

PART IV – COURSE DESCRIPTIONS

Each course entry in this catalog includes the course number, title, prerequisite, a brief description, the number of semester units, and the number of hours the course meets based on the 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 and University of California systems.

- Courses numbered from 001 through 099 are generally applicable to certificate and associate degree programs.
- Courses numbered from 100 through 299 are generally applicable toward baccalaureate degrees conferred by universities.
 - Courses that are designated CSU transfer to CSU campuses system wide.
 - Courses designated UC are approved by the UC Office of the President as comparable to courses offered at UC. Courses with *UC notation indicate that some credit limitation applies. UC limits credit on courses that are similar in nature or taken after a higher level course(s). To access information on SBVC courses that transfer to UC, go to www.assist.org.
 - Although courses may be indicated in the catalog as transferable to UC and/or CSU, they may or may not meet general education or major preparation. Students who plan to transfer to UC or CSU should consult with a counselor and the following websites:
www.csumentor.edu
www.ucop.edu/pathways
www.assist.org
- Courses numbered from 900-999 are not applicable to associate degrees and generally do not transfer to four-year institutions.
- Certain course entries include a symbol x and a number following the symbol, such as MUS 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

DIVISION: Learning Resources
DIVISION DEAN: Marie Mestas, M.L.S.
FACULTY CHAIR: Odette C. Salvaggio, Ph.D.
OFFICE ASSISTANT: Robyn Wicklund
(909) 384-8588
LIAISON COUNSELOR: Ailsa Aguilar-Kitibutr, Psy.D.
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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 Faculty 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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Find and interpret information.

- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.
- Accept responsibility for own actions.
- Demonstrate respect for a diversity of ideas and the rights of others.
- Exhibit personal, professional and academic honesty.
- Recognize own strengths and weaknesses.
- Recognize own learning style.
- Develop time management skills.
- Demonstrate etiquette in face-to-face and written interactions.

COURSES OFFERED BY THE DEPARTMENT OF ACADEMIC ADVANCEMENT:

ACAD 100
STRATEGIES FOR COLLEGE SUCCESS **1 UNIT**
PREREQUISITE: None.

LECTURE: 1 hour per week.

Introduces students 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 for elective credit only.

ACAD 110**TUTOR TRAINING****1 UNIT****PREREQUISITE: None.****DEPARTMENTAL ADVISORY: Completion of the courses to be tutored with a minimum grade of "B", departmental recommendation, and 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 for elective credit only.***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 & Information Technology
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 Business 100D
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 OTHER FACULTY: Janet Courts, M.A.
 ADMINISTRATIVE SECRETARY: Chris Williams
 DIVISION OFFICE: Business 101
 (909) 384- 8908
 LIAISON COUNSELORS: Patty Jones, M.A.
 (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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Find and interpret information.
- Apply learned knowledge to new situations.
- Accept responsibility for own actions.

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

This certificate is designed to prepare students for entry-level positions updating and maintaining accounting records, tabulating expenditures and receipts, tracking accounts payable and receivable, and tabulating profit and loss. 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
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 Microeconomics	3
MATH 095 Intermediate Algebra	4
BUSCAL 091 Beginning Algebra for Business	4
or	
MATH 090 Elementary Algebra	(4)
Ten Units from the list of RECOMMENDED COURSES	10
TOTAL UNITS:	45

RECOMMENDED COURSES:	UNITS
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	3
or	
MATH 102 Introduction to College Algebra	4
CIT 101 Introduction to Computer Literacy	3
REALST 100 Real Estate Principles	3

BOOKKEEPING CERTIFICATE

REQUIRED COURSES:	UNITS
ACCT 010 Bookkeeping	3
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
CIT 033 Machine Calculations	3
TOTAL UNITS:	15-16

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
TOTAL UNITS:	15

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
CIT 033 Machine Calculations	3
TOTAL UNITS:	15

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 030 FEDERAL AND STATE TAXATION 4 UNITS

PREREQUISITE: None.

LECTURE: 4 hours per week.

A comprehensive course of study and practical application of basic federal and state income taxes. Includes history and objectives of the tax, research and analysis of current tax issues, along with the tax treatment of various types of entities, types of income, types of deductions and types of credits. Emphasis is on the individual as a taxpayer. Actual tax forms are studied and returns prepared.

Associate Degree Applicable

ACCT 047 COMPUTERIZED ACCOUNTING 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

Provides a comprehensive overview of accounting software. 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. Also includes the solution of accounting problems using spreadsheet software and creating spreadsheets using formulas and graphics.

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 and *UC.*

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 and *UC.*

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 for elective credit only.

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 for elective credit only.

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 and *UC.*

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

ADMINISTRATION OF JUSTICE

DIVISION:	Criminal Justice
ADMINISTRATIVE DEAN:	Gloria M. Fisher, J.D.
FACULTY CHAIR:	Patrick Buckley, B.S.
ADMINISTRATIVE SECRETARY:	Ruby Zuniga
DIVISION OFFICE:	Planetarium, 2nd Floor (909) 384-4431
LIAISON COUNSELOR:	Joyce Smith, M.A. (909) 384-4404

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.

The Administration of Justice courses listed may not be offered every semester due to instructor availability. Please refer to the college semester schedule of class offerings.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Evaluate strengths, weaknesses and fallacies of logic.
- Locate, evaluate and select evidence to support or discredit an argument.
- Apply learned knowledge to new situations.
- Accept responsibility for own actions.
- Demonstrate respect for a diversity of ideas and the rights of others.
- Exhibit personal, professional and academic honesty.
- Display behavior consistent with ethical standards within a discipline.
- Demonstrate etiquette in face-to-face and written interactions.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.

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

The Administration of Justice certificate is designed to prepare students for entry-level positions in a wide range of law enforcement services, including the courts, corrections, law enforcement, and private security. 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
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)
TOTAL UNITS:	21

RECOMMENDED COURSES:	UNITS
ENGL 101 Freshman Composition	4
ENGL 102 Intermediate Composition and Critical Thinking	4
HIST 101 US History: 1865 to 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.

**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; 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 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. Students work 5-20 hours per week to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

AERONAUTICS

DIVISION: Applied Technology & Transportation
 DIVISION DEAN: Gary Kelly, M.S.
 FACULTY CHAIR: Allen Moore, A.A.
 Technical 108
 (909) 384-8270
 OTHER FACULTY: Kevin Kammer, A.A.
 ADMINISTRATIVE SECRETARY: Cecile Smith
 (909) 384-8902
 DIVISION OFFICE: Technical 108
 (909) 384-4451
 LIAISON COUNSELOR: Jennifer Mendoza, M.S.
 (909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Locate, evaluate and select evidence to support or discredit an argument.
- Exhibit personal, professional and academic honesty.
- Display behavior consistent with ethical standards within a discipline.

AERONAUTICS ASSOCIATE OF SCIENCE DEGREE

The Aeronautics Department offers these area of specialization for the Associate of Science Degree: Aviation Maintenance Technician, 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.)

AVIATION MAINTENANCE TECHNICIAN

REQUIRED COURSES:		UNITS
AERO 100.1	Airframe and Powerplant General Curriculum-Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum-Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum-Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum-Servicing	2.5
AERO 102	Airframe Maintenance Lecture-Structures	6
AERO 103	Airframe Maintenance Lecture-Systems and Components	6
AERO 104	Powerplant Maintenance Lecture-Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory-Calculations	1
AERO 106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General Laboratory-Servicing	1
AERO 108	Airframe Maintenance Laboratory-Structures	5
AERO 109	Airframe Maintenance Laboratory-Systems and Components	5
AERO 110	Powerplant Maintenance Laboratory-Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory-Accessory Overhaul	5
TOTAL UNITS:		58

FLIGHT OPERATIONS AND MANAGEMENT

The college offers a two year program in Flight Operations Management for students who are interested in a career as a Commercial pilot either in general aviation or the airlines, or in the area of aviation management. This certificate prepares students for immediate employment or for transfer to other colleges, and includes Federal Aviation Administration approved curricula in Private Pilot Ground School and Instrument Ground School.

REQUIRED COURSES:		UNITS
AERO 121	Aviation Fundamentals	3
*AERO 122D	FAA 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 140D	Instrument Ground School and Flight Simulators	4
AERO 144	Aviation Weather	3
BUSAD 100	Introduction to Business	3
PHYSIC 101	Basic Physics	4
TOTAL UNITS:		34

**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 is designed to prepare students to qualify for the airframe and powerplant certificate issued by the Federal Aviation Administration, which 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. 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. 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
AERO 100.1	Airframe and Powerplant General Curriculum-Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum-Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum-Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum-Servicing	2.5
AERO 102	Airframe Maintenance Lecture-Structures	6
AERO 103	Airframe Maintenance Lecture-Systems and Components	6
AERO 104	Powerplant Maintenance Lecture-Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory-Calculations	1
AERO106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General Laboratory-Servicing	1
AERO 108	Airframe Maintenance Laboratory-Structures	5
AERO 109	Airframe Maintenance Laboratory-Systems and Components	5
AERO 110	Powerplant Maintenance Laboratory-Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory-Accessory Overhaul	5
TOTAL UNITS:		58

2. FLIGHT OPERATIONS AND MANAGEMENT

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 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.

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
AERO 121	Aviation Fundamentals	3
*AERO 122D	FAA 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
AERO140D	Instrument Ground School and Flight Simulators	4
AERO 144	Aviation Weather	3
BUSAD 100	Introduction to Business	3
PHYSIC 101	Basic Physics	4
TOTAL UNITS:		34

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

3. POWERPLANT MAINTENANCE TECHNICIAN

This certificate is designed to prepare students to qualify for the Powerplant Certificate issued by the Federal Aviation Administration, which enables the holder to perform 100-hour inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines. 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. 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
AERO 100.1	Airframe and Powerplant General Curriculum-Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum-Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum-Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum-Servicing	2.5
AERO 104	Powerplant Maintenance Lecture-Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory-Calculations	1
AERO106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General Laboratory-Servicing	1
AERO 110	Powerplant Maintenance Laboratory-Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory-Accessory Overhaul	5
TOTAL UNITS:		36

4. AIRFRAME MAINTENANCE TECHNICIAN

This certificate is designed to prepare students to qualify for the airframe certificate issued by the Federal Aviation Administration, which enables the holder to perform 100-hour inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines. 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. 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
AERO 100.1 Airframe and Powerplant General Curriculum-Calculations	2.5
AERO 100.2 Airframe and Powerplant General Curriculum-Publications	2.5
AERO 101.1 Airframe and Powerplant General Curriculum-Materials	2.5
AERO 101.2 Airframe and Powerplant General Curriculum-Servicing	2.5
AERO 102 Airframe Maintenance Lecture-Structures	6
AERO 103 Airframe Maintenance Lecture-Systems and Components	6
AERO 106.1 Airframe and Powerplant General Laboratory-Calculations	1
AERO106.2 Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1 Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2 Airframe and Powerplant General Laboratory-Servicing	1
AERO 108 Airframe Maintenance Laboratory-Structures	5
AERO 109 Airframe Maintenance Laboratory-Systems and Components	5
TOTAL UNITS:	36

5. AVIONICS TECHNOLOGY

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

REQUIRED COURSES:	UNITS
AERO 121* Aviation Fundamentals	3
AERO 140C* 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
TOTAL UNITS:	52

* 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 100.1
AIRFRAME AND POWERPLANT GENERAL CALCULATIONS 2.5 UNITS**

PREREQUISITE: None.

