

## PART II – DEGREE, CERTIFICATE AND TRANSFER INFORMATION

Successful completion of approved programs at San Bernardino Valley College may lead to:

- Completion of lower division (freshman and sophomore) requirements for transfer to upper division (junior) standing at a four-year college or university.
- An *Associate of Arts* or *Associate of Science* degree.
- A *Certificate of Completion* in a specific occupational field.

Even though these objectives are listed separately, it is possible to achieve all three concurrently during the first two years of college. For example, it is possible to use the coursework completed for a certificate program as a major for an associate degree. Similarly, students completing lower division requirements for transfer to a four-year college or university will find it possible to meet the requirements for an associate degree from San Bernardino Valley College.

Students are encouraged to work with a counselor to develop a plan to help them meet their educational goals in a time-effective manner.

### Associate Degree (Graduation) Requirements

Graduates from San Bernardino Valley College (SBVC) receive an Associate of Arts degree or an Associate of Science degree. To earn an Associate degree, students must complete general education breadth requirements as specified in Option #1 or Option #2 below, as well as additional units of electives and/or lower division requirements for a major.

Students must file a Graduation Application in the Records Office by the deadlines listed below:

- Fall graduation - October 1
- Spring graduation - March 1
- Summer graduation - July 1

When printed deadlines fall on either Saturday or Sunday, the filing period will be extended to the Monday following the deadline date.

### Associate Degree: Option #1

The Option 1 associate degrees are general degrees designed for students who plan to attend a four-year college or university.

#### Associate Degree Option 1a

The general education breadth requirements are the same as the requirements for the *Intersegmental General Education Transfer Curriculum* (IGETC). Refer to page 31 of the catalog for the IGETC requirements. In the process of completing this coursework the student must fulfill these general requirements:

1. Complete a minimum of 60 semester units of college coursework, with at least 12 semester units in

residence at SBVC.

2. Earn a letter grade of C or higher in each course.

#### Associate Degree Option 1b

The general education breadth requirements for this degree are the same as the requirements for the *California State University General Education Breadth Requirements* (CSU GE). Refer to page 34 of the catalog for the CSU GE requirements. In the process of completing this coursework the student must fulfill these general requirements:

1. Complete a minimum of 60 semester units of college coursework, with at least 12 semester units in residence at SBVC.
2. Earn at least a 2.0 grade point average for the CSU GE coursework. Earn a grade of C or better for each course in the Oral Communication, Written Communication, Critical Thinking and Mathematical/Quantitative Reasoning categories.

### Associate Degree: Option #2

This general Associate Degree is designed for students planning to seek immediate employment after graduation. The general education breadth requirements for this degree are listed below. In the process of completing this coursework, students must fulfill these general requirements:

1. Complete ACAD 100.
2. Complete a minimum of 60 semester units of college coursework, with at least 12 semester units in residence at SBVC.
3. Earn an overall grade point average of C (2.00) or higher.
4. Complete coursework for an Associate of Arts or an Associate of Science major as listed in Part III of the *San Bernardino Valley College Catalog*.
5. Demonstrate competency in English, mathematics and reading by satisfying the following criteria:
  - a. Competency in English as demonstrated by completion of ENGL 015 or ENGL 101 or ENGL 101H with a grade of C or higher.
  - b. Competency in mathematics as demonstrated by:
    - (1) Completion of MATH 090, BUSCAL 091, TECALC 097, or a higher level course in mathematics with a grade of C or higher, or
    - (2) Completion of a mathematics proficiency examination which is equivalent to a comprehensive final examination in MATH 090 with the equivalent to a grade of C or higher.

- c. Competency in reading as demonstrated by:
  - (1) Completion of READING 970X3, 100, or 101 with a grade of C or higher, or

- (2) Completion of all courses required to satisfy minimum graduation requirements in Categories I, II and III as listed below with an overall grade point average of 2.00 or higher.

6. Complete 24 to 26 of the 60 semester units needed for graduation from the five subject categories as listed below:

**Category I: Natural Science (minimum: 4 semester units if a laboratory is included; otherwise 6 semester units).** Courses in the following subjects carry credit for Natural Science:

ANTHRO 106  
 ASTRON (all courses)  
 BIOL (all courses)  
 CHEM (all courses)  
 FCS 162  
 GEOG 110, 111, 114, 285  
 GEOL (all courses)  
 OCEAN (all courses)  
 PHYSIC (all courses)  
 PS 101

**Category II: Social and Behavioral Science (minimum: 6 semester units; the two courses must be from two different subject areas).**

Courses in the following subjects carry credit for Social and Behavioral Sciences:

ANTHRO (all courses)  
 CD 105  
 ECON 100, 200, 200H, 201, 285  
 GEOG 102, 106, 120  
 HIST (all courses)  
 POLIT (all courses)  
 PSYCH 052, 100, 101, 102, 103, 104, 110, 111, 112, 113, 114, 116, 118,  
 SOC 100, 110, 130, 141, 145, 285  
 SPEECH 135, 174, 176

**Category III: Humanities (minimum: 6 semester units; the two courses must be from different subject areas with no more than three semester units within the category of Applied Courses as identified below).**

Courses in the following subjects carry credit for Humanities:

ANTHRO 109, 110  
 ARCH 145, 146, 150  
 ART 100, 102, 103, 105, 108, 109, 110, 111, 285  
 ASL 109, 110, 111  
 DANCE 200, 203  
 ENGL 055, 063, 065, 151, 153, 155, 161, 163, 165, 167, 175, 232, 260,  
 261, 270, 271, 275, 280, 281, 285A, 285B, 285C  
 FRENCH 101, 102  
 HIST 135, 153, 160, 161, 170, 171  
 MUS 100, 101, 102, 104, 105, 106, 107, 121, 122, 285  
 PHIL (all courses)

RELIG (all courses)  
 RTVF 100  
 SPAN 101, 102, 103, 104, 158, 285  
 SPEECH 110, 120  
 THART 100, 110, 115

### ***Applied Courses (Humanities)***

ARCH 151, 159  
 ART 120, 124X4, 126X4, 132X4, 145, 148, 149, 150 ,  
 158X4, 159X4,  
 161, 164X4, 175X4, 181, 182, 183, 212X4, 240X4, 270X4  
 MUS 103, 117X4, 126, 130, 133, 134, 136, 141X4, 150X4,  
 152X4, 154X4,  
 156X4, 158X4, 160X2, 162X4, 168X4, 170X4, 171X4,  
 174X4, 176X4,  
 178X4  
 THART 114X4, 120, 135, 160X4, 165, 222

**Category IV: Communication and Learning Skills (minimum: 6 semester units).**

1. English composition is required of all students. Courses meeting this requirement are ENGL 015 or 101 or 101H.
2. Students may select from the following courses to complete the other portion of the requirement:

BUSCAL 091, 200, 208  
 CD 140  
 CSYS (all courses)  
 ECON 208  
 FRENCH 101, 102  
 LIB 110  
 MIS (all courses)  
 MATH (all courses except MATH 942, 952 and TECALC 950)  
 OIS 115A, 173, 174A, 176, 179  
 PHIL 103  
 PSYCH 105  
 READ 970X3, 100, 101  
 RTVF 104, 105, 106  
 SPAN 015, 016, 101, 102, 103, 119, 140, 158  
 SPEECH 100, 111, 125, 130, 140

**Category V: Physical and Health Education (minimum 2 semester units).** Courses in the following subjects carry credit for Physical and Health Education: *(Note: A maximum of four semester units of Physical Education activity courses can apply for graduation requirements.)*

BIOL 140  
 DANCE 101X2, 102X4, 103X4, 105X2, 106X4, 107X4,  
 114x4  
 FCS 062, 162  
 HEALTH (all courses)  
 PE-I (all courses)  
 PE-T (all activities)

Students are exempt from this requirement if they have completed any of the following programs of study at SBVC: Nursing, Psychiatric Technology, or POLICE 001 (Basic Law Enforcement Academy). Veterans of the armed forces may have met this requirement; consult with a counselor. PE 231 (First Aid and CPR) does not satisfy this graduation requirement.

**Important Note:**

The purpose of categorical subject requirements for graduation is to assure that the graduate will have adequate breadth outside of the area of specialization. For this reason, **NO COURSES IN ANY OF THE PRECEDING CATEGORIES MAY BE USED TO MEET MORE THAN ONE REQUIREMENT.** However, units in a student's subject major may be used to fulfill the requirements in Categories I through V above.

**Associate Degree Majors**

San Bernardino Valley College offers associate degree majors in most departments listed in Part III of this catalog. Refer to the chart on page 37 for a complete list of associate degree majors. Refer to the particular department for course descriptions and a complete list of the courses required for that major.

A minimum of 18 units in associate degree-applicable coursework is required for a major in a subject discipline. The amount of flexibility a student has in selecting which courses will be used to meet these 18 units will vary from department to department, as described in Part III of this catalog.

The associate degree major in a specialized field or major is primarily intended for students who plan to enter an occupation after obtaining their two-year degree. Students preparing for the four-year baccalaureate degree normally do not begin to specialize or major until they leave San Bernardino Valley College. For these students, their lower division coursework will consist primarily of General Education Requirements and prerequisite courses that will lead to a major in their junior year. Thus a student planning to be a professional biologist or geologist is actually a pre-biology or pre-geology major during his/her first two years. Accordingly, these students should declare their associate degree major to be Liberal Arts, and should plan their lower division program on the basis of the requirements and recommendations of the four-year college or university to which they intend to transfer. Students are advised to consult the catalogs of the four-year schools they are interested in and to discuss specific requirements with their counselors.

**Graduation Catalog Rights**

A student in continuous attendance at San Bernardino Valley College, (or one who does not have a break in attendance of over five years), may either meet the graduation requirements in effect at the time of his/her initial enrollment at the college or the requirements in effect at the time of his/her graduation. A student who has had a break in attendance of over five years must meet the graduation requirements in effect at the time of readmission to the college or those in effect at the time of his/her graduation.

**Graduation Requirement Exceptions**

When a student has a deficiency in one or more of the areas required for graduation, he/she has the option of filing a *Petition for Academic Exception*, which is available in the Counseling Center (Administration 111). Each petition will be considered on the basis of its overall,

individual merit by the Scholastic Standards Committee.

**Vocational Certificate Programs**

San Bernardino Valley College offers certificates of occupational proficiency in many fields. Certificates enable the student to gain marketable skills relatively quickly and at less expense than would be required for an associate degree. Students working toward a certificate are not typically required to take advanced academic courses in such fields as philosophy, foreign languages or history. Nonetheless, they must have a sufficient background in arithmetic, reading and writing in order to complete their coursework and to succeed in the occupations they select. Refer to page 37 of this catalog for a complete list of certificates, and to the individual programs described in Part III for a complete list of the sequence and scope of courses required for each certificate. Students interested in enrolling in certificate programs should confer with a counselor and talk with representatives of the departments that offer the desired program. In some instances, courses completed in high school may be used to satisfy some of the requirements for a certificate. In addition, training programs such as military courses, apprenticeships or other training may be credited toward a certificate program.

At the beginning of the student's final semester, he/she should obtain a Graduation and/or Certificate Application either from the Records Office or the division office of his/her certificate program. The student will then submit the application to the Records Office for a final check by the deadline date for the semester in question. Those dates are as follows:

Fall	October 1
Spring	March 1
Summer	July 1

When printed deadlines fall either Saturday or Sunday, the filing period will be extended to the Monday following the deadline date.

Twelve units, or 50 percent of the coursework required for a certificate, whichever is the lesser, must be completed at San Bernardino Valley College. This residency requirement may be waived in the case of extenuating circumstances with the permission of the program coordinator or Department Head. The certificate will be prepared by the Records Office and will be available to the student by the start of each new semester following the semester of submission.

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

Completion of all the requirements in the Intersegmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from a community college to a campus in either the University of California (UC) or the California State University (CSU) without the need to complete additional lower-division general education courses. The IGETC is not an admission requirement for transfer to UC or CSU, nor is it the only way to fulfill prior to transfer, the lower-division, general education requirements of UC or CSU. Students pursuing majors that require extensive lower-division preparation may not find the IGETC option to be advantageous. The

requirements listed here, must be entirely completed and certified in order to be accepted by CSU and UC. Students with Advanced Placement (AP) Examinations, which are recognized as equivalent to SBVC courses listed below, will obtain credit for IGETC. A minimum grade of "C" is required in each course.

#### **AREA 1 - English Communication.**

CSU: Three (3) courses required, one from each group below.

UC: Two (2) courses required, one each from group A and B.

##### **Group A: English Composition**

1 course, 3 semester units/4-5 quarter units. Select from:  
ENGL 101\*\*, 101H\*\*

##### **Group B: Critical Thinking - English Composition**

1 course, 3 semester units/4-5 quarter units. Select from:  
ENGL 102  
PHIL 102

##### **Group C: Oral Communication (CSU only)**

1 course, 3 semester units/4-5 quarter units. Select from:  
SPEECH 100, 130, 140

#### **AREA 2 - Mathematical Concepts and Quantitative Reasoning**

1 course, 3 semester units/4-5 quarter units. Select from:  
MATH 102\*\*, 108, 115, 151, 250, 251, 252, 265, 266, 285

#### **AREA 3 - Arts and Humanities**

At least three (3) courses, with at least one from the Arts and one from the Humanities, 9 semester units/12-15 quarter units. Select from:

##### **Arts:**

ART 100, 102, 103\*\*, 105, 108, 109 (or ANTHRO 109), 110, 111, 285  
DANCE 200  
MUS 100, 101, 104, 105, 106, 107, 108, 121, 122  
THART 100

##### **Humanities:**

ENGL 151, 153, 155, 161, 163, 165, 167, 175 (or RELIG 175), 260, 261,  
270, 271, 275, 280, 281, 285A, 285B, 285C  
HIST 100, 101, 107\* (same as ANTHRO 107), 124, 126, 135 (or RELIG 135), 137, 138, 139, 140, 145, 150, 153, 160, 161, 170, , 171, 180\*  
MUS 285  
PHIL 101, 105, 112, 119, 120, 285  
RELIG 100, 101, 110 (same as ANTHRO 110), 135 (or HIST 135),  
150, 175 (or ENGL 175), 176  
SPAN 103, 104, 285

#### **AREA 4 - Social and Behavioral Sciences**

At least three courses from at least two disciplines or an interdisciplinary sequence, 9 semester units/12-15 quarter units. Select from:

ANTHRO 100, 102, 106, 107\* (same as HIST 107), 110\* (same as RELIG 110)  
ECON 100\*\*, 200\*\*, 200H\*\*, 201, 285  
GEOG 102, 104, 106, 120  
HIST 180\*  
POLIT 100, 285  
PSYCH 100, 101, 102, 103, 110, 111\*\*, 112\*\*, 113\*\*, 114, 116, 118, 285

SOC 100, 110, 141, 145, 285

SPEECH 135, 174, 176

#### **AREA 5 - Physical and Biological Sciences**

Two (2) courses, one Physical Science course and one Biological course. At least one must include a laboratory. Laboratory classes are underlined, 7-9 semester units/9-12 quarter units. Select from:

##### **Physical Science:**

ASTRON 120\*\*, 123\*\*, 125\*\*  
CHEM 101\*\*, 104\*\*, 110\*\*, 150\*\*, 150H\*\*, 151\*\*, 212\*\*, 212H\*\*213\*, 213H\*\*, 216  
GEOG 110\*\*, 111\*\*, 114, 285\*\*  
GEOL 100, 101\*\*, 111\*\*, 112, 122, 250  
OCEAN 100\*\*, 101\*\*, 111\*\*  
PHYSIC 101\*\*, 150A\*\*, 150B\*\*, 200\*\*, 201\*\*  
PS 101\*\*

##### **Biological Science:**

BIOL 100\*\*, 102, 104, 108, 201, 202, 203, 240, 250\*\*, 251\*\*, 260\*\*, 261\*\*, 270

#### **Language Other Than English (UC Requirement Only)**

Proficiency equivalent to two (2) years of high school study in the same language: FRENCH 101 and SPAN 101 are equivalent to two (2) years of high school study. Select from:

ASL 109  
FRENCH 101  
SPAN 101

#### **CSU Graduation Requirements in U.S. History, Constitution and American Ideals**

(Not a part of IGETC; may be completed prior to transfer)  
Six (6) units, one (1) course from Group 1 and one (1) course from Group 2; courses used to meet this requirement may not be used to satisfy requirements for IGETC.

**Group 1:** POLIT 100\*

**Group 2:** HIST 100\*, 101\*, 137\*

#### **NOTE:**

1. Courses designated with one asterisk (\*) may be counted in one area only.
2. Courses designated with a double asterisk (\*\*) indicate that transfer credit may be limited by UC and/or CSU. Please consult with a counselor for further information.
3. Students should request official IGETC certification from the SBVC Records Office. For students who have completed coursework at multiple campuses, the campus of last attendance prior to transfer to UC or CSU will certify the IGETC. SBVC will certify coursework from other campuses according to the IGETC list of the originating campus. Official transcripts from high school and other colleges and universities must be on file at the SBVC Records Office.
4. Courses completed at colleges and universities outside of the U.S.A. will not be permitted for IGETC certification, except for the Language Other than English requirement.
5. Courses on this list are approved for fall 2003 and beyond. SBVC courses not listed above may not be used for IGETC.

## The University of California

The University of California has eight major campuses: Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, Santa Barbara, and Santa Cruz. A ninth campus in San Francisco offers graduate and professional programs in the Health Sciences. The University's tenth campus, UC Merced, is expected to open in 2004, and will operate on the semester system. With the exception of Berkeley, these campuses are on a quarter-unit basis. When converting semester units to quarter units, the number of semester units should be divided by two-thirds. When converting from quarter units to semester units, the number of quarter units should be multiplied by two-thirds.

Students who plan to transfer to the University of California may complete all of the required lower division courses at San Bernardino Valley College. While the UC campuses have similar general breadth lower division requirements and will accept a maximum of 70 semester units (or 105 quarter units) of transfer work, there are some subject differences among the campuses. Consult the catalog of the desired UC campus to identify these differences.

It is also possible to transfer to a University of California campus upon completion of the Intersegmental General Education Transfer Curriculum (IGETC), as discussed in the preceding section of this catalog.

The admission cycle for the fall term of the University of California begins each year on November 1 of the preceding year. Each campus will accept for consideration all applications filed during the month of November. Since enrollment ceilings have been established at each campus, students may be accepted only at their second or third choice campus.

The requirements for admission to the University as a transfer student vary in accordance with the high school record of the applicant. A transfer student must meet one of the following:

1. If you were eligible for admission to the University when you graduated from high school – meaning you satisfied the Subject, Scholarship and examination Requirements, or were identified by the University during your senior year in high school as eligible under the Eligibility in the Local context (ELC) program – you are eligible to transfer if you have a C (2.) average in your transferable coursework.
2. If you met the Scholarship Requirement but did not satisfy the Subject Requirement, you must take transferable college courses in the missing subjects, earning a C or better in each required course, and have an overall C average in all transferable coursework to be eligible to transfer.
3. If you were not eligible for admission to the University when you graduated from high school because you did not meet the Scholarship Requirement, you must:
  - a. Complete 60 semester units or 90 quarter units of transferable college credit with a grade point average of 2.4 (no more than 14 semester/21 quarter units may be taken Pass/Not Pass), and;
  - b. Completed the following course pattern

requirement, earning a grade of C or better in each course:

- two transferable college courses (3 semester or 4-5 quarter units each) in English composition, and;
- one transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning, and;
- four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas: the arts and humanities, the social and behavioral science.

Students who satisfy the Intersegmental General Education Transfer Curriculum (IGETC) prior to transferring to UC may satisfy Option 3B of the transfer admission requirements.

Two programs are available to smooth the transition from San Bernardino Valley College to a University of California campus:

**Transfer Admission Guarantee Program** is an agreement between the University of California, Riverside, and San Bernardino Valley College. Consult with the Transfer Center for details of this admissions agreement.

**Transfer Alliance Program (TAP)** is an agreement between the University of California, Los Angeles, and the Honors Program at San Bernardino Valley College. Consult with the Honors Program Coordinator or the Honors Program Counselor for details of this admissions agreement.

Catalogs for each of the UC campuses are available in the Transfer Center. Also in the Transfer Center are two booklets that provide a summary of the unique requirements of each University of California campus: *Introducing the University* and *Answers for Transfers*.

## The California State University

The California State University system consists of 23 campuses, ranging in location from San Diego to Humboldt. The admission cycle for the fall term of each year begins on October 23 of the preceding year. Eligible students may also be accepted during the winter and/or spring terms. Check with the Transfer Center to determine the acceptance dates for each CSU campus.

The California State University system has specific admission requirements for freshman standing. Eligibility is based on a combination of high school grade point average for the last three years of high school, exclusive of physical education and military science, and scores on the ACT or SAT tests.

Students who do not enter the California State University system as freshmen may enter with advanced standing under the following conditions:

- Students who would have been eligible for admission as freshmen may transfer at the end of any semester, provided they have maintained a C or better average in all work attempted.
- Students who would have been ineligible for admission as freshmen must complete a minimum of

56 transferable semester units of work with a 2.00 grade point average or better.

A maximum of 70 transfer-level semester units (or 105 quarter units) earned in a community college will be accepted for transfer.

Students transferring to the California State University should check both the general education and major requirements as early as possible by referring to the current catalogs for the colleges of their choice. A Guaranteed Admissions Program is available to smooth the transition between San Bernardino Valley College and California State University, San Bernardino. Consult with the Transfer Center for details on this agreement.

## **The California State University General Education-Breadth Requirements**

San Bernardino Valley College may certify that a student has satisfied the minimum general education requirements of 39 lower division transfer units in accordance with CSU Executive Order 595. (It is also possible to transfer to a California State University campus upon completion of the Intersegmental General Education Transfer Curriculum [IGETC], as discussed in the preceding section of this catalog.) The number of units which may be certified are as follows:

### **Category A: Communication in the English Language and Critical Thinking.**

9 semester units/12 quarter units, one (1) course from each group.

A minimum grade of C is required in each course.

#### **A.1 Oral Communication.** Select from:

SPEECH 100, 111, 130, 140

#### **A.2 Written Communication**

ENGL 101, 101H

#### **A.3 Critical Thinking.** Select from:

ENGL 102

PHIL 102, 103

SPEECH 125

### **Category B: Physical Universe and its Life Forms**

9 semester units/12 quarter units. One course from B1 Physical Science, one course from B2 Life Science, one course from B4 Mathematics/Quantitative Reasoning, and a laboratory course. Laboratory courses are underlined.

#### **B.1 Physical Science**

ASTRON 120, 123

CHEM 101, 104, 110, 150, 150H, 151, 151H, 212, 212H, 213, 213H

GEOG 110, 114

GEOL 100, 101, 112, 122, 250, 251

OCEAN 100, 101

PHYSIC 101, 150A, 150B, 200, 201

PS 101

#### **B.2 Life Science**

ANTHRO 106

BIOL 100, 102, 104, 108, 123, 201, 202, 203, 240, 250, 251, 260, 261, 270

#### **B.3 Laboratory Activity**

ASTRON 123, 125

BIOL 100, 102, 201, 202, 203, 240, 250, 251, 260, 261, 270

CHEM 101, 104, 150, 151, 212, 213, 216

GEOG 111, 285

GEOL 100, 111

OCEAN 100, 111

PHYSIC 101, 150A, 150B, 200, 201

### **B.4 Mathematics/Quantitative Reasoning**

A minimum grade of C is required.

BUSCAL 200, 208

ECON 208

MATH 102, 103, 108, 115, 151, 250, 251, 252, 265, 266, 285, 286

## **Category C: Arts, Literature, Philosophy and Foreign Language**

Minimum of 9 semester/12 quarter units with at least one course in the Arts and one from Humanities.

### **C.1 Arts (Art, Dance, Music, Theatre)**

ANTHRO 109 (same as ART 109)

ARCH 145, 146, 150

ART 100, 102, 103, 105, 108, 109 (same as ANTHRO 109), 110, 111, 124x4\*, 126x4\*, 132x4\*, 164x4\*, 212x4, 285

DANCE 200, 203

MUS 100, 101, 102, 104, 105, 106, 107, 121, 122, 285

THART 100

**\*Note: only three (3) units may be counted toward Area C.**

### **C.2 Humanities (Foreign Language, Literature, Philosophy)**

ASL 109, 110, 111

ENGL 151, 153, 155, 161, 163, 165, 167, 175, 232, 260, 261, 270, 271, 275,

280, 281, 285A, 285B, 285C

FRENCH 101, 102

HIST 100, 101, 107, 124, 126, 135 (same as RELIG 135), 137, 138, 139, 140, 145, 150, 153, 160, 161, 170, 171, 180

PHIL 101, 105, 112, 119, 120, 180, 285

RELIG 100, 101, 110 (same as ANTHRO 110), 135 (same as HIST 135), 150, 175, 176, 180

SPAN 101, 102, 103, 104, 158, 285

## **Category D: Social, Political and Economic Institutions and Behavior; Historical Background**

9-12 semester units.

### **D.1 Anthropology and Archaeology**

ANTHRO 100, 102, 106, 107 (same as HIST 107), 109 (same as ART 109), 110 (same as RELIG 110)

ART 109 (same as ANTHRO 109)

### **D.2 Economics**

ECON 100, 200, 200H, 201, 285

### **D.3 Ethnic Studies**

HIST 107, 137, 138, 139, 140; SOC 141

### **D.4 Gender Studies**

PSYCH 116; SOC 145; SPEECH 176

### **D.5 Geography**

GEOG 102, 106, 120

### **D.6 History**

HIST 100, 101, 107 (same as ANTHRO 107), 124, 126, 135 (same as RELIG 135), 137, 138, 139, 140, 145, 150, 153, 160, 161, 170, 171, 180

RELIG 135 (same as HIST 135)

### **D.7 Interdisciplinary Social or Behavioral Science**

CD 105

SPEECH 135, 174

### **D.8 Political Science, Government, and Legal Institutions**

POLIT 100, 101, 200, 285

### **D.9 Psychology**

PSYCH 100, 101, 102, 103, 110, 111, 112, 113, 114, 116, 118

### **D.0 Sociology and Criminology**

SOC 100, 110, 130, 141, 145, 285

**U.S. History and American Ideals Requirement:**

Graduation from the California State University requires U.S. History and American Political Institutions. Any combination of one selection from each of the following lists of history and politics courses will normally fulfill this requirement:

**Group 1:** HIST 100, 101, 137

**Group 2:** POLIT 100

**Category E: Lifelong Understanding and Self-Development**

Three semester units. Only one unit can be a Physical Education Activity course.

ACAD 100

BIOL 140

CD 101

FCS 162

GEOG 106

HEALTH 101, 103

PSYCH 100, 102, 103, 104, 111, 113, 114, 116, 118

**Activity Courses (only one unit allowed toward Area E)**

DANCE 101x2, 102x4, 103x4, 105x2, 106x4, 107x4, 114x4

PE-I 103X4, 105X4, 107x4, 108X4, 110X4, 111x4, 115X4, 116x4, 127X4, 138x4, 144x4, 148X4, 164x4, 168x4, 173x4, 184X4, 185X4, 186X4, 187X4, 188X4, 189X4

PE-T 100x4, 104x4, 108x4, 116x4, 120x4, 124x4

**NOTE:**

1. Students with AP Examinations will receive appropriate CSU GE-Breadth credit according to the CSU Office of the Chancellor guidelines.
2. Students are encouraged to complete Areas A and B4 early. CSU will not admit students until the grades are recorded for courses in Areas A and B4.
3. Upon transfer, students will be required to complete at least nine units of upper division courses at the CSU.
4. For CSU GE-Breadth certification purposes, students may use the catalog of entry or any catalog thereafter as long as continuous enrollment is maintained until transfer to CSU. CSU defines continuous enrollment as one semester or two quarters in each calendar year.
5. Students may request official certification of CSU GE-Breadth requirements at the SBVC Records Office.
6. Although SBVC will certify Areas A through E individually, the CSU encourages students to complete all areas prior to transfer. Upper division transfer students are required to complete a minimum of 30 units of CSU GE-Breadth courses with a minimum grade of C in each course.
7. Coursework from other colleges will be evaluated according to the CSU GE-Breadth pattern of those respective colleges. For out-of-state coursework, the SBVC Records Office will determine equivalency to SBVC courses. Official transcripts must be on file in the Records Office.
8. A single course may not be certified as meeting more than one category.
9. Some majors at the CSU have required general education courses and/or do not allow double-counting of courses toward major requirements. Students are encouraged to consult with a counselor

and the catalog of the CSU to which they want to transfer.

10. The courses on this list are approved by the CSU Chancellor's office for Fall 2003 and beyond. **SBVC courses not on this list may not be used for CSU GE-Breadth requirements.**

**Requirements for Transfer to Independent California Colleges and Universities**

California's fully accredited independent colleges and universities provide a host of options at undergraduate, graduate and professional levels for students planning to continue their education beyond community college. Students who transfer to independent colleges often find that they are given academic credit for most, if not all, of their community college studies. Virtually all institutions give full credit for general education courses and usually for other courses designated for transfer by the community college.

Some colleges stipulate a certain number of completed units before considering students for transfer. Others will accept students at any time. The requirements are outlined in the respective college catalogs.

Listed below are some of the independent colleges and universities a student may choose to attend. Additional information is available in the Transfer Center.

- Alliant International University
- American Academy of Dramatic Arts
- Art Center College of Design
- Azusa Pacific University
- Biola University
- California Baptist University
- California College of Arts and Crafts
- California Institute of the Arts
- California Institute of Technology
- California Lutheran University
- Chapman University
- Charles K. Drew University of Medicine & Science
- Christian Heritage College
- Claremont McKenna College
- Cogswell Polytechnical College
- Concordia University
- DeVRY Institute of Technology
- Dominican University of California
- Fresno Pacific University
- Golden Gate University
- Harvey Mudd College
- Holy Names College
- Hope International University
- Humphreys College
- John F. Kennedy University
- La Sierra University
- Loma Linda University
- Loyola Marymount University
- The Master's College
- Menlo College
- Mills College
- Mount St. Mary's College
- National University
- New College of California
- Notre Dame de Namur University
- Occidental College
- Otis College of Art and Design
- Pacific Oaks College

- Pacific Union College
- Patten College
- Pepperdine University
- Pitzer College
- Point Loma Nazarene University
- Pomona College
- Samuel Merritt College
- San Francisco Art Institute
- San Francisco Conservatory of Music
- Santa Clara University
- St. Mary's College of California
- Scripps College
- Simpson College
- Southern California College of Optometry
- Southern California University of Health Sciences
- Stanford University
- Thomas Aquinas College
- United States International University
- University of Judaism
- University of La Verne
- University of the Pacific
- University of Redlands
- University of San Diego
- University of San Francisco
- University of Southern California
- University of West Los Angeles
- Vanguard University of Southern California
- Western University of Health Sciences
- Westmont College
- Whittier College
- Woodbury University

### **The California Articulation Number System (CAN)**

The California Articulation Number (CAN) System is a statewide numbering system independent from course numbers assigned by local colleges. A CAN number signals that participating California colleges and universities have determined that courses offered by other campuses are equivalent in content and scope to courses offered on their own campuses, regardless of their unique titles or local identifying numbers. Thus, if a schedule of classes or catalog lists a course bearing a CAN number, students on one campus can be assured that it will be accepted in lieu of the comparable CAN course noted in the catalog or schedule of classes of another campus. For example, CAN ECON 2 on one campus will be accepted as meeting the requirement of the designated CAN ECON 2 course on other participating community college or university campus.

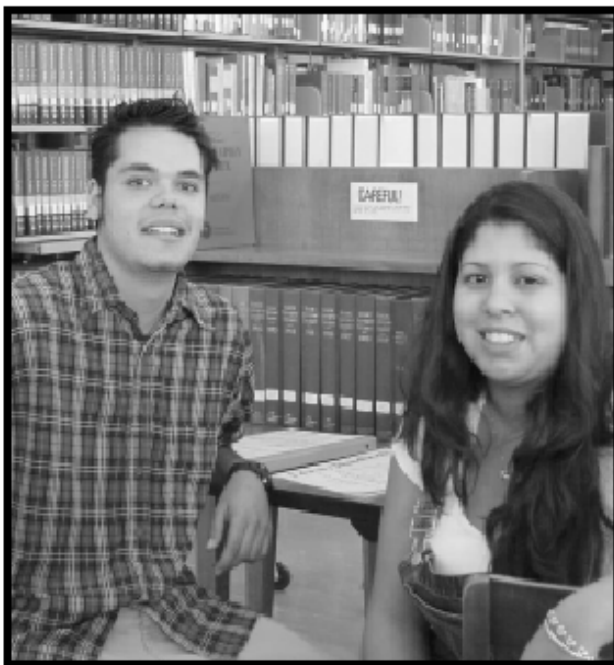
The CAN numbering system is obviously useful for students attending more than one community college and is applied to many of the transferable, lower division courses students need as preparation for their intended major. Because these course requirements may change, however, and because courses are continually being redefined, qualified for or deleted from the CAN database, students should always check with their campus' counselors, articulation officer, or the transfer center director to determine how CAN-designated courses fit into their educational plans for transfer.

Students should consult the ASSIST database at [www.assist.org](http://www.assist.org) for specific information on course agreements. The college staff will help students interpret this information.









## PART III – ANNOUNCEMENT OF COURSES

Each course entry in this catalog includes the course number, title, a brief description, the number of semester units, and the number of hours the course meets based on a 16-18 week semester. The course entries also include information about how the course credit applies to associate degrees and transfer to the California State University or University of California systems.

Courses numbered from 001 through 099 are generally applicable to certificate and associate degree programs. In some instances, these courses are also applicable to specific majors at some campuses of the California State Universities.

Courses numbered from 100 through 299 are generally applicable toward baccalaureate degrees conferred by universities.

Courses numbered from 900-999 are not applicable to associate degrees and do not transfer to four-year institutions.

Certain course entries include a symbol x and a number following the symbol, such as MUSIC 141x4. This symbol (x) indicates that this skill-based course may be taken for credit more than once; the number following the symbol (x) indicates the number of times the course may be taken for credit.

### ACADEMIC ADVANCEMENT

#### ACADEMIC ADVANCEMENT

COORDINATOR: Odette C. Salvaggio, Ph.D.  
(909) 384-8588  
OTHER FACULTY: Dan Angelo, M.H.R.O.D.  
OFFICE ASSISTANT: Robyn Wicklund  
(909) 384-8588  
LIAISON COUNSELOR: Cindy Parish, M.S.  
(909) 384-8977

ACAD 100 is required of all students taking 9 or more units a semester. This course must be completed within a student's first two semesters of course work. Students are exempt from this requirement if they have already earned 30 units or more of college credit or if they have already earned an associate or baccalaureate degree. Students on a career track within vocational disciplines that have articulated programs with four-year institutions may apply for exemption through the Department Chair and Division Dean of their area of study. The rest of the courses offered through this department are designed to help students perform well in their other classes and at their place of employment.

#### ACAD 100

##### STRATEGIES FOR COLLEGE SUCCESS

1 UNIT

**PREREQUISITE:** None.

**LECTURE:** 1 hour per week.

Introduces student to college environment, educational opportunities, college services, academic procedures and policies, graduation and transfer requirements. College survival skills such as educational planning, goal-setting, learning styles, time management, and interpersonal skills are key components.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### TUTOR TRAINING

1 UNIT

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORY:** *Completion of the courses to be tutored with a minimum grade of "B", departmental recommendation, or related experience.*

**LECTURE:** .50 hour per week and

**LABORATORY:** 1.50 hours per week.

Techniques and strategies for effective academic peer tutoring in a community college setting. Emphasis on tutoring, study skill techniques and practical skills to use in a variety of tutoring situations. Completion of any college-level course to be tutored with a grade of B or better is required. Graded on Credit/No Credit basis only.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### ACAD 600A-1x4

##### SUPERVISED TUTORING

Non-Credit

**PREREQUISITE:** None.

**LECTURE:** *Hours will vary according to student need.*

Students enrolling in this non-credit class will receive assistance in understanding course-specific content in areas in which they are having difficulty. Peer tutors will provide examples and supplementary instruction based on course texts and homework exercises. Enrollment in this class is limited to students who have been recommended by an instructor or counselor on the basis of an identified learning need. Call (909) 384-8566 for additional information about tutoring.

#### ACAD 900

##### EMPLOYABILITY SKILLS

1 UNIT

**PREREQUISITE:** None.

**LECTURE:** 1 hour per week.

An introduction to the skills necessary to find and maintain a job; with emphasis on learning the appropriate skills to be successful on the job. Topics include information on desirable employee traits, on-the-job communication and the skills needed to conduct a successful job search. Graded on a Credit/No Credit basis only.

*Not Applicable to Associate Degree*

**ACAD 910x4**  
**VOCATIONAL BASIC SKILLS ENHANCEMENT**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Offers a review and practice of basic skills materials in mathematics, reading, writing English as a second language, GED materials, and applied computational and verbal skills; a self-paced, open-entry computer-assisted review tailored to meet students' individual academic needs each time the class is taken. Graded on Credit/No Credit basis only.

*Not Applicable to Associate Degree*

**ACCOUNTING**

DIVISION: Business and Information  
Technology  
DIVISION DEAN: Margaret Ortiz, M.A.  
DEPARTMENT HEAD: Nickolas Zoumbos, M.S.  
Business 100D  
(909) 384-8912  
OTHER FACULTY: Janet Courts, M.A.  
DIVISION SECRETARY: Chris Williams  
DIVISION OFFICE: Business 101  
(909) 384- 8908  
LIAISON COUNSELORS: To Be Announced  
(909) 384-4404

Accounting, as the language of business, is concerned with how businesses report their transactions and how they interpret the summaries of those transactions. Accountants record and summarize the economic events within a business. In addition, they interpret financial information and conduct solvency and profitability analyses to serve as a basis for sound business decisions.

Within the mission of the college, the Accounting Department has several objectives:

- 1) Provide high quality accounting and business programs, which will prepare our students for successful careers in business and government.
- 2) Provide students with a broad-base understanding of the concepts of Accounting, Business and Management.
- 3) Provide transfer to four-year institutions.

Students planning to transfer to a four-year institution and major in accounting should consult with a counselor regarding the transfer process and lower division requirements.

**ACCOUNTING ASSOCIATE OF ARTS DEGREE**

To graduate with a specialization in Accounting, students must complete all requirements for the certificate plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

**ACCOUNTING CERTIFICATE**

The Certificate in Accounting is designed to prepare students for employment in the fields of accounting or bookkeeping.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ACCT 200 Principles of Accounting I (or ACCT 100 & 101)	4
ACCT 201 Principles of Accounting II	4
ACCT 204 Computer Accounting: Spreadsheets	1
ACCT 207 Integrated Accounting Software	2
BUSAD 100 Introduction to Business	3
BUSAD 210 Business Law	3
BUSCAL 208 Business and Economics Statistics	4
ECON 200 Introduction to Macroeconomics	3
ECON 201 Principles of Economics (Micro)	3
MATH 095 Intermediate Algebra	4
BUSCAL 091 Beginning Algebra for Business or Math 090 Elementary Algebra	(4)
Ten Units from the list of RECOMMENDED COURSES	10
<b>TOTAL UNITS:</b>	<b>45</b>

<b>RECOMMENDED COURSES:</b>	<b>UNITS</b>
ACCT 015 Federal Income Tax Return Preparation	1.5
ACCT 130 Federal and State Revenue Tax Accounting	3
ACCT 090 Payroll Accounting	3
ACCT 202 Intermediate Accounting	3
ACCT 206 Cost Accounting	3
ACCT 235 Accounting for Government and Not-For-Profit Organizations I	4
BUSAD 203 Marketing Management	3
BUSCAL 200 Algebra and Finite Methods in Business or MATH 102 Introduction to College Algebra	4
MIS 101 Introduction to Management Information Systems	3
OIS 070 Introduction to Disk Operating System (PC/MS DOS)	1.5
REALST 100 Real Estate Principles	3

**BOOKKEEPING CERTIFICATE**

<b>REQUIRED COURSES</b>	<b>UNITS</b>
ACCT 010 Bookkeeping or ACCT 100 Introduction to Accounting I	(4)
ACCT 090 Payroll Accounting	3
ACCT 204 Computer Accounting Spreadsheet	1
ACCT 207 Integrated Accounting Software	2
BUSCAL 050 Quantitative Methods in Business	3
OIS 142 Machine Calculations	3
<b>TOTAL UNITS:</b>	<b>15-16</b>

**GOVERNMENTAL AND NON-PROFIT**

## ACCOUNTING CERTIFICATE

The purpose of this certificate is to prepare students for a successful career in the public sector.

REQUIRED COURSES	UNITS
ACCT 235 Accounting for Government And Not-For-Profit Organizations I	4
ACCT 236 Accounting for Government and Not-For-Profit Organizations II	4
ACCT 237 Budgeting for Governments	4
ACCT 202 Intermediate Accounting	3
<b>TOTAL UNITS:</b>	<b>15</b>

## TAX PREPARERS CERTIFICATE

REQUIRED COURSES	UNITS
ACCT 090 Payroll Accounting	3
ACCT 130 Federal and State Revenue Tax Accounting	3
ACCT 131 California Income Taxation	2
ACCT 132x4 Volunteer Income Tax Assistance I (VITA I)	2
ACCT 133x4 Volunteer Income Tax Assistance II (VITA II)	2
OIS 142 Machine Calculations	3
<b>TOTAL UNITS:</b>	<b>15</b>

## COURSES OFFERED BY THE DEPARTMENT OF ACCOUNTING:

**ACCT 010**  
**BOOKKEEPING** 3 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.

Fundamentals of bookkeeping, such as recording transactions in journals, posting to ledgers, preparation of the trial balance and use of controlling accounts and related schedules. Practice in opening, adjusting and closing various professional sets of books. Recommended for occupational students and for those who wish preparatory training before entering ACCT 200.

*Associate Degree Applicable*

**ACCT 090**  
**PAYROLL ACCOUNTING** 3 UNITS  
**PREREQUISITE:** None.  
**DEPARTMENTAL ADVISORY:** ACCT 101 or ACCT 200.  
**LECTURE:** 3 hours per week.

Accounting aspects of the Social Security Act, the California Unemployment Insurance Act and the California Worker's Compensation Insurance Act.

*Associate Degree Applicable*

**ACCT 100**  
**INTRODUCTION TO ACCOUNTING I** 3-4 UNITS  
**PREREQUISITE:** None.  
**DEPARTMENTAL ADVISORY:** BUSCAL 050 or ACCT 010.

**LECTURE:** 3-4 hours per week.

Exploration of the basic principles and practices of the financial accounting process for a sole proprietorship including the sources of financial information, journalizing and posting transactions, and preparing and analyzing financial statements for merchandise. Students completing ACCT 100 and ACCT 101 are eligible to enroll in ACCT 201.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ACCT 101**  
**INTRODUCTION TO ACCOUNTING II** 4 UNITS  
**PREREQUISITE:** ACCT 100.

**LECTURE:** 4 hours per week.

Exploration of the basic principles and practices of the financial accounting process in a sole proprietorship including accounting for cash, posting receivables and payables, inventories, fixed assets and payroll. Students completing ACCT 100 and ACCT 101 are eligible to enroll in ACCT 201.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ACCT 130**  
**FEDERAL AND STATE REVENUE TAX ACCOUNTING** 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Fundamentals of current revenue tax laws and regulations. Primary emphasis on theory and methods of preparation of Federal and State Income Tax returns for individuals. Actual forms are studied and returns are prepared.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 131**  
**CALIFORNIA INCOME TAXATION** 2 UNITS  
**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORIES:** ACCT 130; BUSCAL 050 or MATH 952; ACCT 010; ACCT 090; ACCT 100 or ACCT 200.

**LECTURE:** 2 hours per week.

Combining both theory and practical application, this course allows the student to research and analyze current California tax issues and to prepare tax returns and case studies. Students have the opportunity to study state tax law in a controlled setting under the supervision of a CPA, LL.M. or licensed tax preparer.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 132x4**  
**VITA: VOLUNTEER INCOME TAX ASSISTANCE I**  
(VITA I) 2 UNITS

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORIES:** BUSCAL 050 or MATH 952; ACCT 010; ACCT 090; ACCT 100 or ACCT 200.

