interested in the field of political science. (FT) AA/AS; CSU; UC; C-ID POLS 150.

### 102 The American Political System

**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 comprehensive survey course provides an in-depth study of the American political system. National and California systems of government are studied from the perspective of constitutional frameworks and political institutions, processes, issues, and policies. Other topics include political participation; political parties and interest groups; social movements and minorities; civil liberties; and the role of political ideology, culture, and the mass media in shaping public opinion and policymaking. This course is intended for transfer students, political science majors, or students interested in the American political system. (FT) AA/AS; CSU; UC; C-ID POLS 110.

### 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. *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; C-ID POLS 130.

### 140 Contemporary International 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 Levels R6 and W6. 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. This course is intended for students majoring in political science or anyone with an interest in world politics. (FT) AA/AS; CSU; UC; C-ID POLS 140.

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## 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; C-ID PSY 110.

### 123 Adolescent 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 Level R6 and W6. This course is an exploration of an explosive period in human development. Topics include the physical, cognitive, and emotional development of the adolescent. Students study the stresses experienced during the teenage years and investigate methods of coping with the individual adolescent. This course is intended for students interested in psychology or human development. 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

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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; C-ID PSY 170.

### **201 Academic and Career Opportunities in Psychology**

**1 hour lecture, 1 unit  
Pass/No Pass**

*Prerequisite:* Psychology 101 with a grade of "C" or better, or equivalent.

*Advisory:* 30 units of college course work.

This course is a study of career options in the field of Psychology. Emphasis is placed on the identification of career-related strengths and interests and information on post-baccalaureate options in psychology and related fields. This course is designed for students interested in majoring in psychology. (FT) AA/AS; CSU.

### **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. This course is a study of the basic principles and research in animal and human learning. Topics include scientific versus nonscientific approaches to behavior studies, operant and respondent conditioning, observational and cognitive learning, and motivation as related to self-control. This course is designed for students majoring in psychology or interested in the field. 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 a study of the psychological development of humans in all their sociocultural diversity from conception to death. Emphasis is placed on the major theoretical paradigms related to growth and change and the variety of factors that shape similarities and differences in life. This course is intended for students majoring in psychology. (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.

### **258 Behavioral Science Statistics**

**3 hours lecture, 3 units**

**Letter Grade or Pass/No Pass Option**

*Prerequisite:* Mathematics 92 with a grade of "C" or better, or equivalent or Assessment Skill Level M45 or 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 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: Business (BUSE) 115, Mathematics (MATH) 115, 119, Biology (BIOL) 200 or Psychology (PSYC) 258 combined: maximum credit, one course; C-ID SOCI 125.

### **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.

This course is a study of the biological bases of behavioral and cognitive processes. Emphasis is placed on neuroanatomy and neurophysiology as a means for understanding how basic neurological processes impact perception, movement, consciousness, sexuality, hunger, emotions, and mental disorders. This course is designed for students majoring in Psychology and all students interested in physiological psychology. (FT) AA/AS; CSU; UC; C-ID PSY 150.

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### Real Estate (REAL)

## 101 Real Estate Principles

**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is a study of the economics and transfer of land ownership. Emphasis is placed on the roles and responsibilities of the broker, the owner and the purchaser in the buying and selling of property. This course is designed for students majoring in real estate and anyone interested in the principles of real estate. This course is required to sit for the California Real Estate License. (FT) AA/AS; CSU.

## 105 Legal Aspects of Real Estate I

**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or 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 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. This course is intended for current or future real estate professionals. (FT) AA/AS; CSU.

## 110 Principles of Real Estate Appraisal I

**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of "C" or better, or equivalent or Assessment Skill Level M30.

This course is a study of basic appraisal principles, market analysis, and highest and best use. Topics include 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 is intended for current or future real estate professionals. (FT) AA/AS; CSU.

## 115 Real Estate Finance I

**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 96 with a grade of "C" or better, or equivalent or Assessment Skill Level M50.

This course is a study of real estate finance. Emphasis is placed on the types of real estate lenders, the sources of income for lending purposes, and buyer qualifications. This course is designed for students majoring in real estate and for anyone interested in real estate finance. (FT) AA/AS; CSU.

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**120 Real Estate Practice****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 38 with a grade of “C” or better, or equivalent or Assessment Skill Level M30.

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. It is intended for current or future real estate professionals. (FT) AA/AS; CSU.