COREQUISITES: AERO 106.1 and either AERO 102 and AERO 108 or AERO 104 and AERO 110.

LECTURE: 2.5 hours per week.

This Federal Aviation Administration approved curriculum provides training for the general requirements in aviation maintenance. The areas covered will be familiarization with basic hand tool, applications of mathematics, basic physics and Federal Aviation Regulations.

Associate Degree Applicable

Course credit transfers to CSU.

**AERO 100.2
AIRFRAME AND POWERPLANT GENERAL PUBLICATIONS 2.5 UNITS**

PREREQUISITE: None.

COREQUISITES: AERO 106.2 and either AERO 102 and AERO 108 or AERO 104 and AERO 110.

LECTURE: 2.5 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in aviation maintenance. The areas covered will be familiarization with aircraft forms and records, FAA Publications, basic electricity including application of Ohm's law, use of a volt/ohm meter, read and interpret electrical circuit diagrams, service and inspection of batteries.

Associate Degree Applicable

Course credit transfers to CSU.

**AERO 101.1
AIRFRAME AND POWER PLANT GENERAL -
MATERIALS 2.5 UNITS**

PREREQUISITE: None.

**COREQUISITES: AERO 107.1, AERO 103, and AERO
109 or AERO 105 and AERO 111.**

LECTURE: 2.5 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in maintenance mandated by the FAA. Focus will be on aircraft weight and balance control, basic drafting, and aircraft fluid lines and fittings.

*Associate Degree Applicable
Course credit transfers to CSU.*

**AERO 101.2
AIRFRAME AND POWER PLANT GENERAL -
SERVICING 2.5 UNITS**

PREREQUISITE: None.

**COREQUISITES: AERO 107.2, AERO 103, and AERO
109 or AERO 105 and AERO 111.**

LECTURE: 2.5 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in maintenance mandated by the FAA. Focus will be on aircraft hardware, materials, non-destructive testing processes, corrosion control, aircraft cleaning and ground operations and handling.

*Associate Degree Applicable
Course credit transfers to CSU.*

**AERO 102
AIRFRAME MAINTENANCE LECTURE - STRUCTURES
6 UNITS**

**PREREQUISITES/COREQUISITES: AERO 100.1, AERO
100.2, AERO 106.1 and AERO 106.2**

COREQUISITE: AERO 108.

LECTURE: 6 hours per week.

This Federal Aviation Administration approved curriculum provides training in airframe structures and airframe systems and components. Satisfactory completion qualifies students to take the FAA examination for airframe certification. Topics include 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 101.1, AERO
101.2, AERO 107.1 and AERO 107.2.**

COREQUISITE: AERO 109.

LECTURE: 6 hours per week.

This Federal Aviation Administration approved curriculum provides training in airframe structures and airframe systems and components. Satisfactory completion qualifies students to take the FAA examination for airframe certification. Topics include 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 100.1,
AERO 100.2, AERO 106.1 and AERO 106.2.**

COREQUISITE: AERO 110.

LECTURE: 6 hours per week.

This Federal Aviation Administration approved curriculum provides training in powerplant engines and components. Satisfactory completion qualifies students to take the FAA examination for the powerplant certificate. Topics include reciprocating engine, engine inspections, engine lubrication systems, engine instruments, engine fire protection systems, and engine fuel systems.

*Associate Degree Applicable
Course credit transfers to CSU.*

**AERO 105
POWER PLANT MAINTENANCE LECTURE -
ACCESSORY OVERHAUL 6 UNITS**

**PREREQUISITES/COREQUISITES: AERO 101.1, AERO
101.2, AERO 107.1 and AERO 107.2.**

COREQUISITE: AERO 111.

LECTURE: 6 hours per week.

This Federal Aviation Administration approved curriculum provides training in powerplant system and components. Satisfactory completion qualifies students to take the FAA examination for the powerplant certificate. Topics include basic systems for electricity, ignition, and fuel and fuel metering, induction, cooling, exhaust, propellers, turbine engines and auxiliary power units.

*Associate Degree Applicable
Course credit transfers to CSU.*

**AERO 106.1
AIRFRAME AND POWER PLANT GENERAL
LABORATORY - CALCULATIONS 1 UNIT**

PREREQUISITE: None.

**COREQUISITES: AERO 100.1 and either AERO 102
and AERO 108 or AERO 104 and AERO 110.**

LABORATORY: 3 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in maintenance mandated by the FAA. Focus will be on aircraft weight and balance control, basic drafting, and aircraft fluid lines and fittings.

*Associate Degree Applicable
Course credit transfers to CSU.*

**AERO 106.2
AIRFRAME AND POWER PLANT GENERAL
LABORATORY - PUBLICATIONS 1 UNIT**

PREREQUISITE: None.

**COREQUISITES: AERO 100.2 and either AERO 102
and AERO 108 or AERO 104 and AERO 110.**

LABORATORY: 3 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in aviation maintenance. The areas covered will be familiarization with aircraft forms and records, FAA Publications, basic electricity including application of Ohm's law, use of a volt/ohm meter, read and interpret electrical circuit diagrams, service and inspection of batteries.

*Associate Degree Applicable
Course credit transfers to CSU.*

AERO 107.1
AIRFRAME AND POWER PLANT GENERAL
LABORATORY - MATERIALS 1 UNIT
PREREQUISITE: None.

COREQUISITES: AERO 101.1, AERO 103, and AERO 109 or AERO 105 and AERO 111.

LABORATORY: 3 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in maintenance mandated by the FAA. Focus will be on aircraft weight and balance control, basic drafting, aircraft fluid lines and fittings.

Associate Degree Applicable
Course credit transfers to CSU.

AERO 107.2
AIRFRAME AND POWER PLANT GENERAL
LABORATORY - SERVICING 1 UNIT
PREREQUISITE: None.

COREQUISITES: AERO 101.2, AERO 103, and AERO 109 or AERO 105 and AERO 111.

LABORATORY: 3 hours per week.

This Federal Aviation Administration (FAA) approved curriculum provides training for the general requirements in maintenance mandated by the FAA. Focus will be on aircraft hardware, materials, non-destructive testing processes, corrosion control, aircraft cleaning, and ground operations and handling.

Associate Degree Applicable
Course credit transfers to CSU.

AERO 108
AIRFRAME MAINTENANCE LABORATORY -
STRUCTURES 5 UNITS

PREREQUISITES/COREQUISITES: AERO 100.1 AERO 100.2, AERO 106.1, and AERO 106.2.

COREQUISITE: AERO 102.

LABORATORY: 15 hours per week.

This Federal Aviation Administration approved curriculum provides training in airframe structures and airframe systems and components. Satisfactory completion qualifies students to take the FAA examination for airframe certification. Topics include 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 101.1, AERO 101.2, AERO 107.1, and AERO 107.2

COREQUISITE: AERO 103.

LABORATORY: 15 hours per week.

This Federal Aviation Administration approved curriculum provides training in airframe structures and airframe systems and components. Satisfactory completion qualifies students to take the FAA examination for airframe certification. Topics include aircraft welding; electrical circuits; and basic aircraft systems for hydraulics, landing gear, brakes, warning, instruments, autopilot, 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 100.1, AERO 100.2, AERO 106.1 and AERO 106.2.
COREQUISITE: AERO 104.

LABORATORY: 15 hours per week.

This Federal Aviation Administration approved curriculum provides training in powerplant engines and components. Satisfactory completion qualifies students to take the FAA examination for the powerplant certificate. Topics include reciprocating engine, engine inspections, engine lubrication systems, engine instruments, engine fire protection systems, and engine fuel systems.

Associate Degree Applicable
Course credit transfers to CSU.

AERO 111
POWER PLANT MAINTENANCE LABORATORY -
ACCESSORY OVERHAUL 5 UNITS
PREREQUISITES/COREQUISITES: AERO 101.1, AERO 102.2, AERO 107.1 and AERO 107.2.
COREQUISITE: AERO 105.

LABORATORY: 15 hours per week.

This Federal Aviation Administration approved curriculum provides training in powerplant system and components. Satisfactory completion qualifies students to take the FAA examination for the powerplant certificate. Topics include basic systems for electricity, ignition, fuel and fuel metering, induction, cooling, exhaust, propellers, turbine engines and auxiliary power units.

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 122D
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.

Familiarizes the aviator or prospective pilot with the operating principles and construction highlights of both reciprocating and jet aircraft engines.

Associate Degree Applicable
Course credit transfers to CSU.

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.
 This course covers the fundamentals of aircraft design and construction including the types of construction; reasons for variances in construction from aircraft to aircraft; manufacturing processes 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 for elective credit only.

AERO 134
CIVIL AVIATION MANAGEMENT AND LAWS **3 UNITS**
PREREQUISITE: None.
LECTURE: 3 hours per week.
 This course covers the history of civil aviation in the United States including: federal legislation, international treaties and agreements, and regulations pertaining to the management of airports and airplane companies.
Associate Degree Applicable
Course credit transfers to CSU.

AERO 140D
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. Students work 5-20 hours per week to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students **MUST** be working for pay or volunteer before registering for a Work Experience class. **NOTE: Only one section of Work Experience may be taken during a semester.**
Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

AIR TRAVEL

DIVISION: Applied Technology & Transportation
 DIVISION DEAN: Gary Kelly, M.S.
 FACULTY CHAIR: Allen Moore, A.A.
 Technical 108
 (909) 384-8270
 OTHER FACULTY: Kevin Kammer, A.A.
 ADMINISTRATIVE SECRETARY: Cecile Smith
 (909) 384-8902
 DIVISION OFFICE: Technical 108
 (909) 384-4451
 LIAISON COUNSELOR: Jennifer Mendoza, M.S.
 (909) 384-4404

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Locate, evaluate and select evidence to support or discredit an argument.
- Exhibit personal, professional and academic honesty.
- Display behavior consistent with ethical standards within a discipline.