**LECTURE:** 2 hours per week.

Combining both theory and practical application, this course allows the student to research and analyze current state and federal tax issues and to assist lower income and elderly citizens in the preparation of tax returns under the supervision of a CPA or licensed tax preparer. This course may be taken four times.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 133x4**  
**VITA: VOLUNTEER INCOME TAX ASSISTANCE II**  
**(VITA II) 2 UNITS**

**PREREQUISITE: ACCT 132x4.**  
**LECTURE: 1 hour per week and**  
**LABORATORY: 3 hours per week.**

A continuation of ACCT 132x4 (VITA I), this course allows the student to research and analyze current tax issues, to interview real taxpayers, and to prepare and electronically file real tax returns under the supervision of a CPA or licensed tax preparer. NOTE: VITA I & II must be taken consecutively in the same calendar year. This course may be taken four times.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 200**  
**PRINCIPLES OF ACCOUNTING I 4 UNITS**  
**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSCAL 050 or**  
**ACCT 010.**

**LECTURE: 4 hours per week.**

Development of the basic principles and practices applicable to the general accounting process, primarily in a sole proprietorship including transaction analysis, statement preparation and analysis, internal control, payroll, revenue recognition, and user analysis of accounting information and systems.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*  
*CAN: (California Articulation Number): BUS 2*

**ACCT 201**  
**PRINCIPLES OF ACCOUNTING II 4 UNITS**  
**PREREQUISITES: ACCT 200 or ACCT 100 and**  
**ACCT 101.**

**LECTURE: 4 hours per week.**

Examination of the basic principles and practices of financial and managerial accounting relevant to partnerships and corporations. Application of these concepts in the fields of cost; income tax; department and branch accounting; income projections and decision making; and financial statement preparation and analysis.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

*CAN: (California Articulation Number): BUS 4*

**ACCT 202**  
**INTERMEDIATE ACCOUNTING 3 UNITS**  
**PREREQUISITE: ACCT 201.**

**LECTURE: 3 hours per week.**

Adjustments, working papers, financial statements, cash and receivables, inventories, investments, plant assets, intangibles, liabilities, capital stock and retained earnings, statement analysis and application of funds.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 204**  
**COMPUTER ACCOUNTING: SPREADSHEETS 1 UNIT**  
**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORIES: ACCT 100 or ACCT**  
**200 and MIS 101.**

**LECTURE: 0.5 hour per week and**  
**LABORATORY: 1.5 hours per week.**

Solution of accounting problems using personal computers and spreadsheet software including creating spreadsheets

using formulas, macros, and graphics.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 206**  
**COST ACCOUNTING 3 UNITS**  
**PREREQUISITE: ACCT 201.**

**LECTURE: 3 hours per week.**

Objectives and procedures of accounting for manufacturing enterprises including job-order and process costing, accounting for manufacturing overhead, joint-product and by-product costing, cost budgeting, standard costs and cost reports.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 207**  
**INTEGRATED ACCOUNTING SOFTWARE 2 UNITS**  
**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORIES: BUSCAL 050 or MATH**  
**952; ACCT 010; ACCT 090; ACCT 100 or ACCT 200.**

**LECTURE: 1.5 hours per week and**  
**LABORATORY: 1.5 hours per week.**

Provides a comprehensive overview of application software in the field of accounting. Topics covered include the analysis of source documents and the use of accounting software to prepare, understand, and interpret financial statements for a variety of management purposes.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 222**  
**SPECIAL PROBLEMS IN ACCOUNTING I 1 UNIT**  
**PREREQUISITE: ACCT 200.**

**INDEPENDENT STUDY: 3 hours per week.**

Assigned problems involving library and field work for selected students who are interested in furthering their knowledge of accounting on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 223**  
**SPECIAL PROBLEMS IN ACCOUNTING II 2 UNITS**  
**PREREQUISITE: ACCT 200.**

**INDEPENDENT STUDY: 6 hours per week.**

Assigned problems involving library and field work for selected students who are interested in furthering their knowledge of accounting on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ACCT 235**  
**ACCOUNTING FOR GOVERNMENT AND NOT-FOR-PROFIT ORGANIZATIONS I** **4 UNITS**

**PREREQUISITE: ACCT 201.**

**LECTURE: 4 hours per week.**

Fund accounting as applied to governmental operations and nonprofit institutions including problems of budgeting tax levies, appropriations and accounting for revenues and expenditures. Includes general funds, special revenue, bond sinking, working capital, special assessment, trust, agency, and utility.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 236**  
**ACCOUNTING FOR GOVERNMENT AND NOT-FOR-PROFIT ORGANIZATIONS II** **4 UNITS**

**PREREQUISITE: ACCT 235.**

**LECTURE: 4 hours per week.**

This course is intended to continue the topics introduced in ACCT 235. Emphasis is on budgeting operations and managerial control of budgets in nonprofit organizations such as school districts, health care facilities and charitable organizations.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 237**  
**BUDGETING FOR GOVERNMENTS** **4 UNITS**

**PREREQUISITE: ACCT 235.**

**LECTURE: 4 hours per week.**

An introduction to the concepts and practices of budgeting in the public sector at the federal, state and local government levels including how budgeting operates in the political arena as well as budgeting as a process of public administration.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ACCT 285**  
**HONORS IN ACCOUNTING** **3 UNITS**

**PREREQUISITE: ACCT 200.**

**LECTURE: 3 hours per week.**

Designed to develop thinking and analytical skills of business students through a variety of user based activities in the areas of accounting ethics, information systems design and controls, financial planning and statement analysis, budgeting, forecasting and decision making.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

## ADMINISTRATION OF JUSTICE

DIVISION: Criminal Justice  
 DIVISION DEAN: Gloria M. Fisher, J.D.  
 DEPARTMENT HEAD: Frank Peterson, J.D.  
 Liberal Arts 124  
 909) 384-8604  
 DIVISION SECRETARY: Sharen Chavira  
 DIVISION OFFICE: Planetarium, 2nd Floor  
 (909) 384-4431  
 LIAISON COUNSELOR: Joyce Smith, M.A.  
 (909) 384-8974

The Administration of Justice discipline involves the study of the theory and practice of law, law enforcement, the courts, and corrections systems. Law enforcement specializes in police activities including effective investigation and patrol services to the public. The courts

specialize in responsibilities to the public through the trial system. The corrections systems specialize in the punishment and incarceration process as well as rehabilitation of the offender. Private security services explore private protection through private agencies.

Administration of Justice offers a wide range of career opportunities. Students interested in careers as peace officers should refer to the Department of Police Science in this catalog. Students planning to transfer to a four-year institution and major in Administration of Justice should consult with a counselor regarding the transfer process and lower division requirements.

## ADMINISTRATION OF JUSTICE ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Administration of Justice, students must complete all requirements for the certificate plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

## ADMINISTRATION OF JUSTICE CERTIFICATE

REQUIRED COURSES	UNITS
ADJUS 101 Introduction to Administration of Justice	3
ADJUS 102 Principles and Procedures of the Justice System	3
ADJUS 103 Concepts of Criminal Law	3
ADJUS 104 Legal Aspects of Evidence	3
ADJUS 105 Community Relations	3

**Six (6) units of electives chosen from the following list:** **6**

ADJUS 106 Principles of Investigation	(3)
ADJUS 107 Concepts of Enforcement Services	(3)
ADJUS 108 Juvenile Procedures	(3)
CORREC 101 Introduction to Corrections	(3)
CORREC 102 Correctional Interviewing and Counseling	(3)
CORREC 104 Control and Supervision in Corrections	(3)
CORREC 105 Legal Aspects of Corrections	(3)
<b>TOTAL UNITS:</b>	<b>21</b>

RECOMMENDED COURSES:	UNITS
ENGL 101 Freshman Composition	4
ENGL 102 Intermediate Composition and Critical Thinking	4
HIST 101 History of the United States: From the 1890s to the Present	3
MATH 102 Introduction to College Algebra	4
or	
MATH 108 Introduction to Probability and Statistics	(4)
or	
MATH 115 Ideas of Mathematics	(3)
POLIT 100 American Politics	3
PSYCH 100 General Psychology	3
SOC 100 Introduction to Sociology	3
SPEECH 100 Public Speaking	3
or	
SPEECH 111 Interpersonal Communication	(3)

## COURSES OFFERED BY THE DEPARTMENT OF ADMINISTRATION OF JUSTICE:

**ADJUS 101**  
**INTRODUCTION TO ADMINISTRATION OF JUSTICE** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Philosophy and history of the criminal justice system, including the roles, function of the local, state and federal jurisdictions. The roles, functions and interrelationships among law enforcement agencies, courts and corrections. Crime causation, correctional theory, analysis, and the social impact of crime.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): AJ 2*

**ADJUS 102**  
**PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A study of the role and responsibilities of each segment within the Administration of Justice System, law enforcement, judicial, corrections. A past, present and future exposure to each sub-system, procedures from initial entry to final disposition and the relationship each segment maintains with its system members.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 103**  
**CONCEPTS OF CRIMINAL LAW** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

History, philosophy and the development of U.S. criminal law. Introduction to common law, legal concepts and codes.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): AJ 4*

**ADJUS 104**  
**LEGAL ASPECTS OF EVIDENCE** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Origin, development, philosophy, and constitutional basis of the use of evidence; constitutional and procedural considerations affecting arrest, search and seizure; types of evidence, and rules governing admissibility; judicial decisions, interpretation of individual rights; and case studies.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 105**  
**COMMUNITY RELATIONS** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Relationship and awareness of criminal justice agencies to diverse populations such as gender, racial, and sexual orientation: including discrimination and hate crimes.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ADJUS 106**  
**PRINCIPLES OF INVESTIGATION** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Principles of various types of investigations utilized in the justice system, including concepts of investigation, and the analysis, evaluation, preservation and documentation of evidence. Includes dealing with the public, techniques for handling crime scenes, interviews, evidence, surveillance, follow-up, technical resources, and case preparation.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 107**  
**CONCEPTS OF ENFORCEMENT SERVICES** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Exploration of theories, philosophies, and concepts related to the role expectations of the line enforcement officer. Emphasis on patrol, traffic and public service responsibilities and their relationships to the administration of justice.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 108**  
**JUVENILE PROCEDURES** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Organization, function and jurisdiction of juvenile agencies, processing and detention of juvenile status and court procedures.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 130**  
**LEGAL ANALYSIS RESEARCH AND WRITING** **3 UNITS**

**PREREQUISITE:** ADJUS 101.

**LECTURE:** 3 hours per week.

Introduction to legal research by familiarizing the students with the many aids and legal volumes available to facilitate research and analysis of a legal problem together with guidance in legal writing. This course will be a valuable tool for paralegal persons and others in the courts.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ADJUS 198**  
**ADMINISTRATION OF JUSTICE WORK EXPERIENCE** **1-4 UNITS**

**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Work Experience 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

*Course credit transfers to CSU.*



## AERONAUTICS

DIVISION:	Technical
DIVISION DEAN:	Thomas Bauman, M.S., P.E.
DEPARTMENT HEAD:	Allen Moore, A.A. (909) 384-8270
OTHER FACULTY:	Kevin Kammer, A.A. Dick Thompson, Ed.D.
DIVISION SECRETARY:	Patsy Martinez (909) 384-8902
DIVISION OFFICE:	Technical 108 (909) 384-4451
LIAISON COUNSELOR:	George Fleming, M.S. (909) 384-8975

The aeronautics industry is presently experiencing a shortage of personnel in all aspects of aviation until 2010. Jobs are available locally, throughout the U.S. and globally.

The Aeronautics Department curriculum offers students several ways to qualify for employment in the aviation industry. Students may pursue either Associate of Science degrees or certificates in Flight Operations and Management or Airframe and Powerplant Technology. Students desiring specific ratings or licenses should consult with faculty in the Aeronautics Department and/or the Federal Aviation Administration.

Students planning to transfer to a four-year institution and major in aeronautics should consult with a counselor regarding the transfer process and lower division requirements.

### AERONAUTICS ASSOCIATE OF SCIENCE DEGREE

The Aeronautics Department offers three areas of specialization for the Associate of Science degree: (1) Airframe and Powerplant Technology, (2) Engineering Technology, and (3) Flight Operations and Management. To graduate with a specialization in these areas, students must complete all requirements plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

#### 1. AIRFRAME AND POWERPLANT TECHNOLOGY

Each of the following courses must be completed with a grade of C or higher.

REQUIRED COURSES	UNITS
AERO 100 Airframe and Power Plant General Curriculum - Calculations/Publications	5
AERO 101 Airframe and Power Plant General Curriculum - Servicing/Materials	5
AERO 102 Airframe Maintenance Lecture-Structures	6
AERO 103 Airframe Maintenance Lecture-Systems & Components	6
AERO 104 Power Plant Maintenance Lecture – Reciprocating Engine Overhaul	6
AERO 105 Power Plant Maintenance Lecture – Accessory Overhaul	6
AERO 106 Airframe and Power Plant General Laboratory - Calculations/Publications	2
AERO 107 Airframe and Power Plant General Laboratory - Servicing/Materials	2
AERO 108 Airframe Maintenance Laboratory – Structures	5
AERO 109 Airframe Maintenance Laboratory – Systems & Components	5

AERO 110 Power Plant Maintenance Laboratory – Reciprocating Engine Overhaul	5
AERO 111 Power Plant Maintenance Laboratory – Accessory Overhaul	5
<b>TOTAL UNITS:</b>	<b>58</b>

## 2. ENGINEERING TECHNOLOGY

REQUIRED COURSES	UNITS
AERO 121 Aviation Fundamentals	3
AERO 124 Aircraft Power Plants	3
AERO 126 Aircraft Structures	3
ENGL 101 Freshman Composition	4
GEOG 114 Weather and Climate	3
MATH 102 Introduction to College Algebra	4
MATH 103 Plane Trigonometry	4
MATH 151 Precalculus	4
MATH 250 Single Variable Calculus I	4
PHYSICS 150A Physics for the Life Sciences I	4
PHYSICS 150B Physics for the Life Sciences II	4
SPEECH 100 Elements of Public Speaking	3
<b>TOTAL UNITS:</b>	<b>43</b>

## 3. FLIGHT OPERATIONS AND MANAGEMENT

REQUIRED COURSES	UNITS
AERO 121 Aviation Fundamentals	3
*AERO 122C F.A.A. Private Pilot Ground School	6
AERO 124 Aircraft Power Plants	3
AERO 125 Flight Safety	2
AERO 126 Aircraft Structures	3
AERO 134 Civil Aviation Management and Laws	3
AERO 140C Instrument Ground School and Flight Simulators	4
AERO 144 Aviation Weather	3
BUSAD 100 Introduction to Business	3
MATH (See advisor for appropriate level)	(3-4)
PHYSICS 101 Basic Physics	4
<b>TOTAL UNITS:</b>	<b>37-38</b>

*\*Will be waived if students have taken equivalent course.*

## AERONAUTICS CERTIFICATES

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

### 1. AVIATION MAINTENANCE TECHNICIAN

This certificate program is designed to qualify students for the airframe and powerplant certificate issued by the Federal Aviation Administration. The written examinations are administered by the Federal Aviation Administration through computer testing centers. The practical portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1,900 hours of lecture and laboratory. This maintenance technician certificate enables the holder to perform 100 hour and annual inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
AERO 100 Airframe and Power Plant General Curriculum - Calculations/Publications	5
AERO 101 Airframe and Power Plant General Curriculum - Servicing/Materials	5
AERO 102 Airframe Maintenance Lecture – Structures	6
AERO 103 Airframe Maintenance Lecture – Systems and Components	6
AERO 104 Power Plant Maintenance Lecture – Reciprocating Engine Overhaul	6
AERO 105 Power Plant Maintenance Lecture – Accessory Overhaul	6
AERO 106 Airframe and Power Plant General Laboratory - Calculations/Publications	2
AERO 107 Airframe and Power Plant General Laboratory - Servicing/Materials	2
AERO 108 Airframe Maintenance Laboratory – Structures	5
AERO 109 Airframe Maintenance Laboratory – Systems and Components	5
AERO 110 Power Plant Maintenance Laboratory – Reciprocating Engine Overhaul	5
AERO 111 Power Plant Maintenance Laboratory – Accessory Overhaul	5
<b>TOTAL UNITS:</b>	<b>58</b>

## 2. FLIGHT OPERATIONS

The certificate program in Flight Operations is designed for students interested in careers as a pilot in general aviation, commercial aviation, or military aviation. This certificate prepares students for immediate employment or for transfer to other colleges, and includes Federal Aviation Administration approved curricula in basic ground school, advanced ground school, and instrument ground school. Through the San Bernardino Valley College Flying Club, students have the opportunity to gain additional flight experience at a nominal cost as they prepare for the private pilot, commercial pilot, or instrument pilot ratings.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
AERO 121 Aviation Fundamentals	3
*AERO 122C F.A.A. Private Pilot Ground School	6
AERO 124 Aircraft Power Plants	3
AERO 125 Flight Safety	2
AERO 126 Aircraft Structures	3
AERO 140C Instrument Ground School and Flight Simulators	4
AERO 144 Aviation Weather	3
<b>TOTAL UNITS:</b>	<b>24</b>

*\*Will be waived if students have taken equivalent course.*

## 3. POWERPLANT MAINTENANCE TECHNICIAN

This certificate program is designed to qualify students for the powerplant certificate issued by the Federal Aviation Administration. The written examinations are administered by the Federal Aviation Administration through computer testing centers. The practical portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1150 hours of lecture and laboratory. This maintenance technician certificate enables the holder to perform 100 hour and annual inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
AERO 100 Airframe and Powerplant General Curriculum- Calculations/Publications	5
AERO 101 Airframe and Powerplant General Curriculum- Servicing/Materials	5
AERO 104 Powerplant Maintenance Lecture- Reciprocating Engine Overhaul	6
AERO 105 Powerplant Maintenance Lecture- Accessory Overhaul	6
AERO 106 Airframe and Powerplant General Laboratory- Calculations/Publications	2
AERO 107 Airframe and Powerplant General Laboratory- Servicing/Materials	2
AERO 110 Powerplant Maintenance Laboratory- Reciprocating Engine Overhaul	5
AERO 111 Powerplant Maintenance Laboratory- Accessory Overhaul	5
<b>TOTAL UNITS:</b>	<b>36</b>

## 4. AIRFRAME MAINTENANCE TECHNICIAN

This certificate program is designed to qualify students for the airframe certificate issued by the Federal Aviation administration. The written examinations are administered by the Federal Aviation administration through computer testing centers. The practical portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1,150 hours of lecture and laboratory. This maintenance technician certificate enables the holder to perform 100 hour and annual inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
AERO 100 Airframe and Powerplant General Curriculum- Calculations/Publications	5
AERO 101 Airframe and Powerplant General Curriculum- Servicing/Materials	5
AERO 102 Airframe Maintenance Lecture- Structures	6
AERO 103 Airframe Maintenance Lecture- Systems and Components	6
AERO 106 Airframe and Powerplant General Laboratory- Calculations/Publications	2
AERO 107 Airframe and Powerplant General Laboratory- Servicing/Materials	2
AERO 108 Airframe Maintenance Laboratory- Structures	5
AERO 109 Airframe Maintenance Laboratory- Systems and Components	5
<b>TOTAL UNITS:</b>	<b>36</b>

## 5. AVIONICS TECHNOLOGY

**Complete the CORE REQUIRED COURSES for the ELECTRONICS TECHNOLOGY CERTIFICATE, plus:**

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
AERO 121* Aviation Fundamentals	3
AERO 140* Instrument Ground School & Flight Simulator	4
ELECTR 220A FCC Rules and Regulations	3
ELECTR 250A Radio Transmitters, Receivers, & Antennas	4
ELECTR 257A Navigation & Communication Systems	4
<b>TOTAL UNITS:</b>	<b>52</b>

*\* AERO 102 & 103 can be substituted for AERO 121 & 140*

## COURSES OFFERED BY THE DEPARTMENT OF

## **AERONAUTICS:**

### **AERO 011**

#### **POWER PLANT MAINTENANCE REVIEW**

**6 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 6 hours per week.

A comprehensive review of the power plant curriculum in preparation for the F.A.A. written examination.

*Associate Degree Applicable*

### **AERO 013**

#### **AIRFRAME MAINTENANCE REVIEW**

**6 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 6 hours per week.

A comprehensive review of the aircraft airframe and general curriculum in preparation for the F.A.A. written examination.

*Associate Degree Applicable*

### **AERO 015**

#### **BASIC FUNDAMENTALS OF AIRCRAFT COMPOSITE STRUCTURES**

**2 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week.

An introduction to aircraft composite structures including the manufacturing, uniqueness and strength and repair methods.

*Associate Degree Applicable*

### **AERO 100**

#### **AIRFRAME AND POWER PLANT GENERAL CURRICULUM-CALCULATIONS/PUBLICATIONS**

**5 UNITS**

**PREREQUISITE:** None.

**COREQUISITES:** AERO 106 and either AERO 102 and AERO 108 or AERO 104 and AERO 110.

**LECTURE:** 5 hours per week.

Federal Aviation Administration approved curriculum that provides training for all general requirements in maintenance mandated by the F.A.A. Focus on the applications of mathematics, physics, and electricity in aeronautics; how to interpret and use aircraft drawings; fluid lines and fittings; and strategies for testing various aircraft materials and processes.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **AERO 101**

#### **AIRFRAME AND POWER PLANT GENERAL CURRICULUM-SERVICING/MATERIALS**

**5 UNITS**

**PREREQUISITE:** None.

**COREQUISITES:** AERO 107 and either AERO 103 and AERO 109 or AERO 105 and AERO 111.

**LECTURE:** 5 hours per week.

Federal Aviation Administration approved curriculum that provides training for all general requirements in maintenance mandated by the F.A.A. Focus on cleaning and corrosion control; ground operation and servicing; maintenance publications, forms and records; mechanic privileges and limitations, and solutions to common weight and balance problems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **AERO 102**

#### **AIRFRAME MAINTENANCE LECTURE - STRUCTURES**

**6 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 100 and AERO 106.

**COREQUISITE:** AERO 108.

**LECTURE:** 6 hours per week.

Federal Aviation Administration approved curriculum which provides training in airframe structures and airframe systems and components. Satisfactory completion of AERO 102 and AERO 103, in conjunction with the corresponding laboratory courses, qualifies students to take the F.A.A. examination for airframe certification. Focus on shop safety; aircraft covering; aircraft finishing; theory of flight; assembly and rigging; structural repair; aircraft inspection; and aircraft fuel systems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **AERO 103**

#### **AIRFRAME MAINTENANCE LECTURE - SYSTEMS AND COMPONENTS**

**6 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 101 and AERO 107.

**COREQUISITE:** AERO 109.

**LECTURE:** 6 hours per week.

Federal Aviation Administration approved curriculum which provides training in airframe structures and airframe systems and components. Satisfactory completion of AERO 102 and AERO 103, in conjunction with the corresponding laboratory courses, qualifies students to take the F.A.A. examination for airframe certification. Focus on aircraft welding; electrical circuits; and basic aircraft systems for power, landing, brakes, warning, instrumentation, auto-pilot, cabin atmosphere control, ice and rain control, fire protection and communications.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **AERO 104**

#### **POWER PLANT MAINTENANCE LECTURE - RECIPROCATING ENGINE OVERHAUL**

**6 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 100 and AERO 106.

**COREQUISITE:** AERO 110.

**LECTURE:** 6 hours per week.

Federal Aviation Administration approved curriculum which provides training in power plant theory and maintenance. Satisfactory completion of AERO 104 and AERO 105, in conjunction with the corresponding laboratory courses, qualifies students to take the F.A.A. examination for the power plant certification. Includes reciprocating engines, turbine engines, and engine inspections.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **AERO 105**

#### **POWER PLANT MAINTENANCE LECTURE – ACCESSORY VERHAUL**

**6 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 101 and AERO 107.

**COREQUISITE:** AERO 111.

**LECTURE:** 6 hours per week.

Federal Aviation Administration approved curriculum which provides training in power plant systems and components. Satisfactory completion of AERO 104 and AERO 105, in conjunction with the corresponding

laboratory courses, qualifies students to take the F.A.A. examination for the power plant certification. Includes basic systems for instrumentation, fire protection, electrical, lubrication, ignition, fuel and fuel metering, induction, cooling, exhaust, and propellers.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 106**

**AIRFRAME AND POWER PLANT GENERAL  
LABORATORY CALCULATIONS/PUBLICATIONS 2 UNITS**

**PREREQUISITE:** None.

**COREQUISITES:** AERO 100 and either AERO 102 and AERO 108 or AERO 104 and AERO 110.

**LABORATORY:** 6 hours per week.

Practical shop work companion to AERO 100 to provide the hands-on experience mandated by the F.A.A. Focus on the applications of mathematics, physics, and electricity in aeronautics; how to interpret and use aircraft drawings; fluid lines and fittings; and strategies for testing various aircraft materials and processes.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 107**

**AIRFRAME AND POWER PLANT GENERAL  
LABORATORY - SERVICING/MATERIALS 2 UNITS**

**PREREQUISITE:** None.

**COREQUISITES:** AERO 101 and either AERO 103 and AERO 109 or AERO 105 and AERO 111.

**LABORATORY:** 6 hours per week.

Practical shop work companion to AERO 101 to provide the hands-on experience mandated by the F.A.A. Focus on cleaning and corrosion control; ground operation and servicing; maintenance publications, forms and records; mechanic privileges and limitations, and solutions to common weight and balance problems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 108**

**AIRFRAME MAINTENANCE LABORATORY -  
STRUCTURES 5 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 100 and AERO 106.

**COREQUISITE:** AERO 102.

**LABORATORY:** 15 hours per week.

Laboratory section of Federal Aviation Administration approved curriculum which provides training in airframe structures and airframe systems and components. This laboratory is a required corequisite to AERO 102 and focuses on shop safety; aircraft covering; aircraft finishing; theory of flight; assembly and rigging; structural repair; aircraft inspection; and aircraft fuel systems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 109**

**AIRFRAME MAINTENANCE LABORATORY -  
SYSTEMS AND COMPONENTS 5 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 101 and AERO 107.

**COREQUISITE:** AERO 103.

**LABORATORY:** 15 hours per week.

Laboratory section of Federal Aviation Administration approved curriculum which provides training in airframe structures and airframe systems and components. This

laboratory is a required corequisite to AERO 103 and focuses on aircraft welding; electrical circuits; and basic aircraft systems for power, landing, brakes, warning, instrumentation, auto-pilot, cabin atmosphere control, ice and rain control, fire protection and communications.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 110**

**POWER PLANT MAINTENANCE LABORATORY -  
RECIPROCATING ENGINE OVERHAUL 5 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 100 and AERO 106.

**COREQUISITE:** AERO 104.

**LABORATORY:** 15 hours per week.

Laboratory section of Federal Aviation Administration approved curriculum which provides training in power plant theory and maintenance. This laboratory is a required corequisite to AERO 104 and includes reciprocating engines, turbine engines, and engine inspections.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 111**

**POWER PLANT MAINTENANCE LABORATORY -  
ACCESSORY OVERHAUL 5 UNITS**

**PREREQUISITES/COREQUISITES:** AERO 101 and AERO 107.

**COREQUISITE:** AERO 105.

**LABORATORY:** 15 hours per week.

Laboratory section of Federal Aviation Administration approved curriculum which provides training in power plant systems and components. This laboratory is a required corequisite to AERO 105 and includes basic systems for instrumentation, fire protection, electrical, lubrication, ignition, fuel and fuel metering, induction, cooling, exhaust, and propellers.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 121**

**AVIATION FUNDAMENTALS 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Introduction to the basic principles of aeronautics, aircraft structure and operations. An orientation to the aviation industry including space, rocketry and aeronautical occupations. The history of aviation is presented with an outlook for the future of the aviation and aerospace industries.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 122C**

**F.A.A. PRIVATE PILOT GROUND SCHOOL 6 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 6 hours per week.

Complete preparation for the F.A.A. private pilot written examination including aerodynamics, weight and balance, flight computer, navigation, meteorology and federal air regulations.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **AERO 124**

**AIRCRAFT POWER PLANTS 3 UNITS**

**PREREQUISITE:** None.

**LECTURE: 3 hours per week.**

Designed to familiarize the aviator or prospective pilot with the operating principles and construction highlights of both reciprocating and jet aircraft engines. Enables the professional flier to operate and maintain the power plants of most modern as well as vintage aircraft.

*Associate Degree Applicable*

**AERO 125**

**FLIGHT SAFETY**

**2 UNITS**

**PREREQUISITE: None.**

**LECTURE: 2 hours per week.**

An in-depth study of flight safety including flight safety records, aircraft accident prevention, casual cause factors, agencies and organizations contributing to flight safety, pilot and command responsibilities, liability and litigation.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 126**

**AIRCRAFT STRUCTURES**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The fundamentals of aircraft design and construction including the types of construction; reasons for variances in construction from aircraft to aircraft; manufacturing processes for each type of aircraft and the basic working principles of major aircraft systems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 131B**

**PRIVATE AND COMMERCIAL PILOT GROUND SCHOOL**

**6 UNITS**

**PREREQUISITE: None.**

**LECTURE: 6 hours per week.**

A review of the private pilot F.A.A. ground school and preparation for the F.A.A. private or commercial pilot examination. Topics include weight and balance and flight computers. The final is the F.A.A. written examination.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 134**

**CIVIL AVIATION MANAGEMENT AND LAWS**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The history of civil aviation in the United States including federal legislation on civil aviation; international treaties and agreements relevant to civil aviation; and regulations pertaining to the management of airports and airplane companies.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 140C**

**INSTRUMENT GROUND SCHOOL AND FLIGHT SIMULATORS**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

An instrument ground school which provides academic and practical training in the fundamentals of instrument flying. Includes aerodynamic factors, flight instruments and techniques, electronic navigational aids, flight planning, communication, air traffic control, and procedures such as departures, enroute, arrival, approach, missed approach, and emergencies. The subject matter is reinforced by flying the various procedures in the flight simulators. This is an excellent refresher course for students who currently

possess an Instrument Rating or an Airline Transport Rating. **COMPLETION OF BASIC F.A.A. GROUND SCHOOL OR ENROLLMENT IN GROUND SCHOOL OR COMMERCIAL AERONAUTICAL COURSES IS REQUIRED.**

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 144**

**AVIATION WEATHER**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The aspects of weather as they relate to aircraft operation and flight safety. Includes basic and hazardous weather and interpretation of weather reports, forecasts, charts and maps.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AERO 198**

**AERONAUTICS WORK EXPERIENCE**

**1-4 UNITS**

**PREREQUISITE: None.**

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Work Experience 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIR TRAVEL**

DIVISION:	Technical
DIVISION DEAN:	Thomas Bauman, M.S., P.E.
DEPARTMENT HEAD:	Allen Moore, A.A. (909) 384-8270
OTHER FACULTY:	Kevin Kammer, A.A. Dick Thompson, Ph.D.
DIVISION SECRETARY:	Patsy Martinez (909) 384-8902
DIVISION OFFICE:	Technical 108 (909) 384-4451
LIAISON COUNSELOR:	George Fleming, M.S. (909) 384-8975

**AIR TRAVEL CAREERS**

The Air Travel Careers curriculum prepares students for the, competitive customer service careers in the airline and travel industry. Classes include career survey, hiring requirements, communication skills, appearance/image standards, oral interviewing techniques, written employment skills, airline, airport and travel terminology and codes plus airline reservation systems.

A specialization in Air Travel Careers prepares students for work in every sector of the airline and travel industry such as flight attendant, reservationist, gate agent, customer/passenger service agent, ramp agent, sales and management plus a variety of other positions.

## AIR TRAVEL CAREERS ASSOCIATE OF SCIENCE DEGREE

To graduate with a specialization in one of the Air Travel Careers majors, students must complete all the requirements for the appropriate certificate with a grade of C or better plus the general breadth requirements for the associate degree (minimum total = 60 units).

### AIR TRAVEL CAREERS CERTIFICATES

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

There are three Air Travel Career Certificates: (1) Air Travel Careers - *Flight*, (2) Air Travel Careers - *Ground*, and (3) Airline Travel Careers - *Travel*. Each of these certificates requires the core courses, plus specialized courses.

CORE REQUIRED COURSES:	UNITS
AIRTVL 101 Survey of Travel Careers	1.5
AIRTVL 103 Image, Attitude, and Appearance	1.5
AIRTVL 104 Terminology, Codes, and Operations	1.5
AIRTVL 105 Written Employment Skills	1.5
AIRTVL 106 Oral Interviewing Skills for Employment	1.5
AIRTVL 107 Cultural Awareness	1.5
AIRTVL 108 Service: Ground and In-flight	1.5
AIRTVL 109 Safety: Ground and In-flight	1.5
AIRTVL 110 Travel Reservation System I	1.0
AIRTVL 111 Travel Reservation System II	1.0
AIRTVL 197 Internship Seminar/Work Experience	3.0
PE 231 First Aid and CPR	3.0

**Three courses from the following list of Travel Geography are required for certification: 4.5**

AIRTVL 112 Travel Geography - United States	(1.5)
AIRTVL 113 Travel Geography - The Americas	(1.5)
AIRTVL 114 Travel Geography - Pacific Rim	(1.5)
AIRTVL 115 Travel Geography - Southern Europe	(1.5)
AIRTVL 116 Travel Geography - Northern Europe	(1.5)
AIRTVL 117 Travel Geography - Eastern Europe	(1.5)
AIRTVL 118 Travel Geography - Africa	(1.5)
AIRTVL 120 Travel Geography - Resort Destinations	(1.5)

**TOTAL UNITS for Air Travel Careers Core Requirements 24.5**

#### SUGGESTED ELECTIVES

AERO 121 Aviation Fundamentals	3.0
AERO 134 Civil Aviation Management and Laws	3.0
BUSAD 100 Introduction to Business	3.0
ENGL 101 Freshman Composition	4.0
OIS 100 Beginning Keyboarding	3.0
SPEECH 100 Elements of Public Speaking	3.0

#### 1. Air Travel Careers - Flight

This certificate prepares students for work as flight attendants, reservationists, ticket agents, travel agents, gate agents, customer/ passenger service agents, ramp agents plus a variety of other positions.

#### REQUIRED COURSES: UNITS

Air Travel Careers Core Requirements	24.5
AIRTVL 102 Flight Attendant Survey	1.5

**Total Units for Air Travel Careers - Flight Specialized Courses 1.5**

**Total Units for Air Travel Careers - Flight Certificate 26.0**

#### 2. Air Travel Careers - Ground

This certificate prepares students for work as ground support for the aviation industry such as reservationists, ticket agents, travel agents, gate agents, customer/passenger service agents, ramp agents plus a variety of other positions.

#### REQUIRED COURSES: UNITS

Air Travel Careers Core Requirements	24.5
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**Total Units for Air Travel Careers - Ground Certificate 24.5**

#### 3. Air Travel Careers - Travel

This certificate prepares students for work as ticket agents, travel agents, reservationists, gate agents, customer/passenger service agents, ramp agents, sales and management plus a variety of other positions.

#### REQUIRED COURSES: UNITS

Air Travel Careers Core Requirements	24.5
--------------------------------------	------

AIRTVL 130 Air Fares and Ticketing I: Domestic	3.0
AIRTVL 131 Air Fares and Ticketing II: International	3.0
AIRTVL 132 Introduction to Cruises, Tours, Ground Transportation and Accommodations	3.0
AIRTVL 133 Travel Agency Sales and Business Management	1.5

**Total Units for Air Travel Careers - Travel Specialized Courses 10.5**

**Total Units For Air Travel Careers - Travel Certificate 35.0**

#### COURSES OFFERED BY THE DEPARTMENT OF AIR TRAVEL:

**AIRTVL 101  
SURVEY OF TRAVEL CAREERS 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

Introduction to travel careers employment opportunities, qualifications, salary, and benefits. Includes an overview of employment in airports, hospitality industries, travel agencies, and aviation support businesses, and on airlines, trains, cruises, and tours.

*Associate Degree Applicable  
Course credit transfers to CSU.*

**AIRTVL 102**  
**FLIGHT ATTENDANT SURVEY** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Introduction to flight attendant and in-flight service team qualifications, employment opportunities, responsibilities, lifestyles, salaries and benefits.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 103**  
**IMAGE, ATTITUDE AND APPEARANCE** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Overview of the appearance, image, attitude, lifestyle decisions, goals, etiquette and wellness standards established by major United States airlines. Includes techniques to build confidence, professionalism, and business skills to secure successful employment in airline travel careers.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 104**  
**TERMINOLOGY, CODES AND OPERATIONS** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Survey of terminology unique to the airline travel industry, such as airline codes, airport and city codes, schedules, Official Airline Guide, federal agencies, airport operations, history, airline deregulation, mergers and acquisitions.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 105**  
**WRITTEN EMPLOYMENT SKILLS** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Prepares students with written skills required for employment such as drafting a resume, application, business letters, self-evaluation, marketing plan, personal register of employment data, employment testing, and document on employee/labor organizations and affirmative action.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 106**  
**ORAL EMPLOYMENT INTERVIEW SKILLS** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Prepares students for employment interviews through role playing and feedback on responding to interview questions. Student interviews are videotaped and critiqued, providing students with opportunities to see the image they project during mock interviews.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 107**  
**CULTURAL AWARENESS** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Introduction to the history and belief systems of various world cultures with a focus on etiquette, gestures, body language, eating/ drinking practices, business and social behavior.  
*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 108**  
**SERVICE: GROUND AND IN-FLIGHT** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Survey of service techniques for ground and in-flight operations including the identification and pronunciation of foods and beverages, airline equipment to provide quality food/beverage service, and the development of a personal serving style.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 109**  
**SAFETY: GROUND AND IN-FLIGHT** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 Survey of safety and security procedures for the travel industry including ground and in-flight equipment, passenger psychology, airport security, federal regulations and safety precautions.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 110**  
**TRAVEL RESERVATION SYSTEM I** 1 UNIT  
**PREREQUISITE:** None.  
**LECTURE:** .75 hour per week and  
**LABORATORY:** .75 hour per week.  
 Introduction to computer travel industry reservation and ticketing systems, with extensive practice in entering simulated reservations.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 111**  
**TRAVEL RESERVATION SYSTEM II** 1 UNIT  
**PREREQUISITE:** AIRTVL 110.  
**LECTURE:** .75 hour per week and  
**LABORATORY:** .75 hour per week.  
 A second-level course in computer travel industry reservation and ticketing systems, with extensive role-playing practice in procedures required for reservations, follow-up confirmations, and effective customer service.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 112**  
**TRAVEL GEOGRAPHY - UNITED STATES** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 A travel-industry view of the United States including information on such items as regional accents and dialects, shopping, historical and recreational tourist destinations, regional culture, and ethnic diversity to maximize the travel experience in the United States.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**AIRTVL 113**  
**TRAVEL GEOGRAPHY - THE AMERICAS** 1.5 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week.  
 A travel-industry view of the Americas including information on such items as culture, currency, language, shopping and tourist destinations in Canada, Mexico, the Caribbean, Central America, and South America.  
*Associate Degree Applicable*

**AIRTVL 114**  
**TRAVEL GEOGRAPHY - PACIFIC RIM 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of the Pacific Rim including information on such items as regional accents and dialects, currency, shopping, historical and recreational tourist destinations, regional culture, ethnic diversity, and customs requirements to maximize the travel experience in Australia, New Zealand, Japan, South Korea, Hong Kong, China, Taiwan, Thailand, Philippines, Tahiti, Samoa, Fiji, Singapore, Malaysia, Indonesia, and Indochina.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 115**  
**TRAVEL GEOGRAPHY - SOUTHERN EUROPE 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of Southern Europe including information on such items as culture, currency, language, shopping, tourist destinations and regional cultures in Greece, Spain, Portugal, Italy, Austria, Germany, Switzerland, and France.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 116**  
**TRAVEL GEOGRAPHY - NORTHERN EUROPE 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of Northern Europe including information on such items as customs requirements, currency, language and dialects, shopping, historical and recreational tourist destinations, regional culture, and ethnic diversity to maximize the travel experience in Scandinavia, the British Isles, and the Low Countries.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 117**  
**TRAVEL GEOGRAPHY - EASTERN EUROPE 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of Eastern Europe including information on such items as culture, currency, language, shopping, tourist destinations and regional cultures in Russia, Czechoslovakia, Hungary, Poland, the Yugoslav republics, Romania, and Albania.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 118**  
**TRAVEL GEOGRAPHY - AFRICA 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of Africa including information on such items as customs, entry requirements, currency, language and dialects, shopping, historical and recreation tourist destinations and regional cultures in Africa.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 120**  
**TRAVEL GEOGRAPHY - RESORT DESTINATIONS 1.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1.5 hours per week.**

A travel-industry view of resort destinations in and near the United States. Includes information on such items as local cruises and their corresponding itineraries, culture, currency, language, shopping, historical and recreational tourist destinations, ethnic diversity, and regional culture to maximize the travel experience in the Caribbean, the Bahamas, Bermuda, the Mexican Riviera, the Yucatan Peninsula, and the state of Hawaii.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 130**  
**AIR FARES AND TICKETING I: DOMESTIC 3 UNITS**  
**PREREQUISITE/COREQUISITE: AIRTVL 110.**  
**LECTURE: 3 hours per week.**

This course provides an introduction into domestic airline fares, fare construction ticketing, route construction and corresponding rules. Included in the course will be instruction on correctly writing an airline ticket and an understanding of industry accountable documents and their use. The course is designed for those interested in becoming employed in the air travel industry as an airline ticket agent, travel agent, tour agent or airline reservationist.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 131**  
**AIR FARES AND TICKETING II: INTERNATIONAL 3 UNITS**

**PREREQUISITES/COREQUISITES: AIRTVL 111 and AIRTVL 130.**

**LECTURE: 3 hours per week.**

This course provides an introduction into international airline fares, fare construction, ticketing, route construction and corresponding rules. Also covered will be international taxes, refunds and exchanges both domestic and international. This course is designed for those interested in becoming employed in the air travel industry as an airline ticket agent, travel agent, tour agent or airline reservationist.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 132**  
**INTRODUCTION TO CRUISES, TOURS, GROUND TRANSPORTATION AND ACCOMMODATIONS 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

This course provides an introduction into cruising, rail travel, tours and accommodations for students entering the travel agency/ airline industry. Each module will include information on products available to the public: destinations, itineraries, and services offered, cost of product, value comparison and the corresponding target market for the products.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 133**



**TRAVEL AGENCY SALES AND BUSINESS  
MANAGEMENT 1.50 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1.50 hours per week.

This course provides the travel student the information and knowledge required to successfully manage and operate a travel agency. Students will become familiar with sales and marketing technology, communication and money management. The course is designed to meet the industry standards of the Institute of Certified Travel Agents (ICTA). Each student will have the opportunity to earn a "Travel Career Development Test Certificate" awarded by the ICTA, which is recognized by travel industry employers nationwide.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 197  
INTERNSHIP SEMINAR/WORK EXPERIENCE 3 UNITS**

**PREREQUISITES:** AIRTVL 104 and AIRTVL 110 or equivalent skills verified through occupational experience in a travel agency, other training institution, military or airlines.

**LECTURE:** 16 hours per week and 120 hours of non-paid work or 150 hours of paid work.

A lecture-based foundation for students' work experience in the field. Supervised training in the form of social skills, and application of information about airline and travel industries.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**AIRTVL 198  
AIR TRAVEL CAREERS WORK EXPERIENCE 1-4 UNITS**

**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Work Experience 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ALCOHOL/DRUG STUDIES**

See courses within the  
HUMAN SERVICES DEPARTMENT

**AMERICAN SIGN LANGUAGE**

DIVISION:	Humanities
DIVISION DEAN:	Sherrie Guerrero, Ed.D.
DIVISION SECRETARY:	Nori Mejia, M.A.
DIVISION OFFICE:	North Hall 201
	(909) 384-8544
OTHER FACULTY:	Jeff Schmidt, M.A.
	Lydia Barajas-Zapata, M.A.
DIVISION SECRETARIES:	Kelly Adcock
	North Hall 240
	(909) 384- 8906
LIAISON COUNSELOR:	Juan Zepeda, M.S.C.
	(909) 384-8976

**ASL 109  
BEGINNING AMERICAN SIGN LANGUAGE 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Develops communication skills in American Sign Language. Presents basic vocabulary and grammar of ASL with an introduction to the culture of the deaf community. Primary emphasis is on receptive skills.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ASL 110  
INTERMEDIATE AMERICAN SIGN LANGUAGE 3 UNITS**

**PREREQUISITE:** ASL 109.

**LECTURE:** 3 hours per week.

Develop conversational skills in American Sign Language. Presents expanded vocabulary and grammar of ASL with an examination of the culture of the deaf community. Emphasis is on both receptive and expressive skills.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ASL 111  
ADVANCED AMERICAN SIGN LANGUAGE 3 UNITS**

**PREREQUISITE:** ASL 110.

**LECTURE:** 3 hours per week.

Develops conversational skills in American Sign Language. Presents expanded vocabulary and grammar of ASL with a review of primary issues in deaf culture. Emphasis is on idiomatic constructions and expressive skills.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ANATOMY**

See courses within the BIOLOGY DEPARTMENT

**ANTHROPOLOGY**

DIVISION:	Social Science
ACTING DEAN:	Gloria M. Fisher, J.D.
DEPARTMENT HEAD:	Janet Pielke Brennecke, M.A.
FACULTY:	Gary Olson, M.A.
DIVISION SECRETARY:	To Be Announced
DIVISION OFFICE:	Liberal Arts Building, Room 122
	(909) 384-8603
LIAISON COUNSELOR:	Laura Gomez, M.A.
	(909) 384-8979

Anthropology is the study of humanity in all times and places. As such, it has the broadest scope of any of the social sciences.

The Anthropology Department includes basic introductory courses in cultural and physical anthropology as well as archaeology. In addition, courses are offered which focus on selected areas, such as religion, art, and North American Indians.

With the goal of understanding people in all parts of the world, anthropology is useful to anyone living or working in a multicultural environment, such as the business world, health sciences, or any other profession which involves working with people from diverse backgrounds. The courses within this department are designed to provide students with survival skills for the global community in which we live, a community in which all of the world's people are interdependent. Students planning to transfer to a four-year institution and major in anthropology should consult with a counselor regarding the transfer process and lower division requirements.

## **COURSES OFFERED BY THE DEPARTMENT OF ANTHROPOLOGY:**

### **ANTHRO 100 INTRODUCTION TO ARCHEOLOGY 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The study of material remains, usually from the past, to describe and explain human behavior. Includes the methods, objectives, and history of archeology; a survey of the biological and cultural development of humanity as revealed by archaeological discoveries from around the world; and the contribution of archeology to an understanding of the present and the future.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ANTH 6*

### **ANTHRO 102 CULTURAL ANTHROPOLOGY 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The focus is on human behavior, studied through the approaches of archaeology, linguistics, and ethnology. Selected topics cover the range of cultural phenomena including material culture, social organization, and religion. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ANTH 4*

### **ANTHRO 106 PHYSICAL ANTHROPOLOGY 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The systematic study of humans as biological organisms including the origin and antiquity of humanity, our place in nature, modern biological diversity including race, and the future prospects for the human species. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ANTH 2*

### **ANTHRO 107 THE UNITED STATES AND THE NORTH AMERICAN INDIANS 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A systematic survey of North American Indian groups, from their prehistoric roots to the present. Includes their place in American history, U.S. Government policies and regulation, and future prospects for North American Indians. This course is also offered as HIST 107.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **ANTHRO 109 TRIBAL AND ETHNIC ART 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A world-wide survey of the artistic achievement of past and present tribal peoples with an emphasis on the meaning of art in each society. Art works are surveyed

through films, slides, field trips and examination of actual art works and include cultures of North American Indians, ancient America, the Pacific, Africa and Australia. This course is also offered as ART 109.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **ANTHRO 110 TRIBAL AND ETHNIC RELIGIONS 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A comparative study of supernaturalism in tribal societies, both past and present including witchcraft, magic, totemism, mythology and ritual, nativistic movements, and the religious context of drug usage. Prehistoric religion will be examined, as well as the belief systems of selected tribal peoples. This course is also offered as RELIG 110.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **ANTHRO 222 SPECIAL PROBLEMS IN ANTHROPOLOGY I 1 UNIT PREREQUISITE/COREQUISITE: ANTHRO 100 or**

**ANTHRO 102 or ANTHRO 106.**

**INDEPENDENT STUDY: 3 hours per week.**

An opportunity for selected students with some background in anthropology to pursue special research problems in the field. Topics are selected on an individual basis, and may include practical experience in archaeological excavation or museum work. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **ANTHRO 223 SPECIAL PROBLEMS IN ANTHROPOLOGY II 2 UNITS PREREQUISITE/COREQUISITE: ANTHRO 100 or**

**ANTHRO 102 or ANTHRO 106.**

**INDEPENDENT STUDY: 6 hours per week.**

An opportunity for selected students with some background in anthropology to pursue special research problems in the field. Topics are selected on an individual basis, and may include practical experience in archaeological excavation or museum work. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

## ARCHITECTURE

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: Susan Bangasser  
 Chemistry 118  
 (909) 384-8650  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Diana Rodriguez, M.A.  
 (909) 384-8950  
 (909) 384-8234

The Architecture curriculum is designed to provide students with the following understanding and skills:

- 1) Verbal and graphic methods of communication;
- 2) An understanding of the social and environmental problems in the United States and other countries;
- 3) Creative solutions to existing and future problems in the United States and other countries; and
- 4) How to implement new ideas in a reasonable time frame.