**125 Real Estate Economics****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 96 with a grade of “C” or better, or equivalent or Assessment Skill Level M50.

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; and 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. It is intended for current or future real estate professionals. (FT) AA/AS; CSU.

**140 Real Estate Appraisal II****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5; Mathematics 96 with a grade of “C” or better, or equivalent or Assessment Skill Level M50.

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). It is intended for current or future real estate professionals. (FT) AA/AS; CSU.

**151 Real Estate Computer Applications****3 hours lecture, 3 units  
Grade Only**

*Advisory:* English 47A or English 48 and English 49, each with a grade of “C” or better, or equivalent or Assessment Skill Levels R5 and W5.

This introductory course covers 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 license. It is intended for current or future real estate professionals. (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 226. 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 47A or 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 the basic concepts, theoretical approaches, and methods of sociology. Topics include the scientific study of social interaction, structure, and organization; groups; socialization and the self; social stratification; culture and diversity; social change; and global dynamics. Topics and examples emphasize present-day

America, including cross-cultural and multicultural analysis. This course is intended for students considering careers in counseling, teaching, social work, or nursing as well as anyone wishing to apply sociological ideas to everyday life. (FT) AA/AS; CSU; UC Transfer Limitation: Sociology (SOCO) 101 and Black Studies (BLAS) 115 combined: maximum credit, one course; C-ID SOCI 110.

### 110 Contemporary Social Problems

**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 requires students to identify and analyze present day social problems in the United States, with emphasis on sociological factors involved, including cross-cultural and multicultural analysis. Students use scientific methods and criteria for evaluating proposals for social betterment. This course is useful for students pursuing careers in criminology, counseling, education, law, and medicine. (FT) AA/AS; CSU; UC; C-ID SOCI 115.

### 201 Advanced Principles of Sociology

**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 study of the origins of sociological theory. Principal contributors are presented and examined in detail, with special attention to their model of human action, the nature of empirical fact, and implications for public policy. With an emphasis on critical analyses of science and the humanities, this course is designed to provide a standard theory foundation for transfer students majoring in the arts, sciences, or social sciences. AA/AS; CSU; UC.

### 220 Introduction to Research Methods in Sociology

**3 hours lecture, 3 units  
Grade Only**

*Prerequisite:* Sociology 101 with a grade of "C" or better, or equivalent.

*Advisory:* English 47A or English 48 and English 49, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R5 and W5; Psychology 258 with a grade of "C" or better, or equivalent.

This course introduces students to the fundamental elements of sociological research. Topics include the role of theory in research, issues of ethics, key steps of research design, a review of data collection

methods, quantitative and qualitative analyses, and development of a research report. This course is intended for students majoring in Sociology or other fields of social science. (FT) AA/AS; CSU; UC; C-ID SOCI 120.

### 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 226. 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 86A.

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

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**CSU** = California State University Applicable  
**UC** = University of California Applicable

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 interactive course introduces students to the Spanish language and the cultures of the Spanish speaking world. Students use basic Spanish language structures and vocabulary to speak, listen, read, and write in cultural context at the novice level. This course is intended for all students interested in gaining proficiency in the Spanish language for academic purposes and/or personal enrichment. (FT) AA/AS; CSU; UC Transfer Limitation: Corresponds to two years of high school study; C-ID SPAN 100.

### 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.

This interactive course is the second in the Spanish language series. Students use increasingly complex Spanish language structures to speak, listen, read, and write in cultural context at the novice-high level. This course is intended for all students interested in gaining proficiency in the Spanish language for academic purposes and/or personal enrichment. (FT) AA/AS; CSU; UC.

### 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 interactive course is the third in the Spanish language series. Students use increasingly complex language structures and vocabulary to develop the functional competence required to communicate beyond survival needs and to discuss and express opinions on abstract topics related to the arts, lifestyle, linguistics, and literature at the intermediate level. This course is intended for students majoring in Spanish and anyone interested in gaining proficiency in the Spanish language for academic purposes and/or personal enrichment. (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 previous credit for Spanish 200. This interactive course is the fourth in the Spanish language series. Emphasis is placed on the use of complex language structures and vocabulary to communicate beyond casual conversation and to express opinions and offer hypothetical possibilities related to abstract issues and plans, cultural norms and values, and interpersonal relationships. Students are encouraged to think critically by analyzing linguistic structures and making cross cultural comparisons related to the Spanish speaking world. This course is intended for students majoring in Spanish and anyone interested in gaining proficiency in the Spanish language for academic purposes and/or personal enrichment. (FT) AA/AS; CSU; UC Transfer Limitation: Spanish (SPAN) 201-202 and Chicano Studies (CHIC) 203-204 combined: maximum credit, one series; C-ID SPAN 210.