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 two Air Travel Career Certificates: (1) Air Travel Careers - *Flight*, and (2) Air Travel Careers – *Ground*. Each of these certificates requires the core courses, plus specialized courses.

AIR TRAVEL CAREERS - FLIGHT CERTIFICATE

This certificate is designed to prepare students for entry-level work as flight attendants. Students completing this certificate are also qualified to perform the tasks associated with the Ground 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
AIRTVL 010 Computer Use in Travel Careers	1
AIRTVL 011 Survey of Travel Careers	1.5
AIRTVL 012 Flight Attendant Survey	1.5
AIRTVL 013 Image, Attitude and Appearance	1.5
AIRTVL 014 Terminology, Codes and Operations	1.5
AIRTVL 015 Employment Writing Skills	1.5
AIRTVL 016 Employment Interviewing Skills	1.5
AIRTVL 017 Introduction to Cultural Awareness	1.5
AIRTVL 018 Ground and In-Flight Service	1.5
AIRTVL 019 Ground and In-Flight Safety	1.5
AIRTVL 198 Air Travel Careers Work Experience	1 - 4
PE 231 First Aid and CPR	3

Three (3) courses from the following list of Travel Geography are required for certification:

AIRTVL 020 Travel Geography - Resort Destin.	(1.5)
AIRTVL 022 Travel Geography - United States	(1.5)
AIRTVL 023 Travel Geography - The Americas	(1.5)
AIRTVL 024 Travel Geography - Pacific Rim	(1.5)
AIRTVL 025 Travel Geography - Southern Europe	(1.5)
AIRTVL 026 Travel Geography - Northern Europe	(1.5)
AIRTVL 027 Travel Geography - Eastern Europe	(1.5)
AIRTVL 028 Travel Geography - Africa	(1.5)

RECOMMENDED COURSES

AERO 121 Aviation Fundamentals	(3)
AERO 134 Civil Aviation Management & Laws	(3)
BUSAD 100 Introduction to Business	(3)
CIT 010 Beginning Keyboarding	(3)
ENGL 101 Freshman Composition	(4)
SPEECH 100 Elements of Public Speaking	(3)

TOTAL UNITS: 23 - 26
*Pending approval from the California Community College Chancellor's Office

AIR TRAVEL CAREERS - GROUND CERTIFICATE

This certificate is designed to prepare students for entry-level work for ground support/ticket agents for the aviation industry.

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
AIRTVL 010 Computer Use in Travel Careers	1
AIRTVL 011 Survey of Travel Careers	1.5
AIRTVL 013 Image, Attitude and Appearance	1.5
AIRTVL 014 Terminology, Codes and Operations	1.5
AIRTVL 015 Employment Writing Skills	1.5
AIRTVL 016 Employment Interviewing Skills	1.5
AIRTVL 017 Introduction to Cultural Awareness	1.5
AIRTVL 018 Ground and In-Flight Service	1.5
AIRTVL 019 Ground and In-Flight Safety	1.5
AIRTVL 198 Air Travel Careers Work Experience	1 - 4
PE 231 First Aid and CPR	3

Three (3) courses from the following list of Travel Geography are required for certification:

AIRTVL 020 Travel Geography - Resort Destin.	(1.5)
AIRTVL 022 Travel Geography - United States	(1.5)
AIRTVL 023 Travel Geography - The Americas	(1.5)
AIRTVL 024 Travel Geography - Pacific Rim	(1.5)
AIRTVL 025 Travel Geography - Southern Europe	(1.5)
AIRTVL 026 Travel Geography - Northern Europe	(1.5)
AIRTVL 027 Travel Geography - Eastern Europe	(1.5)
AIRTVL 028 Travel Geography - Africa	(1.5)

RECOMMENDED COURSES:

AERO 121 Aviation Fundamentals	(3)
AERO 134 Civil Aviation Management & Laws	(3)
BUSAD 100 Introduction to Business	(3)
CIT 010 Beginning Keyboarding	(3)
ENGL 101 Freshman Composition	(4)
SPEECH 100 Elements of Public Speaking	(3)

TOTAL UNITS: 21.5 - 24.5
*Pending approval from the California Community College Chancellor's Office

COURSES OFFERED BY THE DEPARTMENT OF AIR TRAVEL:

**AIRTVL 010
COMPUTER USE IN TRAVEL CAREERS 1.5 UNITS**
PREREQUISITE: None.
LECTURE: 1.50 hours per week.

This course is an overview of the use of computer systems and the associated terms used in the travel industry including reservation and ticketing, applications, resumes, and home based employee scheduling and briefing. (Formerly AIRTVL 110)
Associate Degree Applicable

**AIRTVL 011
SURVEY OF TRAVEL CAREERS 1.5 UNITS**
PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course is an introduction to the employment opportunities, qualifications, salary, and benefits for the travel careers industry. Includes an overview of employment in airports, hospitality industries, travel agencies, aviation support businesses, and on airlines, trains, cruises, and tours. (Formerly AIRTVL 101)
Associate Degree Applicable

AIRTVL 012
FLIGHT ATTENDANT SURVEY 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course is an introduction to flight attendant and in-flight service team qualifications, employment opportunities, responsibilities, lifestyles, salaries and benefits. (Formerly AIRTVL 102)
Associate Degree Applicable

AIRTVL 013
IMAGE, ATTITUDE AND APPEARANCE 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course is an 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. (Formerly AIRTVL 103)
Associate Degree Applicable

AIRTVL 014
TERMINOLOGY, CODES AND OPERATIONS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course is a survey of terminology and operations 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. (Formerly AIRTVL 104)
Associate Degree Applicable

AIRTVL 015
EMPLOYMENT WRITING SKILLS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course will help prepare students to write required employment documents such as resumes, applications, business letters, self-evaluations, a personal register of employment data, employment testing, and a document on employee/labor organizations and corporate affirmative action. (Formerly AIRTVL 105)
Associate Degree Applicable

AIRTVL 016
EMPLOYMENT INTERVIEWING SKILLS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course prepares students for employment interviews through role playing and feedback. Student interviews are videotaped and critiqued, providing students with opportunities to see the image they project. (Formerly AIRTVL 106)
Associate Degree Applicable

AIRTVL 017
INTRODUCTION TO CULTURAL AWARENESS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course provides an 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. (Formerly AIRTVL 117)
Associate Degree Applicable

AIRTVL 018
GROUND AND IN-FLIGHT SERVICE 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course is designed to acquaint students with service techniques for ground and in-flight operations. Students will also learn identification and pronunciation of foods and beverages and a knowledge of airline equipment to provide quality food and beverage service while developing a personal serving style. (Formerly AIRTVL 108)
Associate Degree Applicable

AIRTVL 019
GROUND AND IN-FLIGHT SAFETY 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course is designed to familiarize students with safety and security procedures for the travel industry which includes ground and in-flight equipment, passenger psychology, airport security, federal regulations and safety precautions while traveling. Students will also learn procedures to alert proper authorities when discussions of terrorism and hijacking are overheard. (Formerly AIRTVL 109)
Associate Degree Applicable

AIRTVL 020
TRAVEL GEOGRAPHY - RESORT DESTINATIONS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course familiarizes students with the current destinations in and near the United States popular with American tourists, including local cruises and their corresponding itineraries. Areas to be covered are the state of Hawaii, the islands of the Caribbean, the islands of the Bahamas and Bermuda, the Mexican Riviera, and the Yucatan Peninsula. (Formerly AIRTVL 120)
Associate Degree Applicable

AIRTVL 022
TRAVEL GEOGRAPHY - UNITED STATES 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course provides the student with information for maximizing the travel experience including regional accents and dialects, shopping, historical and recreational tourist destinations, and regional and cultural diversity in the United States. (Formerly AIRTVL 112)
Associate Degree Applicable

AIRTVL 023
TRAVEL GEOGRAPHY - THE AMERICAS 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.
This course will provide students with the resources to help travelers maximize their travel experience by increasing the students' knowledge of information about the culture, currency, language, shopping, and tourist destinations in Canada, Mexico, Caribbean, Central America, and South America. (Formerly AIRTVL 113)
Associate Degree Applicable

AIRTVL 024
TRAVEL GEOGRAPHY - PACIFIC RIM 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course provides the student with the resources to help travelers maximize the travel experience by increasing the students' knowledge of information about regional accents and dialects, shopping, historical and recreational tourist destinations, and regional and cultural diversity for Australia, New Zealand, Japan, South Korea, Hong Kong, China, Taiwan, Thailand, Philippines, Tahiti, Samoa, Fiji, Singapore, Malaysia, Indonesia, and Indochina. (Formerly AIRTVL 114)
Associate Degree Applicable

AIRTVL 025
TRAVEL GEOGRAPHY - SOUTHERN EUROPE 1.5 UNITS

PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course provides the student with resources for maximizing the travel experience by increasing the students' knowledge of information about regional accents and dialects, shopping, historical and recreational tourist destinations, and regional and cultural diversity for Greece, Spain, Portugal, Italy, Austria, Germany, Switzerland, and France. (Formerly AIRTVL 115)
Associate Degree Applicable

AIRTVL 026
TRAVEL GEOGRAPHY - NORTHERN EUROPE 1.5 UNITS

PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course provides the student with resources to help travelers maximize their travel experience by increasing the students' knowledge of information about customs, entry requirements, currency, languages and dialects, shopping, historical and recreational tourist destinations, and regional and cultural diversity for Scandinavia, the British Isles, the Netherlands, Belgium and Luxembourg. (Formerly AIRTVL 116)
Associate Degree Applicable

AIRTVL 027
TRAVEL GEOGRAPHY - EASTERN EUROPE 1.5 UNITS

PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course provides the student with resources to help travelers maximize their travel experience by increasing the students' knowledge of information about regional accents and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Russia and Republics, Czech Republic, Hungary, Poland, Yugoslav Republics, Romania, and Albania. (Formerly AIRTVL 117)
Associate Degree Applicable

AIRTVL 028
TRAVEL GEOGRAPHY - AFRICA 1.5 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week.