The areas of study include how to develop a better quality of life through efficient housing, new building material development, new construction methods, new work methods, solar and wind power, efficient use of resources, and a reduction of waste in materials and time. A learning-by-doing approach is stressed in preparation for the job market or transfer to a university for further study in architecture, architectural engineering, city planning, or landscape architecture. Students planning to transfer to a four-year institution and major in one of these fields should consult with a counselor regarding the transfer process and lower division requirements.

### ARCHITECTURE ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Architecture, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

REQUIRED COURSES:	UNITS
ARCH 150 Introduction to Architectural Design I	3
ARCH 151 Introduction to Architectural Design II	3
ARCH 159 Architectural Freehand Drawing	1
ARCH 160 Architectural Drawing	4
ARCH 165 Architectural Illustration	4
ARCH 200 Basic Design I	4
ARCH 201 Basic Design II	4
ARCH 230 Architectural Practice I	3
ARCH 231 Architectural Practice II	3
Nine units from the list of RECOMMENDED COURSES	9
<b>TOTAL UNITS:</b>	<b>38</b>

RECOMMENDED COURSES:	UNITS
ARCH 145 History of Architecture I	3
ARCH 146 History of Architecture II	3
ARCH 170 Architectural Building Construction Systems	4
MATH 151 Precalculus	4
MATH 250 Single Variable Calculus I	4
MATH 251 Single Variable Calculus II	4
MATH 252 Multivariable Calculus	5

### ARCHITECTURE CERTIFICATES

Students working for certificates must have a basic

knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

### 1. ARCHITECTURAL DRAFTING TECHNICIAN CERTIFICATE

The Architectural Drafting Technician Certificate is designed to prepare students for entry-level work in the architectural field doing architectural drafting and detailing, rendering, sketching, and simple computations. Students would most likely work for a licensed architect, structural engineer, mechanical engineer or for local, state, and federal governmental agencies or urban planning commissions.

REQUIRED COURSES:	UNITS
ARCH 130 Materials of Architectural Construction	3
ARCH 150 Introduction to Architectural Design I	3
ARCH 151 Introduction to Architectural Design II	3
ARCH 159 Architectural Freehand Drawing	1
ARCH 160 Architectural Drawing	4
ARCH 165 Architectural Illustration	4
ARCH 200 Basic Design I	4
ARCH 201 Basic Design II	4
ARCH 230 Architectural Practice I	3
ARCH 231 Architectural Practice II	3
TECALC 097 Technical Calculations	(4)
or	
MATH 102 Introduction to College Algebra	4
<b>TOTAL UNITS:</b>	<b>36</b>

### 2. CONSTRUCTION ENGINEERING TECHNOLOGY CERTIFICATE

The Construction Engineering Technology Certificate is designed to prepare students for the building fields and the architectural design fields.

REQUIRED COURSES:	UNITS
ARCH 130 Materials of Construction	3
ARCH 144 Introduction to Architectural Computer-Aided Drafting (CAD)	3
ARCH 150 Introduction to Architectural Design I	3
ARCH 159 Architectural Freehand Drawing	1
ARCH 160 Architectural Drawing	4
ARCH 170 Architectural Building Construction Systems	4
ARCH 230 Architectural Practice I	3
ARCH 231 Architectural Practice II	3
MATH 103 Plane Trigonometry	4
<b>TOTAL UNITS:</b>	<b>28</b>

### COURSES OFFERED BY THE DEPARTMENT OF ARCHITECTURE:

#### ARCH 130 MATERIALS OF ARCHITECTURAL CONSTRUCTION 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Sources, properties and production of the common materials used in construction, such as steel, iron, non-ferrous metals and their alloys, concrete, brick and wood.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### ARCH 141 INTRODUCTION TO ARCHITECTURAL COMPUTER AIDED DRAFTING (CAD) 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY: 3 hours per week.**

This course introduces students to the theories and principles of computer-aided design/drafting and to its principal applications in the field of architecture (generating, evaluating, modeling, drafting, and rendering design solutions).

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 145**

**HISTORY OF ARCHITECTURE I**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A comparative study of architecture and architects from a variety of cultures with emphasis on the people, locations, structures, materials, and methods of construction. Includes prehistoric monolithic, Crete, Greece, Pre-Italian, Roman, English Medieval, and Gothic cultures.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ARCH 146**

**HISTORY OF ARCHITECTURE II**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A comparative study of architecture and architects from a variety of cultures with emphasis on the people, locations, structures, materials, and methods of construction. Includes early colonial settlements in the United States, Mayan, Native American, the Industrial Revolution, and modern cultures.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ARCH 150**

**INTRODUCTION TO ARCHITECTURAL DESIGN I**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Introduction to architecture and the design process with emphasis on reason and principles for the development of creativity.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 151**

**INTRODUCTION TO ARCHITECTURAL DESIGN II**

**3 UNITS**

**PREREQUISITE: ARCH 150.**

**LECTURE: 1 hour per week and**

**LABORATORY: 5 hours per week.**

Development of skills in basic composition and basic design as applied to architecture. A series of projects introduce line, color, form, materials, and promote awareness of environment.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ARCH 159**

**ARCHITECTURAL FREEHAND DRAWING**

**1 UNIT**

**PREREQUISITE: None.**

**LABORATORY: 3 hours per week.**

Development of skills in rapid free-hand sketching with several medium with emphasis on the skills required to

record and communicate architectural concepts.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 160**

**ARCHITECTURAL DRAWING**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1 hour per week and**

**LABORATORY: 8 hours per week.**

Basic architectural techniques and skills used in graphic communication including orthographic, isometric developments, descriptive geometry, perspective (perspective shades, shadows, reflections), and basic model building.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ARCH 165**

**ARCHITECTURAL ILLUSTRATION**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1 hour per week and**

**LABORATORY: 8 hours per week.**

Development of skills required to produce graphic illustrations used in the architectural profession including black and white, color, photographic, and video methods.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 170**

**ARCHITECTURAL BUILDING CONSTRUCTION SYSTEMS**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 2 hours per week and**

**LABORATORY: 6 hours per week.**

Construction project course to give students knowledge and experience in building construction as it relates to architecture.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 180**

**FUNDAMENTALS OF STRUCTURAL DESIGN**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Provides an overview of the variety of forces acting upon building structural systems. Covers topics relative to the strength, mechanical principles and design of concrete, wood, steel and other building materials as they are used in foundations, floors, walls, columns and roofs.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ARCH 200**

**BASIC DESIGN I**

**4 UNITS**

**PREREQUISITE: ARCH 151.**

**LECTURE: 1 hour per week and**

**LABORATORY: 8 hours per week.**

Development of creative design skills and problem solving as required in the architectural profession including the study and solution of elementary problems involving the natural and social environment and basic model building.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ARCH 201**

**BASIC DESIGN II 4 UNITS****PREREQUISITE: ARCH 200.****LECTURE: 1 hour per week and****LABORATORY: 8 hours per week.**

Development of creative design skills and problem solving as required in the architectural profession including advanced problems in space relationships, structures, and human requirements and advanced model building.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ARCH 230****ARCHITECTURAL PRACTICE I 3 UNITS****PREREQUISITES: ARCH 130 and ARCH 160.****LECTURE: 1 hour per week and****LABORATORY: 6 hours per week.**

Methods used in the architectural profession for the preparation of preliminary studies, construction drawings, detail drawings and building code applications including complete construction drawings of light wood frame and heavy timber construction.

*Associate Degree Applicable**Course credit transfers to CSU.***ARCH 231****ARCHITECTURAL PRACTICE II 3 UNITS****PREREQUISITE: ARCH 230.****LECTURE: 1 hour per week and****LABORATORY: 6 hours per week.**

Methods used in the architectural profession for the preparation of preliminary studies, construction drawings, detail drawings and building code applications including complete construction drawings for steel frame and concrete construction.

*Associate Degree Applicable**Course credit transfers to CSU.***ART**

DIVISION: Humanities  
 DIVISION DEAN: Sherrie Guerrero, Ed.D.  
 DEPARTMENT HEAD: Mary Sue Andersen, M.F.A.  
 DEPARTMENT OFFICE: Art Gallery  
 (909) 384-8939  
 OTHER FACULTY: Gary Calote, M.A.  
 James Stewart, M.F.A.  
 DIVISION SECRETARIES: Kelly Adcock  
 North Hall 240  
 (909) 384-8906  
 Diane Metz  
 Art Gallery  
 (909) 384-8939  
 LIAISON COUNSELOR: Richard Long, M.A.  
 (909) 384-8972

The study of art involves both an appreciation of the cultural heritage of art and the development of skills. Consequently, the Art Department offers courses in art history as well as studio courses in drawing, design, ceramics, painting, film-making, sculpture, and glassblowing.

In addition to an associate degree in fine arts, the department offers a certificate in commercial art, designed for students seeking employment in the design, advertising, and entertainment fields.

A baccalaureate degree in art qualifies students for

employment in the fine arts, industry, and education. Students planning to transfer to a four-year institution and major in art should consult with a counselor regarding the transfer process and lower division requirements.

Many of the courses in this department are activity courses that may be taken more than once. These courses are indicated by (x) following the three-digit course number; the number following the (x) indicates the number of times the course may be repeated.

**ART ASSOCIATE OF ARTS DEGREES****1. ART**

To graduate with a specialization in Art, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units). The art courses chosen should reflect the individual student's interests.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ART 100 Art History: The Stone Age to the Middle Ages	3
ART 102 Art History: The Renaissance to the Present	3
ART 120 Two Dimensional Design	3
or	
ART 175x4 Sculpture	(3)
or	
ART 212x4 Ceramics	(3)
ART 124x4 Drawing	3
ART 126x4 Painting	3
or	
ART 132x4 Life Drawing	(3)
ART 148 Beginning Computer Graphics	3
ART 164x4 Creative Filmmaking	3
<b>TOTAL UNITS:</b>	<b>21</b>

**2. GRAPHIC DESIGN**

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ART 100 Art History: The Stone Age to the Middle Ages	3
ART 102 Art History: The Renaissance to the Present	3
ART 120 Two-Dimensional Design	3
ART 124x4 Drawing	3
ART 145 Graphic Design	3
ART 148 Beginning Computer Graphics	3
ART 158x4 Basic Photography	3
<b>Three units from the list of RECOMMENDED COURSES</b>	<b>3</b>
<b>TOTAL UNITS:</b>	<b>24</b>

<b>RECOMMENDED COURSES:</b>	<b>UNITS</b>
ART 109 Tribal and Ethnic Art	3
ART 120 Two-Dimensional Design	3
ART 126x4 Painting	3
ART 132x4 Life Drawing	3
ART 149 Intermediate Computer Graphics	3
ART 150 Advanced Computer Graphics	3
ART 164x4 Creative Filmmaking	3
ART 180 Beginning Computer Animation	3
<b>GRAPHIC DESIGN CERTIFICATE</b>	

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ENGL 015 Preparation for College Writing	4
or	

ENGL 101 Freshman Composition	(4)
ART 100 Art History: The Stone Age to the Middle Ages	3
or	
ART 102 Art History: The Renaissance to the Present	(3)
or	
ART 105 History of 20th Century Art	(3)
ART 120 Two-Dimensional Design	3
ART 145 Graphic Design	3

#### **GRAPHIC DESIGN CERTIFICATE, Continued**

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ART 148 Beginning Computer Graphics	3
ART 149 Intermediate Computer Graphics	3
ART 161 Digital Photography	3
ART 185 Intermediate Web and Multimedia Design	3
<b>TOTAL UNITS:</b>	<b>25</b>

#### **WEB AND MULTIMEDIA DESIGN CERTIFICATE**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	(4)
ART 100 Art History: The Stone Age to the Middle Ages	3
or	
ART 102 Art History: The Renaissance to the Present	(3)
or	
ART 105 History of 20th Century Art	(3)
ART 120 Two-Dimensional Design	3
ART 148 Beginning Computer Graphics	3
ART 161 Digital Photography	3
ART 180 Beginning Computer Animation	3
ART 185 Intermediate Web and Multimedia Design	3
ART 186 Intermediate Web and Multimedia Design	3
<b>TOTAL UNITS:</b>	<b>25</b>

*\*Pending approval from the California Community College Chancellor's Office.*

#### **COURSES OFFERED BY THE DEPARTMENT OF ART:**

**ART 100**  
**ART HISTORY: THE STONE AGE TO THE MIDDLE AGES** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

A survey of Western art from the Stone Age to the Middle Ages including the art of Egypt, Greece, and the Aegean; and Etruscan, Roman, early Christian, Byzantine, Islamic, early Medieval, Romanesque and Gothic art.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ART 2*

**ART 102**  
**ART HISTORY: THE RENAISSANCE TO PRESENT** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

Presents a survey of western art from the Renaissance through the 20<sup>th</sup> Century. Topics covered include 15<sup>th</sup> and 16<sup>th</sup> century Italian art; Renaissance and Baroque art; the

Rococo movement; Romanticism; Realism; Impressionism; Cubism; Surrealism and other styles of the 19<sup>th</sup> and 20<sup>th</sup> centuries.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ART 4*

**ART 103**  
**ART APPRECIATION** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

A multicultural exploration of the form and content of two- and three-dimensional art. Topics include: function of art in a society; the artists' language; techniques employed in creating painting, sculpture and other media; overview of the history of art.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ART 105**  
**HISTORY OF 20TH CENTURY ART** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

Survey of Western modern art from 1900 to the present including cubism, fauvism, futurism, totalitarianism, constructivism; impressionism; surrealism; post-impressionism; pop art; and architectural movements of the 20th century.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ART 108**  
**MEXICAN ART HISTORY** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

Survey of Mexican art from pre-columbian times through the 20<sup>th</sup> century muralists.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ART 109**  
**TRIBAL AND ETHNIC ART** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

A world-wide survey of the artistic achievement of past and present tribal peoples with an emphasis on the meaning of art in each society. Art works are surveyed through films, slides, field trips and examination of actual art works. Includes cultures of North American Indians, ancient America, the Pacific, Africa and Australia. This course is also offered as ANTHRO 109.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ART 110**  
**HISTORY OF AMERICAN CINEMA** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE: 3 hours per week.**

Covers the history and cultural influences of the American Cinema, including the origins of the motion picture, the rise and dominance of Hollywood, the decline of the Studio Era, and the emergence of the independent film. Topics include the historical context of the motion picture industry and its relevance to the contemporary viewer, the aesthetics of film, the director, and the studio system.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ART 111**  
**STUDIES IN FILM APPRECIATION** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A study of script, directing, editing and other aspects of film making, aimed at providing a critical awareness of film technique and construction, and an understanding of what a successful film must possess.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ART 120**  
**TWO-DIMENTIONAL DESIGN** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.

A progressive study of the elements and principles of two-dimensional design. Focus on the concepts, tools, and techniques intrinsic to visual communication. Included are color theory and the use of color to manipulate the illusion of space on a two-dimensional plane.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ART 124x4**  
**DRAWING** **1.5-3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1 - 2 hours per week and  
**LABORATORY:** 1.5 - 3 hours per week.

A progressive study of the analysis and investigation of form, space, and concept using a variety of materials, such as charcoal, ink, pencil, tempera, collage, and mixed media. Includes the theory and analysis of perspective in two- and three-dimensional compositions, such as the various means of representing three-dimensional forms in space through aerial and linear perspective. Content and creativity are emphasized as students' skills develop. This course may be taken four times.

Associate Degree Applicable  
Course credit transfers to CSU and UC.  
CAN (California Articulation Number): ART 8  
**\*EFFECTIVE FA03 ONLY**

**ART 124x4**  
**DRAWING** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.

A progressive study of the analysis and investigation of form, space, and concept using a variety of materials, such as charcoal, ink, pencil, tempera, collage, and mixed media. Includes the theory and analysis of perspective in two- and three-dimensional compositions, such as the various means of representing three-dimensional forms in space through aerial and linear perspective. Content and creativity are emphasized as students' skills develop. This course may be taken four times.

Associate Degree Applicable  
Course credit transfers to CSU and UC.  
CAN (California Articulation Number): ART 8  
**\*EFFECTIVE SP04**

**ART 126x4**  
**PAINTING** **1.5-3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1 - 2 hours per week and

**LABORATORY:** 1.5 - 3 hours per week.

A progressive study of the fundamentals of painting including techniques of composition, color mixing, spatial relationships, and imagery. This course may be taken four times.

Associate Degree Applicable  
Course credit transfers to CSU and UC.  
CAN (California Articulation Number): ART 10  
**\*EFFECTIVE FA03 ONLY**

**ART 126x4**  
**PAINTING** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.

A progressive study of the fundamentals of painting including techniques of composition, color mixing, spatial relationships, and imagery. This course may be taken four times.

Associate Degree Applicable  
Course credit transfers to CSU and UC.  
CAN (California Articulation Number): ART 10  
**\*EFFECTIVE SP04**

**ART 132x4**  
**LIFE DRAWING** **1.5-3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1 - 2 hours per week and  
**LABORATORY:** 1.5 - 3 hours per week.

A progressive study of anatomy in figure drawing and an examination of the creative uses of human figures in art. Includes basic studies in contour, proportion, gesture, volume, and the functional qualities of the human form and the graphic interpretations of human figures with charcoal, pencil, pastel, colored pencil, paint, and mixed media. This course may be taken four times.

Associate Degree Applicable  
Course credit transfers to CSU and UC.  
CAN (California Articulation Number): ART 24

**ART 145**  
**GRAPHIC DESIGN** **3 UNITS**  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.

Focus on the technical skills necessary to enter the graphic design field and the impact of artwork on different audiences. Including the development of a personal style, increased facility with graphic software and analysis of content for a client's strategies and goals. Through reading and discussion, students will learn how to analyze, design, discuss and present work in a professional manner.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ART 148**  
**BEGINNING COMPUTER GRAPHICS** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on desktop publishing and photographic digital imaging. Skills such as layout, page design and scanning and photographic are practiced.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ART 149**  
**INTERMEDIATE COMPUTER GRAPHICS** **3 UNITS**  
**PREREQUISITE:** ART 148.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus is on photographic digital imaging and manipulation. Skills such as scanning, photographic correction and combining photographic images are practiced. Projects will involve creating computer-generated images, integrating type, and inserting objects and a variety of materials into photographs.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ART 150**  
**ADVANCED COMPUTER GRAPHICS** **3 UNITS**  
**PREREQUISITE:** ART 149.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on layout, imaging and illustration skills. Methods of presentation portfolios will be examined. Skills such as optimizing finished artwork for print media and for screen presentation will be practiced.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ART 158x4**  
**BASIC PHOTOGRAPHY** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 A basic course in photography designed for both art majors and non-art majors, including photographic terminology such as composition, tonality, color relationships and elements of balance; hands-on experience with cameras and studio equipment; analyses of great photographs; the development of visual literacy; and the development of an understanding of photography's relationship to the world of visual imagery. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
 CAN (California Articulation Number): ART 18

**ART 159x4**  
**ADVANCED PHOTOGRAPHY** **3 UNITS**  
**PREREQUISITE:** ART 158x4.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 A progressive course designed for art majors and others with a serious interest in photography. Students learn to use appropriate techniques and materials to replace stereotypical photographs with authentic black and white or color images, drawing from the integration of students' emotions and intellect; develop an awareness of the creative process to define a personal direction and steps

in solving problems; and how to evaluate the impact of photographic works on the viewer in different contexts, such as visual, historical, social, and cultural. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 161**  
**DIGITAL PHOTOGRAPHY** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on visual communication and producing expressive images. Skills included are correcting and enhancing images using computers. This course is designed both for Art Department certificate majors and the general public. Students will supply their own film or digital camera and output media supplies.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ART 164x4**  
**CREATIVE FILMMAKING** **1.5-3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 1 - 2 hours per week and  
**LABORATORY:** 1.5 - 3 hours per week.  
 A progressive study of the fundamentals of filmmaking including researching and writing treatments; drawing storyboards; producing films in 8mm, video, and 16mm formats; titling; and editing. Students work in crews and participate in all facets of filmmaking, such as operating camera and sound equipment; directing; set building; lighting; and casting. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ART 175x4**  
**SCULPTURE** **1.5-3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 1 - 2 hours per week and  
**LABORATORY:** 1.5 - 3 hours per week.  
 A progressive study of the fundamentals of sculpture with a focus on techniques of three-dimensional composition, spatial relationships, and imagery. Includes armature building, plaster mold making, and experiments with various materials, such as clay, wood, plaster, and styrofoam. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
 CAN (California Articulation Number): ART 12  
**\*EFFECTIVE FA03 ONLY**

**ART 175x4**  
**SCULPTURE** **3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 A progressive study of the fundamentals of sculpture with a focus on techniques of three-dimensional composition, spatial relationships, and imagery. Includes armature building, plaster mold making, and experiments with various materials, such as clay, wood, plaster, and styrofoam. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
 CAN (California Articulation Number): ART12  
**\*EFFECTIVE SP04**



**ART 180**  
**BEGINNING COMPUTER ANIMATION** 3 UNITS  
**PREREQUISITE:** None.  
**DEPARTMENTAL ADVISORY:** ART 148.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on computer animation, rendering and modeling. The introduction semester emphasizes the construction of space environments and objects in motion. Included are the principles and skills for building objects in a landscape, and changing environmental over time, such as clouds, atmospheric conditions and reflections.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 181**  
**INTERMEDIATE COMPUTER ANIMATION** 3 UNITS  
**PREREQUISITE:** ART 180.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus on computer animation, rendering and modeling. Included are such skills as complex construction of 3-dimensional models and complex movement control of multiple moving parts.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 182**  
**BEGINNING DIGITAL VIDEO EDITING** 3 UNITS  
**PREREQUISITE:** ART 181.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on rendering animated movies. Instruction emphasizes combining and integrating animations with still images and created footage. Students will work with video editing and special effects software to create QuickTime movies.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 183**  
**INTERMEDIATE DIGITAL VIDEO EDITING** 3 UNITS  
**PREREQUISITE:** ART 182.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focuses on making multi-layer video compositions. Included are such skills as motion control and time-varying special effects.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 185**  
**BEGINNING WEB AND MULTIMEDIA DESIGN** 3 UNITS  
**PREREQUISITE:** ART 148.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus on elements of Web page and CD-ROM production. The course will emphasize preparing material and designing for interactive projects. Practical and theoretical understanding of problems relating to digital technologies will be stressed.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 186**  
**INTERMEDIATE WEB AND MULTIMEDIA**  
**DESIGN: FLASH** 3 UNITS

**PREREQUISITE:** ART 185.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus on interactive motion graphics for web site and disk distribution, using applications such as Macromedia Flash. Emphasis will be given to design concept well as an understanding of structure and impact web media and CD-ROM.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 187**  
**ADVANCED WEB AND MULTIMEDIA DESIGN** 3 UNITS  
**PREREQUISITE:** ART 186.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus is on the elements of CD-ROM design and production. Practical experience in using programs such as Macromedia Director, sound editing, and animation software will be emphasized. Conceptualization, research and the design of large projects will be stressed.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 188**  
**PORTFOLIO WEB AND MULTIMEDIA DESIGN** 3 UNITS  
**PREREQUISITE:** ART 187.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.  
 Focus is on multimedia project planning and design production. This course emphasizes planning, research and client communications skills as preparation for designing and executing a multimedia project.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 198**  
**ART WORK EXPERIENCE** 1-4 UNITS  
**PREREQUISITE:** None.  
 Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ART 212x4**  
**CERAMICS** 1.5 -3 UNITS  
**PREREQUISITE:** None.  
**LECTURE:** 1 - 2 hours per week and  
**LABORATORY:** 1.5 - 3 hours per week.  
 A progressive study of the fundamentals of ceramics including hand-building techniques, use of the potter's wheel, and methods of decorating and glazing. Students produce cylinders, bottles, vases, bowls, plates, lids, and vessels with handles, such as mugs, pitchers, and tea pots. This course may be taken four times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): ART6*

**ART 240x4  
GLASSBLOWING 1.5-3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1 - 2 hours per week and

**LABORATORY:** 1.5 - 3 hours per week.

A progressive study of glass working techniques including designing and producing vessel and sculptural forms in hot glass. Emphasis on exploration of color, hot applications, team work, repeatable forms, sandblasting, cold working/fabrications, and non-conventional methods. This course may be taken four times.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ART 270x4  
DESIGN IN GLASS 1.5-3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1 - 2 hours per week and

**LABORATORY:** 1.5 - 3 hours per week.

A progressive study of glass-working techniques including designing and producing functional, decorative, and sculptural forms in kiln-fired glass; composition in two dimensions using fusion/lamination of colored glass elements; shallow relief slumping; three-dimensional relief using molds; and solid glass casting, such as pate de verre, lost wax, and sand casting. This course may be taken four times.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ART 285  
HONORS IN ART 3 UNITS**

**PREREQUISITE:** Complete ART 102 or ART 120x4 or

ART 124x4 or ART 126x4 with an A or B, or

**COREQUISITE:** Art 102 or ART 120x4 or ART 124x4 or ART 126x4 and an overall GPA of 3.0 or higher.

**LECTURE:** 3 hours per week.

A study of contemporary movements in art and the way these ideas are manifest in the work of artists. Includes an overview of the major innovations of Modernism and how those led to Postmodernist concerns, such as deconstructionism, appropriationism, and semiotics, as well as the impact of language, politics, and the mass media on contemporary art.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ASTRONOMY**

See the Department of PHYSICS/ASTRONOMY

**AUTOMOTIVE TECHNOLOGY**

DIVISION: Technical  
DIVISION DEAN: Thomas Bauman, M.S., P.E.  
DEPARTMENT HEAD: Mark Williams, B.S.  
(909) 384-8571  
OTHER FACULTY: Guy M. Hinrichs, Sr., A.A.  
Richard Jaramillo, A.A.  
Manuel Loera, A.S.  
Donald Wilson  
DIVISION SECRETARY: Patsy Martinez  
(909) 384-8902  
DIVISION OFFICE: Technical 108  
(909) 384-4451  
LIAISON COUNSELOR: George Fleming, M.S.  
(909) 384-8975

The Automotive Department offers courses designed to provide the skills and knowledge required for immediate employment as well as for students with a personal interest in automotive technology.

The course of study in automotive technology may lead to an Associate of Science Degree or a vocational certificate.

**AUTOMOTIVE TECHNOLOGY  
ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in Automotive Technology, students must complete the following required courses for one of the following certificates plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

**AUTOMOTIVE TECHNOLOGY CERTIFICATES**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

**1. AUTOMATIC TRANSMISSION CERTIFICATE**

This certificate program is designed for entry-level employment as an automatic transmission specialist.

REQUIRED COURSES:		UNITS
AUTO 064	Automotive Electrical	4
or		
AUTO 065	Automotive Body Electrical	(4)
AUTO 075x3	Automatic Transmissions Rear Wheel Drive	2-6
AUTO 076x3	Automatic Transaxles Front Wheel Drive	2-6
AUTO 077	Manual Transmissions and Transaxles	4
AUTO 084	General Automotive Technology	4
AUTO 090x3	Engine Repair	6
TECALC 950	Shop Calculations	3
<b>TOTAL UNITS:</b>		<b>25-33</b>

**2. BASIC AUTOMOTIVE BODY AND PAINT  
TECHNICIAN**

This certificate program is designed to provide students with the knowledge and skills necessary for entry-level employment as an auto body repair apprentice, an auto painter apprentice, or in related areas of an automotive dealership or shop, such as chassis, front end, brake or frame repair, and parts counter clerk.

REQUIRED COURSES:		UNITS
AUTO 038x3	Basic Auto Body	9
AUTO 039x3	Secondary Auto Body	9
AUTO 048x3	Intermediate Auto Body	9
AUTO 055	Advanced Auto Body	5
TECALC 950	Shop Calculations	3
<b>TOTAL UNITS:</b>		<b>35</b>

*Auto 038x3 may be waived through the Articulation 2+2+2 program with prior agreement with the Auto Body and Refinishing instructor.*

**3. ADVANCED AUTOMOTIVE BODY AND PAINT  
TECHNICIAN**

This certificate program is designed to provide students with the knowledge and skills necessary for employment as an auto body repair apprentice and an auto painter apprentice beyond the Basic Automotive Body and Paint Technician Certificate. This certificate prepares students for Automotive Service Excellent (ASE) certification, and related areas of an automotive dealership or shop, such as an assistant to a chassis, front end and brake specialist, as well as a frame repair technician and parts counter clerk.

REQUIRED COURSES:		UNITS
AUTO 038x3	Basic Auto Body	9
AUTO 039x3	Secondary Auto Body	9
AUTO 048x3	Intermediate Auto Body	9
AUTO 055	Advanced Auto Body	5
AUTO 056	Automotive Heating and Air Conditioning	4

**Must complete one subject from each category:**

<b>Category #1</b>		
AUTO 052	Automotive Suspension and Steering	4
<b>Category #2</b>		
AUTO 064	Automotive Electrical	4
or		
AUTO 065	Automotive Body Electrical	(4)
<b>Category #3</b>		
TECALC 950	Shop Calculations	3

**TOTAL UNITS:** 47

*\*Pending approval from the California Community College Chancellor's Office.*

#### 4. AUTOMOTIVE TECHNICIAN CERTIFICATE

This certificate is designed to qualify students for entry-level employment as Automotive Technicians. Successful completion of the certificate program will qualify students for assignment such as New Car Preps, Engine Performance Diagnoses, Automotive Maintenance, and Service Technicians.

REQUIRED COURSES:		UNITS
AUTO 064	Automotive Electrical	4
AUTO 065	Automotive Body Electrical	4
AUTO 068	Ignition Systems	4
AUTO 069	Fuel and Exhaust Systems	4
AUTO 075x3	Automatic Transmissions	
	Rear Wheel Drive	2-6
or		
AUTO 076x3	Automatic Transaxles Front Wheel Drive	(2-6)
AUTO 084	General Automotive Technology	4
AUTO 090x3	Engine Repair	6
TECALC 950	Shop Calculations	3
<b>TOTAL UNITS:</b>		<b>31-35</b>

#### 5. ENGINE PERFORMANCE CERTIFICATE

This certificate is designed to qualify students for entry-level employment as Automotive Technicians. Successful completion of the certificate program will qualify students for assignment such as Engine Performance Specialists in areas such as computer systems, electrical systems, engine fuel and exhaust systems, and basic engine diagnosis.

REQUIRED COURSES:		UNITS
AUTO 064	Automotive Electrical	4
AUTO 065	Automotive Body Electrical	4
AUTO 066	ASE Alternative A-6, A-8, L-1 Prep	

	or Certificate	4
AUTO 067	Automotive Emissions	4
AUTO 068	Ignition Systems	4
AUTO 069	Fuel and Exhaust Systems	4
AUTO 084	General Automotive Technology	4
AUTO 090x3	Engine Repair	6
TECALC 097	Technical Calculations	4
<b>TOTAL UNITS:</b>		<b>38</b>

*\*Pending approval from the California Community College Chancellor's Office.*

#### 6. WHEEL ALIGNMENT AND BRAKES CERTIFICATE

REQUIRED COURSES:		UNITS
AUTO 050	Automotive Brakes	4
AUTO 051	Advanced Automotive Brakes	4
AUTO 052	Automotive Suspension and Steering	4
AUTO 053	Advanced Automotive Suspension and Steering	4
AUTO 064	Automotive Electrical	4
AUTO 084	General Automotive Technology	4
TECALC 950	Shop Calculations	3
<b>Total Units:</b>		<b>27</b>

#### COURSES OFFERED BY THE DEPARTMENT OF AUTOMOTIVE TECHNOLOGY:

**AUTO 038x3** 3 **BASIC AUTO BODY** 9 UNITS

**PREREQUISITE:** None.

**LECTURE:** 4 hours per week and

**LABORATORY:** 15 hours per week.

Theory and practical experience in auto collision damage repair and shop safety, with a focus on automotive construction, hand and power tools, laws and regulations, oxy-acetylene welding and brazing. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 039x3** 9 UNITS  
**SECONDARY AUTO BODY**

**PREREQUISITE:** AUTO 038x3.

**LECTURE:** 4 hours per week and

**LABORATORY:** 15 hours per week.

Theory and practical experience in auto collision repair and shop safety, with a focus on MIG welding, (minor damage repair), painting equipment and refinishing materials, E.P.A. and S.C.A.Q.M.D. requirements. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 044x3**  
**AUTOMOTIVE BODY REPAIRING AND REFINISHING** 4 UNITS

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY:** 4 hours per week.

Theory and practical experience in auto collision damage repair and shop safety, with a focus on automotive construction; hand and power tools; laws and regulations, surface preparation, masking, basic spray painting on complete vehicles, and detailing with an introduction to oxyacetylene welding and brazing. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 048x3**

**INTERMEDIATE AUTO BODY 9 UNITS****PREREQUISITE: AUTO 039x3.****LECTURE: 4 hours per week and****LABORATORY: 15 hours per week.**

Theory and practical experience in minor uni-body frame repair and small parts replacement and single stage refinishing. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 049****SHOP MANAGEMENT AND ESTIMATING 4 UNITS****PREREQUISITE: AUTO 038x3 or equivalent experience.****LECTURE: 2 hours per week and****LABORATORY: 6 hours per week.**

Theory and practical experience in shop management, estimating, inventory control and sales techniques.

*Associate Degree Applicable*

**AUTO 050****AUTOMOTIVE BRAKES 4 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

This course is based upon NATEF standards and designed for students and current technicians to gain knowledge and skills in automotive brakes (standard and anti-lock) systems. Included but not limited to disc, drum, hydraulics, power boosters, and traction control. Emphasis on diagnosing, trouble-shooting, repairing, replacing, and adjusting. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test (A-5). Theory and practical work in the repair of brake system. Shop instruction to include safety, machinery, procedures for trouble-shooting and reconditioning of brake systems.

*(Formerly AUTO 050x3)*

*Associate Degree Applicable*

**AUTO 051****ADVANCED AUTOMOTIVE BRAKES 4 UNITS****PREREQUISITE: AUTO 050.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

This course is based on NATEF standards and is designed for students and current technicians to gain advanced knowledge and skills in automotive brakes. Advanced study of disc, drum, hydraulics, and power boosters systems. Emphasis on antilock brakes, traction control, and machining. Advanced theory and practical work in the repair of brake system. Shop instruction to include safety, reconditioning, machinery, procedures for trouble-shooting and recondition brake systems. *(Formerly AUTO 051x3)*

*Associate Degree Applicable*

**AUTO 052****AUTOMOTIVE SUSPENSION AND STEERING 4 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

This course is based upon NATEF standards and designed for students and current technicians to gain knowledge and skills in automotive chassis and suspension systems. Included but not limited to suspension types, basic geometry, alignment angles, two wheel alignment and four-wheel alignment using both computerized and mechanical methods. Emphasis on diagnosing, trouble-shooting, repairing, replacing, and

adjusting. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test. Theory and practical work in the repair of chassis and suspension systems. Shop instruction to include safety, rebuilding, replacing, and alignment procedures for trouble shooting of suspension systems. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test (A-4). *(Formerly AUTO 052x3)*

*Associate Degree Applicable*

**AUTO 053****ADVANCED AUTOMOTIVE SUSPENSION AND STEERING 4 UNITS****PREREQUISITE: AUTO 052.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

This course is designed for students and current technicians to gain advanced knowledge and skills in automotive chassis and suspension systems. Included but not limited to suspension design, advanced geometry, alignment angles, and four-wheel alignment using computerized methods. Emphasis on diagnosing, trouble-shooting, repairing, replacing, and adjusting. Advanced theory and practical work in the repair of chassis and suspension systems. Shop instruction to include safety, rebuilding, replacing, and alignment procedures for trouble shooting of suspension systems. *(Formerly AUTO 053x3)*

*Associate Degree Applicable*

**AUTO 055****ADVANCED AUTO BODY 5 UNITS****PREREQUISITE: AUTO 039x3.****LECTURE: 1 hour per week and****LABORATORY: 12 hours per week.**

Theory and practical experience in plastic welding, SMC (sheet molded compounds), fiberglass and lead applications, urethane bumper repair and refinishing, headlight adjustment, spot repairing/ blending, polishing and detailing, pre-delivery servicing, fine-line masking and pinstripping.

*Associate Degree Applicable*

**AUTO 056****AUTOMOTIVE HEATING AND AIR CONDITIONING 4 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

Principles of automotive air conditioning and heating systems. Detail topics include repairing and replacing all components, diagnosis of both manual and automatic heater and air conditioning systems.

*Associate Degree Applicable*

**AUTO 064****AUTOMOTIVE ELECTRICAL 4 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week and****LABORATORY: 3 hours per week.**

Principles of automotive electricity and electronics systems covering batteries, charging and starting systems. Detail topics include the use of a digital multi-meter for the analysis of series, parallel, and series-parallel circuits.

*Associate Degree Applicable*

**AUTO 065****AUTOMOTIVE BODY ELECTRICAL 4 UNITS****PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Principles of automotive electricity and electronics systems covering the use of a digital multi-meter, lighting, gauges, accessories, electronics, automotive body computers and solid-state devices, and communication systems.

*Associate Degree Applicable*

**AUTO 066**

**ASE ALTERNATIVE A-6, A-8, L-1 PREP  
OR CERTIFICATE**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Course provides students with the opportunity to either use this course as a prep course or an alternative for taking ASE A-6 Electrical, ASE A-8 Engine Performance, ASE L-1 Advanced Engine Performance tests. Student wishing to secure alternative ASE certificate will be asked to pay for each test taken. Test certificate will be the same as securing an ASE certificate. **STUDENTS ENTERING THE COURSE MUST HAVE ONE-YEAR EXPERIENCE/EDUCATION IN THE AUTOMOTIVE ENGINE PERFORMANCE AREA.**

*Associate Degree Applicable*

**AUTO 067**

**AUTOMOTIVE EMISSIONS**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

All technicians wishing to become state licensed smog inspection technician must take the Basic Area Clean Air Car Course (68 Hours) and Enhanced Clean Air Car Course (28 Hours). **STUDENT ENTERING THE COURSE MUST HAVE ONE-YEAR EXPERIENCE / EDUCATION IN THE AUTOMOTIVE ENGINE PERFORMANCE AREA.**

*Associate Degree Applicable*

**AUTO 068**

**IGNITION SYSTEMS**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Principles of automotive engine performance covering general engine diagnosis, ignition system diagnosis and repair, and ignition related computerized engine controls.

*Associate Degree Applicable*

**AUTO 069**

**FUEL AND EXHAUST SYSTEMS**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Introduction to emission controls diagnosis and repair, fuel and emission related computerized engine controls, and fuel and exhaust systems.

*Associate Degree Applicable*

**AUTO 075x3**

**AUTOMATIC TRANSMISSION REAR WHEEL DRIVE**

**2-6 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1-3 hours per week and  
LABORATORY: 3-9 hours per week.**

Theory and practical work on rear wheel drive automatic transmissions in automobile and light truck applications.

Course offers preparation information for the Automotive Service Excellence (ASE) A2 certification test. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 076x3**

**AUTOMATIC TRANSAXLES FRONT WHEEL DRIVE**

**2-6 UNITS**

**PREREQUISITE: None.**

**LECTURE: 1-3 hours per week and  
LABORATORY: 3-9 hours per week.**

Theory and practical work on front-wheel drive automatic transaxles in automobile applications. Course offers preparation information for the Automotive Service Excellence (ASE) A2 certification test. This course may be taken three times.

*Associate Degree Applicable*

**AUTO 077**

**MANUAL TRANSMISSIONS AND TRANSAXLES**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Theory and practical work on front wheel drive manual transaxles and rear wheel drive manual transmissions in automobile and light truck applications including transfer cases, axle assemblies, and clutches.

*Associate Degree Applicable*

**AUTO 084**

**GENERAL AUTOMOTIVE TECHNOLOGY**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

General theory, principles and service procedures relating to an introduction to automotive maintenance with emphasis on component identification, basic functions, minor maintenance and service.

*Associate Degree Applicable*

**AUTO 088**

**AIR-COOLED AND SMALL ENGINES**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Practical experience in the repair and maintenance of small air-cooled and outboard engines, including engine overhaul, testing and troubleshooting.

*Associate Degree Applicable*

**AUTO 089x3**

**AIR-COOLED AND SMALL ENGINES**

**4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Practical experience in the repair and maintenance of small air-cooled and outboard engines, including engine overhaul, testing and troubleshooting. These courses may be taken three times each.

**AUTO 090  
ENGINES REPAIR 6 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 9 hours per week.

This course is based on NATEF standards and designed for students and current technicians to gain knowledge and skills in automotive engine repair. Instruction in removal, disassembly, inspection, reconditioning and reassembling of engines. Rebuilding of components using automotive machine shop equipment. Study progressing to the operation of automotive machine shop equipment. Theory and instruction of gasoline, diesel and rotary engines. Theory and practical work in the repair and rebuilding of automotive gasoline, diesel, and rotary engines. Shop instruction to include safety, engine reconditioning, auto shop machinery, and failure analysis of components. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test A-1. (Formerly AUTO 090x4)

Associate Degree Applicable

**AUTO 198  
AUTOMOTIVE-DIESEL TECHNOLOGY 1-4 UNITS**

**WORK EXPERIENCE**

**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

Associate Degree Applicable

**AUTOIN 010  
BASIC CUSTOM AUTO INTERIORS 4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

Basic information and practical experience in design, creation and installation of complete custom and hot rod automotive interiors. Includes instruction in safe work practices, using trimmers, hand and power tools and common covering materials. Cut, sew and fit techniques are stressed.

Associate Degree Applicable

**AUTOIN 011x3  
BASIC CUSTOM AUTO INTERIORS LABORATORY 1 UNIT**

**PREREQUISITE:** AUTOIN 010.

**LABORATORY:** 3 hours per week.

Basic practical experience in design, creation and installation of complete custom and hot rod automotive interiors. Includes instruction in safe work practices, using trimmers, hand and power tools and common covering materials. Cut, sew and fit techniques are stressed.

Associate Degree Applicable

**AUTOIN 012  
ADVANCED CUSTOM AUTO INTERIORS 4 UNITS**

**PREREQUISITE:** AUTOIN 010.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

Information and practical experience in design, creation and installation of complex custom and hot rod automotive

interiors. Instruction builds on prior basic skills in safe work practices, pattern making, using trimmers, working with hand and power tools and applying common covering materials.

Associate Degree Applicable

**AUTOIN 013x3  
ADVANCED CUSTOM AUTO INTERIORS LABORATORY 1 UNIT**

**PREREQUISITE:** AUTOIN 012.

**LABORATORY:** 3 hours per week.

Practical experience in design, creation and installation of complex custom and hot rod automotive interiors. Instruction builds on prior basic skills in safe work practices, pattern making, using trimmers, working with hand and power tools and applying common covering materials. Cut, sew and fit techniques on elaborate designs are stressed.

Associate Degree Applicable

**AUTORS 010  
BASIC VEHICLE RESTORATION 4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

Theory and practical experience in restoring a vehicle to appropriate and safe running conditions which includes instruction in safe work practices, disassembly, cleaning, refinishing of vehicle parts. Design and construction of frame and chassis components will be covered. Body repair and welding will also be included.

Associate Degree Applicable

**AUTORS 011x3  
BASIC VEHICLE RESTORATION LABORATORY 1 UNIT**

**PREREQUISITE:** AUTORS 010.

**LABORATORY:** 3 hours per week.

Practical experience in restoring a vehicle to appropriate and safe running condition. Includes instruction in safe work practices, disassembly, cleaning, refinishing of vehicle parts. Design and construction of frame and chassis components will be covered.

Associate Degree Applicable

**AUTOST 010  
BEGINNING STREET ROD CONSTRUCTION 4 UNITS**

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORY:** AUTO 084x4 or  
AUTORS 010.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

Theory and practical experience in building a street rod vehicle, includes instruction in safe work practices, design and construction of frame and chassis systems and components. Body repair, paint preparation, refinishing and welding are also included.

Associate Degree Applicable

**AUTOST 011x3  
STREET ROD CONSTRUCTION LABORATORY 1 UNIT**

**PREREQUISITE:** AUTOST 010.

**LABORATORY:** 3 hours per week.

Practical experience in building a street rod vehicle. Includes instruction in safe work practices, design and construction of frame and chassis systems and components. Body repair, paint, preparation, refinishing

and welding are also included.  
*Associate Degree Applicable*

## AVIATION

See courses within the AERONAUTICS DEPARTMENT

## BIOLOGY

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: David Bastedo, M.S.  
 Life Science 207  
 (909) 384-8564  
 OTHER FACULTY: Carol Cook, M.S.  
 Glenn Drewes, M.A.  
 Darlene Gamboa, Ph.D.  
 Cin Greyraven, M.S.  
 Mark Ikeda, M.S.  
 Ken Michaelis, M.A.  
 John Olsen, M.S.  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Diana Rodriguez, M.A.  
 (909) 384-8950  
 (909) 384-8234

The courses offered in the Biology Department are designed to meet the demands of science and non-science majors. For non-majors, the department's goal is to educate students so they can make informed choices about key environmental and personal issues. Public awakening to environmental issues emphasizes the increasing need to appreciate various life forms, their interactions with each other, and the human impact on our finite resources. This public is increasingly asked to make decisions on issues concerning the environment and to make choices about personal habits in their daily lives that effect the earth and future generations.