### 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.

## 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 226. 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 312)

## Speech Communications

(See Communication Studies, page 298)

## Sustainability (SUST)

### 101 Introduction to Sustainability

**3 hours lecture, 3 units**  
**Grade Only**

*Advisory:* English 101 or English 101, each with a grade of "C" or better, or equivalent or Assessment Skill Levels R6 and W6.

This course introduces students to an interdisciplinary examination of the theory and practices of sustainability. Sustainability can be defined as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. Topics include restoring ecological and environmental health, creating economic welfare, and ensuring social justice. This course is intended for students interested in Sustainability, Environmental Ethics, and Peace Studies. (FT) AA/AS; CSU; UC.

## 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 is the first in a three course sequence of Tagalog. Emphasis is placed on use the language through speaking, listening, reading, and writing at the novice level as well as basic language structures, appropriate forms of address, and vocabulary for

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**UC** = University of California Applicable

communication. This course is designed for all students interested in the Tagalog language. (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 226. Please refer to the class schedule and/or see the dean or department chair for availability.***

## Work Experience (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.

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Richard Bettendorf  
Ray Bowling  
Ed Brunjes  
James E. Cargill  
Eugene Chamberlin  
Michael Charles  
Norris A. Charles  
William Charman  
Larry Cooke  
Robert Crosby  
Fredrick Deutsch  
Kathleen R. Doorly  
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Gisella Duarte-Cosman  
Peter Elias  
Kenneth Fawcett  
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S.M. Franklin  
Robert Fritsch  
Gin Gee  
Parvine Ghaffari  
Vernal Goodman  
Rex Gorton  
Ruth Gray  
Stephen Greene  
Robert D. Henderson  
Eldon Hoover  
Ralph Jacobs  
Yolanda James  
Jerry LaFrance  
Linda Lee  
Clarence J. Lewis  
Morris W. Magoski  
Ray McFarlane  
Dale Mathews  
Joan Messenger  
Arashmidos Monjazebe  
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Ronald Page  
James Palmer  
William S. Puett  
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Jay Root

David Sanderlin  
Susan Schwarz  
June Scopinich  
Susan Scott  
John S. Shablow  
Richard Shultz  
Dorothy Simpson  
Sandra Smith  
Mary Strobbe  
Donald Taylor  
Terry Truitt  
Helen Webb  
James L. Weber  
Harvey Wilensky



# San Diego Miramar College Classified Employees



<b>Name</b>	<b>Position</b>	<b>Department</b>
AGONAFER, Sara	Senior Clerical Assistant	Public Safety
AGUILAR, Jessica	Senior Student Services Assistant	Evaluations
ALLEN, Joyce	Senior Secretary	Arts & Humanities
AFAN, Virgilio	Accounting Specialist	Accounting
ALFUENTE, Anthony	Senior Account Clerk	Accounting
AQUINO, Dennis	Production Services Assistant	Reprographics
AQUINO, Kyle	Senior Student Services Assistant	Financial Aid
AQUINO, Mark	Athletic Equipment Attendant	Park & Aquatic Center
AQUINO, Stacy	Senior Student Services Assistant	Financial Aid
ARREOLA, Atala	Custodian I	Facilities Services
ARTEAGA, Julian	Custodian I	Facilities Services
ATKINSON, Ellie	Student Services Assistant	Assessment
BARLOLONG, Tina	Student Services Technician	Veterans Affairs
BARNET, Roberto	Utility Worker	Facilities
BARTOLOMEI, Juli	Senior Clerical Assistant	Academic Senate
BATENGA, Ray	Stock Clerk II	Bookstore
BELL, Brett	Vice President, Administrative Services	Administrative Services
BENTON, Robert	Custodian I	Facilities Services
BOREY, Denise	Senior Student Services Assistant	Admissions and Records
BUENAVISTA, Alfredo	Custodian I	Facilities Services
BURKE, Kathy	Senior Student Services Assistant	Admissions & Records
BURTON, Cequine	Food Service Worker	Food Services
CABRERA, Reylyn	Instructional Lab Tech/Learning Resources	The PLACe
CADENA, Sara	Custodian	Facilities Services
CAMPBELL, Lynne	Senior Clerical Assistant	Facilities Services
CAMPUZANO, Michelle	Student Services Assistant	Career Center
CARRANZA, Gloria	Student Services Assistant	Admissions & Records
CASTILLEJOS, Yolanda	Instructional Lab Tech/Learning Resources	Audiovisual
CAVA, Lily	Bookstore Sales Clerk	Bookstore
CEJA, Juan	Gardener/Groundskeeper	Facilities Services
CHAU, Van	Instructional Assistant/Office Systems	Independent Learning Center
CONIGLIO, Carmencita	Accounting Supervisor	Accounting
CONTRERAS, Miguel	Custodian I	Facilities Services
CORDERO, Melanie	Senior Secretary	Math, Biological, Exercise and Physical Science
DAUGHERTY, Beth	Clerical Assistant	College Police
DAVENPORT-ALLEN, Leslie	Nursing Center Supervisor	Student Health Services
DAVIS, Arthur	Instructional Assistant/Aviation	Aviation Maintenance Technology
De LOS REYES, Edgar	Student Services Assistant	Financial Aid