This course provides students with resources to help travelers maximize the travel experience by increasing the students' knowledge of information about customs, entry requirements, currency, languages and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for selected regions of Africa. (Formerly AIRTVL 118)
Associate Degree Applicable

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. Students work 5-20 hours per week to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

ALCOHOL/DRUG STUDIES

See courses within the
HUMAN SERVICES DEPARTMENT

AMERICAN SIGN LANGUAGE

DIVISION:	Humanities
INTERIM DIVISION DEAN:	Kathryn Weiss, Ed.D.
FACULTY CHAIR:	Nori Sogomonian, M.A. North Hall 221-222 (909) 384-8544
OTHER FACULTY:	Bert Reins, B.A.
ADMINISTRATIVE SECRETARY:	To Be Announced (909) 384-8906
DIVISION OFFICE:	North Hall 236 (909) 384-4445
LIAISON COUNSELOR:	Juan Zepeda, M.S. (909) 384-4404

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Apply learned knowledge to new situations.
- Work effectively in group settings.
- Demonstrate knowledge of and respect for other cultures.

COURSES OFFERED BY THE DEPARTMENT OF AMERICAN SIGN LANGUAGE:

ASL 109 AMERICAN SIGN LANGUAGE I 4 UNITS PREREQUISITE: None.

LECTURE: 4 hours per week.

Develops communication skills in American Sign Language. Presents basic vocabulary and grammar of ASL with a review of the characteristics of the deaf community. Primary emphasis is on comprehension abilities.

Associate Degree Applicable

Course credit transfers to CSU and UC.

ASL 110 AMERICAN SIGN LANGUAGE II 4 UNITS PREREQUISITE: ASL 109.

LECTURE: 4 hours per week.

As part of the American Sign Language course sequence, ASL 110 is second in a series of four ASL courses designed for the student to develop proficiency in ASL usage. The course continues to stress the development of basic conversational skills with emphasis on expanding vocabulary and comprehension/production skills. Course content for ASL 110 is comprised of four basic categories: cultural awareness, grammatical features, vocabulary development, and conversational skills.

Associate Degree Applicable

Course credit transfers to CSU and UC.

ASL 111 AMERICAN SIGN LANGUAGE III 4 UNITS PREREQUISITE: ASL 110.

LECTURE: 4 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 as well as comprehension and production skills.

Associate Degree Applicable

Course credit transfers to CSU and UC.

ASL 112 AMERICAN SIGN LANGUAGE IV 4 UNITS PREREQUISITE: ASL 111.

LECTURE: 4 hours per week.

The fourth course in a series designed to help students acquire communicative competency in American Sign Language, both comprehension and production skills within the contexts of literature and story telling. Emphasis is on cultural awareness, grammatical features, vocabulary development, and conversational skills.

Associate Degree Applicable

Course credit transfers to CSU and UC.

ANATOMY

See courses within the BIOLOGY DEPARTMENT

ANTHROPOLOGY

DIVISION: Social Science & Human Development
DIVISION DEAN: Janice Noble, Ph.D.
FACULTY CHAIR: Janet Pielke, M.A.
OTHER FACULTY: Gary Olson, M.A.
ADMINISTRATIVE SECRETARY: Karen Deck
DIVISION OFFICE: Liberal Arts 122
(909) 384-8603
LIAISON COUNSELOR: Rutina Taylor, M.A.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Find and interpret information.

COURSES OFFERED BY THE DEPARTMENT OF ANTHROPOLOGY:

ANTHRO 100 INTRODUCTION TO ARCHAEOLOGY 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.
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.
Associate Degree Applicable
Course credit transfers to CSU and UC.
CAN (California Articulation Number): ANTH 2

ANTHRO 106H
PHYSICAL ANTHROPOLOGY – HONORS **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. Enrollment is limited to students eligible for the Honors Program.
Associate Degree Applicable
*Course credit transfers to CSU and *UC.*

ANTHRO 107
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.
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.
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
INDEPENDENT STUDY IN ANTHROPOLOGY **1-3 UNITS**
PREREQUISITE: ANTHRO 100 or ANTHRO 102 or ANTHRO 106.
INDEPENDENT STUDY: 3-9 hours per week.
 Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of Anthropology 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.
Limited transfer to UC; credit determined after transfer to UC.

ARCHITECTURE and ENVIRONMENTAL DESIGN

DIVISION:	Science
INTERIM DIVISION DEAN:	Susan Bangasser, Ph.D.
FACULTY CHAIR:	John Stankas, Ph.D. Chemistry 114 (909) 384-8268
OTHER FACULTY:	Judy Jorgensen, B.S.
ADMINISTRATIVE SECRETARY:	Rose Garcia
DIVISION OFFICE:	Chemistry 121 (909) 384-8645
LIAISON COUNSELOR:	Rutina Taylor, M.A. (909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Utilize technology to organize and present information.
- Demonstrate working knowledge of basic computer function.
- Apply learned knowledge to new situations.
- Evaluate diverse artistic works.
- Demonstrate creative thought through original expression.

ARCHITECTURAL DESIGN ASSOCIATE OF ARTS DEGREE

To graduate with a specialization in Architectural Design Studies, a student must complete the following courses in addition to the general breadth requirements for an Associate's Degree. For transfer students, these courses will provide students with the tools needed to construct a portfolio that will be required to transfer into Architecture Programs at 4-year institutions. Along with a successful portfolio, these courses should also constitute the first two years of an Architecture Program. In addition, these courses should help students interested in transferring to 4-year institutions as Environmental Design, Landscape Architecture, Interior Design and Urban Planning majors.

REQUIRED COURSES:	UNITS
ARCH 100 Environmental Design I	3
ARCH 101 Environmental Design II	3
ARCH 145 History of Architecture: Ancient to Gothic	3
ARCH 146 History of Architecture: Renaissance to Modern	3
ARCH 200 Architectural Design I	4
ARCH 201 Architectural Design II	4
ARCH 220 Architectural CAD I	4
ARCH 250 Materials and Construction	4
ARCH 270 Portfolio Design	1
PHYSIC 150A or PHYSIC 200 General Physics	5-6
ART 132x4 Life Drawing	3
TOTAL UNITS:	37-38

RECOMMENDED COURSES:	UNITS
<i>Students are encouraged to take these courses as part of their General Education program:</i>	
CS 110 Introduction to Computer Science	3
ART 120 Two-Dimensional Design	3
ART 145 Graphic Design	3
MATH 093 Plane Geometry	3
MATH 103 Trigonometry	4

ARCHITECTURE 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.

COMPUTER-AIDED DRAFTING TECHNICIAN CERTIFICATE

This certificate is designed to prepare students for entry-level work in the fields of architecture, urban planning, interior design, electronics design and manufacturing design. Computer Aided Drafting, CAD, is the primary tool used to produce and present work completed in these fields. Students completing this certificate will most likely

work for a licensed architect, structural engineer, mechanical engineer or for local, state or federal governmental agencies or urban planning commissions.

REQUIRED COURSES:	UNITS
ARCH 120 Intro to Computer-Aided Drafting	4
ARCH 146 History of Architecture: Renaissance To Modern	3
ARCH 220 Architectural CAD I	4
ARCH 221 Architectural CAD II	4
ARCH 250 Materials and Construction	4
MATH 093 Plane Geometry	3
ENGL 015 Preparation for College Writing	4
ART 132x4 Life Drawing	3
TOTAL UNITS:	29

RECOMMENDED COURSES:	UNITS
<i>Students are encouraged, but not required, to enroll in the following:</i>	
CS 110 Instruction to Computer Science	3
INSPEC 010A Funds. of Construction Inspection I	3
INSPEC 011A Funds. of Construction Inspection II	3
INSPEC 012A Funds. of Construction Inspection III	3

COURSES OFFERED BY THE DEPARTMENT OF ARCHITECTURE and ENVIRONMENTAL DESIGN:

ARCH 100 ENVIRONMENTAL DESIGN I	3 UNITS
PREREQUISITE: None.	

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

An introduction to the design process, to the vocabulary of design and the basic principles of environmental design, landscape design, and urban planning.
*Associate Degree Applicable
Course credit transfers to CSU.*

ARCH 101 ENVIRONMENTAL DESIGN II	3 UNITS
PREREQUISITE: ARCH 100.	

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

A continuation of ARCH 100, with an emphasis on composition and basic design as applied to both architecture and art. A series of projects will introduce students to the use of line, color, form and materials, and will promote awareness of environmental concerns.
*Associate Degree Applicable
Course credit transfers to CSU.*

ARCH 120 INTRODUCTION TO COMPUTER AIDED DRAFTING	4 UNITS
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**PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CS 110.**

**LECTURE: 2 hours per week and
LABORATORY: 6 hours per week.**

An introduction to the theories and principles of computer-aided design/drafting (CAD) using AutoCAD and to its principal applications in the fields of architecture, design, manufacturing, construction, and planning are explored. The technical aspects of generating, evaluating, modeling, drafting, and rendering design solutions will be introduced.
*Associate Degree Applicable
Course credit transfers to CSU.*

ARCH 145
HISTORY OF ARCHITECTURE: EARLY DESIGN
TO GOTHIC **3 UNITS**

PREREQUISITE: None.
LECTURE: 3 hours per week.

A survey of Western architectural history from the early Egyptians to the Gothic Period, including a comparative study of architecture and architects with emphasis on the people, locations, structures, materials, and methods of construction.

Associate Degree Applicable
Course credit transfers to CSU and UC.

ARCH 146
HISTORY OF ARCHITECTURE: RENAISSANCE
TO MODERN **3 UNITS**

PREREQUISITE: None.
LECTURE: 3 hours per week.

Survey of Western architectural history, including a comparative study of architecture and architects, with emphasis on the people, locations, structures, materials, and methods of construction. Includes Renaissance, Mannerist, Baroque, Rococo, Native American, American Colonial, Neoclassicism, Romantic Revival, 19th Century Industrialization, Ecole des Beaux Arts, Late 19th Century, Chicago School, Sullivanesque, Arts and Crafts, International Style, Art Nouveau, Art Deco, Art Moderne, German Expressionism, Neo-Expressionism, Late Modernism, and Postmodernism.

Associate Degree Applicable
Course credit transfers to CSU and UC.

ARCH 200
ARCHITECTURAL DESIGN I **4 UNITS**

PREREQUISITE: ARCH 101.
LECTURE: 3 hour per week and
LABORATORY: 3 hours per week.

An Introduction to design skills and problem-solving techniques as they apply to the architectural profession.

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

ARCH 201
ARCHITECTURAL DESIGN II **4 UNITS**

PREREQUISITE: ARCH 200.
LECTURE: 1 hour per week and
LABORATORY: 8 hours per week.