For majors, the courses provide a strong background in the biological sciences for students transferring to four-year institutions who are interested in careers such as teaching, biological research, or the health sciences. Students planning to transfer to a four-year institution and major in biology or a related field should consult with a counselor regarding the transfer process and lower division requirements.

## ASSOCIATE OF SCIENCE DEGREE

An Associate of Science degree with a specialization in the Biological Sciences can be earned by completing the following required courses in addition to fulfilling the breadth requirements for the associate degree (minimum 60 semester units).

REQUIRED COURSES:	UNITS
BIOL 201 Cell and Molecular Biology	4
CHEM 212 Organic Chemistry	4
<b>Twelve units from the list of RECOMMENDED COURSES</b>	<b>12</b>
<b>TOTAL UNITS:</b>	<b>20</b>

RECOMMENDED COURSES:	UNITS
BIOL 104 Human Ecology	3
BIOL 202 Organismal Biology and Ecology	4
BIOL 240 General Botany	4
BIOL 250 Human Anatomy and Physiology I	4
BIOL 251 Human Anatomy and Physiology II	4
BIOL 260 Human Anatomy	4

BIOL 261 Human Physiology	4
BIOL 270 General Microbiology	5

## COURSES OFFERED BY THE DEPARTMENT OF BIOLOGY:

### BIOL 050 ANATOMY AND PHYSIOLOGY 4 UNITS

**PREREQUISITE:** None.

**LECTURE:** 4 hours per week.

Introduction to the elementary principles of human anatomy and physiology. The course is specifically designed for non-majors and students entering the Psychiatric Technology Certificate Program.  
*Associate Degree Applicable*

### BIOL 100 GENERAL BIOLOGY 4 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

Introductory course for non-majors emphasizing basic biological concepts and scientific processes. Topics include origins and comparative characteristics of living organisms, reproduction, metabolism, evolution, and ecological interactions.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### BIOL 102 HUMAN BIOLOGY 4 UNITS

**PREREQUISITE:** None

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

An introduction to biological principles for students interested in allied health careers, emphasizing science as a process and the molecular and cellular basis for the functions of the human body. Topics include the structure and function of important biological molecules, cell anatomy and physiology, human tissue types, cellular energy pathways, genome replication and expression, and reproductive and developmental processes.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### BIOL 104 HUMAN ECOLOGY 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Discussion of the ecological consequences of human resource use and population growth. Emphasis is on the earth's life support systems and current environmental problems threatening human health and species survival.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### BIOL 108 EVOLUTION: MOLECULES TO MAMMALS 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

An investigation of the origins and development of life on earth including major lines of evidence for evolution (biogeography, paleontology, and comparative anatomy and physiology); sources of genetic variation; and mechanisms of natural selection and adaptation.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BIOL 123**  
**ECOLOGY AND ENVIRONMENT** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Survey of the basic concepts of ecology including energy flow in ecosystems, predation, symbiosis, population biology, local biological communities, the human population explosion, and environmental topics including air and water pollution, nuclear reactors, pesticides, and solid waste. Legal, political, and economic solutions to problems are considered.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BIOL 140**  
**BIOLOGY OF SEXUALLY TRANSMITTED DISEASES** **2 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week.

The pathogenesis, biology, treatment and diagnosis of prominent sexually transmitted diseases including the impact of current biotechnology in vaccine development, experimental treatments, and improved diagnostics and screening. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 30 contact hours.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BIOL 201**  
**CELL AND MOLECULAR BIOLOGY** **4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

A one-semester introduction to cellular and molecular aspects of biology. Experimental design concepts and application are included in the laboratory section. This course is designed primarily for the pre-professional and biology major as well as for other students interested in an in-depth study of biology.

*Associate Degree Applicable*

*Course credit transfers to CSU, and UC.*

*CAN (California Articulation Number): BIOL2*

**BIOL 202**  
**ORGANISMAL BIOLOGY AND ECOLOGY** **4 UNITS**

**PREREQUISITE:** BIOL 100 or BIOL 201.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

A one-semester introduction to the ecological and organismal aspects of biology. This course is designed primarily for the preprofessional and biology major as well as for other students interested in an in-depth study of biology. This course requires participation in and completion of a field project.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BIOL 203**  
**INVERTEBRATE BIOLOGY** **4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

An introduction to the biology of invertebrate organisms emphasizing comparative anatomy, systematics, ecology, and evolutionary relationships among the major invertebrate phyla. This course is designed primarily for

pre-professional and biology majors or others with an interest in an in-depth study of biology.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BIOL 220**  
**LABORATORY PREPARATION IN BIOLOGY** **1 UNIT**

**PREREQUISITE:** BIOL 100 or BIOL 201.

**LABORATORY:** 3 hours per week.

Practical laboratory techniques designed to acquaint students with methods of collection and preparation of common materials used in the biology laboratory. Students are required to devote three hours per week to the laboratory throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BIOL 221**  
**LABORATORY PREPARATION IN BIOLOGY** **2 UNITS**

**PREREQUISITE:** BIOL 100 or BIOL 201.

**LABORATORY:** 6 hours per week.

Practical laboratory techniques designed to acquaint students with methods of collection and preparation of common materials used in the biology laboratory. Students are required to devote six hours per week to the laboratory throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BIOL 222**  
**INDEPENDENT STUDY IN BIOLOGY** **1-3 UNITS**

**PREREQUISITE:** None.

**INDEPENDENT STUDY:** 3-9 hours per week.

Assigned problems involving research, laboratory work, or directed study for selected students who are interested in furthering their knowledge of biology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*Limited transfer to UC; contact a counselor for details.*

**BIOL 240**  
**GENERAL BOTANY** **4 UNITS**

**PREREQUISITE:** BIOL 100 or BIOL 201.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

A survey of plant biology with an emphasis on the structure, function and development of vascular plants, plant classifications, evolution, and general ecology.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): BIOL6*

**BIOL 250**  
**HUMAN ANATOMY AND PHYSIOLOGY I** **4 UNITS**

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORY:** A high-school course in chemistry.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

BIOL 250 is the first semester of a two-semester



presentation of anatomy and physiology. Introductory topics include cytology, histology, and basic and organic chemistry. Includes the structure, function, and homeostatic interrelationships of the following organ systems: integumentary, skeletal, cardio-vascular, lymphatic, immune, and respiratory.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**BIOL 251**  
**HUMAN ANATOMY AND PHYSIOLOGY II** 4 UNITS  
**PREREQUISITE: BIOL 250.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

BIOL 251 is the second semester of a two-semester presentation of anatomy and physiology. Topics include the urinary system, nerve and muscle physiology, muscular system, nervous system, endocrine regulation, digestion, metabolism and reproduction. Emphasis is on body homeostasis, human musculature, and gross anatomy, using the cat as a dissection model.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**BIOL 255**  
**INDEPENDENT STUDY IN ANATOMY AND**  
**PHYSIOLOGY** 1-3 UNITS

**PREREQUISITE: BIOL 250 or BIOL 260.**

**INDEPENDENT STUDY: 3-9 hours per week.**

Assigned projects involving research, laboratory work, or directed study for selected students who are interested in furthering their knowledge of anatomy and physiology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BIOL 256**  
**LABORATORY PREPARATION IN ANATOMY AND**  
**PHYSIOLOGY** 2 UNITS

**PREREQUISITE: BIOL 250 or BIOL 260.**

**LABORATORY: 6 hours per week.**

Practical laboratory techniques designed to acquaint students with the methods of preserving and preparing anatomic materials used in the anatomy laboratory. Students are required to devote six hours per week to the laboratory throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BIOL 260**  
**HUMAN ANATOMY** 4 UNITS  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

This is a comprehensive laboratory course in human anatomy. It is organized to explore the body regionally and systemically. It is primarily oriented toward gross anatomy with extensive dissection of the cat. Histological and cellular anatomy are included as they apply to various structures.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): BIOL 10*

**BIOL 261**  
**HUMAN PHYSIOLOGY** 4 UNITS  
**PREREQUISITES: BIOL 260 and CHEM 101.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

Introductory study of the vital processes and functions of the human body. Emphasis is on control mechanisms, maintenance of homeostasis and selected examples of pathophysiology of the major organ systems. Includes a laboratory which involves observations, physiological recordings, and analysis of body functions.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): BIOL 12*

**BIOL 270**  
**MICROBIOLOGY** 5 UNITS  
**PREREQUISITES: BIOL 250 or BIOL 260 or BIOL 261**  
**or BIOL 201 or BIOL 102; and CHEM 101.**

**DEPARTMENTAL ADVISORY: Reading skills at the**  
**12th grade level and ENGL 101 entry-level writing**  
**skills.**

**LECTURE: 3 hours per week and**

**LABORATORY: 6 hours per week.**

A formal introduction to the fundamental principles of microbiology. Attention is given to the morphology, control, metabolism and genetics of microorganisms. Emphasis is placed on the pathogenesis immunity to infectious diseases.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): BIOL 14*

**BIOL 275**  
**INDEPENDENT STUDY IN MICROBIOLOGY** 1-3 UNITS  
**PREREQUISITE: BIOL 270.**

**INDEPENDENT STUDY: 3-9 hours per week.**

Assigned problems involving research, laboratory work, or directed study for selected students who are interested in furthering their knowledge of microbiology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BIOL 276**  
**LABORATORY PREPARATION IN MICROBIOLOGY** 2 UNITS

**PREREQUISITE: BIOL 270.**

**LABORATORY: 6 hours per week.**

Practical laboratory techniques designed to acquaint students with the methods of preserving and preparing materials used in the microbiology laboratory. Students are required to devote six hours per week to the laboratory throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BOTANY**

See courses within the Department of BIOLOGY

**BUILDING INSPECTION  
TECHNOLOGY**  
See the Department of  
INSPECTION TECHNOLOGY

**BUSINESS ADMINISTRATION**

DIVISION:	Business and Information Technology
DIVISION DEAN:	Margaret Ortiz, M.A.
DEPARTMENT HEAD:	Vernon Stauble, Ph.D. Business 200C (909) 384-8915
OTHER FACULTY:	Daniel T. Angelo, M.H.R.O.D. Michael Assumma, M.B.A. Donald Schall, J.D.
DIVISION SECRETARY:	Chris Williams
DIVISION OFFICE:	Business 101 (909) 384-8908
LIAISON COUNSELOR:	To Be Announced (909) 384-4404

The Business Administration Department offers courses in the fundamentals of business organization and management as well as in marketing and business law.

For non-business majors, these courses offer a general view of the world of business and finance. For business majors, these courses provide a solid foundation in preparation for transfer to a four-year institution. Students planning to transfer to a four-year institution and major in business administration or a related field should consult with a counselor regarding the transfer process and lower division requirements.

**BUSINESS ADMINISTRATION  
ASSOCIATE OF ARTS DEGREE**

To graduate with a specialization in Business Administration, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

REQUIRED COURSES:	UNITS
ACCT 200 Principles of Accounting I	4
ACCT 201 Principles of Accounting II	4
BUSAD 103 Marketing Principles	3
BUSAD 210 Business Law	3
ECON 200 Principles of Macroeconomics	3
ECON 201 Principles of Economics (Micro)	3
MIS 101 Introduction to Management Information Systems	3
<b>TOTAL UNITS:</b>	<b>23</b>

**BUSINESS ADMINISTRATION CERTIFICATE**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

REQUIRED COURSES:	UNITS
BUSAD 100 Introduction to Business	3
BUSAD 103 Marketing Principles	3
BUSCAL 050 Quantitative Methods in Business	3
MIS 101 Introduction to Management Information Systems	3
ACCT 100 Introduction to Accounting I or BUSAD 108 Personal Finance	4 (3)

or		
ECON 100	Introduction to Economics	(3)
OIS 144	Business English	3
or		
ENGL 015	Preparation for College Writing	(4)
or		
ENGL 101	Freshman Composition	(4)
SPEECH 100	Elements of Public Speaking	3
<b>ELECTIVES - Choose from the list of RECOMMENDED COURSES;</b>		<b>6</b>
<b>TOTAL UNITS:</b>		<b>28</b>

RECOMMENDED COURSES:	UNITS
BUSAD 105 Small Business Management	3
BUSAD 106 Principles of Selling	3
BUSAD 110 Human Resources Management	3
BUSAD 121 International Business	3
BUSAD 153 Introduction to Supervision	3
BUSAD 198 Business Administration Work Exp	3
BUSAD 200 Business Management	3
BUSAD 203 Marketing Management	3

**RETAIL MANAGEMENT CERTIFICATE**

The Retail Management Program is designed to give students a foundation for a career in the retail management field. Some of the activities involved in retailing are selection and buying of merchandise, marketing, product displays, selling, inventory control, customer relations, and pricing. The student usually enters the retailing field as a clerk or cashier and advances to assistant manager, manager, and upper management.

There is no required sequence of courses, but it is recommended that students structure their schedule to move through three general levels of training and experiences. In the foundational courses the students gain exposure to foundational courses in writing, speaking, math applications, and computer literacy. The second component of course offering covers specific business and management content. Lastly, the advanced topics include the retail specific courses and human relations topics.

FOUNDATIONAL COURSES:	UNITS
BUSAD 207 Business Communication	3
BUSCAL 050 Quantitative Methods in Business	3
MIS 101 Introduction to Management Info Systems	3
<b>Choose one of the following:</b>	
SPEECH 100 Elements of Public Speaking	3
SPEECH 111 Interpersonal Communication	(3)
SPEECH 140 Small Group Discussion	(3)

**INTERMEDIATE COURSES:**

<b>Choose one of the following:</b>	
ACCT 010 Bookkeeping	3
ACCT 100 Introduction to Accounting I	(4)
ACCT 200 Principles of Accounting	(4)
BUSAD 103 Marketing Principles	3
BUSAD 200 Business Management	3

**ADVANCED COURSES:**

BUSAD 110 Human Resource Management	3
BUSAD 112 Principles of Retailing	3
BUSAD 151 Human Relations	3

**TOTAL UNITS: 30-31**

*\*Pending approval from the California Community College Chancellor's Office.*

**COURSES OFFERED BY THE DEPARTMENT OF**

## **BUSINESS ADMINISTRATION:**

### **BUSAD 080-099 SPECIAL SEMINARS IN BUSINESS .25-3 UNITS PREREQUISITE: None.**

**LECTURE: 4 hours per semester per .25 unit.**

Seminars on selected topics in the field of business developed to address current issues. Seminars vary from .25 to 3.0 units and will be offered as requests are made in the business community.

*Associate Degree Applicable*

### **BUSAD 100 INTRODUCTION TO BUSINESS 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

For business majors and non-business majors who desire some knowledge of the fundamentals of business. Includes the basic vocabulary of business terms and a review of the structure, organization, and operating procedures of business enterprises.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **BUSAD 103 MARKETING PRINCIPLES 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

Principles and methods of marketing as practiced by all successfully managed business firms. Course is management-oriented, covering demand analysis, forecasting, product development, price determination, distribution channels, material handling, advertising and personal selling.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 105 SMALL BUSINESS MANAGEMENT 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

For business majors and non-business majors who desire a greater knowledge of the fundamentals specifically related to the opening and operating of a small business firm. Designed to provide a working knowledge of the pitfalls associated with small business operations and how to recognize and solve these problems before they happen.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 106 PRINCIPLES OF SELLING 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

Problems of analyzing the sales talk, making an adequate approach, meeting objections and excuses and techniques of closing the sale, and the psychology involved in selling services, goods, ideas, and one's own personality.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 108 PERSONAL FINANCE 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

Preparation for managing personal finances including budgeting, borrowing, insurance, investments and home

ownership. This course is also offered as FCS 108.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 109 ADVERTISING 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Principles, purposes and practices of advertising, analysis of the channels of trade, the importance of the correct appeal, style, trademarks, headlines, typography, color, layout, ethics and other problems involved in effective advertising. No artistic abilities required.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 110 HUMAN RESOURCE MANAGEMENT 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of objectives, functions and practices in the management of employee relations, and the impact of employee relations on the effective achievement of the organization's goals.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 112 PRINCIPLES OF RETAILING 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

The role of retailing in serving the needs of the community with analysis of consumer needs, store locations, financial requirements and legal processes of starting a retail operation. Planning for store layout, merchandise mix, vendor negotiation, pricing, displaying, advertising, selling and controlling of merchandise.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 115 OFFICE MANAGEMENT 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of office organization, functions, and management styles including methods used to select and train office personnel; office layout and work flow; selection and care of equipment and supplies; and methods designed to streamline office systems and procedures, such as automation and data processing.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 117 PUBLIC RELATIONS 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of the public relations field including the need for public relations in both profit and non-profit organizations. Includes the analysis of public opinion and methods of improving public relations with employees, shareholders, dealers, suppliers, consumers, community and government.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **BUSAD 121 INTERNATIONAL BUSINESS 3 UNITS PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSAD 100.**

**LECTURE: 3 hours per week.**

An analysis of international trade and economic development in modern times, with an examination of business practices and emerging trends in overseas markets. Case studies illustrate methods and strategies for international operations.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 151**

**HUMAN RELATIONS**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A theoretical and practical approach to the impact of human dynamics in the workplace including business applications of sociological scripting and values clarification; the application of management principles to both formal and informal networks within an organization; and the employer/employee needs and motivation in work and organizational relationships.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 153**

**INTRODUCTION TO SUPERVISION**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

This survey course introduces the major responsibilities of supervisory personnel with an emphasis on the importance of understanding employees' needs and motivations.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 154**

**LABOR MANAGEMENT RELATIONS**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to labor-management relations including the history of the labor movement, union contracts and current labor issues. Emphasis on the importance of viewing each issue from both the labor and management perspectives.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 198**

**BUSINESS ADMINISTRATION WORK EXPERIENCE**

**1-4 UNITS**

**PREREQUISITE: None.**

Supervised training in the form of on-the-job employment designed to enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 200**

**BUSINESS MANAGEMENT**

**3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSAD 100.**

**LECTURE: 3 hours per week.**

Designed for business majors, this course examines the primary dimensions of the management process including planning, organizing, decision-making and controlling

organizational activity.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 203**

**MARKETING MANAGEMENT**

**3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSAD 103.**

**LECTURE: 3 hours per week.**

A review of various marketing management practices including analysis of alternative principles and methods of effective marketing management and the development of decision-making with management simulation exercises.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 205**

**BUSINESS AND SOCIETY**

**3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSAD 100.**

**LECTURE: 3 hours per week.**

A review of the relationship between the American business system and society including historical milestones, the impact of current social forces on business, and the moral and ethical responsibilities of business.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**BUSAD 207**

**BUSINESS COMMUNICATION**

**3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: OIS 144.**

**LECTURE: 3 hours per week.**

Studies the principles and role of business communication and the need for communication skills in a global marketplace. Emphasizes written communications such as standard and persuasive business letters, memorandums, and informational as well as analytical reports. Studies effective proposals, resumes, and other employment-related documents. Develops planning, organizing, and outlining skills, as well as editing proficiency. Evaluates grammar skills and improves writing style.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSAD 210**

**BUSINESS LAW I**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Introduction to the development of common law and the functioning of the Judicial Branch. Exploration of the principles of law as applicable to contracts in general and to contracts for the sale of goods under the Uniform Commercial Code.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): BUS 8*

**BUSAD 211**

**BUSINESS LAW II**

**3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: BUSAD 210.**

**LECTURE: 3 hours per week.**

An introduction to the formation, operation and dissolution of corporations and partnerships including the impact of government regulations and consumer protection law on

business; agency employment law; the rules for the use of commercial paper; and how to form secured transactions.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

#### **BUSAD 222**

##### **SPECIAL PROBLEMS IN BUSINESS I 1 UNIT**

**PREREQUISITE:** *None.*

**INDEPENDENT STUDY:** *3 hours per week.*

Assigned problems involving library and laboratory work for selected students who are interested in furthering their knowledge of business on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **BUSAD 223**

##### **SPECIAL PROBLEMS IN BUSINESS II 2 UNITS**

**PREREQUISITE:** *None.*

**INDEPENDENT STUDY:** *6 hours per week.*

Assigned problems involving library and laboratory work for selected students who are interested in furthering their knowledge of business on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

## **BUSINESS CALCULATIONS**

DIVISION: Business and Information  
Technology  
DIVISION DEAN: Margaret Ortiz, M.A.  
DEPARTMENT HEAD: Nickolas Zoumbos, M.S.  
Business 100D  
(909) 384-8912  
DIVISION SECRETARY: Chris Williams  
DIVISION OFFICE: Business 101  
(909) 384-8908  
LIAISON COUNSELOR: To Be Announced  
(909) 384-4404

Courses in Business Calculations are designed to present the fundamentals of mathematics within the context of the field of business. These courses are an important complement to courses in accounting, economics and business.

### **COURSES OFFERED BY THE DEPARTMENT OF BUSINESS CALCULATIONS:**

#### **BUSCAL 050**

##### **QUANTITATIVE METHODS IN BUSINESS 3 UNITS**

**PREREQUISITE:** *None.*

**DEPARTMENTAL ADVISORY:** *MATH 952.*

**LECTURE:** *3 hours per week.*

This introductory course includes business applications of fractions, decimals, and percents; the use of pocket calculator to solve business applications, such as markups, payroll, discounts, simple interest, compound interest, consumer loans; and an introduction to solving one-variable linear equations.

*Associate Degree Applicable*

#### **BUSCAL 091**

##### **BEGINNING ALGEBRA FOR BUSINESS 4 UNITS**

**PREREQUISITE:** *MATH 952 or BUSCAL 050.*

**LECTURE:** *4 hours per week.*

Review of operations on integers and properties of real numbers including solving linear equations and inequalities; ratio, proportion and percent, and the applications of these operations; exponents and polynomials; factoring; an introduction to quadratic equations; rational expressions; graphing linear equations; and applications in business such as markdowns, simple and compound interest, break-even analysis, and supply and demand.

*Associate Degree Applicable*

#### **BUSCAL 200**

##### **ALGEBRA AND FINITE METHODS IN BUSINESS**

**3 UNITS**

**PREREQUISITE:** *MATH 095.*

**LECTURE:** *3 hours per week.*

A course in college algebra including the study of sets and set operations, integral and rational exponents, radicals, quadratic equations, linear equations and systems of equations, linear inequalities and systems of inequalities, logarithms, sequences and series, functions. Applications of these in business including simple and compound interest, supply and demand, market equilibrium, and break-even analysis, and optimization and maximization.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**BUSCAL 208**  
**BUSINESS AND ECONOMICS STATISTICS 4 UNITS**  
**PREREQUISITE: MATH 095.**  
**LECTURE: 4 hours per week.**

A review of statistical methods commonly used in business and economics including measures of central tendency; measures of dispersion and skewness; probability concepts and distributions; statistical inferences; parametric and non-parametric hypothesis testing; index numbers time series analysis, simple regression, and correlation analysis. This course is also offered as ECON 208.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

## CHEMISTRY

DIVISION:	Science and Math
DIVISION DEAN:	W. William Hughes, Ph.D.
DEPARTMENT HEAD:	Susan Bangasser, Ph.D.; Chemistry 118 (909) 384-8650
OTHER FACULTY:	Judy Okamura, Ph.D. John Stanskas, Ph.D.
DIVISION SECRETARY:	Rose Garcia
DIVISION OFFICE:	Chemistry 121 (909) 384-8645
LIAISON COUNSELOR:	Diana Rodriguez, M.A. (909) 384-8950 (909) 384-8234

The Chemistry program is designed to meet the diverse needs of students served by the community college: (a) students majoring in chemistry or related sciences, (b) students majoring in one of the health sciences, and (c) students fulfilling the general education science requirement.

Courses in the Chemistry Department are taught with a strong emphasis on the laboratory. In the advanced classes, students receive hands-on experience with a wide variety of instruments.

Students planning to transfer to a four-year institution and major in chemistry should consult with a counselor regarding the transfer process and lower division requirements.

### CHEMISTRY ASSOCIATE OF SCIENCE DEGREE

To graduate with a specialization in Chemistry, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

REQUIRED COURSES:	UNITS
CHEM 150 General Chemistry I	5
CHEM 151 General Chemistry II	5
CHEM 212 Organic Chemistry I	4
CHEM 213 Organic Chemistry II	4
<b>TOTAL UNITS:</b>	<b>22</b>

RECOMMENDED COURSES:	UNITS
MATH 090 Elementary Algebra	4
MATH 102 Introduction to College Algebra	4
MATH 103 Plane Trigonometry	4
MATH 151 Precalculus	4
MATH 250 Single Variable Calculus I	4
PHYSIC 150A Physics for the Life Sciences I	5

## COURSES OFFERED BY THE DEPARTMENT OF CHEMISTRY:

### CHEM 085 ALGEBRA REVIEW WORKSHOP FOR CHEMISTRY .50 UNIT

**PREREQUISITE: MATH 090.**

**COREQUISITE: CHEM 101.**

**LECTURE: .50 hour per week.**

An algebra review workshop for students in CHEM 101 with an emphasis on how to use mathematics and algebra to solve chemistry problems. Graded on Credit/No Credit basis only.

*Associate Degree Applicable*

### CHEM 101 INTRODUCTORY CHEMISTRY 4 UNITS

**PREREQUISITE: MATH 090.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

A study of the physical and chemical properties of common elements and compounds, the metric system, measurement, atomic structure, the periodic table, chemical equations, gasses, solutions, ionization, and an introduction to organic and biochemistry.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): CHEM 6*

### CHEM 104 INTRODUCTION TO ORGANIC CHEMISTRY AND BIOCHEMISTRY 4 UNITS

**PREREQUISITE: CHEM 101.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

An introduction to the structure, bonding and typical chemical properties of the different classes of organic compounds and biomolecules.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): CHEM 8*

### CHEM 110 CONSUMER AND ENVIRONMENTAL CHEMISTRY 3 UNITS

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A study of the role of chemistry in society that fulfills a general education requirement. These topics are included: physical and chemical properties of common elements and compounds, gases, reactions, atomic structure, simple organic and biochemical compounds, causes and possible solutions for chemical pollution, household and medical uses of chemicals.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**CHEM 150**  
**GENERAL CHEMISTRY I** **5 UNITS**  
**PREREQUISITES:** CHEM 101 and MATH 102.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 6 hours per week.  
An introduction to college-level chemistry with an emphasis on the mole concept, thermochemistry, atomic and molecular structure, interactions, periodic chart, organic chemistry, solids, liquids and gases.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*  
*CAN (California Articulation Number): CHEM 2*

**CHEM 150H**  
**GENERAL CHEMISTRY I – HONORS** **5 UNITS**  
**PREREQUISITES:** CHEM 101 and MATH 102.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 6 hours per week.  
An introduction to college-level chemistry with an emphasis on the mole concept, thermochemistry, atomic and molecular structure, interactions, periodic chart, organic chemistry, solids, liquids and gases. Enrollment is limited to students eligible for the Honors Program.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 151**  
**GENERAL CHEMISTRY II** **5 UNITS**  
**PREREQUISITE:** CHEM 150.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 6 hours per week.  
The second half of a two-part sequence in chemistry with an emphasis on thermodynamics, equilibrium calculations, kinetics, and electrochemistry.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*  
*CAN (California Articulation Number): CHEM 4*

**CHEM 151H**  
**GENERAL CHEMISTRY II – HONORS** **5 UNITS**  
**PREREQUISITES:** CHEM 150 and CHEM 150H.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 6 hours per week.  
The second half of a two-part sequence in chemistry with an emphasis on thermodynamics, equilibrium calculations, kinetics, and electro chemistry. Enrollment is limited to students eligible for the Honors Program.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 212**  
**ORGANIC CHEMISTRY I** **4 UNITS**  
**PREREQUISITE:** CHEM 150.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.  
First semester of organic chemistry. Carbon compounds including aliphatic, aromatic, and heterocyclic series, and modern theoretical concepts are studied. Students identify properties, synthesis, and reactions of functional groups. Mechanisms are examined in detail. Laboratory includes preparation, identification, and study of the properties of organic compounds.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 212H**  
**ORGANIC CHEMISTRY I – HONORS** **4 UNITS**  
**PREREQUISITES:** CHEM 150 and CHEM 150H.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.  
First semester of organic chemistry. Carbon compounds including aliphatic, aromatic, and heterocyclic series, and modern theoretical concepts are studied. Students identify properties, synthesis, and reactions of functional groups. Mechanisms are examined in detail. Laboratory includes preparation, identification and the study of properties of organic compounds. Enrollment is limited to students eligible for the Honors Program.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 213**  
**ORGANIC CHEMISTRY II** **4 UNITS**  
**PREREQUISITE:** CHEM 212.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.  
Second semester of organic chemistry, continuing the study of carbon compounds including aliphatic, aromatic and heterocyclic series, and modern theoretical concepts. Includes modern instrumentation, mechanisms, synthesis and functional groups. Laboratory includes preparation, study of the properties, and extensive identification of organic compounds.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 213H**  
**ORGANIC CHEMISTRY II – HONORS** **4 UNITS**  
**PREREQUISITE:** CHEM 212 or CHEM 212H.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.  
Second semester of organic chemistry. A study of carbon compounds including aliphatic, aromatic and heterocyclic series, and modern theoretical concepts. Includes modern instrumentation, mechanisms, synthesis and functional groups. Laboratory includes preparation and study of properties, and extensive identification of organic compounds. Enrollment is limited to students eligible for the Honors Program.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CHEM 216**  
**ADVANCED ORGANIC CHEMISTRY LABORATORY** **1 UNIT**  
**PREREQUISITE:** CHEM 212.  
**PREREQUISITE/COREQUISITE:** CHEM 213.  
**LABORATORY:** 3 hours per week.  
A laboratory companion to CHEM 213 with hands-on experience in multi-step organic synthesis, organic molecular structures, and reactions involving natural products.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**CHEM 222**  
**SPECIAL PROBLEMS IN CHEMISTRY I** **1 UNIT**  
**PREREQUISITE: CHEM 150.**

**INDEPENDENT STUDY: 3 hours per week.**

Assigned problems involving library and/or laboratory work for selected students who are interested in furthering their knowledge of chemistry on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**CHEM 223**  
**SPECIAL PROBLEMS IN CHEMISTRY II** **2 UNITS**  
**PREREQUISITE: CHEM 150.**

**INDEPENDENT STUDY: 6 hours per week.**

Assigned problems involving library and/or laboratory work for selected students who are interested in furthering their knowledge of chemistry on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

## CHILD DEVELOPMENT

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: Juliann Martin, M.A.  
 North Hall 244  
 (909) 384-4457  
 OTHER FACULTY: Kathryn Adams, M.S.  
 Helen Anderson-Cruz, Ed.D.  
 Jing Babb, M.Ed.  
 Denise Knight, B.A.  
 Susan Shimoff, M.A.  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Diana Rodriguez, M.A.  
 (909) 384-8950  
 (909) 384-8234

The Child Development Department has both an academic and vocational orientation. The academic program leads students along a path toward an Associate of Arts degree that articulates with higher education and transfers into continued study suitable for a baccalaureate degree. Students planning to transfer to a four-year institution and major in child development or a related field should consult with a counselor regarding the transfer process and lower division requirements.

The vocational program, which interfaces with the academic program, prepares students for immediate employment. Certificates offered by the Child Development Department prepare students for work with specific age groups: Infant, Preschool, and School Age. The Family Child Care Provider Certificate, provides a curriculum to prepare students to establish quality family child care centers in their homes.

## CHILD DEVELOPMENT ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Child Development, students must complete the following required courses (28 units) plus the general breadth requirements for the Associate of Arts degree. (Total = 60 units)

REQUIRED COURSES:		UNITS
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 126	Child, Family and the Community	3
<b>Four courses from the following list:</b>		<b>12</b>
CD 101	Parent Child Interaction	(3)
CD 130	Creative Music and Movement for Children	(3)
CD 133	Creative Science and Math Activities for Children	(3)
CD 134	Language, Listening and Literature for Children	(3)
CD 136	Creative Art Activities for Children	(3)
CD 137	Play and Materials for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curric	(3)
CD 140	Spanish for Child Development	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

<b>Experience working with children:</b>		<b>4</b>
CD 198	Child Development Work Exp	(4)
or		
CD 205x2	Child Growth and Development Lab	(4)

**TOTAL CHILD DEVELOPMENT UNITS: 28**

**General Breadth Requirements & Elective Units: 32**  
 (See catalog and/or counselor.)

**TOTAL UNITS: 60**

### 1. ASSOCIATE TEACHER CERTIFICATE

The Associate Teacher is designed to be the first step towards obtaining entry-level employment in the field of Child Development. The Associate Teacher certificate requires 12 CD units, plus CD Work Experience or the CD Laboratory Class. This Certificate meets California Title V requirements for the Child Development Permit.

REQUIRED COURSES:		UNITS
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 126	Child, Family and the Community	3
<b>EXPERIENCE WORKING WITH CHILDREN:</b>		<b>4</b>
CD 198	Child Development Work Exp	4
or		
CD 205X2	Child Growth and Development Lab	(4)
<b>TOTAL UNITS:</b>		<b>16</b>



**ADDITIONAL RECOMMENDED COURSES:**

CD 116X4	Pediatric CPR, First Aid and Safety	2
CD 130	Creative Music and Movement for Children	3
CD 134	Language, Listening and Literature for Children	3
CD 136	Creative Art Activities for Children	3
CD 137	Play and Materials for Children	3

**2. TEACHER CERTIFICATE**

The Teacher certificate is designed to offer the next level of instruction when working with children in a preschool or childcare setting. The certificate focuses on developing age appropriate lesson plans, for the classroom and observation/assessment of children. The Teacher certificate requires 24 CD units, plus CD Work Experience or the CD Laboratory Class, and 16 General Education (GE) units. This Certificate meets California Title V requirements for the Child Development Permit.

**REQUIRED COURSES: UNITS**

CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 126	Child, Family and the Community	3

**TWO COURSES FROM THE FOLLOWING LIST: 6**

CD 130	Creative Music and Movement for Children	(3)
CD 134	Language, Listening and Literature for Children	(3)
CD 136	Creative Art Activities for Children	(3)
CD 137	Play and Materials for Children	(3)

**TWO COURSES FROM THE FOLLOWING LIST: 6**

CD 101	Parent Child Interaction	(3)
CD 133	Creative Science and Math Activities for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curric	(3)
CD 140	Spanish for Child Development	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

**EXPERIENCE WORKING WITH CHILDREN: 4-8**

CD 198	Child Development Work Exp	4-8
or		
CD 205X2	Child Growth and Development Laboratory	(4-8)

**GENERAL EDUCATION COURSES: 16-18**

Math or Natural Science  
 Social and Behavioral Science \*SOC 130  
 Communication and Learning Skills \*ENGL 015 or ENGL 101  
 Humanities \*ART 103 or MUS 121 or 122  
 Electives

*\*These courses are recommended selections to meet the GE requirement*

**3. MASTER TEACHER CERTIFICATE**

The Master Teacher certificate is designed to prepare students to supervise, mentor and assist other teachers and aides in a preschool or childcare setting. The Master Teacher certificate requires 24 CD units and 6 specialization units, plus CD Work Experience or the CD

Laboratory Class and 16 GE units. This Certificate meets California Title V requirements for the Child Development Permit.

**REQUIRED COURSES: UNITS**

CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 126	Child, Family and the Community	3
CD 270	The Mentor Teacher/Adult Supervision	3

**CHILD DEVELOPMENT SPECIALIZATION: 6**

CD 130	Creative Music and Movement for Children	3
and		
CD 136	Creative Art Activities for Children	3

or

CD 134	Language, Listening and Literature for Children	3
and		
ENGL 155	Children's Literature	3
or		
ENGL 055	Children's Literature	(3)

or

CD 138	Cultural Diversity/Anti-Bias Curric	3
and		
CD 140	Spanish for Child Development	3

or

CD 160	Understanding School-Age Children	3
and		
CD 161	Activities for School Age Children	3

or

CD 185	Infant/Toddler Growth and Dev	3
and		
CD 186	Infant/Toddler Activities	3

or

CD 231	Health and Safety Practices for Children	3
and		
CD 232	Nutrition for Young Children	3

**TWO COURSES FROM THE FOLLOWING LIST: 6**

CD 130	Creative Music and Movement for Children	(3)
CD 134	Language, Listening and Literature for Children	(3)
CD 136	Creative Art Activities for Children	(3)
CD 137	Play and Materials for Children	(3)

**ONE COURSE FROM THE FOLLOWING LIST: 3**

CD 101	Parent Child Interaction	(3)
CD 133	Creative Science and Math Activities for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curric	(3)
CD 140	Spanish for Child Development	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

**EXPERIENCE WORKING WITH CHILDREN: 4-8**

CD 198	Child Development Work Experience	4-8
or		
CD 205X2	Child Growth and Development Lab	(4-8)

**GENERAL EDUCATION COURSES (16 units required): 16**

Communication and Learning Skills \*ENGL 015 or ENGL 101  
 Social and Behavioral Sciences: \*SOC 130  
 Humanities \*ART 103 or MUS 121 or MUS 122  
 Natural Science or Math  
 Elective Courses

*\*These courses are recommended selections to meet the GE requirement*

#### 4. SITE SUPERVISOR CERTIFICATE

The Site Supervisor certificate is designed to prepare students with the necessary knowledge and skills to be qualified as a Pre-school or Childcare Center Site Supervisor. The Site Supervisor certificate requires an Associate of Arts Degree or 60 units that include 24 Child Development, 6 Administration, and 3 Adult Supervision Units. This Certificate meets California Title V requirements for the Child Development Permit.

REQUIRED COURSES:		UNITS
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 126	Child, Family and the Community	3
CD 270	The Mentor Teacher/Adult Supervision	3
CD 271	Administration of Early Childhood Programs	3
CD 272	Advanced Administration of Early Childhood Programs	3

#### TWO COURSES FROM THE FOLLOWING LIST: 6

CD 130	Creative Music and Movement for Children	(3)
CD 134	Language, Listening and Literature for Children	(3)
CD 136	Creative Art Activities for Children	(3)
CD 137	Play and Materials for Children	(3)

#### TWO COURSES FROM THE FOLLOWING LIST: 6

CD 101	Parent Child Interaction	(3)
CD 133	Creative Science and Math Activities for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curriculum	(3)
CD 140	Spanish for Child Development	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

#### EXPERIENCE WORKING WITH CHILDREN: 4-8

CD 198	Child Development Work Experience	4-8
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#### GENERAL EDUCATION COURSES: 27

Communication and Learning Skills \*ENGL 015 or ENGL 101  
 Social and Behavioral Sciences: \*SOC 130  
 Humanities \*ART 103 or MUS 121 or MUS 122  
 Natural Science or Math  
 Elective Courses

*\*These courses are recommended selections to meet the GE requirement*

#### 5. INFANT DEVELOPMENT CERTIFICATE

The Infant Development certificate is similar to the Associate Teacher but specializes in Infant (0-36 months) Care and is designed to prepare students for working with infants, by assisting the Teacher in a childcare or infant care setting. The Infant Development certificate requires 31 CD units, including 4 units of the CD Infant Laboratory Class.

REQUIRED COURSES:		UNITS
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 185	Infant/Toddler Growth and Dev	3
CD 186	Infant/Toddler Activities	3
CD 126	Child, Family and Community	3
CD 231	Health and Safety Practices for Children	3
CD 232	Nutrition for Young Children	3

#### ONE COURSE FROM THE FOLLOWING LIST: 3

CD 101	Parent-Child Interaction	(3)
CD 136	Creative Art Activities for Children	(3)
CD 137	Play and Materials for Children	(3)
CD 244	Children with Special Needs	(3)

#### EXPERIENCE WORKING WITH CHILDREN: 4

(Ages birth - 24 months)

CD 210X2	Infant Growth and Development Lab	4
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**TOTAL UNITS: 31**

#### 6. PRESCHOOL CERTIFICATE

The Pre-School certificate is similar to the Associate Teacher but specializes in the care of children from 3 – 6 years and prepares students for employment to assist in a pre-school classroom or childcare facility. The Pre-school certificate requires 33 CD units including the CD Laboratory Class.

REQUIRED COURSES:		UNITS
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 116X4	Pediatric CPR, First Aid and Safety	2
CD 126	Child, Family and Community	3

#### FIVE COURSES FROM THE FOLLOWING LIST: 15

CD 101	Parent-Child Interaction	(3)
CD 130	Creative Music and Movement for Children	(3)
CD 133	Creative Science and Math Activities for Children	(3)
CD 134	Language, Listening and Literature for Children	(3)
CD 136	Creative Art Activities	(3)
CD 137	Play and Materials for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curriculum	(3)
CD 140	Spanish for Child Development	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

**EXPERIENCE WORKING WITH CHILDREN: 4**

CD 205X2 Child Growth and Development Laboratory 4  
**TOTAL UNITS: 33**

**7. SCHOOL-AGE CERTIFICATE**

The School Age certificate is similar to the Associate Teacher but specializes in the care of children from 6-12 years and prepares students for working in after-school programs or childcare facilities that serve older children. The School Age certificate requires 34 CD units including the CD Work Experience, which requires students to work with school-age children.

<b>REQUIRED COURSES:</b>		<b>UNITS</b>
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 160	Understanding School-Age Children	3
CD 161	Activities for School-Age Children	3
CD 126	Child, Family and Community	3

**THREE COURSES FROM THE FOLLOWING LIST: 9**

CD 134	Language, Listening and Literature for Children	(3)
CD 137	Play and Materials for Children	(3)
CD 138	Cultural Diversity/Anti-Bias Curriculum	(3)
CD 231	Health and Safety Practices for Children	(3)
CD 232	Nutrition for Young Children	(3)

**EXPERIENCE WORKING WITH CHILDREN: 4**

(Ages 6-12 years)

CD 198 Child Development Work Experience

**TOTAL UNITS: 28**

**8. FAMILY CHILD CARE PROVIDER CERTIFICATE**

The Family Childcare Provider certificate specializes in the care of children in a Family Childcare setting and prepares students for working in Family Childcare or Home Daycare programs and facilities. The Family Childcare certificate requires 22 - 24 CD units including the CD Work Experience, which requires students to work in Family Child Care.

<b>REQUIRED COURSES:</b>		<b>UNITS</b>
CD 100	Introduction to Child Development	3
CD 105	Child Growth and Development	3
CD 112	Principles and Practices in Early Childhood	3
CD 116X 4	Pediatric CPR, First Aid and Safety	2
CD 136	Creative Art Activities for Children	3
CD 172	Introduction to Family Child Care	1
CD 173	Family Child Care Business Practices	1
CD 174	Family Child Care Children's Program	1

**ONE COURSE FROM THE FOLLOWING LIST: 3**

CD 161	Activities for School Age Children	(3)
CD 186	Infant/Toddler Activities	(3)

**EXPERIENCE WORKING WITH CHILDREN: 2-4**

(in Family Child Care)

CD 198 Child Development Work Experience 2-4

**TOTAL UNITS: 22-24**

**ADDITIONAL RECOMMENDED COURSES :**

CD 231 Health and Safety Practices for Children 3  
 BUSAD 105 Small Business Management 3

**COURSES OFFERED BY THE DEPARTMENT OF CHILD DEVELOPMENT:****CD 081 PARENTING THE INFANT 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A focus on parenting roles and responsibilities for nurturing infants.

*Associate Degree Applicable*

**CD 100 INTRODUCTION TO CHILD DEVELOPMENT 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Introduction to the field of children's studies designed to familiarize students with the broad aspects of the profession, philosophy and principles of caring for children in a variety of settings.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 101 PARENT-CHILD INTERACTION 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A review of the concept of human development and its interaction within the biological, psychological, social and cultural phenomena and their relationship to children's and parent's attitudes and behavior. Family dynamic, communication and discipline are explored.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 105 CHILD GROWTH AND DEVELOPMENT 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of the growth and development of children from the prenatal period through adolescence with an emphasis on the individual needs of children in the modern world.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): FCS14*

**CD 112 PRINCIPLES AND PRACTICES IN EARLY CHILDHOOD EDUCATION 3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: CD 105.**

**LECTURE: 3 hours per week.**

Studies the practices and principles of working with young children. Emphasis is on observation and evaluation, developing age appropriate lesson plans, guiding and understanding young children.