<b>Name</b>	<b>Position</b>	<b>Department</b>
DIMAYUGA, Pocholo	Custodian I	Facilities Services
ELMONE, Shaunna	Administrative Technician	Business Office
EMERY, Christoph	Grounds Crew Leader	Groundskeeping
EMERY, Micah	Custodian	Facilities Services
ESCAMARILLA-RIOS, Teresita	Food Service Worker I	Food Services
FERIA, Adam	Accounting Technician	Accounting, Evaluations
FURMAN, Karen	Student Services Supervisor I	Admissions & Records, Veterans Affairs
GALVAZ, Danny	Custodian I	Facilities Services
GARCIA-LORENZO, Epifanio	Gardener/Groundskeeper	Gardening
GINES, Noel	Custodian	Facilities Services
GREEN, Carrie	Instructional Lab Technician	Child Development
GUTOWSKI, Dan	Administrative Services Supervisor	Park & Aquatic Center
MEYERS, Rob	Bookstore Location Supervisor	Bookstore
HANKINSON, Joseph	Placement Officer	Career/Employment
HEASTY, Francesca	Student Services Assistant	Counseling
HENSHAW, Maureen	Senior Food Service Worker	Food Services
HERMANN, Jack	Custodial Crew Leader	Facilities Services
HERNANDEZ, Julian	Administrative Technician	Business Office
HERNANDEZ, Rey	Custodian	Facilities Services
HILL, Kurt	Microspecialist Supervisor	Instructional Computer Support
HUBBARD, Terrie	Administrative Technician	Public Safety
HUNT, Margaret (Peggy)	Clerical Supervisor	Public Safety
HUYNH, An	Gardener/Groundskeeper	Gardening
IDANO, Tito	Gardener/Groundskeeper	Gardening
JOHNSON, Kristine	Lead Food Service Worker	Food Services
JOHNSTON, Toniann	Senior Student Services Assistant	Testing/Assessment/Career Services
JOSEPHSON, Jeffrey	Instructional Assistant	Automotive Technology
KANE, Thomas	Facilities Supervisor/Custodian II	Facilities 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
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/Audiovisual
MANALASTAS, Emilia	Instructional Lab Technician/Biology	Biological Sciences