A continuation of ARCH 200. Architectural design processes are explored, including advanced problem-solving in spatial relationships, structures and human requirements. Includes advanced model building.

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

ARCH 220
ARCHITECTURAL COMPUTER AIDED DRAFTING I **4 UNITS**

PREREQUISITE: ARCH 120.
LECTURE: 2 hours per week and
LABORATORY: 6 hours per week.

An introduction to the theories and principles of computer aided design/drafting (CAD) using AutoCAD and to its principal applications in the field of architecture by generating, evaluating, modeling, drafting and rendering design solutions. (Formerly ARCH 141)

Associate Degree Applicable
Course credit transfers to CSU.

ARCH 221
ARCHITECTURAL COMPUTER AIDED DRAFTING II **4 UNITS**

PREREQUISITES: ARCH 220.
LECTURE: 2 hour per week and
LABORATORY: 6 hours per week.

A continuation of ARCH 220 and continues to familiarize students with the preparation of preliminary studies, construction drawings, detail drawing and building code applications. This includes complete construction drawings of light wood frame and heavy timber construction and utilizes computer aided design drafting (CAD). (Formerly ARCH 230)

Associate Degree Applicable
Course credit transfers to CSU.

ARCH 250
MATERIALS AND CONSTRUCTION **4 UNITS**

PREREQUISITE: ARCH 146.
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.

A survey of 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. Construction projects will give students knowledge and experience in building construction as it relates to architecture.

Associate Degree Applicable
Course credit transfers to CSU and UC.

ARCH 270
PORTFOLIO DESIGN **1 UNIT**

PREREQUISITE: ARCH 200.
LABORATORY: 3 hours per week.

This course is designed to assist architecture students in the preparation of their portfolio. The design portfolio is required to transfer to most four-year/five-year Architecture programs. Students should be enrolled in their last semester at Valley College before enrolling in this course.

Associate Degree Applicable
Course credit transfers to CSU.

ART

DIVISION: Visual, Performing and Media Arts
DIVISION DEAN: Marjorie Price, M.A., M.Ed.
FACULTY CHAIR: Mandi Batalo, M.A.
DEPARTMENT OFFICE: Art Gallery
(909) 384-8937
OTHER FACULTY: Gary Calote, M.A.
David Rosales, M.F.A.
James Stewart, M.F.A.
DEPARTMENT ASS'T: Emily Nichols
Art Gallery
(909) 384-8939
ADMINISTRATIVE SECRETARY: To Be Announced
(909) 384-8906
DIVISION OFFICE: North Hall 236
(909) 384-8633
LIAISON COUNSELOR: Juan Zepeda, M.S.
(909) 384-4404

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, filmmaking, life drawing, computer graphics, graphic design, computer animation, web & multimedia design, digital photography, basic photography design in glass, sculpture, and glassblowing. In addition to an associate degree in fine arts, the department offers two certificates in graphic design and web+multimedia design, 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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Find and interpret information.
- Utilize technology to organize and present information.
- Demonstrate working knowledge of basic computer function.
- Evaluate diverse artistic works.
- Demonstrate creative thought through original expression.

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.

REQUIRED COURSES:	UNITS
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
TOTAL UNITS:	21

2. GRAPHIC DESIGN

REQUIRED COURSES:	UNITS
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
Three units from the list of RECOMMENDED COURSES	3
TOTAL UNITS:	24

RECOMMENDED COURSES:	UNITS
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

GRAPHIC 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. This certificate is designed to prepare students for entry-level work using a variety of print, electronic, and film media to create designs that meet clients' commercial needs. 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
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 Modern Art	(3)
ART 120 Two-Dimensional Design	3
ART 145 Graphic Design	3
ART 148 Beginning Computer Graphics	3
ART 149 Intermediate Computer Graphics	3
ART 161 Digital Photography	3
ART 185 Beginning Web and Multimedia Design	3
TOTAL UNITS:	25

WEB AND MULTIMEDIA DESIGN CERTIFICATE

This certificate is designed to prepare students for entry-level work in a variety of occupations related to web site design, development, creation, and maintenance. 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
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 Modern 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 Beginning Web and Multimedia Design	3
ART 186 Intermediate Web and Multimedia Design	3
TOTAL UNITS:	25

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 20th Century. Topics covered include 15th and 16th century Italian art; Renaissance and Baroque art; the Rococo movement; Romanticism; Realism; Impressionism; Cubism; Surrealism and other styles of the 19th and 20th 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 and *UC.*

ART 105 HISTORY OF MODERN 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 107 ART HISTORY: AFRICA, ASIA, THE AMERICAS, AND OCEANIA 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

The survey of art from Africa, Asia, the Americas, and Oceania. Includes examination of the religious and social factors influencing art, artifacts, and architecture.

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 20th century muralists.

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-DIMENSIONAL 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.

CAN (California Articulation Number): ART 14

**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

**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

**ART 132x4
LIFE DRAWING 3 UNITS**

PREREQUISITE: None.

LECTURE: 2 hours per week and
LABORATORY: 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 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 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): ART 12

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: None.
DEPARTMENTAL ADVISORY: 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 for elective credit only.

ART 186
INTERMEDIATE WEB AND MULTIMEDIA DESIGN: FLASH 3 UNITS

PREREQUISITE: None.
DEPARTMENTAL ADVISORY: 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 for elective credit only.

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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

ART 212x4
CERAMICS 3 UNITS
PREREQUISITE: None.

LECTURE: 2 hours per week and
LABORATORY: 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): ART 6

ART 240x4
GLASSBLOWING 3 UNITS
PREREQUISITE: None.

LECTURE: 2 hours per week and
LABORATORY: 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 3 UNITS
PREREQUISITE: None.

LECTURE: 2 hours per week and
LABORATORY: 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:	Applied Technology & Transportation
DIVISION DEAN:	Gary Kelly, M.S.
FACULTY CHAIR:	Richard Jaramillo, A.A. (909) 384-8505
OTHER FACULTY:	Guy M. Hinrichs, Sr., A.A. Manuel Loera, A.S. Mark Williams, B.S. Donald Wilson
ADMINISTRATIVE SECRETARY:	Cecile Smith (909) 384-8902
DIVISION OFFICE:	Technical 108 (909) 384-4451
LIAISON COUNSELOR:	Jennifer Mendoza, M.S. (909) 384-4404

Core competencies emphasized by courses in this department:

- Read and retain information.
- Apply learned knowledge to new situations.

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 is designed to prepare students for entry-level work as an automatic transmission specialist. 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
AUTO 064	Automotive Electrical: Battery, Starting & Charging Systems	4
Or		
AUTO 065	Electrical Accessory Diagnostic	(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
Or		
MATH 942	Arithmetic	(3)
Or		
Higher-level math course		
TOTAL UNITS:		25-33

2. BASIC AUTOMOTIVE BODY AND PAINT TECHNICIAN

This certificate is designed to prepare students for entry-level work 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. 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
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
TOTAL UNITS:		35

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 is designed to prepare students for entry-level work as an auto body repair apprentice and an auto painter apprentice beyond the Basic Automotive Body and Paint Technician Certificate, and to prepare students for Automotive Service Excellence (ASE) certification. 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
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:

Category #1		
AUTO 052	Automotive Suspension and Steering	4
Category #2		
AUTO 064	Automotive Electrical	4
or		
AUTO 065	Automotive Body Electrical	(4)
Category #3		
TECALC 950	Shop Calculations	3
TOTAL UNITS:		47

4. AUTOMOTIVE TECHNICIAN CERTIFICATE

This certificate is designed to prepare students for entry-level work as automotive technicians working in areas such as new car preps, engine performance diagnoses, automotive maintenance, and automotive service. 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
AUTO 050	Automotive Brake	4
AUTO 052	Automotive Suspension and Steering	4
AUTO 056	Automotive Heating and Air Conditioning	4
AUTO 064	Automotive Electrical: Battery, Starting & Charging Systems	4
AUTO 065	Electrical Accessory Diagnostic	4
AUTO 068	Engine Performance-Ignition Systems	4
AUTO 069	Engine Performance-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 077	Manual Transmissions and Transaxles	4
AUTO 084	General Automotive Technology	4
AUTO 090x3	Engine Repair	6
TECALC 950	Shop Calculations	3
Or		
MATH 942	Arithmetic	(3)
Or		
Higher-level math course		
TOTAL UNITS:		47-51

5. ENGINE PERFORMANCE CERTIFICATE

This certificate is designed to prepare students for entry-level work as engine performance specialists in areas such as computer systems, electrical systems, engine fuel and exhaust systems, and basic engine diagnosis. 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
AUTO 064	Automotive Electrical: Battery, Starting & Charging Systems	4
AUTO 065	Electrical Accessory Diagnostic	4
AUTO 066	ASE Alternative A-6, A-8, L-1 Prep Or Certificate	4
AUTO 067	Automotive Emissions	4
AUTO 068	Engine Performance-Ignition Systems	4

AUTO 069	Engine Performance-Fuel and Exhaust Systems	4
AUTO 084	General Automotive Technology	4
AUTO 090x3	Engine Repair	6
TECALC 950	Shop Calculations	3
Or		
MATH 942	Arithmetic	(3)
Or		
	Higher-level math course	
TOTAL UNITS:		37

6. WHEEL ALIGNMENT AND BRAKES CERTIFICATE

This certificate is designed to prepare students for entry-level work as an automotive technician working in the area of wheel alignment and brake repair. 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
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: Battery, Starting & Charging Systems	4
AUTO 084 General Automotive Technology	4
TECALC 950 Shop Calculations	3
Or	
MATH 942 Arithmetic	(3)
Or	
Higher-level math course	
TOTAL UNITS:	27

COURSES OFFERED BY THE DEPARTMENT OF AUTOMOTIVE TECHNOLOGY:

AUTO 038x3
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
SECONDARY AUTO BODY **9 UNITS**
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.

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.

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 (A-4).
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, 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.
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 pin stripping.
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.

This course is an in-depth study of the design and operation of contemporary, domestic and import air conditioning/heating systems. Air conditioning and heating related parts will be disassembled, inspected and a determination made of the serviceability of existing parts. Emphasis is placed on problem diagnosis of and repair procedures for these systems. This course also offers an introduction to Automatic A/C and Comfort Control Systems, and recovery and recycling of refrigerants.
Associate Degree Applicable

AUTO 063
EMISSION SYSTEMS 4 UNITS

PREREQUISITE: None
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.