*Applicable to Associate Degree*

*Course credit transfers to CSU.*

2-4

**CD 116x4**  
**PEDIATRIC CPR, FIRST AID AND SAFETY 2 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 1.5 hours per week and  
**LABORATORY:** 1.5 hours per week.  
Certification of pediatric CPR, pediatric first aid, prevention of the spread of infectious disease, immunizations, child safety and injury prevention. Meets community and state licensing recommendations for child care workers. This course may be taken four times.  
*Applicable to Associate Degree*  
*Course credit transfers to CSU.*

**CD 120x3**  
**LABORATORY PREPARATION IN CHILD DEVELOPMENT 1 UNIT**  
**PREREQUISITE:** One course in child development.  
**LABORATORY:** 3 hours per week.  
Practical laboratory techniques designed to acquaint students with the preparation of materials commonly used in child education.  
This course may be taken three times.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 126**  
**CHILD, FAMILY, AND THE COMMUNITY 3 UNITS**  
**PREREQUISITE:** None.  
**DEPARTMENTAL ADVISORY:** CD 105.  
**LECTURE:** 3 hours per week.  
Essentials and principles of preschool programs as they relate to the child, parent and teacher with emphasis on the interactions among the child, family and the community. Includes types of preschool programs, licensing regulations, discipline and the services available to families.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 128**  
**CREATIVE EXPERIENCES FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
The study of children's creativity including strategies to promote creativity in art, music, movement, and drama and the uses of creative activities as a way to develop children's cognitive skills, social skills, and aesthetic appreciation.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 130**  
**CREATIVE MUSIC AND MOVEMENT FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
Will explore the importance of music and movement for the development of the young child. Developing creative experiences in both music and movement to bring out the child's ability to express themselves using rhythm, sounds and movement. Experiences with musical instruments to use with children in the classroom along with ways to bring music and movement ideas into the daily lesson plan.  
*Applicable to Associate Degree*  
*Course credit transfers to CSU.*

**CD 133**  
**CREATIVE SCIENCE AND MATH ACTIVITIES FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** CD 105.  
**LECTURE:** 3 hours per week.  
Study of basic scientific theories and practices for teaching young children simple methods and processes of science and math. Classifying, simple reasoning, observing, making hypothesis, testing, generalizing causes and effect, using energy, matter and living things are explored. Fundamental mathematical concepts such as one to one correspondence, number sense and counting sets and classifying, parts and whole, basic measurements, ordering and patterning are also explored.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 134**  
**LANGUAGE, LISTENING AND LITERATURE FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** CD 105.  
**LECTURE:** 3 hours per week.  
The study of language acquisition in children and techniques and experiences which promote language development and listening skills. Includes examination of children's literature and teaching strategies for reading picture books to children as well as presenting poetry, flannel board activities, puppetry and storytelling in the classroom.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 136**  
**CREATIVE ART EXPERIENCES FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
The study of children's creativity including strategies to promote and value artists' development through activities using developmentally appropriate art materials and tools. Includes development of an art curriculum, which focuses on the emotional, social, physical, creative and cognitive needs of children from 2-8 years of age.  
*Applicable to Associate Degree*  
*Course credit transfers to CSU.*

**CD 137**  
**PLAY AND MATERIALS FOR CHILDREN 3 UNITS**  
**PREREQUISITE:** None.  
**DEPARTMENTAL ADVISORY:** CD 105.  
**LECTURE:** 3 hours per week.  
In depth study of the dynamic of play and play materials for children including the rationale for play as a facilitator of learning. History and philosophy of play, current theories and their relationships to materials as they are utilized in creating and implementing play environments for children.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 138**  
**CULTURAL DIVERSITY - ANTI-BIAS CURRICULUM 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
This course is designed to help students explore and address diversity in ways that enhance their own development and the development of the children they will

encounter as teachers and parents.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 140**  
**SPANISH FOR CHILD DEVELOPMENT 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Language and listening experiences in Spanish through the use of literature, music, conversation and dramatic play. Emphasis will be placed on acquisition of basic communication skills appropriate for those students teaching or planning to teach in early childhood bilingual-bicultural learning environments. (This course is equivalent to SPAN 140)  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 142-143-144-145-146**  
**ISSUES IN CHILD DEVELOPMENT 1-2 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 1-2 hours per week and/or**

**LABORATORY: 2-3 hours per week per unit.**

Lecture on issues, principles, theories and trends in the field of early childhood development. This course is appropriate for teachers, parents, day care workers, volunteers, aides and others interested in programs serving young children. Selected topics include foster parenting, strategies of discipline, grieving, and emancipation of foster children.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 150-151-152-153-154-155**  
**PARENTING ISSUES IN CHILD DEVELOPMENT 2 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 1 hour per week and**

**LABORATORY: 3 hours per week.**

Designed for participants in the campus Child Development Center, this course provides a framework for discussing parenting and education issues that emerge while working at the Center. **PARTICIPATION AT THE CHILD DEVELOPMENT CENTER IS REQUIRED.**  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 160**  
**UNDERSTANDING SCHOOL-AGE CHILDREN 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Designed to prepare students to work with children ages five years through adolescence, this course includes developmental theories and the practical implications of those theories. This course incorporates licensing regulations as required by Title 22 licensed facilities.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 161**  
**ACTIVITIES FOR SCHOOL-AGE CHILDREN 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of program and activity planning for school age children including both before- and after-school activities for groups and individuals.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 172**  
**FAMILY CHILD CARE 1 UNIT**  
**PREREQUISITE: None.**

**LECTURE: 1 hour per week.**

An introduction to in-home business practices, general development of children, and California licensing practices.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 173**  
**FAMILY CHILD CARE BUSINESS PRACTICES 1 UNIT**  
**PREREQUISITE: None.**

**LECTURE: 1 hour per week.**

Includes advertising, fees, collections, and record-keeping systems for family day care. Also includes child care food program regulations and licensing standards.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 174**  
**FAMILY CHILD CARE CHILDREN'S PROGRAMS 1 UNIT**  
**PREREQUISITE: None.**

**LECTURE: 1 hour per week.**

Strategies for organizing the child's day in family day care. Includes a review of age level development, suggested activities for each age, the importance of establishing routines, techniques for arranging the physical environment, and working with parents.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 185**  
**INFANT/TODDLER GROWTH AND DEVELOPMENT 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Designed for infant caregivers, this course explores the developmental, sensory, cognitive and emotional development of children from birth to age three. This course fulfills licensing requirements for Infant Center personnel and includes record-keeping, parent issues and the development of services, and daily plans of activities.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CD 186**  
**INFANT/TODDLER ACTIVITIES 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of program and activity planning for infants and toddlers child care programs, emphasizing curriculum and good practice specific to infants, toddlers and two-year-old children.  
*Applicable to Associate Degree*  
*Course credit transfers to CSU.*

**CD 198**  
**CHILD DEVELOPMENT WORK EXPERIENCE 1-4 UNITS**  
**PREREQUISITE: None.**

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.  
*Associate Degree Applicable*

Course credit transfers to CSU.

**CD 205x2**

**CHILD GROWTH AND DEVELOPMENT LABORATORY 4 UNITS**

**PREREQUISITE/COREQUISITE: CD 105.**

**LECTURE: 1.5 hour per week and**

**LABORATORY: 8.5 hours per week.**

Supervised experience and participation in a group program for preschool children at the SBVC Child Development Center. Emphasis is on curriculum planning and evaluation, discipline, guidance techniques, instructional method, cooperative relationships with staff, parents, children and professional ethics.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 210x2**

**INFANT GROWTH AND DEVELOPMENT LABORATORY 4 UNITS**

**PREREQUISITE/COREQUISITE: CD 185.**

**LECTURE: 1.5 hour per week and**

**LABORATORY: 8.5 hours per week.**

This course is designed to provide child development students with a supervised teaching experience in an infant care setting. The student is responsible for developing an appropriate individual program for the infants in their care. The lecture will be devoted to techniques to enhance effectiveness and a discussion of the laboratory experience.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 222**

**SPECIAL PROBLEMS IN CHILD DEVELOPMENT I 1 UNIT**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: Complete one 3-unit course in Child Development.**

**INDEPENDENT STUDY: 3 hours per week.**

Assigned problems involving library, laboratory, or conference work for selected students who are interested in furthering their knowledge of child development on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 231**

**HEALTH AND SAFETY PRACTICES FOR CHILDREN 3 UNITS**

**PREREQUISITES: CD 105 and CD 126.**

**LECTURE: 3 hours per week.**

This course will focus on the exploration of essential aspects and concerns of health and safety for children in early education programs. Examination of relationship of preventive health care and safety measures to optimal development and education. Focus on how to provide high quality, secure environments and health, safety and educational experiences. Knowledge of basic management of accidental injuries and illness.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 232**

**NUTRITION FOR YOUNG CHILDREN**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Nutrition issues relating to the basic needs of children from the prenatal period through adolescence with an emphasis on meal planning for child care facilities, and federal, state, and local regulations.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 244**

**CHILDREN WITH SPECIAL NEEDS 3 UNITS**

**PREREQUISITE: CD 105.**

**LECTURE: 3 hours per week.**

This course is designed to introduce characteristics of children with special needs. The course will provide a means of identification of a sensitivity to the needs and feelings of children with special needs and their families. Legal requirements of educating the child with disabilities or other special needs will be identified.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 270**

**THE MENTOR TEACHER/ADULT SUPERVISION 3 UNITS**

**PREREQUISITE: CD 105.**

**DEPARTMENTAL ADVISORY: Two years teaching experience and possession of a Child Development Permit (or completion of 24 units in child development coursework).**

**LECTURE: 3 hours per week.**

The methods and principles of supervising student teachers in early childhood classrooms. Emphasis is on the role of experienced classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents and other staff.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 271**

**ADMINISTRATION OF EARLY CHILDHOOD PROGRAMS 3 UNITS**

**PREREQUISITES: CD 105 and CD 126.**

**LECTURE: 3 hours per week.**

This course is an introduction to basic principles of administration of early childhood education programs. Specific topics include curriculum development and evaluation; licensing laws and regulations; site development; budgeting and fiscal management; working with parents, nutrition, health and safety issues and problem solving techniques.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**CD 272**

**ADVANCED ADMINISTRATION OF EARLY CHILDHOOD PROGRAMS 3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: CD 271.**

**LECTURE: 3 hours per week.**

This course will address administrative skills, knowledge and techniques needed to organize and operate a child development facility. Emphasis will be on principled centered leadership, budget and fiscal management, working with a board, funding opportunities, staffing, staff development opportunities, personnel policies, working with parents, volunteers and the community, regulatory

laws, problem solving techniques. This class meets state requirements for supervision of Title 22 preschool programs and the Child Development matrix for Master Teachers, Site Supervisor and Program Directors.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

#### CD 293

#### **ELEMENTARY LABORATORY: INTRODUCTION TO EARLY FIELD EXPERIENCE 3 UNITS**

**PREREQUISITE: EDU 290.**

**LECTURE: 2 hours per week and  
 LABORATORY: 2 hours per week.**

This course offers supervised experience and participation in an elementary school setting for prospective elementary school teachers. Emphasis is on understanding the role of the elementary school teacher, instructional methods, aiding literacy, cooperative relationships with staff, parents, children and professional ethics of teaching. This is a required class for all Liberal Studies/ Education majors transferring to CSUSB seeking a teaching credential.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

#### CD 295-296-297-298-299

#### **SPECIAL TOPICS IN CHILD DEVELOPMENT .5 UNIT**

**PREREQUISITE: None.**

**LECTURE: 8 hours per semester.**

Seminars on selected topics in the field of child development developed to address current issues, such as infants born with addictions; bonding with foster parents; bilingual education; discipline strategies with teenagers; and self-esteem of foster children.

## **COMPUTER SCIENCE**

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: Susan Bangasser, Ph.D.  
 Chemistry 118  
 (909) 384-8650  
 OTHER FACULTY: Anne Liu, M.S.  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Diana Rodriguez, M.A.  
 (909) 384-8950  
 (909) 384-8234

Courses offered by the Computer Science Department are interactive, featuring hands-on experience with the college's computer hardware and software. The courses cover a range of topics in the computer field with an emphasis on software engineering and information processing.

The Computer Science curriculum may culminate in either an Associate of Science degree or a certificate. The degree program prepares students to transfer to a four-year institution with a major in computer science or a related discipline. Students planning to transfer to a four-year institution and major in computer science should consult with a counselor regarding the transfer process and lower division requirements. The certificate program prepares students for entry-level employment as programmers for scientific and business applications.

## **COMPUTER SCIENCE ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in Computer Science, students must complete all requirement for the following certificate plus the general breadth requirements for the Associate Degree (minimum total = 60 units). Courses in mathematics and physics are strongly recommended as support courses for this major. Students should take a math course each semester.

## **COMPUTER SCIENCE CERTIFICATE**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

The Computer Programming Certificate Program is designed to prepare students for entry-level employment as programmers for scientific applications and business applications. Students completing this certificate program will possess a knowledge of software engineering and information processing concepts. Participants must successfully complete a minimum of 30 units with a grade of C or better in each course.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
<b>Select five of the following courses:</b>	
CS 110 Fundamentals of Computer Science	3
CS 120 Visual BASIC Programming I	4
CS 130 Applied Computer Logic	3
CS 165 Pascal Programming	4
CS 170 Assembly Language	4
CS 190 Programming in C++	4

#### **SELECT FOUR OF THE FOLLOWING COURSES:**

CS 215 Programming with Java	4
CS 220 Visual BASIC Programming II	3
CS 222 Special Problems in Computer Science	1
CS 223 Special Problems in Computer Science	2
CS 265 Data Structures	3
<b>TOTAL UNITS:</b>	<b>30 MINIMUM</b>

## **COURSES OFFERED BY THE DEPARTMENT OF COMPUTER SCIENCE:**

#### **CS 110 FUNDAMENTALS OF COMPUTER SCIENCE 3 UNITS**

**PREREQUISITE: MATH 952.**

**LECTURE: 2 hours per week and  
 LABORATORY: 2 hours per week.**

An orientation in computer science for computer science majors. Topics include an overview of the computer discipline, design and use of the computer devices, the art of problem solving and programming, and the representation of data. Includes hands-on experience in computer programming using visual BASIC and C++.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**CS 120**  
**VISUAL BASIC PROGRAMMING I** **4 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 2 hours per week.  
 An introduction to a beginner's computer language, Visual BASIC. Topics include problem solving, program design, software tools, structured logic, arrays, files, graphical display of data and procedures.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*  
*CAN (California Articulation Number): CSC 16*

**CS 130**  
**APPLIED COMPUTER LOGIC** **3 UNITS**  
**PREREQUISITE:** CS 110.  
**LECTURE:** 3 hours per week.  
 An introduction to digital systems. Topics include Boolean algebra, truth tables, logic gates, number systems and codes, Karnaugh maps, flip-flops, counters and registers, digital arithmetic, combinatorial logic and functions.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**CS 165**  
**PASCAL PROGRAMMING** **4 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 2 hours per week.  
 An introduction to the structured language, Pascal. Topics include pseudocoding, top-down design, control logic, arrays, sets, records, pointers, functions, procedures, parameters and recursion.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**CS 170**  
**ASSEMBLY LANGUAGE** **4 UNITS**  
**PREREQUISITE:** CS 110.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 2 hours per week.  
 An introduction to assembly language and machine organization. Topics include memory location, register references, data definitions, machine instructions, screen processing, disk storage and macros.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): CSCI 10*

**CS 190**  
**PROGRAMMING IN C++** **4 UNITS**  
**PREREQUISITE:** CS 110.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 2 hours per week  
 This course is an introduction to the object-oriented language, C++. Topics include object-oriented design, program logic structures, problem solving techniques, arrays and records, procedures and functions, classes and objects, pointers and references, inheritance, and polymorphism.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): CSCI 16*

**CS 198**  
**COMPUTER SCIENCE WORK EXPERIENCE** **1-4 UNITS**  
**PREREQUISITE:** None.  
 Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CS 215**  
**PROGRAMING WITH JAVA** **4 UNITS**  
**PREREQUISITE:** CS110.  
**LECTURE:** 3 hours per week and  
**LABORATORY:** 2 hours per week.  
 An introduction to the network-friendly language, Java. Topics include object-oriented design, multiple platform environment, program logic structures, graphical user interface, Visual J++, Java Applet and recursion.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**CS 220**  
**VISUAL BASIC PROGRAMMING II** **3 UNITS**  
**PREREQUISITE:** CS 120.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 2 hours per week.  
 Advanced programming using Visual BASIC with emphasis on software development and maintenance. Topics include object-oriented design, multiple class modules, interface and linking, windows and Internet controls and database access.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**CS 222**  
**SPECIAL PROBLEMS IN COMPUTER SCIENCE I** **1 UNIT**  
**PREREQUISITE:** CS 110.  
**INDEPENDENT STUDY:** 3 hours per week.  
 Assigned problems involving computer laboratory work for selected students who are interested in furthering their knowledge of computer science on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared.  
 See instructor for details.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*Limited transfer to UC; contact a counselor for details.*

**CS 265**  
**DATA STRUCTURES** **3 UNITS**  
**PREREQUISITE:** CS 190.  
**LECTURE:** 2 hours per week and  
**LABORATORY:** 2 hours per week.  
 An introduction to data structures such as linked lists, stacks, queues and trees. Topics include algorithm development, storage allocation, data organization, information retrieval system software and language support features.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): CSCI 24*



## COMPUTER SYSTEMS

DIVISION: Business and Information Technology  
 DIVISION DEAN: Margaret Ortiz, M.A.  
 DEPARTMENT HEAD: Vernon Stauble, Ph.D.  
 Business 200C  
 (909) 384-8915  
 OTHER FACULTY: Daniel T. Angelo, M.H.R.O.D.  
 Maha Al-Husseini, B.A.  
 Mona Jackson, M.A.  
 Barbara Saxon, B.S.I.S.  
 Roger Powell, M.S.  
 Mary Lou Vasquez, B.A.  
 DIVISION SECRETARY: Chris Williams  
 DIVISION OFFICE: Business 101  
 (909) 384-8908  
 LIAISON COUNSELOR: To Be Announced  
 (909) 384-4404

Courses offered by the Computer Systems Department are interactive, featuring hands-on experience with the college's computer hardware and software. The courses cover a range of topics in the computer field with an emphasis on productivity software in word processing, data base management, spreadsheet, desktop publishing, graphics, and courseware on the IBM-PC and Macintosh.

The Computer Systems curriculum may culminate in either an Associate of Arts degree or a certificate. The degree program prepares students to transfer to a four-year institution with a major in computer information systems or a related discipline. Students planning to transfer to a four-year institution and major in computer systems should consult with a counselor regarding the transfer process and lower division requirements. The certificate program prepares students for entry-level employment in education, industry, and businesses that require the use of microcomputers.

### COMPUTER SYSTEMS ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Computer Systems, students must complete all requirement for the following certificate plus the general breadth requirements for the Associate Degree (minimum total = 60 units). Courses in mathematics and business are strongly recommended as support courses for this major.

### COMPUTER SYSTEMS CERTIFICATE

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. The Microcomputer Applications Certificate Program is designed to prepare students for employment in education, industry, and businesses that require the use of microcomputers. Students completing this certificate program will possess a knowledge of using productivity software in word processing, data base management, spreadsheet, desktop publishing, graphics, and courseware on IBM-PC and Macintosh computers. Participants must successfully complete each course with a grade of C or better.

## REQUIRED COURSES: UNITS

### Select four of the following courses:

CSYS 101 Computer Literacy	3
CSYS 102 Using the IBM-PC	3
CSYS 103 Computer Graphics	3
CSYS 104 Using the Macintosh	2
CSYS 106 Disk Operating System (MS-DOS)	3

### Select three of the following courses:

ART 148 Beginning Computer Graphics	3
CSYS 202 Data Base Management Systems	3
CSYS 203 Web Publishing	3
CSYS 222 Special Problems in Computer Systems	1
CSYS 223 Special Problems in Computer Systems	2
CSYS 230 Inside the IBM/PC	3
CSYS 232 Data Communications and Networks	3

**TOTAL UNITS: 18 MINIMUM**

## COURSES OFFERED BY THE DEPARTMENT OF COMPUTER SYSTEMS:

### CSYS 101 COMPUTER LITERACY 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 2 hours per week.

An introductory computer survey course. Topics include computer terminology, computer development, computer uses, the impact of computers on society, the changing work place, and computer crime. Includes hands-on experience in computer labs using an integrated software package such as Microsoft Works.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### CSYS 102 USING THE IBM-PC 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 2 hours per week.

A survey course for the use of software tools such as word processors, spread sheets, graphics and data bases with selected packages. Includes hands-on experience on IBM-PC compatible computers.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

### CSYS 103 COMPUTER GRAPHICS 3 UNITS

**PREREQUISITE:** CSYS 101.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 2 hours per week.

An introduction course to graphic design using graphic software. Topics include the study of good graphic design skills and how to apply them, learning graphic software to create professional looking documents and hands-on experience using the IBM-PC.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

### CSYS 104 USING MACINTOSH 2 UNITS

**PREREQUISITE:** None.

**LECTURE:** 1 hour per week and  
**LABORATORY:** 2 hours per week.

A survey course for personal use of computers with emphasis on the Macintosh computer. Topics include hardware, software, Macintosh's operating system and

software tools, with emphasis on learning Claris Works.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 106**  
**DISK OPERATING SYSTEM (MS-DOS) 3 UNITS**  
**PREREQUISITE: CSYS 101.**

**LECTURE: 2 hours per week and**  
**LABORATORY: 2 hours per week.**

An introduction to the disk operation system used on IBM PC'S. Topics include booting, disk handling and management, DOS commands, system configuration, hard disk organization, directories, file management, utilities, and system environment alteration through batch files.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 202**  
**DATA BASE MANAGEMENT SYSTEMS 3 UNITS**  
**PREREQUISITE: CSYS 101.**

**LECTURE: 2 hours per week and**  
**LABORATORY: 2 hours per week.**

A survey course for the use of data base management systems. Topics include various data base models, and the collection, design, management, structures of data for storage and retrieval, and some advanced features on composing macros and procedures.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 203**  
**WEB PUBLISHING 3 UNITS**  
**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORIES: CS 110 and CSYS 101.**

**LECTURE: 2 hours per week and**  
**LABORATORY: 2 hours per week.**

An introduction to Web Page design in a hypertext language such as HTML, Fusion, or FrontPage. Topics include design and construction of effective Web pages, the World Wide Web, Internet, searching and loading files, interface and navigation, color and graphics, text and image files, and updating a web site.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 222**  
**SPECIAL PROBLEMS IN COMPUTER SYSTEMS I 1 UNIT**

**PREREQUISITE: CSYS 102 or CSYS 104.**  
**INDEPENDENT STUDY: 3 hours per week.**

Assigned problems involving computer laboratory work for selected students who are interested in furthering their knowledge of computer systems on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 223**  
**SPECIAL PROBLEMS IN COMPUTER SYSTEMS II 2 UNITS**

**PREREQUISITE: CSYS 102 or CSYS 104.**  
**INDEPENDENT STUDY: 6 hours per week.**

Assigned problems involving computer laboratory work for selected students who are interested in furthering their knowledge of computer systems on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared.

See instructor for details.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 230**  
**INSIDE THE IBM/PC 3 UNITS**  
**PREREQUISITE: CSYS 101.**

**LECTURE: 3 hours per week.**

An introduction to the IBM-PC and compatible computers at the machine level. Topics include the system board, keyboard, floppy and hard disk drives, interface cards, monitors, printers, machine organization, and design conventions.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CSYS 232**  
**DATA COMMUNICATIONS AND NETWORKS 3 UNITS**  
**PREREQUISITE: CSYS 101.**

**LECTURE: 3 hours per week.**

An introduction to human-to-computer and computer-to-computer communications. Topics include data transmission, modems, network configurations, protocols and software, telecommunication, teleprocessing, security, and control and management of LAN'S and WAN'S.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**COOPERATIVE**  
**WORK EXPERIENCE**  
See WORK EXPERIENCE

**CORRECTIONS**

DIVISION:	Criminal Justice
DIVISION DEAN:	Gloria M. Fisher, J.D.
DIVISION SECRETARY:	Sharen Chavira
DIVISION OFFICE:	Planetarium, 2nd Floor
LIAISON COUNSELOR:	Joyce Smith, M.A.
	(909) 384-8604
	(909) 384-4431
	(909) 384-8974

**COURSES OFFERED BY THE DEPARTMENT OF**  
**CORRECTIONS:**

**CORREC 101**  
**INTRODUCTION TO CORRECTIONS 3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

This course will focus on the legal issues, probation and parole, specific laws and general operation of correctional institutions. The relationship between historical trends of adult and juvenile corrections and other components of the

judicial system will also be examined.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CORREC 102**  
**CORRECTIONAL INTERVIEWING AND COUNSELING** 3 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.

This course is an overview of the techniques in counseling and interviewing available to practitioners in corrections. The student will learn the use of appropriate techniques and theories in confidence building which may be used by the correctional employee in client interviews and counseling. This is a basic course for students planning to enter or are already employed within the correctional science field.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CORREC 104**  
**CONTROL AND SUPERVISION IN CORRECTIONS** 3 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.

This course will emphasize local, state and federal institutions and the role played by the offender and the correctional worker. Topics will include inmate subculture, violence and effects of crowding on inmates and staff, coping techniques for a correctional officer in a hostile prison environment.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CORREC 105**  
**LEGAL ASPECTS OF CORRECTIONS** 3 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.

This course provides students with an awareness of the historical framework, concepts and precedents that guide correctional practice. Course material will broaden the individual's perspective of the corrections environment, the civil rights of prisoners and responsibilities and liabilities of corrections officials.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**CRIMINAL JUSTICE**  
(see also POLICE SCIENCE)

DIVISION:	Criminal Justice
DIVISION DEAN:	Gloria Fisher, J.D.
DIVISION SECRETARY:	Sharen Chavira
CAMPUS OFFICE:	Planetarium, 2nd Floor (909) 384-4431
GLEN HELEN OFFICE:	Sheriff's Training Center (909) 473-2695
LIAISON COUNSELOR:	Joyce Smith, M.A. (909) 384-8974

The Criminal Justice Department of classes are designed to meet the needs and interests of the general public, including individuals interested in law enforcement or related careers. Specialized training is available for persons interested in becoming a Basic Dispatcher or Forensic Specialist (Crime Scene Investigator).

**COURSES OFFERED BY THE DEPARTMENT OF  
COMPUTER SYSTEMS:**

**CRMJUS 006**  
**BASIC CORRECTIONAL HEALTH CARE ACADEMY** 2.25 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 40 hours per semester .

This course will provide the health care professional with a knowledge base in the delivery of correctional health care to include receiving medical screening and triage, identification and treatment of the seriously mentally ill, communicable disease, safety concerns, quality management and legal issues. Registration is limited to a student's completion of the LVN Certification Program, or equivalent.

*Associate Degree Applicable*

**CRMJUS 009**  
**VERBAL JUDO** .25 UNIT

**PREREQUISITE:** None.  
**LABORATORY:** 8 hours per semester.

This course provides a thorough overview that will enable students to apply the information they will learn about the philosophy of verbal judo. Introduces the proper procedures for using words as tool not weapons. Students will receive instruction on how to look creatively at conflict and use specific strategies and tactics to find peaceful resolutions.

*Associate Degree Applicable*

**CRMJUS 015**  
**CAMPUS SECURITY** 1.50 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 24 hours per semester.

This course is directed toward the training need of campus security personnel employed in elementary schools, secondary schools and community colleges. Topics include: laws impacting school campuses; working with law enforcement personnel; tactical communications; school violence; gangs and disaster/emergency preparedness.

*Associate Degree Applicable*

**CRMJUS 016**  
**SCHOOL POLICE OFFICER** 2 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 32 hours per semester.

This course is directed towards the training needs of the peace officers employed in elementary schools, secondary schools and community colleges. A school police course, which meets the requirements of SB1627 and Commission of Peace Officer Standards and Training (P.O.S.T.). Topics include: laws impacting school campuses; community relations; tactical communications; sexual harassment; violence/gangs; facility protection; disasters/ emergencies.

*Associate Degree Applicable*

**CRMJUS 018**  
**COMMUNITY ORIENTED POLICING** 1.50 UNITS

**PREREQUISITE:** None.  
**LECTURE:** 24 hours per semester.

This course is intended to assist and define efficiency and equity as they pertain to community-oriented policing. An emphasis on analyzing the importance and use of a community assessment.

*Associate Degree Applicable*

**CRMJUS 020**  
**WORKPLACE VIOLENCE** .50 UNIT

**PREREQUISITE:** None.

**LECTURE: 6 hours per semester and  
LABORATORY: 2 hours per semester.**

This course is designed for the employee, employer, business owner or police officer who may become involved in a workplace violence incident. Students will learn the definition of workplace violence, will identify individual and organizational factors contributing to workplace violence, will learn prevention and intervention techniques, and will be introduced to the concepts of security analysis/threat assessment.

*Associate Degree Applicable*

**CRMJUS 025**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 1A  
1.75 UNITS**

**PREREQUISITE: None.**

**LECTURE: 18 hours per semester and  
LABORATORY: 31 hours per semester.**

This course is designed to develop student's awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the first course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Professional Orientation, Ethics, Lifetime Fitness, Report Writing, Computer Applications, Weaponless Defense, Fire Conditions and Emergency Vehicle Operation Center Orientation.

*Associate Degree Applicable*

**CRMJUS 026**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 1B  
2.75 UNITS**

**PREREQUISITE: CRMJUS 025.**

**LECTURE: 38 hours per semester and  
LABORATORY: 25 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the second course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Report Writing, Cultural Awareness, Choices/Self-Esteem, Gangs, Animal/Insect Danger, Patrol Procedures, Tactical Communications, Support Units (K9/Horse/Aviation) and Glen Helen Rehabilitation Center Orientation. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 027**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 2A  
2.25 UNITS**

**PREREQUISITE: CRMJUS 026.**

**LECTURE: 27 hours per semester and  
LABORATORY: 22 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the third course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Professional Orientation, Report Writing, Traffic Control, Law Enforcement Math, Tactical Communications, Emergency Vehicle Operations Center Simulator, Administration of Justice, Railroad and Problem Oriented Policing. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 028**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 2B  
3 UNITS**

**PREREQUISITE: CRMJUS 027.**

**LECTURE: 40.5 hours per semester and  
LABORATORY: 22.5 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the fourth course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Report Writing, Vehicle Stops, Weaponless Defense, Narcotics, Lifetime Fitness, Sign Language, Blood Borne Pathogens, Goals, Counseling Team and Support Units (K-9/Horse/Aviation). **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 029**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 3A  
4.50 UNITS**

**PREREQUISITE: None.**

**LECTURE: 59.50 hours per semester and  
LABORATORY: 38.50 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the fifth course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Ethics/ Professionalism, Report Writing, Corrections, Introduction to Fire California Department of Forestry (CDF), Choices/Self-Esteem, Weaponless Defense, Cultural Awareness, Firearm Training, Social Diseases, Domestic Violence and Tactical Communications. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 030**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 3B  
5.50 UNITS**

**PREREQUISITE: CRMJUS 029.**

**LECTURE: 68 hours per semester and  
LABORATORY: 58 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the sixth course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Report Writing, Cultural Awareness, Choices/Self-Esteem, Weaponless Defense, Firearm Training, Court Demeanor, Aviation/Communications, Search and Rescue, Support Units [K-9/Horse/Special Weapons and Tactics (SWAT)], Basic Traffic Control and Radio Communications. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 031**

**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 4A  
4.75 UNITS**

**PREREQUISITE: CRMJUS 030.**

**LECTURE: 62 hours per semester and  
LABORATORY: 36 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the seventh course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Weaponless Defense, Report Writing, Cultural Awareness, Choices/Self-Esteem, Crimes

Against Persons, Firearm Training, Fire Rescue, Cardiopulmonary Resuscitation (CPR), First Aid and Gangs. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**  
Associate Degree Applicable

**CRMJUS 032**  
**PUBLIC SAFETY INTERNSHIP ACADEMY MODULE 4B**  
**5.75 UNITS**

**PREREQUISITE: CRMJUS 031.**

**LECTURE: 76 hours per semester and**

**LABORATORY: 50 hours per semester.**

This course is designed to develop students' awareness of the Public Safety field, which includes law enforcement, corrections and fire safety. It is the eighth course in a series of eight to be completed by students who have a desire to pursue a career in public safety. Content covered in this course includes Report Writing, Scientific Investigations, Search and Seizure, Weaponless Defense, Driver Awareness, Firearm Training, Cultural Awareness, Chemical Agents, Water Safety, Tactical Communications, Aviation/Communications and Court Demeanor. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

Associate Degree Applicable

**CRMJUS 036**  
**BASIC INVESTIGATIVE TRACKING** .50 UNIT

**PREREQUISITE: None.**

**LECTURE: 8 hours per semester and**

**LABORATORY: 8 hours per semester.**

Covers the basic tracking techniques used by law enforcement officers to apprehend suspects or to track lost children or adults. Topics include: track sketch; track preservation and processing; vehicle tracks; suspect interviews; preparation for testifying in court.

Associate Degree Applicable

**CRMJUS 040**  
**CITIZENS' ORIENTATION TO LAW ENFORCEMENT**  
**FUNCTIONS** 1.75 UNITS

**PREREQUISITE: None.**

**LECTURE: 26 hours per semester and**

**LABORATORY: 13 hours per semester.**

This course is designed to inform the public of the functions, organizational structure, and daily operations of a Sheriff's department. Students will visit the following divisions: aviation, basic academy, county jail, crime lab, firing range, homicide, SWAT and narcotics.

Associate Degree Applicable

**CRMJUS 041**  
**CRIME PREVENTION** .50 UNIT

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 8 hours per semester.**

A review of crime prevention strategies including police/citizen interaction, methods of opportunity-reduction, and the use of property inventories. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

Associate Degree Applicable

**CRMJUS 042**  
**BUSINESS ACADEMY** 1.50 UNITS

**PREREQUISITE: None.**

**LECTURE: 22 hours per semester and**

**LABORATORY: 11 hours per semester.**

This course is designed to inform business owners of

rules, regulations and practices of a sheriff's department. During this course, students will tour and learn about different divisions of the department. Students will visit the following divisions: aviation, basic academy, crime lab, and firing range. Special emphasis will be placed upon gang and narcotic awareness and crime prevention principles.

Associate Degree Applicable

**CRMJUS 043**  
**RAILROAD CROSSING** .25 UNIT

**PREREQUISITE: None.**

**LECTURE: 3 hours per semester and**

**LABORATORY: 5 hours per semester.**

This course is designed to familiarize students with railroad crossing collisions, incidents involving trespassing on railroad property and the skills needed to properly investigate a grade crossing collision.

Associate Degree Applicable

**CRMJUS 044**  
**RESERVE AND VOLUNTEER COORDINATOR'S**  
**TRAINING** 1.25 UNITS

**PREREQUISITE: None.**

**LECTURE: 20 hours per semester and**

**LABORATORY: 4 hours per semester.**

Designed to assist those charged with establishing and maintaining Reserve Peace Officer or Volunteer Units within law enforcement agencies with the information they need to succeed. Topics include: establishing agency policy and procedures; conducting background investigations; developing recruiting methods, managing, training and disciplining reserve officers and volunteers; liability issues.

Associate Degree Applicable

**CRMJUS 046**  
**CITIZENS ON PATROL** 1.75 UNITS

**PREREQUISITE: PE 231.**

**LECTURE: 24 hours per semester and**

**LABORATORY: 12 hours per semester.**

This course is designed to inform the public of rules, regulations, and practices of a sheriff's department Citizen's on Patrol unit. Students will learn the necessary skills to perform as a citizen on patrol for the sheriff's department. Skills include proper radio procedure, proper vehicle operations, public contact, telephone demeanor, and clerical/administrative duties. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

Associate Degree Applicable

**CRMJUS 050**  
**WILDERNESS FIRST RESPONDER** 3 UNITS

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 32 hours per semester and**

**LABORATORY: 32 hours per semester.**

First aid course for the first responder in a search and rescue wilderness activity. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

Associate Degree Applicable

**CRMJUS 052X4**  
**SEARCH AND RESCUE TECHNIQUES** .5-1 UNIT

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 4-8 hours per semester and**

**LABORATORY: 20-40 hours per semester.**

Search and rescue techniques including: search organization and deployment; tracking procedures, ELT operation, compass and map work, winch operation, line

and rock work, Helitech operation, and area familiarization. **CURRENT CPR AND CURRENT FIRST AID CERTIFICATION IS REQUIRED. REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.** This course may be taken four times.

*Associate Degree Applicable*

#### **CRMJUS 053x2**

**WINTER SEARCH AND RESCUE OPERATIONS 1 UNIT**  
**PREREQUISITE: CRMJUS 058.**

**LECTURE: 12 hours per semester and**

**LABORATORY: 12 hours per semester.**

Introduction to the proper use of equipment and techniques in winter search and rescue operations including the use of snowshoes, cross-country skiing, crampon, ice axe, high angle snow travel, minimum use of rescue gear, and winter travel skills. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.** This course may be taken twice.

*Associate Degree Applicable*

#### **CRMJUS 055**

**PREPARATION FOR POLICE ACADEMY 3.5 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week and**

**LABORATORY: 1.5 hours per week.**

This course is designed to familiarize students with the requirements, scope, and commitments of the Police Academy Training Program. Includes assessing potential academy recruits for job related skills, such as physical endurance, report-writing, and comprehension of penal codes. Students who successfully complete this course are eligible for admission into the Police Academy Training Program.

*Associate Degree Applicable*

#### **CRMJUS 058**

**PENAL CODE 832 COURSE 3.50 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 50 hours per semester and**

**LABORATORY: 26 hours per semester.**

These functions include the history, professionalism, and ethics of law enforcement, the criminal justice system, community relations, criminal law, laws of arrest, search and seizure, presentation of evidence, report writing, use of force, preliminary investigation, arrest and control, firearms, and crimes against the justice system. **MUST MEET STATE SCREENING REQUIREMENTS.**

*Associate Degree Applicable*

#### **CRMJUS 059**

**BASIC LAW ENFORCEMENT ACADEMY-LEVEL I OF THE MODULAR FORMAT 18.50 UNITS**

**PREREQUISITE: CRMJUS 060.**

**LECTURE: 225 Hours per semester and**

**LABORATORY: 215 Hours per semester.**

This course is the third module in the Regular Basic Course Modular Format Training sequence. The intensive and disciplined instruction is designed to meet the minimum requirements of a full time peace officer or Level I reserve peace officer in the state of California. The course includes professional orientation, police-community relations, laws of arrest, evidence and search and seizure, vehicle and radio procedures, administration of justice, narcotics, gangs, patrol procedures, firearms, vehicle stops, domestic violence, defensive tactics, physical training, criminal investigations, traffic investigations,

practical scenarios and testing. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES AND STATE SCREENING REQUIREMENTS.**

*Associate Degree Applicable*

#### **CRMJUS 060**

**RESERVE LEVEL II OFFICER 14.25 UNITS**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 203 hours per semester and**

**LABORATORY: 73 hours per semester.**

This course will familiarize the Level II Reserve officers with training in various law enforcement functions. These law enforcement functions include the prevention and detection of crime and the general enforcement of the laws of this state while under the immediate supervision of a peace officer that has completed the basic training course for deputy sheriffs and police officers. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

#### **CRMJUS 061**

**RESERVE LEVEL III OFFICER 6 UNITS**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 64 hours per semester and**

**LABORATORY: 93 hours per semester.**

This course will familiarize the Level III Reserve officers with training in various law enforcement functions. These law enforcement functions include law enforcement history, criminal justice system, tactical communication, crimes against persons and property, report writing, vehicle operations and pullover, traffic enforcement, custody, weaponless defense, first aid/cardiopulmonary resuscitation, firearms/chemical agents, information systems, and cultural awareness. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

#### **CRMJUS 063x4**

**FIRST AID .25 UNIT**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 4 hours per semester and**

**LABORATORY: 4 hours per semester.**

The basic elements of first aid care for victims of injuries or sudden illness. Includes care of persons with stopped breathing, heart attack and stroke, heavy bleeding, poisoning, and shock. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.** This course may be taken four times.

*Associate Degree Applicable*

#### **CRMJUS 064x4**

**CPR FOR RECERTIFICATION .25 UNIT**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 4 hours per semester and**

**LABORATORY: 4 hours per semester.**

Instruction and practice in CPR and obstructed airway skills. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

This course may be taken four times.

*Associate Degree Applicable*

#### **CRMJUS 065**

**SIGN LANGUAGE FOR EMERGENCY PERSONNEL 1 UNIT**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 12 hours per semester and**

**LABORATORY: 12 hours per semester.**

This course trains emergency personnel to interact with deaf victims, witnesses and suspects. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 066**

**INSTRUCTOR DEVELOPMENT .75 UNIT**

**PREREQUISITE: None.**

**LECTURE: 8 hours per semester and**

**LABORATORY: 16 hours per semester.**

This course will enable police instructors to improve their public speaking skills, understand adult learning theories, write learning objectives and lesson plans, use various methods of instruction effectively, and understand techniques of testing and remediation.

*Associate Degree Applicable*

**CRMJUS 069**

**LIFETIME FITNESS AND COPING WITH STRESS**

**.50 UNIT**

**PREREQUISITE: CRMJUS 058.**

**LECTURE: 8 hours per semester.**

Designed to assist officers in developing a personal fitness program, this course includes strategies to permanently control body fat, such as routine exercise and diet modification, and strategies for identifying and managing stress. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 070**

**BASIC DISPATCHER'S COURSE**

**6 UNITS**

**PREREQUISITE: None.**

**LECTURE: 92 hours per semester and**

**LABORATORY: 30 hours per semester.**

Training in the terminology, codes, and skills required for employment as a public safety dispatcher. Satisfies Peace Officers Standards and Training (POST) requirements for basic training of Public Safety Dispatchers.

*Associate Degree Applicable*

**CRMJUS 071**

**DISPATCHERS AND CRITICAL INCIDENTS 2.25 UNITS**

**PREREQUISITE: CRMJUS 070.**

**LECTURE: 36 hours per semester and**

**LABORATORY: 4 hours per semester.**

This course is devoted to the experienced dispatcher's role in critical incidents and officer survival. Course content will include: civil liabilities, communications under stress, physical disablers and psychological wellness, courtroom demeanor, sexual harassment, domestic violence, missing persons, hostage barricaded subject and suicidal subject situations, overview of telephone, radio and 800 megahertz systems. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 072x20**

**CIVIL UPDATE FOR DISPATCHERS**

**.50 UNIT**

**PREREQUISITE: CRMJUS 070.**

**LECTURE: 6 hours per semester and**

**LABORATORY: 2 hours per semester.**

Does it seem like everybody wants to sue a police agency? Get updated information concerning civil liability issues related to dispatching, learn courtroom survival techniques in the event of a lawsuit, and get the latest

information concerning court orders and civil disputes.

**REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

This course may be taken twenty times.

*Associate Degree Applicable*

**CRMJUS 073**

**DISASTER PREPAREDNESS FOR DISPATCHERS**

**.50 UNIT**

**PREREQUISITE: CRMJUS 070.**

**LECTURE: 6 hours per semester and**

**LABORATORY: 2 hours per semester.**

The "big one" hits Southern California. Are you prepared to deal with the effects of this disaster during and immediately after? Learn what to expect when it hits and how to prepare, at home or at a dispatch center. Topics include extrication of employees, law enforcement response, fire and medical response, and how to protect your family. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 074x20**

**LEGAL UPDATE FOR DISPATCHERS**

**.25 UNIT**

**PREREQUISITE: CRMJUS 070.**

**LECTURE: 5 hours per semester and**

**LABORATORY: 3 hours per semester.**

This class provides the student with an understanding of the legal requirements for missing persons and domestic violence reports, and provides the student with the current case law and statutory law information needed to completely perform public safety dispatching duties. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

This course may be taken twenty times.

*Associate Degree Applicable*

**CRMJUS 075**

**CRITICAL INCIDENT FOR DISPATCHERS .25 UNIT**

**PREREQUISITE: CRMJUS 070.**

**LECTURE: 5 hours per semester and**

**LABORATORY: 3 hours per semester.**

Scenarios and basic skills will provide students with some new ideas and approaches to the everyday incidents. Students will have an understanding of what to tell the public in their inquiries, and where to get more information. **REGISTRATION IS LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 076**

**STRESS MANAGEMENT FOR DISPATCHERS .50**

**UNIT PREREQUISITE: CRMJUS 070.**

**LECTURE: 6 hours per semester and**

**LABORATORY: 2 hours per semester.**

This course is designed to identify the primary causes of chronic stress associated with public safety dispatching. Some sources of stress associated with dispatching will include multiple requests for priority traffic and managing large-scale critical incidents. Scenarios and basic skills will be provided to him/her with some new ideas and approaches to combat the sources of stress on the job. **LIMITED TO STUDENTS WHO HAVE SUCCESSFULLY COMPLETED PROGRAM PREREQUISITES.**

*Associate Degree Applicable*

**CRMJUS 085**

**FORENSIC SPECIALIST—BASIC ACADEMY 6.5 UNITS**

**PREREQUISITE: None.**

**LECTURE: 96 hours per semester and  
LABORATORY: 24 hours per semester.**

This course is designed to familiarize students with the area of criminalistics, specifically that branch which deals with Forensic Science. All aspects of laboratory identification of criminal evidence, processing and handling of evidence, and the relationship between the identification and the presentation of the evidence in court are explored.

*Associate Degree Applicable  
Course credit transfers to CSU.*

## DANCE

DIVISION: Humanities  
DIVISION DEAN: Sherrie Guerrero, Ed.D.  
DEPARTMENT HEAD: Leticia Hector, M.A.  
Liberal Arts 239  
(909) 384-8618  
OTHER FACULTY: Denise Dale Jacobs, M.F.A.  
DEPARTMENT OFFICE: Auditorium Green Room  
DIVISION SECRETARIES: Kelly Adcock  
North Hall 240  
(909) 384-8625  
LIAISON COUNSELOR: Richard Long, M.A.  
(909) 384-8972

### COURSES OFFERED BY THE DEPARTMENT OF DANCE:

**DANCE 101x2  
BEGINNING MODERN DANCE 2 UNITS**

**PREREQUISITE: None.**

**LABORATORY: 6 hours per week.**

Focuses on the "inner impulse" of modern dance and draws upon the movement vocabularies of classical, post-modern, and contemporary styles. Strong emphasis on the acquisition of a beginning modern dance movement vocabulary, dynamic alignment, and suppleness, flexibility, rhythmically, musicality, endurance and balance.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 102x4  
INTERMEDIATE MODERN DANCE 2 UNITS**

**PREREQUISITE: DANCE 101x2.**

**LABORATORY: 6 hours per week.**

Continuing study of modern dance techniques including the movement's vocabularies of Graham, Holm, Humphrey-Weidman, Limon. Cunningham, Hawkins, Taylor, and Sharp and the post-modern and contemporary styles of today. Emphasis is on expanding and deepening the dancer's technical and expressive skills through more complicated techniques, combinations, improvisations, and choreographic studies while supporting the discovery of a personal movement voice. Complexity, rhythmically, spatially, and dynamically aspects are stressed. This course may be taken four times.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 103x2  
BALLET 2 UNITS**

**PREREQUISITE: None.**

**LABORATORY: 6 hours per week.**

A progressive study of Ballet including vocabulary, placement and alignment, strength and flexibility exercises, work on balance and control, and combinations

of increasing speed, length, and complexity. This course may be taken two times.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 105x2  
BEGINNING JAZZ DANCE 2 UNITS**

**PREREQUISITE: None.**

**LABORATORY: 6 hours per week.**

A comprehensive survey of the beginning techniques of Jazz Dance with a focus on vocabulary, placement, centering, balance, alignment, strength and flexibility, and combinations of loco motor movement. May be taken a total of two times for credit. This course may be taken twice.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 106x4  
INTERMEDIATE JAZZ DANCE 2 UNITS**

**PREREQUISITE: DANCE 105x2.**

**LABORATORY: 6 hours per week.**

Continuing study of jazz dance techniques including the styles and techniques of jazz innovators such as Cole, Giordano, Luigi, Robbins, Fosse, and Tremain. Contemporary and commercial styles may also be introduced. Historical and theoretical understandings of jazz technique from film, television, and stage are a primary focus as well as the development of the dancer's technical and expressive skills. This course may be taken four times.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 107x2  
TAP DANCE 2 UNITS**

**PREREQUISITE: None.**

**LABORATORY: 6 hours per week.**

A comprehensive study and practice of tap as presented through physical strengthening, rhythmic awareness, and the learning of tap combinations and routines, vocabulary, and stylistic concerns. This course may be taken two times.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 114x4  
DANCE REHEARSAL AND PERFORMANCE 4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 2 hours per week and**

**LABORATORY: 6 hours per week.**

Instruction and supervision of rehearsal and performance of various dance productions. **ENROLLMENT IN THIS CLASS IS CONTINGENT WITH AN AUDITION FOR A CURRENT DANCE PRODUCTION.** This course may be taken four times.