<b>Name</b>	<b>Position</b>	<b>Department</b>
MARQUEZ, Cynthia	Instructional Lab Tech/Child Development	Child Development
MAYOR, Glynda	Food Service Worker	Food Services
McCORKELL, Francine	Instructional Support Supervisor	Independent Learning Center
McLEMORE, Tali	Student Services Assistant	Transfer Center
MIDDLETON, Carletta	Senior Secretary	Student Affairs
MIZE, Joan	Graphic Artist/Photographer	Communications
MORA, Dante	Stock Clerk I	Receiving/Stockroom
MUITTA, Phyllis	Student Services Assistant	Counseling
NEFF, Arnice	Senior Secretary	Business, Technical Careers, Workforce Initiatives
NELSON, Alice	Student Services Supervisor I	Counseling
NGUYEN, Tam Quy	Media Clerk	Library
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
NICHOLSON, John	Instructional Assistant/Diesel Technology	Diesel Technology
NOVAK, Anthony	Accounting Technician	Accounting
PACHECO, Bill	Intructional Lab Technician/Learning Resources	Audiovisual
PAPA, Ben	Custodial Crew Leader	Facilities Services
PARENT, Christine	Production Services Assistant	Reprographics
PHAM, Lonnie	Student Assistance Technician	Financial Aid
PHAYMANY, Pamela	Media Clerk	Library
PHILLIPS, Lorna	Medical Office Assistant	Health Services
PLATTS, Cleon	Student Services Assistant	Admissions and Records
POLLACK, Edith	Administrative Secretary	Office of Vice President of Student Services
REAGAN, Carol	Media Technician	Library
REICHARD, Betty-Anne	Instructional Lab Technician/Biotech	Biological Sciences
RICO, Maria	Student Assistance Technician	Financial Aid
ROBINSON, Janee	Senior Student Services Assistant	DSPS
RODGERS, Stacy	Administrative Technician	Public Safety
ROSAS, Herminio	Gardener/Groundskeeper	Groundskeeping
SALEHI, Kayhan	Instructional Asst/Learning Resources	Independent Learning Center
SANCHEZ, Margarita A.	Senior Clerical Assistant	Office of Instruction
SHOOSHTARY, Sam	Student Assistance Technician	EOPS/CARE
SIMMONS, Susan	Assistant Textbook Buyer	Bookstore
SMITH, William T.	Webmaster	Library & Technology
SORIANO, Anna Liza	Hourglass Park Supervisor	Park & Aquatics Center

<b>Name</b>	<b>Position</b>	<b>Department</b>
STACK, Dana	Student Services Supervisor II	Admissions & Records, VA, Evaluations
STAMOS, William	Instructional Lab Technician	Instructional Computer Support Computer Science
STERLING, Rakena	Custodian	Facilities Services
STILLSON, Daniel	Gardener/Groundskeeper	Gardening
STOUT, Mark	Instructional Lab Technician/Aviation	Aviation Maintenance Technology
TANJUAQUIO, Adrian	Student Services Assistant	Veterans Affairs
TEPRASEUTH, Tosh	Athletic Trainer	Athletics
THOMAS, Elizabeth	Instructional Lab Technician	Child Development Child Development
TODD, Katinea	Administrative Secretary	Office of Vice President of Instruction
TOWNSEND, Jacqueline	Senior Food Service Worker	Food Services
TREVISAN, Sandra	Information Officer	Communications
TUAZON, Ricardo	Custodian I	Facilities Services
UM, Minh Chon (Stephen)	Support Services Supervisor	Reprographics
VEGA, Elaine	Senior Office Manager	Business Office
VELAZQUEZ, Maria	Custodian	Facilities Services
VILABOY, Teresa	Financial Aid Officer	Financial Aid
VOLIN, Steven	Instructional Lab Technician	Physical Science
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
WATKINS, Robin	Media Technician	Library
WARREN, Briele	Executive Assistant to the President	President's Office
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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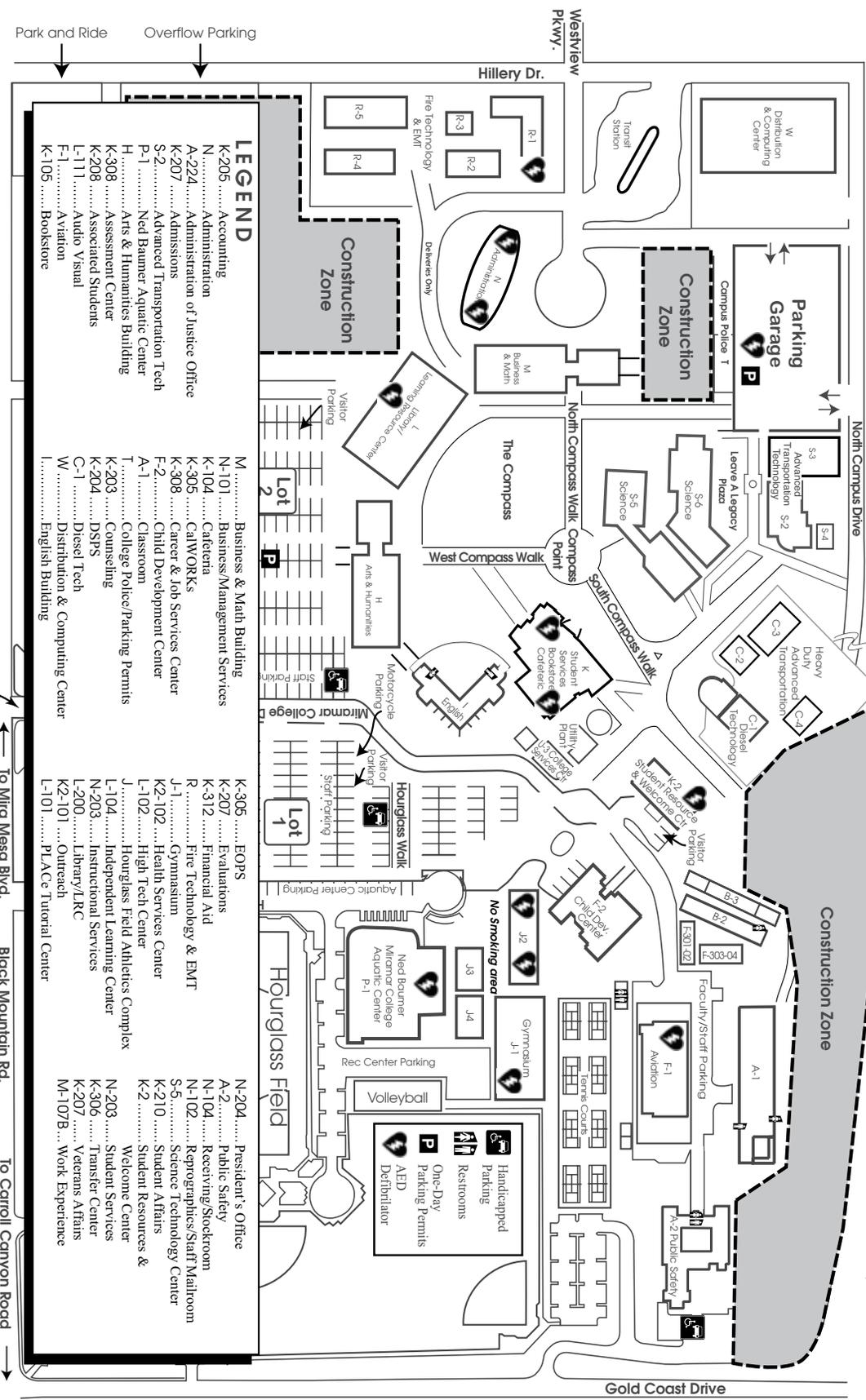
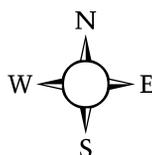
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# SAN DIEGO MIRAMAR COLLEGE CAMPUS MAP