This course covers design and operation of domestic and import emission control on automobiles and light trucks. Subject areas include emission control systems, computerized engine controls, emissions testing, and engine related services. Emphasis is placed on the correct diagnosis of and repair procedures for those systems. The use of current diagnostic test equipment used in today's industry and strategies necessary to determine needed repairs are covered.
Associate Degree Applicable

AUTO 064
AUTOMOTIVE ELECTRICAL: BATTERY, STARTING & CHARGING SYSTEMS 5 UNITS

PREREQUISITE: None.
LECTURE: 4 hours per week and
LABORATORY: 3 hours per week.

This course covers the theory of electricity, use of meters, test equipment, wiring diagrams, diagnosis and repair/replacement of major electrical components of automobiles and light trucks. Major areas of study include batteries, starting and charging systems. Emphasis is placed on problem diagnosis of and repair procedures for these systems.
Associate Degree Applicable

AUTO 065
ELECTRICAL ACCESSORY DIAGNOSTIC 5 UNITS

PREREQUISITE: None.
LECTURE: 4 hours per week and
LABORATORY: 3 hours per week.

This course provides students with the knowledge necessary to diagnose and repair automotive electrical malfunctions. Topics include lighting systems, electrical instruments and accessories, electrical door components, air bags, wiring diagrams, and alarm systems. Emphasis is placed on problem diagnosis of and repair procedures for these 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.

Automotive Service Excellence (ASE) alternative course is designed for students wishing to meet the Bureau of Automotive Repair (BAR) requirements to become a Smog Technician in lieu of ASE certificates or as a preparation for ASE testing. Subject areas include reviewing of A-6 Electrical and Electronics, A-8 Engine Performance, and L-1 Advanced Engine Performance. Students wishing alternative certificate will be asked to pay for testing services for each test; certificate expires at the end of five years.
Associate Degree Applicable

AUTO 067
BASIC AND ADVANCED CLEAN AIR CAR COURSE
4 UNITS

PREREQUISITE: None.
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.

This Bureau of Automotive Repair (BAR) course provides students with the knowledge necessary to perform a smog inspection in a basic and enhanced inspection area according to BAR guidelines. Information covered will include preconditioning procedures, proper use of smog test equipment, current laws and regulations, consumer waiver and extension procedures, generic On-Board Diagnostic (OBD) II information. This class satisfies BAR requirements for all current updates, including 2007. Students will receive three state certificates, 68 hours, 28 hours and 2007 Update.

Associate Degree Applicable

AUTO 068
ENGINE PERFORMANCE – IGNITION SYSTEMS
5 UNITS

PREREQUISITE: None.
LECTURE: 4 hours per week and
LABORATORY: 3 hours per week.

This course provides an in-depth study of the design and operation of domestic and import ignition systems. Major areas of study include point type, electronic, and computer control ignition systems. Emphasis is placed on the correct diagnosis of and repair procedures for these systems. The use of current diagnostic test equipment used in today's industry and strategies necessary to determine needed repairs are covered.

Associate Degree Applicable

AUTO 069
ENGINE PERFORMANCE – FUEL AND EXHAUST SYSTEMS
5 UNITS

PREREQUISITE: None.
LECTURE: 4 hours per week and
LABORATORY: 3 hours per week.

This course is an in-depth study of the design and operation of fuel management systems including domestic and import feedback carburetor, fuel injection and computer control fuel management systems. This course covers the diagnosis and repair/replacement of major components: all sensors, injectors, fuel pumps, and interpretation of computer related malfunctions. The use of current diagnostic test equipment used in today's industry and strategies necessary to determine needed repairs are covered.

Associate Degree Applicable

AUTO 075x3
AUTOMATIC TRANSMISSIONS 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 088x3
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.

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.

Associate Degree Applicable

AUTO 090x3
ENGINE REPAIR **6 UNITS**
PREREQUISITE: None.
LECTURE: 3 hours per week
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. This course may be taken three times.

Associate Degree Applicable

AUTO 198
AUTOMOTIVE-DIESEL 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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

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
 INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
 FACULTY CHAIR: David Bastedo, M.S.
 Health & Life Science 210
 (909) 384-8564

OTHER FACULTY: Carol Cook, M.S.
 Glenn Drewes, M.A.
 Darlene Gamboa, Ph.D.
 C.R. Greyraven, M.S.
 Mark Ikeda, M.S.
 Ken Michaelis, M.A.
 John Olsen, M.S.

ADMINISTRATIVE SECRETARY: Rose Garcia
 DIVISION OFFICE: Chemistry 121
 (909) 384-8645

LIAISON COUNSELOR: Wendy Whitney, M.S.
 (909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Employ vocabulary of the subject studied.
- Find and interpret information.
- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.

BIOLOGY 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
BIOL 202	Organismal Biology and Ecology	4
CHEM 150 or 150H	General Chemistry I	5
CHEM 151 or 151H	General Chemistry II	5
Twelve Units from the RECOMMENDED COURSES:		12
TOTAL UNITS:		30

RECOMMENDED COURSES:		UNITS
MATH 250	Calculus I	4
MATH 251	Calculus II	4
CHEM 212 or 212H	Organic Chemistry	4
CHEM 213 or 213H	Organic Chemistry	4
PHYSIC 150A	General Physics I	5
and		
PHYSIC 150B	General Physics II	5
or		
PHYSIC 200	General Physics I	6
and		
PHYSIC 201	General Physics II	6

COURSES OFFERED BY THE DEPARTMENT OF BIOLOGY:**BIOL 010****FOUNDATIONAL SKILLS FOR BIOLOGY MAJORS****.25 UNIT****PREREQUISITE: None.****COREQUISITE: BIOL 201, 202, 203, 251, 261, or 270.****LECTURE: None.****LABORATORY: 13.5 hours per semester.**

This course enables students to develop and strengthen foundational science skills during enrollment in major's-level science coursework. Workshops emphasize skill-building in the analytical and communication skills necessary for success in major's-level science classes and professional-level science careers. Topics include applied math, word problems, data manipulation, graphing, scientific writing, critical thinking, scientific method, and the use of technology. Graded on Credit/No Credit basis only.

*Associate Degree Applicable***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 and *UC.*

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 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 109
HISTORY OF LIFE 4 UNITS
PREREQUISITE: None.
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.
An introductory course exploring the history of life on Earth. The role of natural selection and evidence from geology, biogeography, and paleontology will be combined with fossils and recent organisms to interpret the clues of life's history on Earth.
Associate Degree Applicable
Course credit transfers to CSU and UC.

BIOL109H 4 UNITS
HISTORY OF LIFE - HONORS
PREREQUISITE: None.
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.
An introductory course exploring the history of life on earth. The role of natural selection and evidence from geology, biogeography, and paleontology will be combined with fossils and recent organisms to interpret the clues of life's history on earth. Enrollment is limited to students eligible for the Honors Program.
Associate Degree Applicable
Course credit transfers to CSU and UC.

BIOL 123
ECOLOGY AND ENVIRONMENT 3 UNITS
PREREQUISITE: None.
LECTURE: 3 hours per week.
Study of the basic concepts of ecology including the physical environment, ecosystems, energy production and transfer, and the impact of humans on ecosystems. Environmental considerations include renewable and non-renewable energy, food resources, pest control, waste management, maintenance of air and water quality, sustaining the biodiversity of ecosystems, global climate, and political and economic considerations.
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.
Social, economic, psychological, medical and legal issues surrounding the sexually transmitted diseases. The pathogenesis, diagnosis and treatment of prominent sexually transmitted diseases including the impact of current biotechnology on vaccine development, treatment and diagnostics. Historical coverage of changing attitudes and measures toward control of the sexually transmitted diseases.
Associate Degree Applicable
Course credit transfers to CSU and UC.

BIOL 201
CELL AND MOLECULAR BIOLOGY 4 UNITS
PREREQUISITE/COREQUISITE: CHEM 150 or CHEM 150H.
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): BIOL 2

BIOL 202
ORGANISMAL BIOLOGY AND ECOLOGY 4 UNITS
PREREQUISITE: 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 pre-professional 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: BIOL 201.

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 204
GENERAL BOTANY 4 UNITS
PREREQUISITE: BIOL 100 or BIOL 201.

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

Introduction to the development and comparative morphology, function, heredity, physiology, and evolution of algae, bryophytes and vascular plants.

Associate Degree Applicable

Course credit transfers to CSU and UC.

CAN (California Articulation Number): BIOL 6

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; credit determined after transfer to UC.

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, cardiovascular, lymphatic, immune, and respiratory.

Associate Degree Applicable

*Course credit transfers to CSU and *UC.*

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 and *UC.*

BIOL 252
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.

Limited transfer to UC; credit determined after transfer to UC.

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 for elective credit only.

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 and *UC.*

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 and *UC.*
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 272
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.
Limited transfer to UC; credit determined after transfer to UC.

BIOL 276
LABORATORY PREPARATION IN MICROBIOLOGY 2 UNITS
PREREQUISITE: BIOL 270.
INDEPENDENT STUDY: 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 for elective credit only.

BIOL 290
BIOTECHNOLOGY I 5 UNITS
PREREQUISITE: BIOL 201 or BIOL 102; CHEM 101 or CHEM 150 or CHEM 150H.
LECTURE: 4 hours per week and
LABORATORY: 3 hours per week.
 This course will focus on basic principles of cellular and molecular biology and laboratory methods utilized in the biotechnology industry. Students will learn the foundations of lab safety and documentation, skills in the maintenance and calibration of basic lab equipment, calculation and preparation of laboratory solutions and principles of separation of cellular components and macromolecules.
Associate Degree Applicable
Course credit transfers to CSU and UC.

BIOL 291
BIOTECHNOLOGY II 5 UNITS
PREREQUISITE: BIOL 290.
LECTURE: 3 hours per week and
LABORATORY: 6 hours per week.
 This course will expand on the principles of cellular and molecular biology as applied in the biotechnology laboratory. Laboratory work will include DNA & RNA isolations, DNA amplification and sequencing, recombinant techniques, restriction analysis of DNA and protein purification and analysis.
Associate Degree Applicable
Course credit transfers to CSU.