*Associate Degree Applicable  
Course credit transfers to CSU and UC.*

**DANCE 200  
DANCE HISTORY AND APPRECIATION 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A comprehensive survey of dance from primitive time through the 20th century. Emphasis will be placed on historical perspectives revealing dance as an emerging art form. Course material also includes the relation of dance



to religion and myth, as a reflection of cultural and social attitudes and mores, and its relation to other art forms.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

## **DANCE 203**

### **CHOREOGRAPHY**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

An introduction and analysis of the elements of dance composition. A comprehensive survey of theories, techniques, and historical perspectives of dance composition, as well as the practical application of these elements through the actual physical activity of creating and teaching dance compositions.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

## **DANCE 206x4**

### **DANCE PRODUCTION**

**4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY:** 6 hours per week.

Instruction and analysis of all aspects of dance production including organizing a dance production; publicity and marketing; budget; theatrical and dance lighting; set design; costumes and makeup; and instruction in elements of physical theater, such as stage terminology, stage directions, and roles of theatre personnel. This course may be taken four times.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

## **DIESEL**

DIVISION: Technical  
DIRECTOR: Kevin Anderson, M.B.A.  
FACULTY: Daniel Hooks, A.S.  
DEPARTMENT SECRETARY: Michelle Curry  
(909) 382-4079  
DEPARTMENT OFFICE: 264 S. Leland Norton Way  
Suite A110, San Bernardino  
LIAISON COUNSELOR: George Fleming, M.S.  
(909) 384-8975

## **HEAVY-DUTY DIESEL TECHNICIAN CERTIFICATE**

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
CSYS 101 Computer Literacy	3
DIESEL 021 Diesel Engine - Heavy Duty	4
DIESEL 022 Heavy-Duty Truck Brakes	2
DIESEL 023 Heavy-Duty Truck Suspension & Steering	2
DIESEL 024 Heavy-Duty Equipment Diesel Engine	4
DIESEL 028 Heavy-Duty Truck Preventive Maintenance Service	4
DIESEL 030 Advanced Heavy-Duty Truck Systems	4
TECALC 950 Shop Calculations	3
WELD 123 Oxy-Acetylene Welding	3
WELD 077x4 Continuous Wire Welding	1
<b>TOTAL UNITS:</b>	<b>30</b>

*\*Pending approval from the California Community College  
Chancellor's Office.*

## **COURSES OFFERED BY THE DEPARTMENT OF DIESEL:**

## **DIESEL 020**

### **DIESEL ENGINES – LIGHT DUTY**

**4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

Theory and practical shop work in the repair, operation, and maintenance of light duty automotive diesel engines and fuel injection systems. Course includes general trouble-shooting and diagnostic testing. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test.

*Associate Degree Applicable*

## **DIESEL 021**

### **DIESEL ENGINES-HEAVY DUTY**

**4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

Theory and practical shop work in repair, operation, and maintenance of heavy-duty industrial diesel engines and fuel injection systems. Course includes general trouble-shooting and diagnostic testing. This course may be used in preparation for the automotive Service Excellence (ASE) National Test.

*Associate Degree Applicable*

## **DIESEL 022**

### **HEAVY-DUTY TRUCK BRAKES**

**2 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1.5 hours per week and

**LABORATORY:** 1.5 hours per week.

Theory and practical shop work in the construction and repair of heavy-duty truck brake systems and components. Includes principles of hydraulic and pneumatic brake systems, anti-lock, and computer controlled braking systems used in today's modern heavy-duty diesel trucks and semi-tractors.

*Associate Degree Applicable*

## **DIESEL 023**

### **HEAVY-DUTY TRUCK SUSPENSION AND STEERING**

**2 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1.5 hours per week and

**LABORATORY:** 1.5 hours per week.

Theory and practical shop work in the construction, operation, and repair of heavy-duty truck suspension and steering components. Includes principles of hydraulic and pneumatic steering and suspension systems.

*Associate Degree Applicable*

## **DIESEL 024**

### **HEAVY-EQUIPMENT DIESEL ENGINES**

**4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and

**LABORATORY:** 3 hours per week.

Theory and practical shop work of the construction, operation, and repair of automotive, heavy-duty, and heavy-equipment diesel engines. Includes principles of diesel fuel injection pumps, governors, and injectors; turbo-charges and blowers; two and four-cycle combustion systems.

*Associate Degree Applicable*

## **DIESEL 025x3**

### **HEAVY-EQUIPMENT DIESEL ENGINES LABORATORY**

**1 UNIT**

**PREREQUISITE:** DIESEL 024.

**LABORATORY:** 3 hours per week.

Practical shop work in the construction, operation, and repair of automotive, heavy-duty, and heavy-equipment diesel engines. Includes principles of diesel fuel injection pumps, governors, and injectors; turbo-charges and blowers; two and four-cycle combustion systems. This course may be taken three times.

*Associate Degree Applicable*

**DIESEL 026**  
**MICRO-COMPUTER CONTROLLED DIESEL ENGINES**  
**4 UNITS**

**PREREQUISITE: DIESEL 024.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

Theory and practical shop work in the repair, operation, and maintenance of micro-computer controlled diesel engines. Includes general trouble-shooting and diagnostics using assorted electronic and computerized test equipment on operable computer controlled diesel engines. General service and overhaul of the computerized 3406E Caterpillar engine is emphasized.

*Associate Degree Applicable*

**DIESEL 027x3**  
**MICRO-COMPUTER CONTROLLED DIESEL ENGINES**  
**LABORATORY 1 UNIT**

**PREREQUISITE: DIESEL 026.**

**LABORATORY: 3 hours per week.**

Practical shop work in the repair, operation, and maintenance of micro-computer controlled diesel engines. Includes general troubleshooting and diagnostics using assorted electronic and computerized test equipment on operable computer controlled diesel engines. General service and overhaul of the computerized 3406E Caterpillar engines is emphasized. This course may be taken three times.

*Associate Degree Applicable*

**DIESEL 028**  
**HEAVY-DUTY TRUCK PREVENTIVE MAINTENANCE**  
**SERVICE 4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

Theory and practical shop work in maintenance and preventive maintenance service of heavy-duty trucks and semi-tractor systems. Fundamentals of truck components and systems are explained as students perform routine service tasks on a Ford semitractor truck. Course is designed to provide students the needed skills and knowledge to perform entry level labor tasks in the heavy-duty truck service industry.

*Associate Degree Applicable*

**DIESEL 029x3**  
**HEAVY-DUTY TRUCK PREVENTIVE MAINTENANCE**  
**SERVICE LABORATORY 1 UNIT**

**PREREQUISITE: DIESEL 028.**

**LABORATORY: 3 hours per week.**

Practical shop work in maintenance and preventative maintenance service of heavy-duty trucks and semi-tractor systems. Fundamentals of truck components and systems are explained as students perform routine service tasks on a Ford semi-tractor truck. Course is designed to provide students the needed skills and knowledge to perform entry-level labor tasks in the heavy-duty truck service industry. This course may be taken three times.

*Associate Degree Applicable*

**DIESEL 030**  
**ADVANCED HEAVY-DUTY TRUCK SYSTEMS 4 UNITS**

**PREREQUISITE: DIESEL 028.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

Advanced level theory and practical workshop in maintenance, air conditioning, ABS, computers, and operations of the heavy-duty truck and semi-tractors systems.

*Associate Degree Applicable*

**DIESEL 034**  
**INTRODUCTION TO HEAVY-DUTY COMPRESSED**  
**NATURAL GAS VEHICLE SYSTEMS 4 UNITS**

**PREREQUISITE: DIESEL 026.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

This course provides theory and hands-on experience in the operation, service, inspection, and maintenance of compressed natural gas (CNG) systems. This course prepares students for ASE Alternate Fuels Test (F-1).

*Associate Degree Applicable*

## **ECONOMICS**

DIVISION: Business and Information  
Technology

DIVISION DEAN: Margaret Ortiz, M.A.

DEPARTMENT HEAD: Nickolas Zoumbos, M.S.

Business 100D

(909) 384-8912

FACULTY: Walt Chatfield, Ph.D.

J. D. Dulgeroff, Ph.D.

DIVISION SECRETARY: Chris Williams

DIVISION OFFICE: Business 101

(909) 384-8908

LIAISON COUNSELOR: To Be Announced

(909) 384-4404

Economics is concerned with the study of how people and societies produce various commodities and distribute them for consumption, now or in the future, among various persons and groups in society. As a descriptive, academic discipline, it is concerned with accurate portrayals of national economics as well as those of regions, firms, and individuals. As an analytic discipline, its tools are used to order, modify, and describe economic activity.

Training in economics, supplemented by course work in other disciplines, provide excellent preparations for particular careers in industry, government, and many professions including management, law, education, public administration or consulting. The study of economics also provides useful intellectual training for individuals who may be uncertain about their future plans.

Students planning to transfer to a four-year institution and major in economics or related fields should consult with a counselor regarding the transfer process and lower division requirements.

## **COURSES OFFERED BY THE DEPARTMENT OF ECONOMICS:**

### **ECON 100**

**INTRODUCTION TO ECONOMICS 3 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week.**

Survey of the American economy and the development, functioning and significance of economic institutions. Emphasis on economic growth, the national debt, inflation and international economic problems.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ECON 200****INTRODUCTION TO MACROECONOMICS 3 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week.**

Introduction to macroeconomic theory and the role of fiscal and monetary policies in economics with emphasis on national economic problems.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.**CAN (California Articulation Number): ECON 2***ECON 200H****INTRODUCTION TO MACROECONOMICS – HONORS 3 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week.**

Introduction to macroeconomic theory and the role of fiscal and monetary policies in economics with special emphasis on national economic problems. Enrollment is limited to students eligible for the Honors Program.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ECON 201****PRINCIPLES OF ECONOMICS (MICRO) 3 UNITS****PREREQUISITE: None.****LECTURE: 3 hours per week.**

Introduction to microeconomic theory including international economics, economic development, and comparative economic systems with emphasis on microeconomic problems.

*Associate Degree Applicable**Course credit transfers to CSU and UC.**CAN (California Articulation Number): ECON4***ECON 208****BUSINESS AND ECONOMICS STATISTICS 4 UNITS****PREREQUISITE: MATH 095.****LECTURE: 4 hours per week.**

A review of statistical methods commonly used in business and economics including measures of central tendency; measures of dispersion and skewness; probability concepts and distributions; statistical inferences; parametric and non-parametric hypothesis testing; index numbers time series analysis, simple regression, and correlation analysis. This course is also offered as BUSCAL 208.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ECON 222****SPECIAL PROBLEMS IN ECONOMICS I 1 UNIT****PREREQUISITES: ECON 200 and ECON 201.****INDEPENDENT STUDY: 3 hours per week.**

Assigned problems involving library work and research for selected students who are interested in furthering their knowledge of economics on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ECON 223****SPECIAL PROBLEMS IN ECONOMICS II****2 UNITS****PREREQUISITES: ECON 200 and ECON 201.****INDEPENDENT STUDY: 6 hours per week.**

Assigned problems involving library and laboratory work for selected students who are interested in furthering their knowledge of economics on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; contact a counselor for details.***ECON 285****HONORS IN ECONOMICS****3 UNITS****PREREQUISITE: ECON 200 or ECON 201.****COREQUISITE: ECON 200 or ECON 201.****LECTURE: 3 hours per week.**

Building on the concepts introduced in Principles of Economics (200 or 201), this class focuses on contemporary social issues including the educational, energy, and environmental impact of economic decisions, the use of computers in the field of economics, and methods for conducting research in the fields of macro and micro-economics.

*Associate Degree Applicable**Course credit transfers to CSU and UC.***EDUCATION**

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: Juliann Martin, M.A.  
 North Hall 244  
 (909) 384-4457  
 OTHER FACULTY: Kathryn Adams, M.S.  
 Helen Anderson-Cruz, Ed.D.  
 Jing Babb, M.Ed.  
 Denise Knight, B.A.  
 Susan Shimoff, M.A.  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Laura Gomez, M.A.  
 (909) 384-8979

**COURSES OFFERED BY THE DEPARTMENT OF EDUCATION:**

**EDU 290****INTRODUCTION TO EDUCATION****3 UNITS****PREREQUISITE: CD 105.****LECTURE: 3 hours per week.**

Introduction to the field of education, designed to familiarize students with philosophies of education, history of education in America, social, political and legal foundations of education, and contemporary issues in education. The course transfers to CSUSB for students, majoring in Liberal Studies/Education.

*Associate Degree Applicable**Course credit transfers to CSU and UC.*

## ELECTRICITY/ELECTRONICS/ TECHNICAL CALCULATIONS

DIVISION:	Technical
DIVISION DEAN:	Thomas Bauman, M.S., P.E.
DEPARTMENT HEAD:	Carlos Busselle, B.A. (909) 384-8502
OTHER FACULTY:	Edward Szumski, M.A.
DIVISION SECRETARY:	Patsy Martinez (909) 384-8902
DIVISION OFFICE:	Technical 108 (909) 384-4451
LIAISON COUNSELOR:	George Fleming, M.S. (909) 384-8975

The Electricity/Electronics curriculum is designed to provide entry-level job training in this broad and expanding field. These classes lead to trainee positions in maintenance, installation, field service, networking, and apprenticeship in the area of specialization. Students who seek a Certificate or an Associate of Science Degree in the fields of: 1) Electronics Technology, 2) Communication Engineering Technology, 3) Computer Engineering Technology, 4) Electric Power Technology, or (5) Avionics Technology, will complete a series of Electronics Technology courses common to electricity, communications, and computers and then complete the appropriate area of specialization. All classes must be completed with a grade of C or better.

Students planning to transfer to a four-year institution and major in electronics should consult with a counselor regarding the transfer process and lower division requirements.

### ELECTRICITY/ELECTRONICS ASSOCIATE OF SCIENCE DEGREE

To graduate with a specialization in one of the Electricity/Electronics majors, students must complete all the requirements for the appropriate certificate with a grade of C or better plus the general breadth requirements for the Associate Degree.

**ELECTRICITY/ELECTRONICS CERTIFICATES**

Students should have normal color vision, hand/eye coordination and the ability to lift over 50 pounds.

**1. ELECTRONICS TECHNOLOGY****(Core Courses required for all specializations)**

REQUIRED COURSES:	UNITS
TECALC 097 Technical Calculations	4
ELECTR 110 Direct Current Circuit Analysis	3
ELECTR 111 Direct Current Circuit Laboratory	1
ELECTR 115 Alternating Current Circuit Analysis	3

ELECTR 116 Alternating Current Circuit Lab	1
ELECTR 155 Electronic Drawing and Assembly	3
ELECTR 230 Semiconductor Devices	3
ELECTR 235 Solid State Circuit Analysis	4
ELECTR 265 Digital Logic Design	4
ELECTR 266 Microprocessor Technology	4
ELECTR 270 Linear Integrated Circuit Analysis	4
<b>TOTAL UNITS:</b>	<b>34</b>

**2. COMMUNICATION ENGINEERING TECHNOLOGY****Complete the REQUIRED COURSES plus:**

ELECTR 220A F.C.C. Rules and Regulations	3
ELECTR 250A Radio Transmitters, Receivers and Antennas	4
ELECTR 255A Telephone Networking	4
<b>TOTAL UNITS:</b>	<b>45</b>

**3. COMPUTER ENGINEERING TECHNOLOGY****Complete the REQUIRED COURSES plus:**

ELECTR 158 Microcomputer Operation	2
ELEC 217A Industrial Electricity	4
ELECTR 280A Computer Operations and Maint	4
<b>TOTAL UNITS:</b>	<b>44</b>

**4. ELECTRONIC POWER TECHNOLOGY****Complete the REQUIRED COURSES plus:**

ELEC 216A Introduction to Industrial Electricity	4
ELEC 217A Industrial Electricity	4
ELEC 218A Controlling Industrial Electricity	4
<b>TOTAL UNITS:</b>	<b>46</b>

**5. AVIONICS TECHNOLOGY****Complete the REQUIRED COURSES plus:**

AERO 121* Aviation Fundamentals	3
AERO 140* Instrument Ground School & Flight Sim.	4
ELECTR 220A FCC Rules and Regulations	3
ELECTR 250A Radio Transmitters, Receivers, & Antennas	4
ELECTR 257A Navigation & Communication Syst	4
<b>TOTAL UNITS:</b>	<b>52</b>

*\* AERO 102 & 103 can be substituted for AERO 121 & 140*

### COURSES OFFERED BY THE DEPARTMENT OF ELECTRICITY/ELECTRONICS:

**ELEC 012 UTILITY POLE CLIMBING: OSPCTP****3.25 UNITS****PREREQUISITE: None.****LECTURE: 2 hours per week and****LABORATORY: 4 hours per week.**

The study of the procedures, safety practices and equipment used in telephone and utility pole climbing. Subjects include: knots, handlines, cable repair, pole climbing, blueprints, cable placement, and pole handling. **DOCTOR'S VERIFICATION THAT THERE IS AN ABSENCE OF FEAR OF HEIGHTS, HEART TROUBLE, DIZZINESS, FAINTING SPELLS, HIGH BLOOD PRESSURE, BACK TROUBLE, ASTHMA, EPILEPSY; OR A PHYSICIAN'S STATEMENT THAT PRE-EXISTING CONDITIONS WILL NOT AFFECT THE STUDENT'S ABILITY TO SAFELY COMPLETE THIS COURSE IS REQUIRED.**

*Associate Degree Applicable*

### ELEC 216A INTRODUCTION TO INDUSTRIAL ELECTRICITY

**4 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

The study of electrical power transmission, the National Electrical Code, electrical blueprints, and residential and commercial wiring.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELEC 217A****INDUSTRIAL ELECTRICITY****4 UNITS**

**PREREQUISITE:** ELECTR 115.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

Study of DC motors, single and polyphase AC motors, and the necessary controls and measuring equipment, industrial circuit protection and switching equipment.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELEC 218A****CONTROLLING INDUSTRIAL ELECTRICITY****4 UNITS**

**PREREQUISITE:** ELEC 217A.

**LECTURE:** 3 hours per week and  
**LABORATORY:** 3 hours per week.

The study of DC, AC and polyphase motor operation, of mechanical and programmable machine controls, relays and programmable controllers, ladder logic diagrams and the communication network linking the programmer, the controller and the machine.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 110****DIRECT CURRENT CIRCUIT ANALYSIS****3 UNITS**

**PREREQUISITE:** None.

**COREQUISITE:** ELECTR 111.

**LECTURE:** 3 hours per week.

A comprehensive course in direct circuit analysis including Ohm's Law, series and parallel circuit analysis, voltage and current dividers, DC meters, Kirchhoff's Laws, magnetic circuits, and network theorems.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 111****DIRECT CURRENT CIRCUIT LABORATORY****1 UNIT**

**PREREQUISITE:** None.

**COREQUISITE:** ELECTR 110.

**LABORATORY:** 3 hours per week.

The laboratory complement to ELECTR 110 including experiments reinforcing the theory of electricity and the necessary technical skills.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 115****ALTERNATING CURRENT CIRCUIT ANALYSIS****3 UNITS**

**PREREQUISITES:** ELECTR 110 and ELECTR 111.

**COREQUISITE:** ELECTR 116.

**LECTURE:** 3 hours per week.

An in-depth analysis of alternating current circuits including AC generation and transformation, inductance and inductive circuits, capacitance and capacitive circuits, time constants, rectangular and polar notation, AC circuit analysis, resonance and filters.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 116****ALTERNATING CURRENT CIRCUIT LABORATORY****1 UNIT**

**PREREQUISITES:** ELECTR 110 and ELECTR 111.

**COREQUISITE:** ELECTR 115.

**LABORATORY:** 3 hours per week.

The laboratory complement to ELECTR 115 including skill training in oscilloscopes QT boards, function generators, and other test equipment.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 155****ELECTRONIC DRAWING AND ASSEMBLY****3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and  
**LABORATORY:** 3 hours per week.

Skill in interpreting and creating electronic drawings, circuit board construction and assembly. Emphasis on drawings, soldering, assembly, and fundamentals of CAD.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 158****MICROCOMPUTER OPERATION****2 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 1.5 hours per week and  
**LABORATORY:** 1.5 hours per week.

A survey course in the technical applications of the microcomputer systems including computer interconnections, system capabilities and limitations, flowcharting, trouble isolation techniques and the use of microcomputers as calculating devices.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 198****ELECTRONICS WORK EXPERIENCE****1-4 UNITS**

**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 220A****F.C.C. RULES AND REGULATIONS****3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A review of the requirements for the General Radiotelephone Operator's License offered by the Federal Communications Commission.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ELECTR 222****SPECIAL PROBLEMS IN ELECTRONICS I****1 UNIT**

**PREREQUISITE:** ELECTR 116.

**INDEPENDENT STUDY:** 3 hours per week.

Assigned problems involving laboratory work for selected students who are interested in furthering their knowledge of electronics on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract

must be prepared. See instructor for details.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 223**  
**SPECIAL PROBLEMS IN ELECTRONICS II** 2 UNITS  
**PREREQUISITE: ELECTR 116.**  
**INDEPENDENT STUDY: 6 hours per week.**

Assigned problems involving laboratory work for selected students who are interested in furthering their knowledge of electronics on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 230**  
**SEMICONDUCTOR DEVICES** 3 UNITS  
**PREREQUISITE: ELECTR 110.**  
**LECTURE: 3 hours per week.**

A study of semiconductor devices including the chemistry and physics of the structure of matter, the structure of the atom and the operation of semiconductor of devices based on energy level analysis.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 235**  
**SOLID STATE CIRCUIT ANALYSIS** 4 UNITS  
**PREREQUISITE: ELECTR 230.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

An analysis of discrete solid state circuits and their design including diodes and their applications; circuit configurations; amplifiers and amplification; biasing techniques; quiescent point stabilization; feedback principles; FETs; photo devices; multi-stage amplifiers and power devices; multi-stage amplifiers and power amplifiers; breadboarding and evaluation of designed circuits using discrete components.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 250A**  
**RADIO TRANSMITTERS, RECEIVERS AND ANTENNAS** 4 UNITS

**PREREQUISITE: ELECTR 115.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Course includes radio frequency amplifiers, oscillators, signal spectra, elements of noise, AM and FM modulation and demodulation, AM and FM transmitter and receiver systems, transmitter and receiver circuits, frequency and phase modulation and demodulation, phase locked loops, pulse and digital modulation and demodulation and data communication techniques.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 255A**  
**TELEPHONE NETWORKING** 4 UNITS  
**PREREQUISITE: ELECTR 115.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Course includes telephone technology with emphasis on telephony color code, tools, single line and business phone wiring and installation, block wiring, installation,

programming and troubleshooting the 616 FLEX phone switch.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 257A**  
**NAVIGATION AND COMMUNICATION SYSTEMS** 4 UNITS

**PREREQUISITE: ELECTR 250A.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Bench test, installation and ramp test of transmitter and receiver systems and their operating principles. Systems include Auto Direction Finder, Very High Frequency Omnidirectional, LORAN-C, Omega, INS, DME, ILS, VHF comm, HF comm, FM transceivers and transponder.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 265**  
**DIGITAL LOGIC DESIGN** 4 UNITS  
**PREREQUISITE: None.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Provides technicians, engineers, and programmers with a working knowledge of digital logic circuits and their application to logic circuits to computers. Includes theory and experience necessary to understand and analyze digital circuits logic and systems.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 266**  
**MICROPROCESSOR TECHNOLOGY** 4 UNITS  
**PREREQUISITE: ELECTR 265.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Fundamental principles of microprocessors, 8080 series with emphasis on their operation and applications in radio, VCRs, and traffic control. Makes use of assembly language interfacing with both analog and digital circuitry. Includes breadboarding circuits and controlling them with the 8080 microprocessor.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 270**  
**LINEAR INTEGRATED CIRCUIT ANALYSIS** 4 UNITS  
**PREREQUISITE: ELECTR 115 and ELECTR 116.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

A review of bipolar transistor fundamentals and differential amplifiers with emphasis on inner connections and circuit designs using integrated circuit operational amplifiers, phase-lock loops, and current differentiating amplifiers. Includes breadboarding and evaluation of various types of active linear and pulse circuits involving operational amplifiers and phase-lock loops.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 280A**  
**MINI COMPUTER OPERATION AND MAINTENANCE** 4 UNITS

**PREREQUISITE: ELECTR 266.**  
**LECTURE: 3 hours per week and**  
**LABORATORY: 3 hours per week.**

Provides technicians and engineers with a working

knowledge of the principles and analysis techniques applicable to computer operations and maintenance. Includes the theory and experience necessary to understand and analyze computer circuitry as needed for entry-level work in the computer and electronics industry.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**ELECTR 290A**  
**INDUSTRIAL COMPUTERS AND ROBOTICS**  
**MAINTENANCE** **4 UNITS**

***PREREQUISITE: ELECTR 266.***  
***LECTURE: 3 hours per week and***  
***LABORATORY: 3 hours per week.***

A comprehensive study of computers and robots used in industry. Includes diagnostics and programming for controlling robots, machines and medical equipment.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**TECALC 097**  
**TECHNICAL CALCULATIONS** **4 UNITS**  
***PREREQUISITE: MATH 952.***  
***LECTURE: 4 hours per week.***

Practical use of mathematics especially designed for the

needs of technical students. Includes signed numbers, terms, four operations on polynomials, linear equations, applied problems, factoring, four operations on fractions, complex fractions, fractional equations, and introduction to complex numbers, trigonometry, and scientific notation.  
*Associate Degree Applicable*

**TECALC 950**  
**SHOP CALCULATIONS** **3 UNITS**

***PREREQUISITE: None.***  
***LECTURE: 3 hours per week.***

A basic skills course designed as a review of whole numbers, fractions, decimals, problem solving methods, and practical measurements.  
*Not applicable to the Associate Degree*

**ENGLISH**

DIVISION:

Humanities



DIVISION DEAN: Sherrie Guerrero, Ed.D.  
 DEPARTMENT HEAD: Judith Ashton, M.A.  
 OTHER FACULTY: Horace Alexander, Ed.D.  
 Sharon Chapman, M.A.  
 Paula Ferri-Milligan, M.A.  
 Sheela Free, Ph.D.  
 Diane Hunter, M.A.  
 Thomas Kinnaird, M.A.  
 Joel Lamore, M.A.  
 Yvette Lee, M.A.  
 William McKie, M.A.  
 Dolores Moreno, M.A.  
 Anasuya Pal, Ph.D.  
 Edward Perez, Ph.D.  
 Lydia Rivera, Ph.D.  
 Michael Slusser, M.A.  
 Julie Tilton, M.A.

DIVISION SECRETARIES: Cheryl Benner  
 Liberal Arts 217  
 (909) 384-8633  
 Kelly Adcock  
 North Hall 240  
 (909) 384-8906

LIAISON COUNSELOR: Juan Zepeda, M.S.C.  
 (909) 384-8976

The English Department offers courses in composition, literature, journalism, creative writing, English as a second-language, and basic skills. These courses are designed to help students develop skills in reading perceptively, thinking critically, and writing effectively. The Writing Center, located in Liberal Arts 201, offers supplemental support to assist students in developing these skills.

In order to be placed into the proper level of composition class, all new students are required to take a placement test and meet with a counselor prior to enrollment. A schedule of test dates is available in the Counseling Center. A counselor will use those scores as well as other information, such as high school and/or work experience, to place students in the proper English class.

Students planning to transfer to a four-year institution and major in English should consult with a counselor regarding the transfer process and lower division requirements.

## **COURSES OFFERED BY THE DEPARTMENT OF ENGLISH:**

**ENGL 911**  
**BASIC GRAMMAR AND USAGE REVIEW** **1 UNIT**  
**PREREQUISITE: None.**  
**LECTURE: 1 hour per week.**

A review of basic English grammar (parts of speech and sentence structure) as well as a review of common errors in grammar and usage.

*Not applicable to the Associate Degree*

**ENGL 912**  
**RESEARCH PAPER WORKSHOP** **1 UNIT**  
**PREREQUISITE: None.**  
**LECTURE: 1 hour per week.**

A workshop to prepare students in all phases of preparing a research paper, from selecting a topic to final format.

*Not Applicable to the Associate Degree*

**ENGL 914**  
**BASIC WRITING** **3 UNITS**  
**PREREQUISITE: None.**  
**LECTURE: 3 hours per week.**

A basic skills writing course for students who are not

eligible for ENGL 015. Focus is on effective sentences and paragraphs including an extensive review of grammar, punctuation, and usage.

*Not Applicable to the Associate Degree*

**ENGL 920**  
**GRAMMAR** **3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introductory course on basic grammatical principles and language use, focusing on the structure of the sentence, parts of speech and major errors in grammar and usage.

*Not Applicable to the Associate Degree*

**ENGL 015**  
**PREPARATION FOR COLLEGE WRITING** **4 UNITS**  
**PREREQUISITE: ENGL 914 or ESL 941 with a grade of C or better or eligibility for ENGL 015 as determined through the SBVC assessment process.**

**LECTURE: 4 hours per week.**

A writing course designed to prepare students for ENGL 101. Primary focus on the development of the paragraph and short essay. Includes a review of grammar, sentence structure, and punctuation.

*Associate Degree Applicable (applies toward English requirement)*

**ENGL 055**  
**CHILDREN'S LITERATURE** **3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Survey of literature written for children with emphasis on values common to all significant literature. This non-transfer course is taught simultaneously with ENGL 155, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

*Associate Degree Applicable (applies toward Humanities requirement)*

**ENGL 063**  
**CHICANO LITERATURE** **3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Survey of representative Chicano literature including novels, drama, poetry, and essays. This non-transfer course is taught simultaneously with ENGL 163, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

*Associate Degree Applicable (applies toward Humanities requirement)*

**ENGL 065**  
**AFRICAN-AMERICAN LITERATURE** **3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of some of the most important works written by African-Americans in the genres of poetry, drama, the short story, the novel and the essay. This non-transfer course is taught simultaneously with ENGL 165, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

*Associate Degree Applicable (applies toward Humanities requirement)*

**ENGL 101**

**FRESHMAN COMPOSITION 4 UNITS**

**PREREQUISITE:** ENGL 015 or eligibility for ENGL 101 as determined through the SBVC assessment process.

**LECTURE:** 4 hours per week.

A writing course which emphasizes expository and argumentative essays. Includes reading and analysis of various forms of writing, instruction in library research and preparation of documented papers.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): ENGL 2*

**ENGL 101H****FRESHMAN COMPOSITION-HONORS 4 UNITS**

**PREREQUISITE:** ENGL 015 or eligibility for ENGL 101 as determined through the SBVC assessment process.

**LECTURE:** 4 hours per week.

A writing course which emphasizes expository and argumentative essays. Includes reading and analysis of various forms of writing, instruction in library research and preparation of documented papers. Enrollment is limited to students eligible for the Honors Program.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ENGL 102****INTERMEDIATE COMPOSITION AND CRITICAL THINKING 4 UNITS**

**PREREQUISITE:** ENGL 101.

**LECTURE:** 4 hours per week.

Further work in the expository and argumentative essay with emphasis on the critical examination of literature and on analytical and explicatory writing.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ENGL 102H****INTERMEDIATE COMPOSITION AND CRITICAL THINKING – HONORS 4 UNITS**

**PREREQUISITE:** ENGL 101 or ENGL 101H

**LECTURE:** 4 hours per week.

Further work in the expository and argumentative essay with emphasis on the critical examination of literature and on analytical and explicatory writing. Enrollment is limited to students eligible for the Honors Program.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**ENGL 120****FUNDAMENTALS OF NEWS WRITING 3 UNITS**

**PREREQUISITE:** ENGL 101.

**LECTURE:** 3 hours per week.

A course in journalistic writing: reporting, feature writing, interpretation, editorial and column writing and critical review of the arts. Emphasis on the most basic form, the news story.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): JOUR 2*

**ENGL 121****THE NEWS MEDIA 3 UNITS**

**PREREQUISITE:** ENGL 015 or eligibility for ENGL

101 as determined through the SBVC assessment process.

**LECTURE:** 3 hours per week.

An analysis of the nature of news, the role of the news media in America, the principal problems of the media (newspapers, wire services, news magazines and television) and an evaluation of their performances.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ENGL 122x4****JOURNALISM PRODUCTION 2 UNITS**

**PREREQUISITE:** ENGL 101.

**LABORATORY:** 4 hours per week.

A laboratory course for the production of the campus newspaper. Students participate in all phases of newspaper production: writing, reporting, layout, advertising, photography, editing, and distribution. This course may be taken four times.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ENGL 125x2****LITERARY MAGAZINE PRODUCTION 2 UNITS**

**PREREQUISITE:** ENGL 015 or eligibility for ENGL 101 as determined through the SBVC assessment process.

**LABORATORY:** 4 hours per week.

The production of the college literary magazine including selecting material, planning format, typesetting, and paste-up. This course may be taken twice.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ENGL 151****FRESHMAN COMPOSITION AND LITERATURE 3 UNITS**

**PREREQUISITE:** ENGL 101.

**LECTURE:** 3 hours per week.

Study of fiction, poetry, and drama with emphasis on the fundamental principles of literary criticism and interpretation. Includes student writing based on critical reading.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): ENGL 4*

**ENGL 153****LITERATURE AND FILM 3 UNITS**

**PREREQUISITE:** ENGL 101.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

A study of literature adapted into film. Students will read short stories, novels, and plays; view the film(s) adapted from each literary work; and write critical and analytic essays about the literature, the films, and their interplay.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**ENGL 155****CHILDREN'S LITERATURE 3 UNITS**

**PREREQUISITE:** ENGL 101.

**LECTURE:** 3 hours per week.

Survey of literature written for children with emphasis on values common to all significant literature. This transfer course is taught simultaneously with ENGL 055, a non-transfer course. Assignments differ for the two courses

although the students participate in the same lectures.  
*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 161**  
**WOMEN WRITERS** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

A survey of poetry and prose by prominent women writers, exploring historical and contemporary issues in women's lives.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 163**  
**CHICANO LITERATURE** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Survey of representative Chicano literature including novels, drama, poetry, and essays which focus on the cultural, social, and political developments/themes which shape and characterize Chicano culture and literary expression. This transfer course is taught simultaneously with ENGL 063, a non-transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 165**  
**AFRICAN-AMERICAN LITERATURE** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

A survey of some of the most important works written by African-Americans in the genres of poetry, drama, the short story, the novel and the essay. This transfer course is taught simultaneously with ENGL 065, a non-transfer course. Assignments differ for the two courses although the students participate in the same lectures.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 167**  
**LATIN AMERICAN LITERATURE IN TRANSLATION** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Reading and discussion of representative 19th and 20th century Latin American novels, short stories and poems. The works are read with attention to literary analysis and the development of the literature within the social, cultural and historical context.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 175**  
**LITERATURE AND RELIGION OF THE BIBLE** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

The English Bible as literature and as religion including an examination of the types of literature found in the Bible, the historical and religious context in which the literature was developed and an extensive reading of the two testaments. This course is also offered as RELIG 175.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 232**  
**CREATIVE WRITING** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

An introductory course in creative writing focusing on poetry and fiction. Includes strategies for writing both poetry and fiction, and the development of critical standards for judging literature.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): ENGL 6*

**ENGL 260**  
**AMERICAN LITERATURE: TO THE MID-1800S** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Reading of representative literary works of significant writers to illustrate the origin and development of American thought and culture from colonial times to the mid-1800s.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 261**  
**AMERICAN LITERATURE: FROM THE MID-1800S**  
**TO THE PRESENT** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Reading of representative literary works of significant writers to illustrate the development of literary and intellectual American thought from the mid-1800s to the present.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 270**  
**ENGLISH LITERATURE TO THE 18TH CENTURY** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Analysis of masterpieces of every literary type significant in the development of English literature from the Middle Ages to the early 18th century, supplemented by a study of the historical and social background of the literature and lives of representative and important writers.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 271**  
**ENGLISH LITERATURE FROM THE 18TH CENTURY**  
**TO THE PRESENT** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Analysis of masterpieces of every literary type significant in the development of English literature from the 18th century to the present day, supplemented by a study of the historical and social background of the literature and lives of representative and important writers.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*

**ENGL 275**  
**SHAKESPEARE** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

A critical analysis of a selection of Shakespeare's plays representative of his literary development. Lectures, films, and records examine life and the theatre in Elizabethan England.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGL 280**  
**WORLD LITERATURE: TO THE 17TH CENTURY** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

An introduction to world literature from the beginning to the 17<sup>th</sup> century, including a critical analysis of selected samples of literature within the context of the culture and time in which they were written.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGL 281**  
**WORLD LITERATURE: FROM THE 17TH CENTURY TO THE PRESENT** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

An introduction to world literature from the 17th century to the present, including a critical analysis of selected samples of literature within the context of the culture and time in which they were written.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGL 285A**  
**HONORS IN ENGLISH: POETRY** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

An intensive study of poetry as a distinct literary form. Attention to versification, structure, imagery, and diction of various poets.

This is not a creative writing class.  
Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGL 285B**  
**HONORS IN ENGLISH: DRAMA** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

A study of drama as a literary form. Reading and discussion of plays. Attention to playwright's plots, themes, characterizations, settings, language and stage directions.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGL 285C**  
**HONORS IN ENGLISH: FICTION** **3 UNITS**

**PREREQUISITE: ENGL 101.**  
**LECTURE: 3 hours per week.**

Intensive study of two popular forms of fiction as distinct literary forms (the short story and the novel). This is not a creative writing class.

Associate Degree Applicable  
Course credit transfers to CSU and UC.

**ENGLISH AS A SECOND LANGUAGE**

*Courses in English as a second language are designed for individuals learning English as a foreign language. The various courses cover writing, conversation, spelling and vocabulary in the English language.*

**ESL 906**  
**THE SOUND PATTERNS OF ENGLISH** **3 UNITS**  
**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A basic skills course designed to increase the non-native English speaker's ability to understand and pronounce the sounds of standard American English. Instruction in the pronunciation of vowels, consonants and intonation patterns with special emphasis in decreasing communication problems due to non-standard American English pronunciation.

*Not Applicable to the Associate Degree*

**ESL 907**  
**PRACTICAL CONVERSATION** **3 UNITS**

**PREREQUISITE: None.**  
**LECTURE: 3 hours per week.**

This is a course designed to increase non-native students' skills in pronunciation, listening and conversation. The course will offer extensive listening and conversation instruction.

*Not Applicable to the Associate Degree*

**ESL 930**  
**PATTERNS OF CONTEMPORARY ENGLISH I** **4 UNITS**

**PREREQUISITE: None.**  
**LECTURE: 4 hours per week.**

This is the first of two courses which together present an introduction of spoken and written English for non-native speakers of English. It provides instruction on listening comprehension, conversation, reading and writing. The course covers grammatical features, troublesome exceptions, elementary pronunciation and basic sentence patterns.

*Not Applicable to the Associate Degree*

**ESL 930A**  
**VOCATIONAL ENGLISH AS A SECOND LANGUAGE, PART 1** **1 UNIT**

**PREREQUISITE: None.**  
**LECTURE: 1 hour per week.**

This is the first of a basic skills sequence emphasizing spoken English, using examples drawn from vocational fields. The course includes conversational and listening comprehension practice, grammatical features, troublesome exceptions, and the study of simple sentences. Topics covered include: introductions, use of the verb "to be", contractions and simple punctuation and capitalization.

*Not applicable to the Associate Degree*

**ESL 930B**  
**VOCATIONAL ENGLISH AS A SECOND LANGUAGE, PART 2** **1 UNIT**

**PREREQUISITE: None.**  
**LECTURE: 1 hour per week.**

This is the second of a basic skills sequence emphasizing spoken English, using examples from vocational fields. The course includes conversational and listening comprehension practice, grammatical features, troublesome exceptions, and the study of simple sentences. Topics covered include vocabulary related to work and time, writing simple questions and statements, and prepositions and pronouns.

*Not applicable to the Associate Degree*

**ESL 930C**  
**VOCATIONAL ENGLISH AS A SECOND LANGUAGE, PART 3** **1 UNIT**

**PREREQUISITE: None**  
**LECTURE: 1 hour per week.**

This is the third of a basic skills sequence emphasizing spoken English, using examples drawn from vocational fields. The course includes conversational and listening comprehension practice, grammatical features, troublesome exceptions, and the study of simple sentences. Topics covered include: vocabulary related to shopping, colors, and the use of demonstratives and adjectives.

*Not applicable to the Associate Degree*

### **ESL 930D**

#### **VOCATIONAL ENGLISH AS A SECOND LANGUAGE, PART 4 1 UNIT**

**PREREQUISITE: None.**

**LECTURE: 1 hour per week.**

This is the fourth of a basic skills sequence emphasizing spoken English, using examples drawn from vocational fields. The course includes conversational and listening comprehension practice, grammatical features, troublesome exceptions, and the study of simple sentences. Topics covered include: vocabulary related to entertainment and invitations, and the use of subject and object pronouns.

*Not applicable to the Associate Degree*

### **ESL 931**

#### **PATTERNS OF CONTEMPORARY ENGLISH II 4 UNITS**

**PREREQUISITE: ESL 930 or eligibility as determined through the SBVC assessment process.**

**LECTURE: 4 hours per week.**

This is the second of a two-course basic skills sequence which together present an introduction of spoken and written English for non-native speakers of English. It provides instruction on listening comprehension, conversation, reading and writing. The course covers grammatical features, troublesome exceptions, elementary pronunciation and basic sentence patterns including complex sentences and simple paragraphs.

*Not Applicable to the Associate Degree*

### **ESL 940**

#### **PATTERNS OF CONTEMPORARY ENGLISH III 4 UNITS**

**PREREQUISITE: ESL 931 or eligibility as determined through the SBVC assessment process.**

**LECTURE: 4 hours per week.**

The first of a two-course basic skills sequence emphasizing written English. Emphasis on intensive paragraph writing preparation, reading comprehension practice, and instruction on writing brief essay responses to questions on reading passages.

*Not Applicable to the Associate Degree*

### **ESL 941**

#### **PATTERNS OF CONTEMPORARY ENGLISH IV 4 UNITS**

**PREREQUISITE: ESL 940 or eligibility as determined through the SBVC assessment process.**

**LECTURE: 4 hours per week.**

The second of a two-course basic skills sequence emphasizing written English. Emphasis on intensive paragraph writing preparation, reading comprehension practice, writing brief essay responses to short articles and developing summarizing skills.

*Not Applicable to the Associate Degree*

### **ESL 945**

#### **IDioms IN AMERICAN ENGLISH 3 UNITS**

**PREREQUISITE: ESL 941.**

### **LECTURE: 3 hours per week.**

This is a course designed for non-native students to recognize idiomatic expressions commonly used by native speakers. It will present instruction on the meaning and use of idioms as well as common problems to avoid. The course will offer extensive oral, written, reading and listening comprehension practice.

*Not Applicable to the Associate Degree*

## **ENVIRONMENT**

DIVISION: Technical  
DIVISION DEAN: Thomas Bauman, M.S., P.E.  
DEPARTMENT HEAD: Mark Williams, B.S.  
(909) 384-8571  
DIVISION SECRETARY: Patsy Martinez  
(909) 384-8902  
DIVISION OFFICE: Technical Building, Room 108  
(909) 384-4451  
LIAISON COUNSELOR: George Fleming, M.S.  
(909) 384-8975

## **COURSES OFFERED BY THE DEPARTMENT OF ENVIRONMENT:**

### **ENVT 101**

#### **MANAGEMENT OF HAZARDOUS MATERIALS 3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: CHEM 101.**

**LECTURE: 3 hours per week.**

Survey of regulations and laws governing the management of hazardous materials: definitions, safety requirements, storage, transportation, emergency response, Material Safety Data Sheets (MSDS) and personal protective equipment.

*Associates Degree Applicable*

*Course credit transfers to CSU.*

### **ENVT 103**

#### **HAZARDOUS SUBSTANCES AND ENVIRONMENTAL CONSEQUENCES 3 UNITS**

**PREREQUISITE/COREQUISITE: CHEM 101.**

**LECTURE: 3 hours per week.**

Examination of the effects that different types of substances have on the environment. Aquatic chemistry will cover water pollution and water treatment. Atmospheric chemistry will deal with the major threats to the global atmosphere, including greenhouse gases and ozone-depleting chemicals. Soil chemistry will examine macronutrients and micronutrients and soil erosion. The nature and sources of hazardous waste: reduction, treatment and disposal.