Smoke Free Campus - Board Policy 0505



## LEGEND

- K-205.....Accounting
- N.....Administration
- A-224.....Administration of Justice Office
- K-207.....Admissions
- S-2.....Advanced Transportation Tech
- P-1.....Ned Banner Aquatic Center
- H.....Arts & Humanities Building
- K-308.....Assessment Center
- K-208.....Associated Students
- L-111.....Audio Visual
- F-1.....Aviation
- K-105.....Bookstore
- M.....Business & Math Building
- N-101.....Business/Management Services
- K-104.....Caterina
- K-305.....CalWORKS
- K-308.....Career & Job Services Center
- F-2.....Child Development Center
- A-1.....Classroom
- T.....College Police/Parking Permits
- K-203.....Counseling
- K-204.....DSPS
- C-1.....Diesel Tech
- W.....Distribution & Computing Center
- L.....English Building
- K-305.....EOPS
- K-207.....Evaluations
- K-312.....Financial Aid
- R.....Fire Technology & EMT
- J-1.....Gymnasium
- K-2-102.....Health Services Center
- L-102.....High Tech Center
- J.....Hourglass Field Athletics Complex
- L-104.....Independent Learning Center
- N-203.....Instructional Services
- L-200.....Library/LRC
- K-2-101.....Outreach
- L-101.....PLAcE-Tutorial Center
- N-204.....President's Office
- A-2.....Public Safety
- N-104.....Receiving/Stockroom
- N-102.....Reprographics/Staff Mailroom
- S-5.....Science Technology Center
- K-2-10.....Student Affairs
- K-2.....Student Resources & Welcome Center
- N-203.....Student Services
- K-306.....Transfer Center
- K-207.....Veterans Affairs
- M-107B.....Work Experience

Subject to change. Check [www.sdmiramar.edu](http://www.sdmiramar.edu) for up-to-date information.

**P** Miramar College Drive - campus main entrance is subject to closure