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

BUSINESS ADMINISTRATION

DIVISION: Business & Information Technology
DIVISION DEAN: Margaret Ortiz, M.A.
FACULTY CHAIR: Roger Powell, M.S.
 Business, 200E
 (909) 384-8910
OTHER FACULTY: Michael Assumma, M.B.A.
 Donald Schall, J.D.
 Vernon Stauble, Ph.D.
ADMINISTRATIVE SECRETARY: Chris Williams
DIVISION OFFICE: Business 101
 (909) 384-8908
LIAISON COUNSELOR: Patty Jones, M.A.
 (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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Find and interpret information.
- Evaluate authority and bias of information.
- Evaluate strengths, weaknesses and fallacies of logic.
- Apply learned knowledge to new situations.
- Accept responsibility for own actions.
- Exhibit personal, professional and academic honesty.
- Apply lessons from the past to ethical issues faced in the present.
- Give and receive constructive feedback.
- Develop time management skills.
- Demonstrate creative thought through original expression.
- Demonstrate etiquette in face-to-face and written interactions.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.

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 Introduction to Macroeconomics	3
ECON 201 Principles of Economics (Micro)	3
CIT 101 Introduction to Computer Literacy	3
TOTAL UNITS:	23

BUSINESS ADMINISTRATION CERTIFICATE

This certificate is designed to prepare students for entry-level work in the business field by providing the fundamentals of business organization and management as well as in marketing and business law. 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
CIT 101 Introduction to Computer Literacy	3
ACCT 100 Introduction to Accounting I	4
or	
BUSAD 108 Personal Finance	(3)
or	

ECON 100 Introduction to Economics	(3)
CIT 031 Business English	3
or	
ENGL 015 Preparation for College Writing	(4)
or	
ENGL 101 Freshman Composition	(4)
SPEECH 100 Elements of Public Speaking	3
ELECTIVES - Choose from the list of RECOMMENDED COURSES:	6
TOTAL UNITS:	28

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

This certificate is designed to prepare students for entry-level work in the retail management field. Beginning as a clerk or cashier, the student can advance 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. 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.

FOUNDATIONAL COURSES:	UNITS
BUSAD 207 Business Communication	3
BUSCAL 050 Quantitative Methods in Business	3
CIT 101 Introduction to Computer Literacy	3
Choose one of the following:	
SPEECH 100 Elements of Public Speaking	3
SPEECH 111 Interpersonal Communication	(3)
SPEECH 140 Small Group Discussion	(3)

INTERMEDIATE COURSES:	UNITS
BUSAD 103 Marketing Principles	3
BUSAD 200 Business Management	3

Choose one of the following:	UNITS
ACCT 010 Bookkeeping	3
ACCT 100 Introduction to Accounting I	(4)
ACCT 200 Principles of Accounting	(4)

ADVANCED COURSES:	UNITS
BUSAD 110 Human Resource Management	3
BUSAD 112 Principles of Retailing	3
BUSAD 151 Human Relations	3
TOTAL UNITS:	30-31

COURSES OFFERED BY THE DEPARTMENT OF BUSINESS ADMINISTRATION:

BUSAD 039
STRATEGIES FOR SUCCESSFUL EMPLOYMENT 3 UNITS

PREREQUISITE: None.
DEPARTMENTAL ADVISORIES: CIT 010 and CIT 009.
LECTURE: 3 hours per week.

This course is designed to help students develop the skills needed to successfully seek employment, including job search strategies, career paths, cover letter and resume writing, mock interviews, job applications, and positive workplace attitudes.

Associate Degree Applicable

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.

Introduction to the fundamental concepts of business in a changing world. Includes an overview of such areas as economic systems, management, marketing, accounting, finance, ethics, ownership, organization of business, the legal aspects and regulation of business, as well as globalization.

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 for elective credit only.

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 for elective credit only.

BUSAD 108
PERSONAL FINANCE AND INVESTMENTS 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

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

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 for elective credit only.

BUSAD 110
HUMAN RESOURCE MANAGEMENT 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

A survey of the 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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

BUSAD 151
HUMAN RELATIONS 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

This course provides a basic understanding of human interactions in the workplace, focusing on the roles of the individual, the group, and the organization as a whole.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

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 for elective credit only.

BUSAD 198
BUSINESS ADMINISTRATION 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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

BUSAD 200
BUSINESS MANAGEMENT 3 UNITS
PREREQUISITE: 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 for elective credit only.

BUSAD 203
MARKETING MANAGEMENT 3 UNITS
PREREQUISITE: BUSAD 103.

LECTURE: 3 hours per week.

Actual marketing management practices are carefully reviewed and evaluated. Alternative principles and methods of effective marketing management are closely examined. Marketing management decision-making skills are developed via management simulation exercises.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

BUSAD 207
BUSINESS COMMUNICATION 3 UNITS
PREREQUISITE: None.

DEPARTMENTAL ADVISORY: CIT 031.

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 for elective credit only.

BUSAD 210
BUSINESS LAW 3 UNITS
PREREQUISITE: None.

DEPARTMENTAL ADVISORY: Pass a standardized test of reading comprehension at or above the twelfth grade level; Eligibility for ENGL 101.

LECTURE: 3 hours per week.

Exploration of the legal environment, in which, business operates. Includes an introduction to law and legal reasoning, ethics, torts, strict and products liability, criminal law and contracts. Special emphasis is placed on acquiring a working knowledge of the rules for contracting in general and the modifications applicable under the Uniform Commercial Code for the sale of goods.

Associate Degree Applicable

*Course credit transfers to CSU and *UC.*

CAN (California Articulation Number): BUS 8

BUSAD 211
THE LEGAL ENVIRONMENT OF BUSINESS 3 UNITS
PREREQUISITE: None.

DEPARTMENTAL ADVISORY: Pass a standardized test of reading comprehension at or above the twelfth grade level; Eligibility for ENGL 101.

LECTURE: 3 hours per week.

A broad investigation of the legal environment in which business is required to operate in today's world. Includes an investigation of the different governmental entities and their jurisdictions, including the forums provided by each for conflict resolution. Focuses on the regulations in the employment, consumer protection, environmental, land-use control and real property, sole proprietorships, partnerships, corporations, antitrust, securities regulation, comparative and international law areas.

Associate Degree Applicable

*Course credit transfers to CSU and *UC.*

BUSAD 222
INDEPENDENT STUDIES IN BUSINESS
ADMINISTRATION 1-3 UNITS

PREREQUISITE: None.

INDEPENDENT STUDY: 3-9 hours per week.

Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of business administration 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 for elective credit only.

BUSINESS CALCULATIONS

DIVISION: Business & Information Technology
DIVISION DEAN: Margaret Ortiz, M.A.
FUCULTY CHAIR: Nickolas Zoumbos, M.S.
Business 100D
(909) 384-8912
ADMINISTRATIVE SECRETARY: Chris Williams
DIVISION OFFICE: Business 101
(909) 384-8908
LIAISON COUNSELOR: Patty Jones, M.A.
(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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.

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 and *UC.*

CHEMISTRY

DIVISION: Science
INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
FACULTY CHAIR: John Stankas, Ph.D.
Chemistry 114
(909) 384-8268
OTHER FACULTY: Joseph Henn, M.E.
Sheri Lillard, Ph.D.
ADMINISTRATIVE SECRETARY: Rose Garcia
DIVISION OFFICE: Chemistry 121
(909) 384-8645
LIAISON COUNSELOR: Wendy Whitney, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Utilize technology to organize and present information.
- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.
- Defend a logical hypothesis to explain observed phenomenon.

CHEMISTRY ASSOCIATE OF SCIENCE DEGREE

Students planning to transfer to a four-year institution and major in chemistry or biochemistry should consult with a counselor regarding the transfer process and lower division requirements because additional courses may be required at some institutions.

To graduate with a specialization in Chemistry, students must complete the following required courses plus the general breadth requirements for the Associate's Degree. The A.S. in Chemistry is designed to prepare students who wish to pursue a Bachelor's Degree from a four-year institution. At the four-year institution, students may choose to specialize in one particular aspect of chemistry, such as Environmental Chemistry, Organic Chemistry, Atmospheric Chemistry, or Physical Chemistry.

REQUIRED COURSES:	UNITS
CHEM 150 or CHEM 150H General Chemistry I	5
CHEM 151 or CHEM 151H General Chemistry II	5
CHEM 212 or CHEM 212H Organic Chemistry I	4
CHEM 213 or CHEM 213H Organic Chemistry II	4
MATH 250 Single Variable Calculus I	4
MATH 251 Single Variable Calculus II	4
TOTAL UNITS:	26

RECOMMENDED COURSES:	UNITS
*PHYSIC 150A or PHYSIC 200 General Physics I	5-6
*PHYSIC 150B or PHYSIC 201 General Physics II	5-6
<i>*These physics courses are typically prerequisites for third year chemistry majors. Students are encouraged to complete the recommended physics courses to prevent the postponement of continued coursework in this major.</i>	

BIOCHEMISTRY ASSOCIATE OF SCIENCE DEGREE

Students planning to transfer to a four-year institution and major in chemistry or biochemistry should consult with a counselor regarding the transfer process and lower division requirements because additional courses may be required at some institutions.

To graduate with a specialization in Biochemistry, students must complete the following required courses plus the general breadth requirements for the Associate's Degree. The A.S. in Biochemistry is designed to prepare students who wish to pursue a Bachelor's Degree in Biochemistry from a four-year institution and specialize in the chemical interactions that pertain to biological systems.

REQUIRED COURSES:	UNITS
CHEM 150 or CHEM 150H General Chemistry I	5
CHEM 151 or CHEM 151H General Chemistry II	5
CHEM 212 or CHEM 212H Organic Chemistry I	4
CHEM 213 or CHEM 213H Organic Chemistry II	4
BIOL 201 Cell and Molecular Biology	4
BIOL 202 Organismal Biology and Ecology	4
MATH 250 Single Variable Calculus I	4
MATH 251 Single Variable Calculus II	4
TOTAL UNITS:	34

RECOMMENDED COURSES:	UNITS
*PHYSIC 150A or PHYSIC 200 General Physics I	5-6
*PHYSIC 150B or PHYSIC 201 General Physics II	5-6
<i>*These physics courses are typically prerequisites for third year biochemistry majors. Students are encouraged to complete the recommended physics courses to prevent the postponement of continued coursework in this major.</i>	

COURSES OFFERED BY THE DEPARTMENT OF CHEMISTRY:

CHEM 010 FOUNDATIONAL SKILLS FOR CHEMISTRY MAJORS .25 UNIT

PREREQUISITE: None.

COREQUISITE: CHEM 150, 151, 212, or 213.

LECTURE: None.

LABORATORY: 13.5 hours per semester.