*Associates Degree Applicable*

*Course credit transfers to CSU.*

### **ENVT 105**

#### **HAZARDOUS WASTE MANAGEMENT 3 UNITS**

**PREREQUISITE: None.**

**DEPARTMENTAL ADVISORY: ENVT 103.**

**LECTURE: 3 hours per week.**

Federal and California laws and regulations governing hazardous waste management. Topics include: hazardous waste generation logs, identification and classification, EPA identification numbers, small quantity generators, permit and notification requirements, minimization and source reduction, permitting of hazardous waste facilities and transportation of hazardous waste.

*Associates Degree Applicable*

**ENVT 107  
TOXICOLOGY**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Examination of the routes of entry of hazardous substances and the effects on the human body. Distribution and elimination of toxins, coupled with dose-effect and time-effect will provide an understanding on how our bodies react to hazardous substances. Carcinogens and how they affect the reproductive system will also be examined. Industrial hygiene and occupational health hazards along with monitoring of hazardous agents will be discussed in detail. Exposure control methods, medical monitoring, treatment and management will give the students knowledge in preventing exposure to hazardous substances.

*Associates Degree Applicable*

*Course credit transfers to CSU.*

**ENVT 109**

**TRANSPORTATION OF HAZARDOUS MATERIALS**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Examination of hazardous materials, packaging requirements, and shipping regulations as they apply to the Department of Transportation (DOT), International Air Transport Association (IATA), and the International Maritime Organization (IMO). Focus will be on how to complete shipping papers, select and apply labels and markings, along with proper placarding and loading of transport vehicles.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**ESCROW**

See the Department of REAL ESTATE AND ESCROW

**FAMILY AND CONSUMER SCIENCE**

DIVISION: Science and Math  
DIVISION DEAN: W. William Hughes, Ph.D.  
DEPARTMENT HEAD: Juliann Martin, M.A.  
North Hall 244  
(909) 384-4457  
OTHER FACULTY: Susan Shimoff, M.S.  
DIVISION SECRETARY: Rose Garcia  
DIVISION OFFICE: Chemistry 121  
(909) 384-8645  
LIAISON COUNSELOR: Diana Rodriguez, M.A.  
(909) 384-8950  
(909) 384-8234

**FAMILY AND CONSUMER SCIENCE  
ASSOCIATE OF SCIENCE DEGREES**

**FAMILY CONSUMER SCIENCE – ASSOCIATE OF  
ARTS DEGREE**

The Family and Consumer Science Associate of Science Degree is as unique and diverse as the needs of the students it serves. Family and Consumer Science, is comprised of three diverse specialties 1) Food Science and Nutrition; 2) Clothing & Fashion Merchandising; and 3) Interior Design.

Career opportunities in the business, industry and public sectors exist for graduates with an AS Degree in Family Consumer Science, they include the following:

- Apparel Designer or Manufacturer
- Retail Manager or Sales
- Interior Designer or Assistant
- Nutrition and Health Counselor
- Fashion Coordinator
- Family Life Educator

**1. DIETETIC TECHNICIAN**

To graduate with a specialization in Dietetic Technology, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

The Dietetic Technician curriculum prepares students for careers in food/nutrition service operations at hospitals, nursing homes, schools, and community feeding programs. The technician will be able to perform such functions as supervision of food production, planning duty schedules for employees, writing menus, designing regular and modified diets, taking nutrition histories, teaching classes to patients and food service personnel, and giving diet instructions. Successful completion of the program qualifies graduates for certification by membership in the American Dietetic Association and in the American School Food Service Association. Certification as a registered Dietetic Technician authorizes use of the initial D.T.R. after the student's name. The Associate of Science degree curriculum is approved by the American Dietetic Association.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
FCS 160 Food Preparation	3
FCS 161 Quantity Food Preparation	3
FCS 162 Nutrition	3
FCS 225 Sanitation and Safety	3
FCS 235 Menu Planning	3
FCS 240 Purchasing	3
FCS 260 Modified Diets	3
FCS 262 Nutrition Care	4.5
FCS 264 Nutrition Management	3
FCS 290 Field Experience	2
FCS 292 Clinical Experience	4
RM 111x2 Restaurant Internship II	1.5
<b>TOTAL UNITS:</b>	<b>36</b>

**2. FAMILY AND CONSUMER SCIENCE**

To graduate with a specialization in Family and Consumer Science, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
FCS 130 Clothing Construction	3
FCS 132 Advanced Clothing Construction	3
FCS 148 Fashion Selection	3
FCS 160 Food Preparation	3
FCS 161 Quantity Food Preparation	3
FCS 162 Nutrition	3
<b>TOTAL UNITS:</b>	<b>18</b>

<b>RECOMMENDED COURSES:</b>	<b>UNITS</b>
FCS 140 Textiles	3
FCS 180 Interior Design Fundamentals	3

## FAMILY AND CONSUMER SCIENCE CERTIFICATES

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

### 1. DIETETIC AIDE CERTIFICATE

The Dietetic Aid Certificate is designed to prepare students for entry-level employment in Dietetics.

REQUIRED COURSES:	UNITS
FCS 160 Food Preparation	3
FCS 161 Quantity Food Preparation	3
FCS 162 Nutrition	3
FCS 225 Sanitation and Safety	3
FCS 235 Menu Planning	3
FCS 240 Purchasing	3
FCS 260 Modified Diets	3
<b>TOTAL UNITS:</b>	<b>21</b>

### 2. DIETETIC SERVICE SUPERVISOR CERTIFICATE

The Dietetic Service Supervisor Certificate is designed to prepare students for supervision of food production, writing menus, designing diets, teaching classes to food service personnel and giving diet instructions. Upon successful completion of the required courses, students will meet the California Department of Health Licensing Requirements for Dietetic Service Supervisor (DSS).

REQUIRED COURSES:	UNITS
FCS 160 Food Preparation	3
FCS 161 Quantity Food Preparation	3
FCS 162 Nutrition	3
FCS 225 Sanitation and Safety	3
FCS 240 Purchasing	3
FCS 260 Modified Diets	3
FCS 262 Nutrition Care	4.5
FCS 264 Nutrition Management	3

#### RECOMMENDED COURSES:

BUSAD 105 Small Business Management	3
TECALC 097 Technical Calculations	4
Or	
MATH 090 Elementary Algebra	(4)
<b>TOTAL UNITS:</b>	<b>25.5-32.5</b>

## COURSES OFFERED BY THE DEPARTMENT OF FAMILY AND CONSUMER SCIENCE:

**FCS 030x2**  
**SEWING TECHNIQUES** **2 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1 hour per week and  
**LABORATORY:** 2 hours per week.

Sewing skills with emphasis on comparing different clothing construction techniques and their application to the specific pattern and fabric selected for student projects. Includes discussion on selection of materials, equipment, and patterns.

*Associate Degree Applicable*

**FCS 032x2**  
**ADVANCED SEWING TECHNIQUES** **2 UNITS**  
**PREREQUISITE:** FCS 130.

**LECTURE:** 1 hour per week and  
**LABORATORY:** 2 hours per week.

Advanced clothing construction principles with emphasis on complex construction techniques relating to intricate pattern styles and special fabrics, such as napped, striped, and one-way designs.

*Associate Degree Applicable*

**FCS 101-102**  
**ISSUES IN FAMILY AND CONSUMER SCIENCE** **1 UNIT**

**PREREQUISITE:** None.

**LECTURE:** 1 hour per week.

Special interest classes designed to upgrade and update information in the fields of Family and Consumer Science and consumer skills for teachers, teacher's aides, parents, and professionals. Topics include innovations in fashion, clothing, interior design, nutrition, and merchandising.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**FCS 108**  
**PERSONAL FINANCE** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Preparation for managing personal finances including budgeting, borrowing, insurance, investments and home ownership. This course is also offered as BUSAD 108.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**FCS 120x2**  
**LABORATORY PREPARATION IN FAMILY AND CONSUMER SCIENCE** **1 UNIT**  
**PREREQUISITE:** One course in Family and Consumer Science.

**LABORATORY:** 3 hours per week.

Practical laboratory techniques designed to acquaint students with methods of collection and preparation of common materials used in Family and Consumer Science courses. This course may be taken twice.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**FCS 130**  
**PRINCIPLES OF APPAREL CONSTRUCTION** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1 hour per week and

**LABORATORY:** 6 hours per week.

Basic techniques in apparel construction including tools and equipment, body measurements, pattern selection

and adjustments, fabric selection and preparation, fabric manipulation, construction techniques, standards of construction and fit, and construction of completed garments.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 132**

**ADVANCED PRINCIPLES OF APPAREL CONSTRUCTION**

**3 UNITS**

**PREREQUISITE:** FCS 030x2 or FCS 130.

**LECTURE:** 1 hour per week and

**LABORATORY:** 6 hours per week.

Advanced clothing construction principles with the emphasis on complex apparel construction techniques. Includes the evaluation of fabrics requiring special handling and intricate pattern designs and discussion of current construction practices in high fashion.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 148**

**FASHION SELECTION**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

The study and application of the elements and principles of design as related to apparel for the individual, with special emphasis on design theory; the significance and effects of apparel on personality and lifestyle; wardrobe budgeting, planning and care; and clothing for special needs. This course is also offered as OIS 148.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*CAN (California Articulation Number): FCS 20*

**FCS 160**

**INTRODUCTION TO FOODS**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY:** 3 hours per week.

Introduction to food science principles and food preparation techniques. Emphasis on ingredient functions and interactions; technique, production and sensory evaluation standards, food safety, sanitation, nutrient values, and food presentation. This course is also listed as RM160.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*  
*CAN (California Articulation Number): FCS 8*

**FCS 161**

**QUANTITY FOOD PREPARATION**

**3 UNITS**

**PREREQUISITE:** FCS 160 or RM 160.

**LECTURE:** 3 hours per week.

Introduction to the scientific theory of the application of heat, and the changes that takes place in food during the cooking process. Includes handling of kitchen tools and equipment, analysis of budgets, and the proper techniques of preparing food for quantity production. This course is also offered as RM/FS 161.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 162**

**NUTRITION**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Scientific concepts of nutrition relating to the functioning of nutrients in the basic life processes. Emphasis on individual needs, food sources of nutrients, current nutritional issues and diet analysis.

*Associate Degree Applicable*  
*Course credit transfers to CSU and UC.*  
*CAN (California Articulation Number): FCS 2*

**FCS 180**

**INTERIOR DESIGN FUNDAMENTALS**

**3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 2 hours per week and

**LABORATORY:** 3 hours per week.

The study and application of the elements and principles of color and design, space planning, and decorative materials including consumer and socioeconomic considerations.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 198**

**FAMILY AND CONSUMER SCIENCE WORK**

**EXPERIENCE**

**1-4 UNITS**

**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 222**

**SPECIAL PROBLEMS IN FAMILY AND CONSUMER SCIENCE I**

**1 UNIT**

**PREREQUISITE:** One class in Family and Consumer Science.

**INDEPENDENT STUDY:** 3 hours per week.

Assigned problems involving library and laboratory work for selected students who are interested in furthering their knowledge of family and consumer science on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 225**

**SANITATION AND SAFETY**

**3 UNITS**

**PREREQUISITE:** FCS 160 or RM/FS 101 or RM 160.

**LECTURE:** 3 hours per week.

Sanitation and safety as these effect the individual and the operation with a focus on prevention and control of problems encountered in client and employee safety and sanitation. Includes accidents, fire prevention, security maintenance and foodborne illnesses. This course is also offered as RM/FS 225.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**FCS 235**



**MENU PLANNING 3 UNITS****PREREQUISITE:** FCS 160 or RM/FS 101 or RM 160.**LECTURE:** 3 hours per week.

Principles of menu planning with emphasis on development, types, organization and significance of menus. Includes cost and pricing of menu items, and current legislation regarding truth in advertising. This course is also offered as RM 235.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 240 PURCHASING 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

Policies, procedures, controls and their implementation in purchasing merchandise and supplies including food, beverage, equipment, service-ware, furniture, fixtures, and contract services. Students write and analyze reports of purchasing procedures, manuals, and receiving reports. This course is also offered as RM/FS 240.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 260 MODIFIED DIETS 3 UNITS****PREREQUISITE:** FCS 162.**LECTURE:** 3 hours per week.

The principles of nutrition relating to modified diets used in the treatment of abnormal physical conditions with an emphasis on the rationale for the diet and how these modifications will improve the patient's condition.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 262 NUTRITION CARE 4.5 UNITS****PREREQUISITE:** FCS 162.**COREQUISITE:** FCS 260.**LECTURE:** 2 hours per week and**FIELD WORK:** 150 hours total.

The integration of academic knowledge and clinical field experience in dietary health care including nutrition care, dietary evaluation, education, and case studies.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 264 NUTRITION MANAGEMENT 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

Planning and coordinating the operation of a food service system within the policies of an organization including the staffing, training, procedures, and responsibilities for financial planning and cost control.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 290 FIELD EXPERIENCE 2 UNITS****PREREQUISITE:** FCS 260.**FIELD WORK:** 120 hours total.

Supervised experience in an acute care medical facility. Rotation through the various job responsibilities of the technician assessing the progress of the patient through diet histories, nutritional analysis, and routine diet modifications.

*Associate Degree Applicable**Course credit transfers to CSU.***FCS 292 CLINICAL EXPERIENCE 3 UNITS****PREREQUISITE:** FCS 262.**FIELD WORK:** 180 hours total.

Supervised experience in an acute care medical facility. Rotation through the various job responsibilities of the technician assessing the progress of the patient through diet histories, nutritional analysis, and routine diet modifications.

*Associate Degree Applicable**Course credit transfers to CSU.***FASHION MERCHANDISING**

See the Department of FAMILY AND CONSUMER SCIENCE

**FLOOR**

DIVISION: Technical  
DIVISION DEAN: Thomas Bauman, M.S., P.E.  
DEPARTMENT HEAD: William Clark, Ed.D.  
(909) 384-8504  
DIVISION SECRETARY: Patsy Martinez  
(909) 384-8902  
DIVISION OFFICE: Technical Building, Room 108  
(909) 384-4451  
LIASION COUNSELOR: George Fleming, M.S.  
(909) 384-8975

**COURSES OFFERED BY THE DEPARTMENT OF FLOOR:****FLOOR 010A FLOORING INSTALLATION: CARPET 1 UNIT****PREREQUISITE:** None.**LECTURE:** .50 hour per week and**LABORATORY:** 1.50 hours per week.

Theory and practical application of techniques for installation of carpet, including methods of measuring, selecting appropriate products and cutting techniques. Employment in the industry will also be addressed.

*Associate Degree Applicable***FLOOR 010B FLOORING INSTALLATION: SHEET VINYL, VINYL TILE AND COMPOSITION TILE 1 UNIT****PREREQUISITE:** None.**LECTURE:** .50 hour per week and**LABORATORY:** 1.50 hours per week.

Theory and practical application of techniques for installation of sheet vinyl, vinyl tile, and composition tile, including methods of measuring, selecting appropriate products and cutting techniques. Employment in the industry will also be addressed.

*Associate Degree Applicable***FLOOR 010C FLOORING INSTALLATION: CERAMIC TILE 1 UNIT****PREREQUISITE:** None.**LECTURE:** .50 hour per week and**LABORATORY:** 1.50 hours per week.

Theory and practical application of techniques for installation of ceramic tile, including methods of measuring, selecting appropriate products and cutting techniques. Employment in the industry will also be addressed.

*Associate Degree Applicable*

**FLOOR 010D**  
**FLOORING INSTALLATION: WOOD FLOOR**  
**AND LAMINATE** **1 UNIT**

**PREREQUISITE:** None.

**LECTURE:** .50 hour per week and

**LABORATORY:** 1.50 hours per week.

Theory and practical application of techniques for installation of wood floor and laminate, including methods of measuring, selecting appropriate products and cutting techniques. Employment in the industry will also be addressed.

*Associate Degree Applicable*

**FLOOR 011Ax3**  
**FLOORING INSTALLATION: CARPET**  
**LABORATORY** **.50 UNIT**

**PREREQUISITE:** FLOOR 010A.

**LABORATORY:** 1.50 hours per week.

Practical application of techniques for installation of carpet, including methods of measuring, selecting appropriate products and installation.

*Associate Degree Applicable*

**FLOOR 011Bx3**  
**FLOORING INSTALLATION: VINYL AND**  
**COMPOSITION FLOOR LABORATORY** **.50 UNIT**

**PREREQUISITE:** FLOOR 010B.

**LABORATORY:** 1.50 hours per week.

Practical application of techniques for installation of sheet vinyl, vinyl tile and composition tile, including methods of measuring, selecting appropriate products and installation. Employment in the industry will also be addressed.

*Associate Degree Applicable*

**FLOOR 011Cx3**  
**FLOORING INSTALLATION: CERAMIC TILE**  
**LABORATORY** **.50 UNIT**

**PREREQUISITE:** FLOOR 010C.

**LABORATORY:** 1.50 hours per week.

Practical application of techniques for installation of ceramic tile, including methods of measuring, selecting appropriate products and installation. Employment in the industry will also be addressed.

*Associate Degree Applicable*

**FLOOR 011Dx3**  
**FLOORING INSTALLATION: WOOD FLOOR AND**  
**LAMINATE LABORATORY** **.50 UNIT**

**PREREQUISITE:** FLOOR 010D.

**LABORATORY:** 1.50 hours per week.

Practical application of techniques for installation of wood floor and laminate, including methods of measuring, selecting appropriate products and installation. Employment in the industry will be also be addressed.

*Associate Degree Applicable*

**FOOD SERVICE**

See the Department of RESTAURANT  
MANAGEMENT/FOOD SERVICE

**FRENCH**

DIVISION: Humanities  
DIVISION DEAN: Sherrie Guerrero, Ed.D.  
DEPARTMENT HEAD: Nori Mejia  
North Hall 201

OTHER FACULTY: (909) 384-8544  
Jeff Schmidt, M.A.  
Lydia Barrajas-Zapata, M.A.  
DIVISION SECRETARIES: Kelly Adcock  
North Hall 240  
(909) 384-8906  
LIAISON COUNSELOR: Juan Zepeda, M.S.C.  
(909) 384-8976

The ever-increasing role that the United States takes in global affairs, international trade, and the growing numbers of immigrants dictate the need for knowledge of a modern foreign language. The primary objective of the Modern Languages Department is communication at an acceptably correct level with an understanding of culture.

Teaching methods incorporate critical thinking activities and include the direct oral approach, lectures and language laboratory assignments. Courses are offered in American Sign Language, French, and Spanish.

Students planning to transfer to a four-year institution and major in a modern language should consult with a counselor regarding the transfer process and lower division requirements. Positions for which four-year graduates in modern languages are qualified are teaching, business, foreign services, law enforcement, nursing, hospitality services, and secretarial services.

**FRENCH COURSES OFFERED BY THE  
DEPARTMENT OF MODERN LANGUAGES:**

**FRENCH 101**  
**COLLEGE FRENCH I** **5 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 5 hours per week.

Develops the ability to converse, read and write in French. The course includes the study of essentials of pronunciation, vocabulary, idioms and grammatical structures along with an introduction to the culture of French-speaking peoples. This course corresponds to two years of high school study.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): FREN2*

**FRENCH 102**  
**COLLEGE FRENCH II** **5 UNITS**  
**PREREQUISITE:** FRENCH 101.

**LECTURE:** 5 hours per week.

Continues to develop conversational, reading and writing skills in French with special emphasis on past tense verbs, grammar, vocabulary expansion and cultural applications of the French language.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): FREN4*

**GEOGRAPHIC INFORMATION  
SYSTEMS**

DIVISION: Business and Information  
Technology  
DIVISION DEAN: Margaret Ortiz, M.A.  
DEPARTMENT HEAD: Vernon Stauble, Ph.D.  
Business 200C  
(909) 384-8915  
DIVISION SECRETARY: Chris Williams  
DIVISION OFFICE: Business 101

## GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

The GIS Certificate is designed to provide the skills and knowledge necessary for immediate entry-level employment for persons interested in Geographic Information Systems (GIS) and automated mapping technology. The certificate also provides the needed upgrading and retraining of current employees in this rapidly expanding technological field.

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

REQUIRED COURSES:	UNITS
GIS 130 Introduction to Geographic Information Systems (GIS)	3
GIS 131 GIS Applications	3
GIS 133 GIS Cartography and Base Map Dev	3
GIS 135 Spatial Analysis with GIS	3
GIS 136 GIS for Science, Government and Business	3
Or	
GIS 137 Advanced GIS Applications	(3)
GIS 139 Global Positioning Systems (GPS) Field Techniques	1
Or	
GIS 150 GIS Internship	(1)
<b>TOTAL UNITS:</b>	<b>16</b>

## COURSES OFFERED BY THE DEPARTMENT OF GEOGRAPHIC INFORMATION SYSTEMS (GIS):

### GIS 130 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS) 3 UNITS

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

An introduction to the fundamentals of Geographic Information Systems (GIS) including the history of automated mapping. Includes a brief introduction to basic cartographic principles, an in-depth review of the hardware and software used in GIS, and various applications of GIS technology in environmental science, business and government.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### GIS 131 GIS APPLICATIONS 3 UNITS

**PREREQUISITE:** CSYS 101.

**DEPARTMENTAL ADVISORY:** GIS 130.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

Survey of the fundamentals of Geographic Information Systems (GIS) including hands-on experience in hardware and software elements used in GIS, vector-based data structures using ArcView, and raster-based data structures using ArcView Spatial Analysis Module.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### GIS 133 GIS CARTOGRAPHY AND BASE MAP DEVELOPMENT 3 UNITS

**PREREQUISITE:** GIS 131.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

A comprehensive study of Geographic Information Systems (GIS) cartographic principles, data acquisition methods used in map production, and methods of base map development. Includes an in-depth study of cartography, such as history, principles, map projections, scales, and map accuracy; methods of data acquisition, such as basic principles used in remote sensing, aerial images and the use of Global Positioning System (GPS) in the field for map feature location; techniques of GIS base map development, such as scanning, digitizing and coordinate geometry; and the production of professional quality maps using Arc View software.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### GIS 135 SPATIAL ANALYSIS WITH GIS 3 UNITS

**PREREQUISITE:** GIS 131.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

An introduction to spatial analysis including the use of the principles of statistics in analysis of geographically referenced data; sampling strategies for data used in Geographic Information Systems (GIS) using raster and vector data structures; comparisons of conventional and geostatistical estimation techniques; single and multi-layer statistical operations including classification, coordination, and modeling analysis. Emphasis on application and interpretation of spatial analyses and problems in spatial correlation.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### GIS 136 GIS FOR SCIENCE, GOVERNMENT AND BUSINESS 3 UNITS

**PREREQUISITE:** GIS 135.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

An in-depth survey of the uses of Geographic Information Systems (GIS) techniques in science (geography, geology, oceanography, archeology and meteorology), government (city, county, state and federal) and business. Topics include data acquisition, accuracy, analysis, presentation techniques and legal issues for various GIS applications. Students produce a GIS project, including hardware and software requirements, methods of data acquisition, formulation of data standards, data structure, database features and attributes, metadata standards, methods of base map development, cost benefits analysis and generation of presentation-quality map layouts specific to their chosen GIS application.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### GIS 137 ADVANCED GIS APPLICATIONS 3 UNITS

**PREREQUISITE:** GIS 135.

**LECTURE:** 2 hours per week and

**LABORATORY:** 2 hours per week.

Hands-on training in advanced applications of Geographic

Information Systems (GIS) using ArcView and ArcInfo, and a review of Avenue programming for customizing ArcView. Add-on modules extend the analytical capabilities of ArcView and allow input of map features and conversion of feature themes from raster to vector. Includes spatial analysis of slope and aspect maps, neighborhood and zone analysis; problem-solving techniques for geographic networks (point to point routing) or closest points; and use of ArcView and ArcInfo software to produce professional quality documents for use in spatial analysis and decision-making.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

### **GIS 139**

#### **GLOBAL POSITIONING SYSTEMS (GPS)**

##### **FIELD TECHNIQUES**

**1 UNIT**

**PREREQUISITE:** *None.*

**LABORATORY:** *3 hours per week.*

An introduction to the use of a hand-held Global Positioning System (GPS) unit in the field including terminology; hardware; basic techniques of determining location; completion of a traverse using a GPS and a topographic map; and applications of GPS data in Geographic Information Systems.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

### **GIS 150**

#### **GIS INTERNSHIP**

**1 UNIT**

**PREREQUISITE:** *GIS 135.*

**LABORATORY:** *5 hours per week.*

A directed field study program in which students apply classroom instruction to real-world Geographic Information Systems (GIS) projects in a business or government agency. Students meet periodically with their advisor, complete interim reports and present a final report.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

## **GEOGRAPHY**

DIVISION: Science and Math  
 DIVISION DEAN: W. William Hughes, Ph.D.  
 DEPARTMENT HEAD: Robert M. Petersen, Ph.D.  
 Chemistry 112  
 (909) 384-8653  
 DIVISION SECRETARY: Rose Garcia  
 DIVISION OFFICE: Chemistry 121  
 (909) 384-8645  
 LIAISON COUNSELOR: Diana Rodriguez, M.A.  
 (909) 384-8950  
 (909) 384-8234

The environmental science of geography examines both physical and cultural landscapes. Geography includes the study of all forces of nature and the consequences of those forces: the nature and interactions of the atmosphere and the land, plants and animals, the earth's waters, weather, climate, the earth's dynamic surface, landforms and soil, and the way people have inhabited and altered the earth by creating various forms of agriculture, language, religion, and cities.

Courses in geography fulfill the science requirement for the associate degree, prepare students for majoring in geography at a four-year institution, and supplement other studies for students interested in careers in environmental

studies, education, engineering, and architecture. Students planning to transfer to a four-year institution and major in geography should consult with a counselor regarding the transfer process and lower division requirements.

## **GEOGRAPHY**

### **ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in Geography, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
GEOG 102 Cultural Geography	3
GEOG 106 Natural Resources and Conservation	3
GEOG 110 Physical Geography	3
GEOG 111 Physical Geography Laboratory	1
or	
GEOG 285 Honors in Physical Geography	(1)
GEOG 114 Weather and Climate	4
GEOG 120 World Regional Geography	3
Any Economics Course	(3)
or	
Any Statistics Course	(3)
or	
Any GIS Course	(3)
<b>TOTAL UNITS:</b>	<b>20</b>

### **COURSES OFFERED BY THE DEPARTMENT OF GEOGRAPHY:**

#### **GEOG 102**

##### **CULTURAL GEOGRAPHY**

**3 UNITS**

**PREREQUISITE:** *None.*

**LECTURE:** *3 hours per week.*

An introduction to the interrelationship of people and the land. Includes population trends, regional analysis and livelihood patterns. Emphasis on historical development and diffusion of agriculture, languages, religions, and cities.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): GEOG 4*

#### **GEOG 106**

##### **THE ENVIRONMENT, NATURAL RESOURCES AND CONSERVATION**

**3 UNITS**

**PREREQUISITE:** *None.*

**LECTURE:** *3 hours per week.*

A non-traditional and revised examination of the origins, nature and restrictions relating to world resources in light of continuing expansion of demand for basic materials including energy, metals, water, open space, soils and biologic resources. Emphasis on value considerations and social institutions as they relate to allocation decisions and environmental regulation.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

#### **GEOG 110**

##### **PHYSICAL GEOGRAPHY**

**3 UNITS**

**PREREQUISITE:** *None.*

**LECTURE:** *3 hours per week.*

Basic physical elements of geography, especially climate, landforms, water, soils, native animal life and natural vegetation, and their Inter-relationships and patterns of

distribution on a world basis.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): GEOG 2*

*CAN (California Articulation Number):*

*GEOG 110 + GEOG 111 = CAN GEOG 6*

### **GEOG 111**

#### **PHYSICAL GEOGRAPHY LABORATORY 1 UNIT**

**COREQUISITE: GEOG 110 (May be taken previously)**

**LABORATORY: 3 hours per week.**

Laboratory companion for various lecture courses in geography. May be taken during the same semester as the lecture courses or be taken after completing the lecture course.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): GEOG 110 + GEOG 111 = CAN GEOG 6*

### **GEOG 114**

#### **WEATHER AND CLIMATE 4 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week and**

**LABORATORY: 3 hours per week.**

The earth's atmospheric phenomena with special reference to the causes and regional distribution of weather and climate, both past and present.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **GEOG 120**

#### **WORLD REGIONAL GEOGRAPHY 3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to world geography emphasizing the nature of major world cultural regions, their social structure, religions, government, and economics.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **GEOG 222**

#### **INDEPENDENT STUDY IN GEOGRAPHY 1-3 UNITS**

**PREREQUISITE: GEOG 102 or GEOG 110.**

**INDEPENDENT STUDY: 3-9 hours per week.**

Assigned projects involving research, laboratory work, or directed study for selected students who are interested in furthering their knowledge of geography on an independent study basis. For each unit earned students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOG 285**

#### **HONORS IN PHYSICAL GEOGRAPHY LABORATORY 1 UNIT**

**PREREQUISITE: None.**

**COREQUISITE: GEOG 110 (May be taken previously).**

**LABORATORY: 3 hours per week.**

An experiential in-depth supplement specifically designed for the average student. This is an interactive laboratory experience examining the earth's atmosphere and weather, soil and sediments, landforms, vegetation and rocks. Maps and remotely sensed imagery will be studied

and used. Lecture material given in Introduction to Physical Geography (GEOG 110) will be enhanced and research techniques and methodologies explored. Satisfies the Physical Geography Laboratory requirement.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

## **GEOLOGY**

DIVISION:	Science and Math
DIVISION DEAN:	W. William Hughes, Ph.D.
DEPARTMENT HEAD:	W. William Hughes, Ph.D.
DIVISION SECRETARY:	Rose Garcia
DIVISION OFFICE:	Chemistry 121 (909) 384-8645
LIAISON COUNSELOR:	Diana Rodriguez, M.A. (909) 384-8950 (909) 384-8234

The Geology Department offers courses which examine the earth's history, structure, and economic resources. These courses meet the needs for (1) students planning to transfer to a four-year institution and prepare for a career in geology or related fields, (2) students fulfilling the undergraduate general education science requirement, and (3) students who wish to better understand the planet on which we live.

The first course in geology offers the following laboratory option: Students may enroll in GEOL 100, a four-unit course which includes a laboratory, or they may enroll in GEOL 101, a three-unit course without a laboratory. All remaining courses offered by the Geology Department require that students have completed either GEOL 100 or GEOL 101 or an equivalent course in geology.

Students planning to transfer to a four-year institution and major in geology should consult with a counselor regarding the transfer process and lower division requirements.

## **GEOLOGY**

### **ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in geology, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units).

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
CHEM 150 General Chemistry I	5
CHEM 151 General Chemistry II	5
GEOL 100 Physical Geology	4
GEOL 201 Mineralogy	4
GEOL 200 Rocks and Rock Minerals	4
MATH 250 Single Variable Calculus I	4
MATH 251 Single Variable Calculus II	4
PHYSIC 150A Physics for the Life Sciences I	5
PHYSIC 150B Physics for the Life Sciences II	5
<b>Eight units from the list of RECOMMENDED COURSES</b>	<b>8</b>
<b>TOTAL UNITS:</b>	<b>48</b>

<b>RECOMMENDED COURSES:</b>	<b>UNITS</b>
GEOL 112 Historical Geology	4
GEOL 122 Environmental Geology	3
GEOL 170x4 Geologic History of the Great Basin	1
GEOL 250 Geology of California	3
GEOL 251 Geology of the National Parks and	

Monuments	3
GEOL 260 Introduction to Field Geology	2
GEOL 270x4 Geology of the Eastern Sierra Nevada	1

## **COURSES OFFERED BY THE DEPARTMENT OF GEOLOGY:**

### **GEOL 100 PHYSICAL GEOLOGY 4 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

An introduction to the study of the earth with emphasis on the materials that make up the earth; plate tectonics, the process that created the continents and the ocean basins; and the processes that change the landscape. Laboratory study is closely coordinated with the lecture.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

*CAN (California Articulation Number): GEOL 2*

### **GEOL 101 INTRODUCTION TO PHYSICAL GEOLOGY 3 UNITS PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to the study of the earth with emphasis on the materials that make up the earth; plate tectonics; the process that created the continents and the ocean basins; and the processes that change the landscape. Laboratory study is closely coordinated with the lecture.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOL 111 INVESTIGATIONS IN PHYSICAL GEOLOGY 1 UNIT PREREQUISITE/COREQUISITE: GEOL 101.**

**LABORATORY: 3 hours per week.**

**DEPARTMENTAL ADVISORY: ENGL 015 or eligibility  
for ENGL 101 as determined through the SBVC  
assessment process.**

The laboratory portion of GEOL 100. Students who have completed GEOL 101 may enroll in GEOL 111 to complete the requirement for a physical science with a laboratory.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOL 112 HISTORICAL GEOLOGY 4 UNITS**

**PREREQUISITE: GEOL 100 or 101.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Geologic history of the earth including chronological development of major continental features, plate tectonics, and sea floor spreading, interpretation of earth history from rock and fossil records, and evolutionary development of plant and animal life. Field trips required.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): GEOL 4*

### **GEOL 122 ENVIRONMENTAL GEOLOGY 3 UNITS PREREQUISITE: None. LECTURE: 3 hours per week.**

A survey of the relationships between geologic processes, natural resources and the needs of society. Topics include natural hazards such as earthquakes, landslides and mudflows; mineral and energy resources; and the particular problems of geologic nature associated with massive urbanization.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **GEOL 170X4 GEOLOGIC HISTORY OF THE GREAT BASIN 1 UNIT PREREQUISITE: GEOL 100 or 101.**

**LECTURE: .5 hour per week and**

**LABORATORY: 24 hours during a four-day field trip.**

Discussion and observation of the physical and historical geology of the Great Basin province of the United States with specific emphasis on the geology of the Death Valley National Monument. Course work will include a series of lectures preparatory to a four-day field trip through parts of the Great Basin in and around Death Valley. Students must attend the field trip for successful completion of the course.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

### **GEOL 200 ROCKS AND ROCK MINERALS 4 UNITS PREREQUISITE: GEOL 100 or 101.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

An introduction to the techniques of field identification of the principal rocks and rock-forming minerals through hand specimen examination. Discussions of the major classes of rocks and their origins. Field trips are an integral part of the class.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOL 201 MINERALOGY 4 UNITS PREREQUISITE: CHEM 101.**

**LECTURE: 3 hours per week and  
LABORATORY: 3 hours per week.**

Identification of minerals through chemical tests, physical properties, spectroscopic, optical and x-ray diffraction analysis. The study of crystal structures with models, natural crystals, and stenographic projection.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOL 222 INDEPENDENT STUDY IN GEOLOGY 1-3 UNITS PREREQUISITE: GEOL 100 or 101.**

**INDEPENDENT STUDY: 3-9 hours per week.**

Assigned problems involving research, laboratory work or directed study for selected students who are interested in furthering their knowledge of geology on an independent study basis. For each unit earned, students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

### **GEOL 250**

**GEOLOGY OF CALIFORNIA 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

Physical and historical geology of California emphasizing the distinctive geologic features of each of California's twelve geomorphic provinces.

*Associate Degree Applicable**Course credit transfers to CSU and UC.***GEOL 251****GEOLOGY OF THE NATIONAL PARKS AND****MONUMENTS****3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

A study of the geology of selected National Parks and Monuments of the United States with emphasis on the geologic processes which formed them. Field trips are offered.

*Associate Degree Applicable**Course credit transfers to CSU.***GEOL 260****INTRODUCTION TO FIELD GEOLOGY****2 UNITS****PREREQUISITE:** GEOL 100 or 101.**LECTURE:** 1 hour per week and**LABORATORY:** 3 hours per week.

Demonstration, discussion and practice of field investigations of geologic environments involving describing, mapping, and identifying geologic phenomena. Field studies are required.

*Associate Degree Applicable**Course credit transfers to CSU and UC.***GEOL 270x2****GEOLOGY OF THE EASTERN SIERRA NEVADA****1 UNIT****PREREQUISITE:** GEOL 100 or 101.**LECTURE:** .5 hour per week and**LABORATORY:** 24 hours during a field trip.

Physical and historical geology of the Eastern Sierra Nevada Province with emphasis on the volcanic and glacial features in and around Mammoth-Mono Lakes region. Course work is a series of lectures preparatory to a field trip along the eastern margin of the Sierra Nevada. Students must attend the field trip for successful completion of the course. This course may be taken twice.

*Associate Degree Applicable**Course credit transfers to CSU.***HEALTH EDUCATION**

See the Department of

**PHYSICAL EDUCATION AND ATHLETICS****HISTORY**

DIVISION: Social Science  
 ACTING DEAN: Gloria M. Fisher, J.D.  
 DEPARTMENT HEAD: Colleen Calderon, M.A.  
 OTHER FACULTY: Edward Gomez, M.A.  
 Daniel Walker, Ph.D.  
 DIVISION SECRETARY: To Be Announced  
 DIVISION OFFICE: Liberal Arts 122  
 (909) 384-8603  
 LIAISON COUNSELOR: Laura Gomez, M.A.  
 (909) 384-8979

Courses in the History Department explore the past in a variety of ways. Through a critical evaluation of the causes and significance of events in the past, students of history learn about the individuals, ideas, actions, and events that have shaped our present. History teaches students to think

critically and to communicate their ideas in a more sophisticated fashion. It promotes an understanding of cultures and societies from the past while it helps students consider their own identities in the world of today. While the study of history is valuable in its own right, it also serves as a useful preparation for careers in law, public service, journalism, business, medicine, and education.

Students planning to transfer to a four-year institution and major in history should consult with a counselor regarding the transfer process and lower division requirements.

**COURSES OFFERED BY THE DEPARTMENT OF HISTORY:****HIST 100****HISTORY OF THE UNITED STATES: FROM COLONIAL TIMES TO THE CIVIL WAR 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

General survey of the history of the United States with an emphasis on political, economic, social and cultural developments from the discovery of the United States through the Civil War and Reconstruction period.

*Associate Degree Applicable**Course credit transfers to CSU and UC.**CAN (California Articulation Number): HIST 8***HIST 101****HISTORY OF THE UNITED STATES: FROM THE 1890'S TO THE PRESENT 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

General survey of the history of the United States with an emphasis on political, economic, social and cultural developments during the late 19th and 20th centuries.

*Associate Degree Applicable**Course credit transfers to CSU and UC.**CAN (California Articulation Number): HIST 10***HIST 107****THE UNITED STATES AND THE NORTH AMERICAN INDIANS 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

A systematic survey of North American Indian groups, from their prehistoric roots to the present. Includes their place in American history, U.S. Government policies and regulation, and future prospects for North American Indians. This course is also offered as ANTHRO 107.

*Associate Degree Applicable**Course credit transfers to CSU and UC.***HIST 124****CIVIL WAR AND RECONSTRUCTION 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

Study of the causes, nature, course and consequences of the Civil War with special focus on American leaders, institutions and values.

*Associate Degree Applicable**Course credit transfers to CSU and UC.***HIST 126****HISTORY OF THE AMERICAN WEST 3 UNITS****PREREQUISITE:** None.**LECTURE:** 3 hours per week.

An examination of major topics and issues in the United States history concerning the conquest, expansion and development of the West. The focus will be on critically analyzing major events and key themes, beginning with an

analysis of the original inhabitants in the region, the purchasing and fighting to obtain greater amounts of land by the United States, the cultural clashes between new and old inhabitants, the railroad and the closing of the frontier, immigrants and their role in Westward expansion, and current ecological challenges. A special emphasis will also be given to the roles of women, African-Americans, ethnic immigrants like the German, Irish, and Chinese-Americans, and various Native Americans.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 135**

#### **RELIGION IN AMERICA**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction of the growth and development of diverse religions in the United States that spans from the colonial period to the present. This course chronologically presents these religious movements, including the Puritans, slave religion, the religious reform movements, the Catholic, Protestant and Jewish communities, the Black religious experience, and contemporary religious movements. This course is also offered as RELIG 135.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 137**

#### **ETHNIC MINORITIES IN UNITED STATES HISTORY**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to United States history focusing on the experiences of ethnic minorities that spans from the early colonial period to the present. This course chronologically presents previously unseen and unheard minorities and their experiences through major social, political and economic changes in United States history. The course highlights ethnic groups, such as African-Americans, Native Americans, Jews, Irish-Americans, Asian Americans, Latinos and others as active participants in the creation of our nation.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 138**

#### **AFRICAN-AMERICAN HISTORY I**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An historical survey of African-Americans with emphasis on their origin, slave experience, cultural transplantation, participation in the American Revolution, and their march toward freedom during the Civil War and Reconstruction.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 139**

#### **AFRICAN-AMERICAN HISTORY II**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An historical survey of Black Leadership in America since the 17<sup>th</sup> Century with emphasis on the changing nature of the African-American community, the Civil Rights struggle, Black Nationalism, and the rise of Black politics in our contemporary society.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 140**

#### **CHICANO HISTORY**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An overview of the heritage of Mexican-Americans from its Spanish and Indian origins to the Chicano movement. This course will compare and contrast the Chicano experience to those of other racial and ethnic groups in American society, emphasizing the period since 1845.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 145**

#### **HISTORY OF CALIFORNIA**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

A survey of California history from the Colonial times to the present including its diverse social, political, economic, racial and cultural make-up and development.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 150**

#### **INTRODUCTION TO LATIN AMERICAN HISTORY**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introductory survey of Latin American history that begins with an overview of the region's Iberian and American roots and surveys the major historical trends and events through recent times. Includes the impact of the encounter between European and American societies; the formation of colonial societies; the independence struggles; the integration of Latin America in the world economy; revolutionary movements in the 20th century; and the relations between the United States and Latin America.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 153**

#### **HISTORY OF MEXICO**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Survey study of the development of Mexico from its early agrarian, colonial beginning to its present industrial growth with an emphasis on Mexico's cultural, social and political changes.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

### **HIST 160**

#### **HISTORY OF WESTERN CIVILIZATION:**

##### **ANCIENT TIMES TO 1600 A.D.**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to the historical roots and development of Western Civilization from the Neolithic Age to the Renaissance. Includes the rise of Mediterranean civilization; the classical societies of Greece and Rome; the spread of Christianity; medieval European political, social and cultural achievements; and the European Renaissance.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): HIST 2*

### **HIST 161**



**HISTORY OF WESTERN CIVILIZATION:  
1600 A.D. TO THE PRESENT 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

An introduction to the history of Western Civilization from the Reformation to the present time. Includes the rise of the modern state system; the religious, political, scientific and technological revolutions and the cultural changes that accompany them; and the development of nationalism/imperialism and their economic/ideological foundations.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): HIST 4*

**HIST 170  
WORLD CIVILIZATIONS TO 1500 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Explores the origin and development of civilizations in Europe, the Americas, Africa, the Near East and East Asia. Using a global perspective and a comparative approach between the world's major civilizations, students will examine social structure and daily life, evolution of complex political systems, cultural values and economic development to 1500.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): HIST 14*

**HIST 171  
WORLD CIVILIZATIONS SINCE 1492 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Survey of the modern world from 1500 to the present. The course emphasizes the unique characteristics of world cultures as they entered into a critical period of increasing interaction, a process that led to the shaping of the modern world. Specific themes include religious, economic and political revolution; the development of modern science; industrialism; imperialism; rise and fall of super powers; colonization and de-colonization, fascism, communism, world wars, and contemporary history.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

*CAN (California Articulation Number): HIST 16*

**HIST 180  
AFRICAN CIVILIZATION 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A general survey of the history of Africa from the early Nile Valley civilizations to the twentieth century.

*Associate Degree Applicable*

*Course credit transfers to CSU and UC.*

**HIST 190-191  
SELECTED STUDIES IN HISTORY 3 UNITS**

**PREREQUISITE:** HIST 100 or HIST 101.

**LECTURE:** 3 hours per week.

A review of selected historical themes, periods, or personalities in history chosen by the department.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**HIST 222**

**SPECIAL PROBLEMS IN HISTORY 1 UNIT**

**PREREQUISITE:** None.

**INDEPENDENT STUDY:** 3 hours per week.

Assigned problems involving library and research work for selected students who are interested in furthering their knowledge of history on an independent study basis. Students are required to devote three hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**HIST 223  
SPECIAL PROBLEMS IN HISTORY II 2 UNITS**

**PREREQUISITE:** None.

**INDEPENDENT STUDY:** 6 hours per week.

Assigned problems involving library and research work for selected students who are interested in furthering their knowledge of history on an independent study basis. Students are required to devote six hours per week to their project throughout the semester. Prior to registration, a contract must be prepared. See instructor for details.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

*Limited transfer to UC; contact a counselor for details.*

**HUMAN DEVELOPMENT**

DIVISION: Student Support  
DIVISION DEAN: Ali Mossaver-Rahmani, Ed.D.  
DIVISION OFFICE: Administration 105  
(909) 384-8966

**COURSES OFFERED BY THE DEPARTMENT OF  
HUMAN DEVELOPMENT:**

**HUMDV 900  
ASSESSMENT OF LEARNING DISABILITIES .50 UNIT**

**PREREQUISITE:** None.

**LECTURE:** .5 hour per week.

Introduction to the history, general characteristics, and the legal definition of learning disabilities. Includes identification of students' learning strengths and weaknesses and the determination of students' eligibility for learning disabilities services. Emphasis on the LD services at the college and the development of an Individualized Education Plan to compensate for any identified learning disability. Graded on Credit/Non-Credit basis only.

*Not applicable to Associate Degree.*

**HUMDV 905  
SUPPORTIVE LEARNING IN MATHEMATICS 1 UNIT**

**PREREQUISITE:** None.

**LABORATORY:** 3 hours per week.

Course provides specialized instruction and tutoring to individuals and small groups in basic mathematics. Although this course is designed for students with disabilities as certified through diagnostic testing, all students are welcome to enroll. Support strategies to minimize the effects of the disability in the academic setting are presented to maximize students' effectiveness in mainstream classes. Graded on a Credit/Non-Credit basis only.

*Not applicable to Associate Degree.*

**HUMDV 906**

**SUPPORTIVE LEARNING IN READING 1 UNIT****PREREQUISITE:** None.**LABORATORY:** 3 hours per week.

This multi-sensory phonics course provides specialized instruction and tutoring to individuals and small groups in reading. Although this course is designed for students with disabilities as certified through diagnostic testing, all students are welcome to enroll. Support strategies to minimize the effects of the disability in the academic setting are presented to maximize students' effectiveness in mainstream classes. Graded on a Credit/Non-Credit basis only.

*Not applicable to Associate Degree.***HUMDV 907****SUPPORTIVE LEARNING IN ENGLISH 1 UNIT****PREREQUISITE:** None.**LABORATORY:** 3 hours per week.

Course provides specialized instruction and tutoring to individuals and small groups in basic English and writing. Although this course is designed for students with disabilities as certified through diagnostic testing, all students are welcome to enroll. Support strategies to minimize the effects of the disability in the academic setting are presented to maximize students' effectiveness in mainstream classes. Graded on a Credit/Non-Credit basis only.

*Not applicable to Associate Degree.***HUMDV 961-962-963****INDIVIDUAL AND GROUP STUDIES .5-1 UNIT****PREREQUISITE:** None.**LECTURE:** 1/2-1 hour per week.

Independent or group activity in an area of educational development. Such areas of activity shall be defined in the Schedule of Classes. A maximum of two activities may be completed per semester.

*Not applicable to the Associate Degree***HUMDV 990****PUENTE: PLANNING FOR COLLEGE SUCCESS I 1 UNIT****PREREQUISITE:** None.**LECTURE:** 1 hour per week.

Designed for students in the Puente Program, this course helps students identify their academic strengths and weaknesses as a first step in long-term educational planning. Includes stress management, motivation, self-esteem, cultural identity, and the Chicano/Latino experience.

*Not applicable to the Associate Degree***HUMDV 101****PUENTE: PLANNING FOR COLLEGE SUCCESS II 1 UNIT****PREREQUISITE:** None.**LECTURE:** 1 hour per week.

Designed for students in the Puente Program, this course is designed to prepare students for an active role in their education and community. Includes a mentoring component which links students with community professionals in their major area of study.

*Associate Degree Applicable**Course credit transfers to CSU.***HUMDV 102****COLLEGE TO CAREER 2 UNITS****PREREQUISITE:** None.**LECTURE: 2 hours per week.**

This course is designed for students seeking assistance in setting academic, vocational and career goals. Major topics will include evaluation of personal interests, abilities and values, and the utilization of technological resources that will identify career choices and labor market trends. It is designed for all college majors.

*Associate Degree Applicable**Course credit transfers to CSU.***HUMAN SERVICES**

DIVISION: Social Science  
 ACTING DEAN: Gloria M. Fisher, J.D.  
 DEPARTMENT HEAD: James S. Robinson, M.A.  
 OTHER FACULTY: Joan Harter, M.S.  
 DIVISION SECRETARY: To Be Announced  
 DIVISION OFFICE: Liberal Arts 122  
 (909) 384-8603  
 LIAISON COUNSELOR: Laura Gomez, M.A.  
 (909) 384-8979

The Human Services Department offers an academic and experiential study of the history, theory, development, and implementation of society's response to human need. Reflecting this varied and expanding field, Human Services courses are based on a synthesis of knowledge and methodologies of intervention at the individual, group, and community levels.

Courses in this department fulfill various needs: (1) an introduction to helping skills for students planning advanced degrees in social work, counseling, vocational rehabilitation, and related professions; (2) career preparation at the Associate Degree level; (3) career preparation at the Vocational Certificate level (Alcohol/Drug Studies, Career Specialist, Case Management in the Public Sector, Eating Disorders Studies, or Human Services); and (4) continuing education for professionals working in nursing, alcohol/ drug counseling, or related clinical settings. Students planning to transfer to a four-year institution and major in human services or a related field should consult with a counselor regarding the transfer process and lower division requirements.

Most courses in Human Services can be applied toward Continuing Education Hours for Marriage and Family Therapists (MFT's) and Licensed Clinical Social Workers (LCSW's), Provider Number PCE 2005, as well as for the CATS and CAS Credentials. Several courses also apply toward Continuing Education hours for Registered Nurses, Provider Number 01480.

**HUMAN SERVICES  
ASSOCIATE OF ARTS DEGREE**

To graduate with a specialization in Human Services, students must complete 18 units in Human Services courses (excluding HUMSV 198) plus the general breadth requirements for the Associate Degree (total = 60 units).

**HUMAN SERVICES CERTIFICATES**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

**1. ALCOHOL/DRUG STUDIES CERTIFICATE**

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
HUMSV 179 Legal/Ethical Issues in Human Services	3
HUMSV 181 Alcohol/Drug Studies: Introduction	3
HUMSV 182 Alcohol/Drug: Program Modalities	3
HUMSV 186 Alcohol/Drugs in the Family	3
HUMSV 188 Alcohol/Drugs: Medical Aspects	3
HUMSV 190 Drugs: Use and Abuse	3

**TAKE ONE OF THE FOLLOWING THREE COURSES:**

HUMSV/SOC 170 Introduction to Human Services	3
or	
HUMSV 189 Alcohol/Drug Prevention and Intervention	(3)
or	
PSYCH 132 Counseling Techniques	(3)

**REQUIRED FIELD WORK COURSES:** **UNITS**

*Prior to field work courses, students must complete HUMSV 181 plus nine other units in Human Services courses required for the certificate with a grade of C or better.*

**THE FOLLOWING THREE COURSES ARE TO BE TAKEN CONCURRENTLY:**

HUMSV 183 Alcohol/Drug: Counseling I	3
HUMSV 197A Alcohol/Drug: Intern Seminar I	1
HUMSV 198A Alcohol/Drug: Field Work I	2

**THE FOLLOWING THREE COURSES ARE TO BE TAKEN CONCURRENTLY:**

HUMSV 184 Alcohol/Drug: Counseling II	3
HUMSV 197B Alcohol/Drug: Intern Seminar II	1
HUMSV 198B Alcohol/Drug: Field Work II	2

**REQUIRED GENERAL EDUCATION COURSES: UNITS**

ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	4)
PSYCH 100 General Psychology	3
SOC 100 Introduction to Sociology	3
SPEECH 100 Elements of Public Speaking	3

**RECOMMENDED COURSE:** **UNITS**

HUMSV 205 AIDS: Practices, Processes, and Policy	(2)
<b>TOTAL UNITS:</b>	<b>46</b>

**2. CAREER SPECIALIST CERTIFICATE**

**REQUIRED COURSES:** **UNITS**

HUMSV/SOC 170 Introduction to Human Services	3
HUMSV/SOC 172 Group and Family Dynamics	3
HUMSV/SOC 173 Helping Skills	3
HUMSV 207 Career Specialist	3
PSYCH 132 Counseling Techniques	3

**REQUIRED FIELD WORK COURSES:** **UNITS**

*A minimum of four Human Services courses required for the certificate must be completed with a grade of C or better prior to field work courses.*

**Students must complete one of the following sets of two concurrent courses:**

HUMSV 195A Human Services: Intern Seminar I	1
HUMSV 204A Career Specialist: Field Work I	2
or	
HUMSV 195B Human Services: Intern Seminar II	(1)
HUMSV 204B Career Specialist: Field Work II	(2)

**REQUIRED GENERAL EDUCATION COURSES: UNITS**

ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	(4)
PSYCH 100 General Psychology	3
SOC 100 Introduction to Sociology	3
SPEECH 100 Elements of Public Speaking	3
<b>TOTAL UNITS:</b>	<b>31</b>

**3. EATING DISORDERS STUDIES CERTIFICATE**

**REQUIRED COURSES:** **UNITS**

HUMSV /SOC 170 Introduction to Human Services	3
HUMSV 172 Group and Family Dynamics	3
HUMSV 173 Helping Skills	3
HUMSV 175 Introduction to Eating Disorders	3
HUMSV 176 Treatment Modalities for Eating Disorders	3
HUMSV 178 Medical Aspects of Eating Disorders	3

**REQUIRED FIELD WORK COURSES:** **UNITS**

*A minimum of four Human Services courses required for the certificate must be completed with a grade of C or better prior to field work courses.*

**Students must complete one of the following sets of two concurrent courses:**

HUMSV 195A Human Services: Intern Seminar I	1
HUMSV 200A Eating Disorders: Field Work I	2
or	
HUMSV 195B Human Services: Intern Seminar II	(1)
HUMSV 200B Eating Disorders: Field Work II	(2)

**REQUIRED GENERAL EDUCATION COURSES: UNITS**

ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	(4)
FCS 162 Nutrition	3
PSYCH 100 General Psychology	3
PSYCH 110 Abnormal Psychology	3
SOC 100 Introduction to Sociology	3
SPEECH 100 Elements of Public Speaking	3
<b>TOTAL UNITS:</b>	<b>40</b>

**4. HUMAN SERVICES CERTIFICATE**

**REQUIRED COURSES:** **UNITS**

HUMSV/SOC 170 Introduction to Human Services	3
HUMSV/SOC 172 Group and Family Dynamics	3
HUMSV/SOC 173 Helping Skills	3
HUMSV 179 Legal/Ethical Issues in Human Services	3
PSYCH 132 Counseling Techniques	3
SOC 110 Contemporary Social Issues	3
or	
SOC 141 Minority Relations	(3)
Two other 3-unit Human Services courses	6

**REQUIRED FIELD WORK COURSES:** **UNITS**

*A minimum of four Human Services courses required for the certificate must be completed with a grade of C or better prior to field work courses.*

**THE FOLLOWING TWO COURSES ARE TO BE TAKEN CONCURRENTLY:**

HUMSV 195A Human Services: Intern Seminar I	1
HUMSV 196A Human Services: Field Work I	2

**THE FOLLOWING TWO COURSES ARE TO BE TAKEN CONCURRENTLY:**

HUMSV 195B Human Services: Intern Seminar II	1
HUMSV 196B Human Services: Field Work II	2

**REQUIRED GENERAL EDUCATION COURSES: UNITS**

ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	(4)
PSYCH 100 General Psychology	3
SOC 100 Introduction to Sociology	3
<b>TOTAL UNITS:</b>	<b>40</b>

**5. CASE MANAGEMENT IN THE PUBLIC SECTOR CERTIFICATE**

**REQUIRED COURSES: UNITS**

HUMSV 140 Case management in Public Service	3
HUMSV 167 Crisis Intervention, Assessment, Referral	3
HUMSV/SOC 170 Introduction to Human Services	3
HUMSV/SOC 173 Helping Skills	3
HUMSV 195A Human Services: Intern Seminar I	1
HUMSV 196A Human Services: Field Work I	2
ENGL 015 Preparation for College Writing or Higher English course	4
MIS 101 Intro to Management Information Systems	3
PSYCH 100 General Psychology	3
SPEECH 111 Interpersonal Communication	3
SPEECH 174 Intercultural Communication	3
<b>TOTAL UNITS:</b>	<b>31</b>

*\*Pending approval from the California Community College Chancellor's Office.*

**COURSES OFFERED BY THE DEPARTMENT OF HUMAN SERVICES:**

**HUMSV 140 CASE MANAGEMENT IN PUBLIC SERVICE 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

An overview of the history, theories, skills and knowledge of case management in public social service settings. Topics include organizational structure, funding streams, regulatory issues, job description, skills, personal qualities, evaluation, assessment and referral, employment services, and career paths. Designed for students entering into the field of case management in public service.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 150 INTRODUCTION TO GERONTOLOGY: SOCIAL ASPECTS OF AGING 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Physical, emotional, social and economic perspectives on aging including a review of how roles change with age, and the opportunities available to people over age 55. Recommended for human services paraprofessionals, for those interested in gerontology as a profession, and those retired or preparing to retire. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course is also offered as SOC 150.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 152**

**COUNSELING THE ELDERLY AND THEIR FAMILIES 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A practical course in counseling which applies communication skills to the resolution of problems unique to the elderly. Includes techniques for solutions to problems within families and with the society at large. This course is also offered as SOC 152.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 160 CRIME AND DELINQUENCY 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

The nature of correctional work; aims and objectives of correctional administration; probation and parole practices; skills, knowledge, and attitudes required for employment in the field; types of institutions and services; and career opportunities in corrections. This course is also offered as SOC 160.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 165 PERSONAL ISSUES IN THE WORKPLACE: IMPACTS AND SOLUTIONS 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

This course focuses on the impact of personal problems in the workplace and how to find solutions to benefit both the employee and employer within the constraints of current state law, Managed Care, and Behavioral Health Care systems. Topics include core elements of wellness/health promotion, models of Employee Assistance Programs, program effectiveness and evaluation, legal issues, outreach and marketing; and cost containment.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 166 THE WORKPLACE AND PERSONAL ISSUES: DIRECT SERVICES 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

This course focuses on direct services to employees and employers to reduce the impact of personal issues on productivity and other costs. Topics include utilization of Managed Care; individual services such as assessment and referral, management training, union issues, resource development, drug testing, intervention, and critical incident debriefing.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 167 CRISIS INTERVENTION, ASSESSMENT, REFERRAL, AND EVALUATION 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Designed for the human services paraprofessional or volunteer, this course includes crisis intervention techniques, interviewing techniques, referral procedures, and diagnostic assessment and categories within DSM IV.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 170**  
**INTRODUCTION TO HUMAN SERVICES 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
History, philosophy, development and practice of social welfare, public services, casework, social/group work, community public service organizations, and career opportunities in Human Services. This course is also offered as SOC 170.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 172**  
**GROUP AND FAMILY DYNAMICS 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
A study of the dynamics operating in groups and families including the identification of healthy versus dysfunctional groups/families; methods of intervention in dysfunctional groups/families; and techniques of facilitating treatment groups. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course is also offered as SOC 172.  
*Associate Degree Applicable*

**HUMSV 173**  
**HELPING SKILLS 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
A practical study of helping strategies and interpersonal skills. The focus is on the use of techniques to improve communication, better evaluate relationships, and resolve conflicts. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course is also offered as SOC 173.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 174**  
**INTRODUCTION TO SELF-HELP 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
Introduction to the principles, processes, and practices of self-help for individuals and for mutual aid groups. Focus will be on initiating and facilitating self-help groups, particularly for special populations. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course is also offered as SOC 174.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 175**  
**INTRODUCTION TO EATING DISORDERS 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
An introduction to the description, explanation, and treatment of eating disorders (e.g., bulimia, anorexia). Includes patterns of compulsive eating, chronic dieting, and the history of attitudes toward eating disorders. Biological, psychoanalytic, behavioral, and other theoretical perspectives and treatment approaches are surveyed. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.  
*Associate Degree Applicable*

*Course credit transfers to CSU.*

**HUMSV 176**  
**TREATMENT MODALITIES FOR EATING DISORDERS 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
With a focus on treatment, this course addresses assessment, diagnosis, treatment, and community support systems for people with eating disorders and their families. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 178**  
**MEDICAL ASPECTS OF EATING DISORDERS 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
Reviews eating disorders from a medical perspective including a review of the etiology and physiology of obesity, anorexia, compulsive eating, and bulimia. Reviews medical treatment and possible physical complications associated with specific eating disorders. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 179**  
**LEGAL/ETHICAL ISSUES IN HUMAN SERVICES 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
A study, interpretation, and practice of the legal/ethical responsibilities and liabilities encountered in providing and utilizing Human Services with special focus on privileged relationships, counseling, and confidentiality.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 181**  
**ALCOHOL/DRUG STUDIES: INTRODUCTION 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
Exploration of the psychological, sociological, and physical causes and effects of alcohol and drug abuse. Includes the examination of stereotypes about substance abusers, and the major prevention and treatment strategies. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course also qualifies for the educational requirement for Marriage and Family Counselors and Licensed Clinical Social Workers.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 182**  
**ALCOHOL/DRUG: PROGRAM MODALITIES 3 UNITS**  
**PREREQUISITE:** None.  
**LECTURE:** 3 hours per week.  
Principles and practices of the social models of alcohol/drug rehabilitation; comparative analysis of the various program/treatment modalities; and a review of the

state certification and licensing requirements with a focus on administration, staffing, and community involvement in treatment programs. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 183**  
**ALCOHOL/DRUG: COUNSELING I 3 UNITS**  
**DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Alcohol/Drug Studies Certificate or the Employees Assistance Program Certificate.**

**LECTURE: 3 hours per week.**

This course is designed for students seeking certificates in Alcohol/Drug Studies or the Employees Assistance Program, and includes the dynamics of the helping relationship; analysis and implications of common characteristics of substance dependent individuals; demonstration and practice of assessment, interviewing, and referral techniques; and review of counseling skills and case management. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE MUST ALSO TAKE HUMSV 197A AND HUMSV 198A. STUDENTS SEEKING EMPLOYEES ASSISTANCE PROGRAM CERTIFICATE MUST ALSO TAKE HUMSV 197A AND HUMSV 202A.**

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 184**  
**ALCOHOL/DRUG: COUNSELING II 3 UNITS**  
**DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Alcohol/Drug Studies Certificate or the Employees Assistance Program Certificate.**

**LECTURE: 3 hours per week.**

This course is designed for students seeking certificates in Alcohol/Drug Studies or the Employees Assistance Program, and includes practical implications and experience in various recovery and crisis intervention modalities; investigation of and experience in group dynamics; analysis and interpretation of critical aspects of counseling; analysis of the role of significant others in the recovery process; discussion of current treatment interventions; and the process of case management and record keeping. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE MUST ALSO TAKE HUMSV 197B AND HUMSV 198B. STUDENTS SEEKING EMPLOYEES ASSISTANCE PROGRAM CERTIFICATE MUST ALSO TAKE HUMSV 197B AND HUMSV 202B.**

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 186**  
**ALCOHOL/DRUGS IN THE FAMILY 3 UNITS**  
**PREREQUISITE: None.**  
**LECTURE: 3 hours per week.**

This course reviews the family dynamics associated with alcoholism and drug addiction; the impact of the diseases on different family members; family oriented approaches to recovery; and the reintegration of the family into the community. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 187**  
**ADULT CHILDREN OF ALCOHOLICS 1 UNIT**  
**PREREQUISITE: None.**  
**LECTURE: 1 hour per week.**

Overview of the problems experienced by adult children of alcoholics (ACAs) with particular emphasis on the various approaches in counseling ACAs.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 188**  
**ALCOHOL/DRUG: MEDICAL ASPECTS 3 UNITS**  
**DEPARTMENTAL ADVISORY: HUMSV 181.**  
**LECTURE: 3 hours per week.**

The biological impact of alcoholism and other drug dependencies with an emphasis on the treatment and recovery processes, and the role of medical professionals as members of the recovery team. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 189**  
**ALCOHOL/DRUG: PREVENTION AND INTERVENTION 3 UNITS**  
**PREREQUISITE: None.**  
**LECTURE: 3 hours per week.**

Overview of theories and strategies for the prevention of and intervention with alcohol and drug abuse. Emphasis on promoting health and wellness through self-awareness, decision-making, and coping skills.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 190**  
**DRUGS: USE AND ABUSE 3 UNITS**  
**PREREQUISITE: None.**  
**LECTURE: 3 hours per week.**

A survey of the impact of drug use and abuse in our society including the history, pharmacology, and physiological impact of each drug category; laws related to drug abuse; and society's response to both drug use and abuse. This course qualifies for continuing education credit for nurses. Provider approved by the California Board of Registered Nursing, provider number 01480, for 45 contact hours. This course also qualifies for the educational requirement for Marriage and Family Counselors and Licensed Clinical Social Workers.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 195A**  
**HUMAN SERVICES: INTERN SEMINAR I 1 UNIT**  
**DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Human Services, Career Specialist or Eating Disorders certificate.**  
**LECTURE: 1 hour per week.**

An introduction to applied strategies for crisis intervention, case analysis, and therapeutic interventions, and serves as a lecture-based foundation for students' field work. **STUDENTS SEEKING THE HUMAN SERVICES CERTIFICATE MUST ALSO TAKE HUMSV 196A. STUDENTS SEEKING THE CAREER SPECIALIST CERTIFICATE MUST ALSO TAKE HUMSV 204A.**  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 195B**  
**HUMAN SERVICES: INTERN SEMINAR II** 1 UNIT  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Human Services, Career Specialist or Eating Disorders certificate.*  
**LECTURE: 1 hour per week.**

This course focuses on current counseling strategies as a lecture-based foundation for students' field work. **STUDENTS SEEKING THE HUMAN SERVICES CERTIFICATE MUST ALSO TAKE HUMSV 196B. STUDENTS SEEKING THE CAREER SPECIALIST CERTIFICATE MUST ALSO TAKE HUMSV 204B.**

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 196A**  
**HUMAN SERVICES: FIELD WORK I** 2-3 UNITS  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Human Services, Career Specialist or Eating Disorders certificate.*  
**COREQUISITE: HUMSV 195A.**

Supervised field experience in specific agencies to provide students with work experience in the field of Human Services. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 196B**  
**HUMAN SERVICES: FIELD WORK II** 2-3 UNITS  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Human Services, Career Specialist or Eating Disorders certificate.*  
**COREQUISITE: HUMSV 195B.**

Supervised field experience in specific agencies to provide students with work experience in the field of Human Services. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 197A**  
**ALCOHOL/DRUG: INTERN SEMINAR I** 1 UNIT  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Alcohol/Drug Studies Certificate or the Employees Assistance Program Certificate.*

**LECTURE: 1 hour per week.**

An introduction to the duties and work objectives of counselors in alcohol/drug and related fields. Basic skills are developed through discussion and demonstration. Serves as a lecture-based support for students' field work. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE MUST ALSO TAKE HUMSV 183 AND HUMSV 198A. STUDENTS SEEKING EMPLOYEES ASSISTANCE PROGRAM CERTIFICATE MUST ALSO TAKE HUMSV 183 AND HUMSV 202A.**

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 197B**  
**ALCOHOL/DRUG: INTERN SEMINAR II** 1 UNIT  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Alcohol/Drug Studies Certificate or the Employees Assistance Program Certificate.*

**LECTURE: 1 hour per week.**

On-the-job skills, such as case management, assessment, and counseling, are monitored and enhanced through

class discussion and demonstration in this lecture-based foundation to the students' field work. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE MUST ALSO TAKE HUMSV 184 AND HUMSV 198B. STUDENTS SEEKING EMPLOYEES ASSISTANCE PROGRAM CERTIFICATE MUST ALSO TAKE HUMSV 184 AND HUMSV 202B.**

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 198**  
**HUMAN SERVICES WORK EXPERIENCE** 1-4 UNITS  
**PREREQUISITE: None.**

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 198A**  
**ALCOHOL/DRUG: FIELD WORK I** 2-3 UNITS  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Alcohol/Drug Studies Certificate.*

**COREQUISITES: HUMSV 183 and HUMSV 197A.**

Supervised field experience in specifically assigned agencies to provide students with work experience in the field of Alcohol/Drug Studies. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 198B**  
**ALCOHOL/DRUG: FIELD WORK II** 2-3 UNITS  
**DEPARTMENTAL ADVISORIES: HUMSV 183, HUMSV 197A, and HUMSV 198A.**

**COREQUISITES: HUMSV 184 and HUMSV 197B.**

Supervised field experience in specifically assigned agencies to provide students with work experience in the field of Alcohol/Drug Studies. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 200A**  
**EATING DISORDERS: FIELD WORK I** 2-3 UNITS  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Eating Disorders Certificate.*

**COREQUISITE: HUMSV 195A.**

Supervised field experience in specific agencies to provide students with work experience in the field of Eating Disorders. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*  
*Course credit transfers to CSU.*

**HUMSV 200B**  
**EATING DISORDERS: FIELD WORK II** 2-3 UNITS  
**DEPARTMENTAL ADVISORY:** *Complete four Human Services courses required for the Eating Disorders Certificate.*  
**COREQUISITE: HUMSV 195B.**

Supervised field experience in specific agencies to provide students with work experience in the field of Eating Disorders. Students work in their assigned agencies 10-15

hours per week with 5 hours each week equal to one unit.  
*Associate Degree Applicable*  
*Course credit transfers to CSU.*

#### **HUMSV 204A**

**CAREER SPECIALIST: FIELD WORK I 2-3 UNITS**

**DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Career Specialist Certificate.**

**COREQUISITE: HUMSV 195A.**

Supervised field experience in specifically assigned agencies to provide students with work experience in the field of Career Specialist. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 204B**

**CAREER SPECIALIST: FIELD WORK II 2-3 UNITS**

**DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Career Specialist Certificate.**

**COREQUISITE: HUMSV 195B.**

Supervised field experience in specifically assigned agencies to provide students with work experience in the field of Career Specialist. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 205**

**AIDS: PRACTICES, PROCESSES, AND POLICY**

**2 UNITS**

**PREREQUISITE: None.**

**LECTURE: 2 hours per week.**

An overview of the tragedy of Acquired Immune Deficiency Syndrome (AIDS) including its diagnosis, transmission, and prevention; the psychosocial and economic impact of the disease on patients and their families and friends; society's response to the disease; and effective approaches to assist individuals coping with AIDS.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 207**

**CAREER SPECIALIST**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

An introduction to the field of career counseling including interviewing techniques, assessment tools, job opportunities, and models for developing occupational options.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 261, 262, 263, 264**

**SELECTED STUDIES IN HUMAN SERVICES .5-1 UNIT**

**PREREQUISITE: None.**

**LECTURE: 8 - 16 hours per semester.**

Selected themes that are current and relevant are explored in the areas of Human Services, Alcohol/Drug Counseling, Eating Disorders, Social Work, Mental Health, Corrections, and Community Services. Possible topics include: child/spouse abuse; crisis intervention; co-dependency; and seniors and substance abuse.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 271, 272, 273, 274**

**SELECTED STUDIES IN HUMAN SERVICES 1-3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 16 - 48 hours per semester.**

Selected current themes are explored in the areas of Human Services, Alcohol/Drug Counseling, Eating Disorders Counseling, Social Work, Mental Health, Corrections, and Community Services. Suggested subjects include stress management, smoking, and the politics of aging.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 281, 282, 283, 284**

**ALCOHOL/DRUG: SPECIAL STUDIES**

**.25-1 UNIT**

**PREREQUISITE: None.**

**LECTURE: 4 - 16 hours per semester.**

Selected current themes relevant to those preparing for careers in Alcohol/Drug Counseling or other related human or social services. Possible topics include vocational education; family violence; driving under the influence; and special population issues, such as women and alcoholism.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

#### **HUMSV 291, 292, 293, 294**

**ALCOHOL/DRUG: SPECIAL STUDIES**

**.5-1 UNIT**

**PREREQUISITE: None.**

**LECTURE: 8 - 16 hours per semester.**

Selected current themes relevant to those preparing for careers in Alcohol/Drug Counseling and other related human services. Possible topics include child abuse, chemical abuse prevention/intervention for parents, and special population issues, such as teenagers and alcoholism.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

## **INSPECTION TECHNOLOGY**

DIVISION:	Technical
DIVISION DEAN:	Thomas Bauman, M.S., P.E.
DEPARTMENT HEAD:	William Kastner, M.S. (909) 384-8290
DIVISION SECRETARY:	Patsy Martinez (909) 384-8902
DIVISION OFFICE:	Technical 108 (909) 384-4451
LIAISON COUNSELOR:	George Fleming, M.S. (909) 384-8975

Courses in the Inspection Technology Department are designed to train construction inspectors and contractors who prepare construction for inspection. This training includes the structural, mechanical, and technical aspects of construction. Building, plumbing, electrical, heating and air conditioning codes and related laws are included in INSPEC 013B, 014B, 015B, and 016B. Energy regulations and the perspective of building inspectors are included in INSPEC 017B and 018B. INSPEC 024B and 025B have been developed for civil service employees working in this field.

Students interested in a single subject, such as electrical contractors who want to become more informed about the



requirements of the electrical code, may take individual courses without prerequisites. Students seeking a certificate or an associate degree in this, discipline must complete the sequence of required courses described below.

## **INSPECTION TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in Inspection Technology, students must complete the following required courses for the certificate plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

### **INSPECTION TECHNOLOGY CERTIFICATE**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
INSPEC 010 Fundamentals of Construction Inspection I	3
INSPEC 011 Fundamentals of Construction Inspection II	3
INSPEC 012 Fundamentals of Construction Inspection III	3
INSPEC 013B Advanced Construction Inspection: Uniform Building Code	3
INSPEC 014B Advanced Construction Inspection: National Electrical Code	3
INSPEC 015B Advanced Construction Inspection: Uniform Plumbing Code	3
INSPEC 016B Advanced Construction Inspection: Uniform Mechanical Code	3
INSPEC 017B California State Energy Regulations for Residential Buildings	3
INSPEC 018B California State Energy Regulation for Non-Residential Buildings	3
INSPEC 024B Community Relations for Civil Service Employees	3
INSPEC 025B Communication and Enforcement	3
INSPEC 026B Non-Structural Plan Review	3
<b>TOTAL UNITS:</b>	<b>36</b>

## **COURSES OFFERED BY THE DEPARTMENT OF INSPECTION TECHNOLOGY:**

### **INSPEC 010 FUNDAMENTALS OF CONSTRUCTION INSPECTION I 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

A basic study of soils engineering, soils construction methods, soils identification, and soils terminology and nomenclature.

*Associate Degree Applicable*

### **INSPEC 011 FUNDAMENTALS OF CONSTRUCTION INSPECTION II 3 UNITS**

**PREREQUISITE:** INSPEC 010.

**LECTURE:** 3 hours per week.

A basic study of concrete and asphalt including cements, aggregates, admixtures, job and batch, control, properties of concrete, finishing, curing, and reinforcing.

*Associate Degree Applicable*

### **INSPEC 012**

## **FUNDAMENTALS OF CONSTRUCTION INSPECTION III 3 UNITS**

**PREREQUISITE:** INSPEC 011.

**LECTURE:** 3 hours per week.

A basic study of structures including wood, steel, and masonry construction, building occupancies, constructions and separations, acoustics and sound control.

*Associate Degree Applicable*

### **INSPEC 013B ADVANCED CONSTRUCTION INSPECTION: UNIFORM BUILDING CODE 3 UNITS**

**PREREQUISITE:** INSPEC 012.

**LECTURE:** 3 hours per week.

Study of the Uniform Building Code for inspectors, including application, interpretation, and use of the code.

*Associate Degree Applicable*

### **INSPEC 014B ADVANCED CONSTRUCTION INSPECTION: NATIONAL ELECTRICAL CODE 3 UNITS**

**PREREQUISITE:** INSPEC 012.

**LECTURE:** 3 hours per week.

The interpretation and use of the National Electrical Code.

*Associate Degree Applicable*

### **INSPEC 015B ADVANCED CONSTRUCTION INSPECTION: UNIFORM PLUMBING CODE 3 UNITS**

**PREREQUISITE:** INSPEC 012.

**LECTURE:** 3 hours per week.

The interpretation and use of the Uniform Plumbing Code.

*Associate Degree Applicable*

### **INSPEC 016B ADVANCED CONSTRUCTION INSPECTION: UNIFORM MECHANICAL CODE 3 UNITS**

**PREREQUISITE:** INSPEC 012.

**LECTURE:** 3 hours per week.

The interpretation and use of the Uniform Mechanical Code.

*Associate Degree Applicable*

### **INSPEC 017B CALIFORNIA STATE ENERGY REGULATIONS FOR RESIDENTIAL BUILDINGS 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Basic compliance with California Title 24 Energy Efficiency Standards for residential buildings. Includes prescriptive and performance methods, such as alternative packages, point systems, and computers.

*Associate Degree Applicable*

### **INSPEC 018B CALIFORNIA STATE ENERGY REGULATIONS FOR NON-RESIDENTIAL BUILDINGS 3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Basic compliance with California Title 24 Energy Efficiency Standards for non-residential buildings. Includes prescriptive and performance methods, such as alternative packages, point systems, and computers.

*Associate Degree Applicable*

### **INSPEC 024B COMMUNITY RELATIONS FOR CIVIL SERVICE EMPLOYEES 3 UNITS**

**PREREQUISITE:** None.

**LECTURE: 3 hours per week.**

Introduction to community relations for civil service employees.

*Associate Degree Applicable*

**INSPEC 025B**

**BUILDING INSPECTION FOR CIVIL SERVICE  
EMPLOYEES: COMMUNICATION AND  
ENFORCEMENT**

**3 UNITS**

**PREREQUISITE: None.**

**LECTURE: 3 hours per week.**

Effective writing and building inspection skills for Civil Service employees.

*Associate Degree Applicable*

**INSPEC 026B**

**NON-STRUCTURAL PLAN REVIEW**

**3 UNITS**

**COREQUISITE: INSPEC 013B.**

**LECTURE: 3 hours per week.**

Training in the application of the Uniform Building Code to pre-construction drawings, including legal requirements for nonstructural plan review, local and community laws applicable to pre-construction drawings, and the use of plan reviews as a first step in performing consistent and thorough inspections.

*Associate Degree Applicable*

**INSPEC 198**

**INSPECTION TECHNOLOGY WORK EXPERIENCE**

**1-4 UNITS**

**PREREQUISITE: None.**

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

**INTERIOR DESIGN**

See the Department of FAMILY CONSUMER SCIENCE

**JOURNALISM**

See the Department of ENGLISH

**LEGAL ADMINISTRATIVE  
ASSISTANT**

See the certificate program in the department of  
OFFICE INFORMATION SYSTEMS

**LIBERAL ARTS  
ASSOCIATE OF ARTS DEGREE**

Division:	Instruction Office
Division Dean:	Dr. Robin Calote Vice President, Instruction
Administrative Assistant:	Lisa Gonzales
Division Office:	Administration 216 (909) 384-8993

The Liberal Arts major is an interdisciplinary major that exposes students to various academic disciplines and includes courses from the Sciences, Social Sciences and Humanities. The major is intended for students who want to transfer to a university, or for students who want a general Associate of Arts Degree that reflects broad-based interests rather than the more narrow focus of other majors.

Students may obtain an Associate of Arts Degree in Liberal Arts by completing a minimum of 60 semester units

of coursework (of these 60 units, a minimum of 12 units must be taken at SBVC) in addition to meeting one of the following criteria:

1. Completion of all CSU General Education-Breadth requirements, as described on pages 36-37 of the college catalog; or
2. Completion of all IGETC requirements for either the University of California or the California State University systems, as described on pages 34-35 of the college catalog; or
3. Completion of the requirements for Associate Degree Option 2, as described on page 32 of the college catalog, plus 18 additional units from Category I (Natural Science), Category II (Social and Behavioral Science) and Category III (Humanities).

## LIBRARY TECHNOLOGY

DIVISION: Learning Resources  
 INTERIM DIVISION DEAN: Marie Mestas, M.L.S.  
 OTHER FACULTY: Dan Angelo, M.H.R.O.D.  
 Celia McKinley, M.L.I.S.  
 Odette Salvaggio, Ph.D.  
 Patricia Wall, M.L.I.S.  
 DIVISION SECRETARY: Terry Conboy  
 DIVISION OFFICE: Library 202  
 (909) 384-8576  
 LIAISON COUNSELOR: Juan Zepeda, M.S.C.  
 (909) 384-8976

Library skills are fundamental to student success, especially in today's information-laden society. The Library Technology Department offers one course (LIB 110) which is designed to teach students how to access both print and on-line information sources more efficiently and effectively. The remaining Library Technology courses are part of an associate of arts degree or a certificate program designed for students who are interested in working as paraprofessionals in the library field. Taken alone, each course provides entry-level exposure to a particular library department or function. Presently employed library workers can also take courses to increase their level and variety of training in the library field. Courses for the program are rotated over a two-semester sequence.

## LIBRARY SCIENCE ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Library Science, students must complete 18 units from the following list plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

REQUIRED COURSES:	UNITS
LIB 062 Care and Repair of Library Materials	1
LIB 110 Information Literacy	1
LIB 120 Introduction to Libraries for Library Technicians	1
LIB 122 Public Services for Library Technicians	3
LIB 126 Acquisitions for Library Technicians	3
LIB 128 Library Technical Services	3
LIB 130 Library Media Services	2
LIB 132 Library Automation for Library Techs	2
ENGL 055 or 155 Children's Literature	3
or	
Any other college literature course	(3)

**TOTAL UNITS:**

**19**

## LIBRARY TECHNOLOGY CERTIFICATE

Students working toward certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

REQUIRED COURSES:	UNITS
LIB 062 Care and Repair of Library Materials	1
LIB 120 Introduction to Libraries for Library Technicians	1
LIB 122 Public Services for Library Technicians	3
LIB 126 Acquisitions for Library Technicians	3
LIB 128 Library Technical Services	3
LIB 130 Library Media Services	2
LIB 132 Library Automation for Library Technicians	2
or	
Any other hands-on computer course	
*LIB 198 Library Work Experience	1-4
ENGL 055 or ENGL 155 Children's Literature	3
or	
Any other college literature course	(3)
OIS 100 Beginning Keyboarding	3
or	
Demonstrated ability to type 30 wpm for five minutes	
<b>TOTAL UNITS:</b>	<b>22 - 25</b>

*\*This requirement may be waived if the student has been employed in a library for at least one year.*

## COURSES OFFERED BY THE DEPARTMENT OF LIBRARY TECHNOLOGY:

### LIB 062 CARE AND REPAIR OF LIBRARY MATERIALS 1 UNIT

**PREREQUISITE: None.**

**LECTURE: .5 hour per week and**

**LABORATORY: 1 hour per week.**

Basic, hands-on instruction in the binding, repair, and care of printed library materials.

*Associate Degree Applicable*

### LIB 110 INFORMATION LITERACY 1 UNIT

**PREREQUISITE: None.**

**LECTURE: .50 hour and**

**LABORATORY: 1.5 hours per week.**

An introduction to the skills needed to effectively access print and online information sources, to critically evaluate the information retrieved, and to practice ethical behavior in regard to information technology.

*Applicable to Associate Degree*

*Course credit transfers to CSU and UC.*

### LIB 120 INTRODUCTION TO LIBRARIES FOR LIBRARY TECHNICIANS 1 UNIT

**PREREQUISITE: None.**

**LECTURE: 1 hour per week.**

Introduction to the philosophy of library service; the history and types of libraries; the relationship of a library to the community it serves; the organizational structure of libraries; the role of the Library Technician; and the development of workplace attitude.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 122**  
**PUBLIC SERVICES FOR LIBRARY TECHNICIANS** **3 UNITS**

**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

An introduction to library circulation systems; customer service skills; bibliographic instruction; shelf maintenance; image in public service; dealing with problem patrons; and basic reference skills, including a review of standard print and computer-based reference sources and their usage.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 126**  
**ACQUISITIONS FOR LIBRARY TECHNICIANS** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Introduction to the publishing industry; principles of collection development; bibliographic searching; acquisitions tools and techniques; accounting and budgeting procedures; an overview of ordering, receiving and claiming procedures; and weeding procedures.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 128**  
**LIBRARY TECHNICAL SERVICES** **3 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 3 hours per week.

Introduction to descriptive and subject cataloging, classification of materials using the Dewey Decimal and Library of Congress systems, preparation of catalog cards and computer database records, and use of electronic bibliographic utilities.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 130**  
**LIBRARY MEDIA SERVICES** **2 UNITS**  
**PREREQUISITE:** None.

**LECTURE:** 1.5 hours per week and

**LABORATORY:** 1.5 hours per week.

Provides an overview of a wide variety of media services within a library setting, ranging from the more traditional formats of film and video to the more recent compact disc technologies, digital audio, digitized video, telecommunications, and hypermedia.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 132**  
**LIBRARY AUTOMATION FOR LIBRARY TECHNICIANS** **2 UNITS**

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORIES:** LIB 122, LIB 126, and LIB 128.

**LECTURE:** 1.5 hour per week and

**LABORATORY:** 1.5 hours per week.

Introduction to the application and integration of computer systems in libraries. Students will be exposed to a variety of computer applications including online public access catalogs, automated circulation and cataloging systems. In addition, students will gain entry-level proficiency in utilizing compact disc technology and in conducting online database searches.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

**LIB 198**  
**LIBRARY WORK EXPERIENCE** **1-4 UNITS**  
**PREREQUISITE:** None.

Supervised training in the form of on-the-job employment that will enhance the student's educational goals. The student's major and job must match. Students work 5-20 hours per week, with 5 hours each week equal to one unit. Students may earn a total of 16 units toward graduation in work experience courses.

*Associate Degree Applicable*

**LIB 296-297-298-299**  
**SPECIAL TOPICS IN LIBRARY TECHNOLOGY** **.25-1 UNIT**

**PREREQUISITE:** None.

**LECTURE:** 4 hours per semester per 1/4 unit.

Selected topics for those working in the library field. Topics will vary, but may include coping with difficult patrons, children's programming, legal research materials, medical library service, book repair, video camera techniques, advanced reference skills, and disaster preparedness for libraries.

*Associate Degree Applicable*

*Course credit transfers to CSU.*

## **MACHINIST TECHNOLOGY**

DIVISION: Technical  
DIVISION DEAN: Thomas Bauman, M.S., P.E.  
DEPARTMENT HEAD: William Clarke, Ed.D.  
(909) 384-8504  
DIVISION SECRETARY: Patsy Martinez  
(909) 384-8902  
DIVISION OFFICE: Technical 108  
(909) 384-4451  
LIAISON COUNSELOR: George Fleming, M.S.  
(909) 384-8975

The Machinist Technology curriculum is designed to prepare students for entry-level employment in manufacturing. The courses train first-time students and re-train students already employed in the machine trades industry. The curriculum has been developed in collaboration with local industries to meet the National Industry Metalworking Standard (NIMS) Industry. Supporters of this program are Society of Plastics Industry (SPI) S&C Mold, W.A. Lane Corporation, Wilden Pump, Service Industrial Tool and Supply, Rettig Machine, Prestige Mold, Fontana Machines, MWYP International, and Zwerner Industries.

## **MACHINIST TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in one of the Machinist Technology majors, students must complete all the requirements for the appropriate certificate with a grade of C or better plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

## **MACHINIST TECHNOLOGY CERTIFICATES**

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

There are four Machine Technology certificates: (1) Computer Numerical Control: CAD/CAM, (2) Machine Technology, (3) Machinist Standard, and (4) Tool and Die.

Each of these certificates requires the core courses plus specialized courses.

<b>REQUIRED CORE COURSES:</b>	<b>UNITS</b>
MACH 120A Machine Shop Theory	2
MACH 021A Machine Shop I	4
MACH 022A Machine Shop II	4
MACH 023A Machine Shop III	4
MACH 024A Machine Shop IV	4
MACH 090A Engineering Blueprint Reading, Geometric Dimensioning and Tolerancing	3
TECALC 097 Technical Calculations	4
<b>TOTAL UNITS for Core Requirements:</b>	<b>25</b>

#### 1. COMPUTER NUMERICAL CONTROL: CAD/CAM

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
<u>Machine Technology Core Requirements</u>	25
MACH 070A Computer Numerical Control Machining I	(3)
MACH 071A Computer Numerical Control Machining II	(3)
MACH 072B Computer Aided Design/Computer Aided Manufacturing I	(3)
MACH 073B Computer Aided Design/Computer Aided Manufacturing II	(3)
MACH 074A Set-up and Operation of Various Machine Controls	(3)
MACH 129A Manufacturing Processes	(3)

**TOTAL UNITS for the Computer Numerical Control: CAD/CAM specialized courses:** **18**

**TOTAL UNITS REQUIRED for the Computer Numerical Control: CAD/CAM Certificate:** **43**

#### 2. MACHINE TECHNOLOGY

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
<u>Machine Technology Core Requirements</u>	25

**TOTAL UNITS required for the Machine Technology Certificate:** **25**

#### 3. MACHINIST STANDARD

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
<u>Machine Technology Core Requirements</u>	25
MACH 070A Computer Numerical Control Machining I	3
MACH 129A Manufacturing Processes	3

**TOTAL UNITS for the Machinist Standard specialized courses:** **6**

**TOTAL UNITS required for the Machinist Standard Certificate:** **31**

#### 4. TOOL AND DIE

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
<u>Machine Technology Core Requirements</u>	25
MACH 060A Tool and Die	4
MACH 061A Jig and Fixture Making	4
MACH 062X3 Introduction to Mold Making	3
MACH 129A Manufacturing Processes	3

**TOTAL UNITS for the Tool and Die specialized courses:** **14**

#### **TOTAL UNITS required for the Tool and Die Certificate**

**39**

#### **MECHANICAL HYDRAULICS/PNEUMATICS CERTIFICATE**

The Mechanical Hydraulics/Pneumatics Certificate program is designed to qualify students for entry-level work in industrial mechanical hydraulics maintenance with training on state-of-the-art pneumatic systems, basic components, pumps and hydraulic simulation equipment. This certificate enables the holder to perform many plant maintenance requirements.

<b>REQUIRED COURSES:</b>	<b>UNITS</b>
MACH 021A Machine Shop I	4
MACH 090A Engineering Blueprint Reading, Geometric Dimensioning and Tolerancing	3
MACH 091A Rigging Systems and Techniques	3
MACH 092A Fluid Power Systems I	2
MACH 093A Fluid Power Systems II	2
MACH 094A Fluid Pump Systems	2
MACH 095A Piping Systems	1
MACH 096A Central Lubrication	1
MACH 097A Mechanical Systems	2
TECALC 097 Technical Calculations	4
WELD 145 Shielded Metal Arc Welding	3
<b>TOTAL UNITS:</b>	<b>27</b>

*\*Pending approval from the California Community College Chancellor's Office.*

#### **COURSES OFFERED BY THE DEPARTMENT OF MACHINIST TECHNOLOGY:**

**MACH 021A MACHINE SHOP I** **4 UNITS**

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORY:** MACH 120A.

**LECTURE:** 2 hours per week and

**LABORATORY:** 6 hours per week.

First semester machine shop practices with emphasis on safety, shop mathematics, measurements and the correct use of the basic machine tools, mills, lathes, saws and drill presses.

*Associate Degree Applicable*

**MACH 022A MACHINE SHOP II** **4 UNITS**

**PREREQUISITE:** None.

**DEPARTMENTAL ADVISORY:** MACH 021A.

**LECTURE:** 2 hours per week and

**LABORATORY:** 6 hours per week.

Second semester intermediate machine shop with a machining background. Emphasis on safety, applied mathematics and advanced processes on mills, lathes and tool grinding.

*Associate Degree Applicable*