This course enables students to develop and strengthen foundational science skills during enrollment in major's-level science coursework. Workshops emphasize skill-building in the analytical and communication skills necessary for success in major's-level science classes and professional-level science careers. Topics include applied math, word problems, data manipulation, graphing, scientific writing, critical thinking, scientific method, and the use of technology. Graded on Credit/No Credit basis only.

Associate Degree Applicable

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 and *UC.*

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 and *UC.*

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 and *UC.*

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 and *UC.*
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 and *UC.*

CHEM 151
GENERAL CHEMISTRY II 5 UNITS

PREREQUISITE: CHEM 150 or 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 electrochemistry.

Associate Degree Applicable
*Course credit transfers to CSU and *UC.*
CAN (California Articulation Number): CHEM 4

CHEM 151H
GENERAL CHEMISTRY II – HONORS 5 UNITS

PREREQUISITE: CHEM 150 or 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 and *UC.*

CHEM 205
QUANTITATIVE CHEMICAL ANALYSIS 5 UNITS

PREREQUISITE: CHEM 151 or CHEM 151H.
LECTURE: 3 hours per week and
LABORATORY: 6 hours per week.

This course explores the principles, calculations, and applications of volumetric, gravimetric, and instrumental analysis as well as practical experience in standardizing reagents and determining the composition of various mixtures pertaining to the chemical laboratory setting. It is designed for second year Chemistry and Biology majors and students pursuing professional careers.

Associate Degree Applicable
Course credit transfers to CSU and UC.

CHEM 212
ORGANIC CHEMISTRY I 4 UNITS

PREREQUISITE: CHEM 150 or 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 study of the properties of organic compounds.

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

CHEM 212H
ORGANIC CHEMISTRY I – HONORS 4 UNITS

PREREQUISITES: CHEM 150 or 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 and *UC.*

CHEM 213
ORGANIC CHEMISTRY II 4 UNITS

PREREQUISITE: CHEM 212 or CHEM 212H.
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 and *UC.*

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 and *UC.*

CHEM 222
SPECIAL PROBLEMS IN CHEMISTRY I 1 UNIT
PREREQUISITE: CHEM 150 or CHEM 150H.
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; credit determined after transfer to UC.

CHEM 223
SPECIAL PROBLEMS IN CHEMISTRY II 2 UNITS
PREREQUISITE: CHEM 150 or CHEM 150H.
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; credit determined after transfer to UC.

CHILD DEVELOPMENT

DIVISION: Social Science & Human Development
 DIVISION DEAN: Janice Noble, Ph.D.
 FACULTY CHAIR: Juliann Martin, B.A.
 North Hall 244
 (909) 384-4457
 OTHER FACULTY: Kathryn Adams, M.S.
 Kellie Barnett, M.S.
 Denise Knight, B.A.
 Susan Shimoff, M.A.
 ADMINISTRATIVE SECRETARY: Karen Deck
 DIVISION OFFICE: Liberal Arts 122
 (909) 384-8603
 LIAISON COUNSELOR: Mary Beth Barrios, M.S.
 (909) 384-4404

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 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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Apply learned knowledge to new situations.
- Demonstrate respect for a diversity of ideas and the rights of others.
- Give and receive constructive feedback.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.

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

FOUR COURSES FROM THE FOLLOWING LIST:		12
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)

EXPERIENCE WORKING WITH CHILDREN:		4
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

This certificate is designed to prepare students for entry-level work as a childcare worker nurturing and teaching children of all ages in childcare centers, nursery schools, preschools, public schools, private households, family childcare homes, and before- and after-school programs, and 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

EXPERIENCE WORKING WITH CHILDREN:		4
CD 198	Child Development Work Exp	4
or		
CD 205X2	Child Growth and Development Lab	(4)

TOTAL UNITS: 16

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

This certificate is designed to prepare students for the next level of instruction when working with children in a preschool or childcare setting, focusing on developing age-appropriate lesson plans for the classroom, and observation/assessment of children. Meets California Title V requirements for the Child Development permit. 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
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		3-4
Social and Behavioral Science *SOC 130		3
Communication and Learning Skills *ENGL 015 or ENGL 101		4
Humanities *ART 103 or MUS 121 or 122		4
Electives		2-3

**These courses are recommended selections to meet the GE requirement*

TOTAL UNITS: 44-50

3. MASTER TEACHER CERTIFICATE

This certificate prepares students to supervise, mentor and assist other teachers and aides in a preschool or childcare setting. Meets California Title V requirements for the Child Development permit. 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
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	4
Social and Behavioral Sciences: *SOC 130	3
Humanities *ART 103 or MUS 121 or MUS 122	4
Natural Science or Math	3-4
Elective Courses	2-3
<i>*These courses are recommended selections to meet the GE requirement</i>	

TOTAL UNITS: 50-54

4. SITE SUPERVISOR CERTIFICATE

This certificate is designed to prepare students with the necessary knowledge and skills to be qualified as a preschool or childcare center site supervisor. Meets California Title V requirements for the Child Development permit. 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
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

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	
<i>*These courses are recommended selections to meet the GE requirement</i>	

TOTAL UNITS: 60-64

5. INFANT DEVELOPMENT CERTIFICATE

This certificate is similar to that of the Associate Teacher, and is designed to prepare students for entry-level work specializing in the care of infants (0-36 months) as an assistant to the teacher in a childcare or infant care setting. 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
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
<i>(Ages birth - 24 months)</i>	
CD 210X2 Infant Growth and Development Lab	4

TOTAL UNITS: 31

6. SCHOOL-AGE CERTIFICATE

This certificate is similar to that of the Associate Teacher, and is designed to prepare students for entry-level work as an assistant in after-school programs or childcare facilities that serve older children from 6-12 years of age. 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
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	
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TOTAL UNITS: 31

7. FAMILY CHILD CARE PROVIDER CERTIFICATE

This certificate is designed to prepare students for entry-level work in the care of children in a Family Childcare or Home Daycare program and/or facility setting. 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
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: 4

(in Family Child Care)

CD 198 Child Development Work Experience	4
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TOTAL UNITS: 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 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.

Course covers general concepts, goals and strategies of parenting through the life span in varying life circumstances and diverse family types. Emphasis is placed on establishing and maintaining close emotional relationships through bonding, attachment, and effective communication techniques with children at all developmental stages. The importance of effective guidance skills, shaping and modifying children's behavior is also explored.

*Associate Degree Applicable
Course credit transfers to CSU.*

CD 105 CHILD GROWTH AND DEVELOPMENT 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

Growth and development of children from the prenatal period through adolescence; with an emphasis on individual, physical, cognitive, and socioemotional needs of children. Practical experience observing and interacting with children.

*Associate Degree Applicable
Course credit transfers to CSU and *UC.
CAN (California Articulation Number): FCS 14*

CD 105H CHILD GROWTH AND DEVELOPMENT – HONORS 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

Study of the growth and development of children from the prenatal period through adolescence with an emphasis on the physical, cognitive, social and emotional needs of children. Practical experience observing and recording children's behavior is included. Enrollment is limited to students eligible for the Honors Program.

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

CD 111 OBSERVATIONS AND METHODS IN CHILD DEVELOPMENT 3 UNITS

PREREQUISITE/COREQUISITE: CD 105 or CD 105H.

LECTURE: 2 hour per week and

LABORATORY: 3 hours per week.

Introduction to observational methodologies and techniques used in the study of childhood behavior including observation, recording, analysis and interpretation as they relate to developmental principles, theories and current research.

*Associate Degree Applicable
Course credit transfers to CSU.*

CD 113
PROGRAMS AND PRINCIPLES IN EARLY
CHILDHOOD EDUCATION **3 UNITS**

PREREQUISITE: None
LECTURE: 3 hours per week.

Introduction to the programs and principles related to working with children. Focuses on a variety of early childhood programs and the teacher's role in planning and facilitating learning by implementing developmentally appropriate standards for children age birth through eight.
Applicable to Associate Degree
Course credit transfers to CSU.

CD 114
CREATIVE CURRICULUM IN EARLY CHILDHOOD
EDUCATION **3 UNITS**

PREREQUISITE: None
LECTURE: 3 hours per week.

The study and application of creative curriculum design principles for early childhood educational programs. Course includes planning, implementing, facilitating and evaluating developmentally appropriate activities and experiences that promote physical, cognitive, creative, social and emotional growth in children aged three to five.
Applicable to Associate Degree
Course credit transfers to CSU.

CD 116
PEDIATRIC CPR, FIRST AID AND SAFETY **1 UNIT**

PREREQUISITE: None.
LECTURE: 1 hour per week and
LABORATORY: 3 hours per week.

Course includes 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.) (Formerly CD 116x4)
Applicable to Associate Degree
Course credit transfers to CSU for elective credit only.

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 127
GUIDANCE OF CHILDREN **3 UNITS**

PREREQUISITE: None
LECTURE: 3 hours per week.

This course presents a developmental approach to the guidance and discipline of children. Effective guidance theories and methods are presented for teachers and professionals working with children, including children with special needs. Effective communication methods for early childhood educators working with children and their parents will be emphasized.
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.

This course will explore the importance of music and movement in the development of the children ages two through eight. Because children's physical and motor maturation influence all other aspects of development this course focuses on planning for motor skill progression through creative and teacher-guided movement. There is equal emphasis on developmentally appropriate musical activities, as well as rhythmic experiences with musical instruments and creative props.
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 for elective credit only.

CD 134
LANGUAGE, LISTENING AND LITERATURE FOR
CHILDREN **3 UNITS**

PREREQUISITE: CD 105 or CD 105H.
LECTURE: 3 hours per week.

This course emphasizes the process of language acquisition in children and techniques and experiences which promote language development and listening skills. It includes the examination of children's literature; teaching strategies for reading picture books to children; presenting poetry; flannel board activities; puppetry and storytelling in the classroom for children ages two through eight.
Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

CD 136
CREATIVE ART EXPERIENCES FOR CHILDREN
3 UNITS

PREREQUISITE: None.
LECTURE: 3 hours per week.

This course focuses on establishing an environment for young children that cultivates and nourishes creativity and their aesthetic sense. It includes the principles of creative development; instructional strategies; materials, tools and equipment in an art program; and developmentally appropriate activities and experiences which underscore the emotional, social, physical, and cognitive needs of children from two through eight years of age.
Applicable to Associate Degree
Course credit transfers to CSU for elective credit only.

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 for elective credit only.

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 for elective credit only.

CD 150
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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

CD 168
EARLY LITERACY FOR YOUNG CHILDREN 3 UNITS
PREREQUISITE: CD 105 or CD 105H.

LECTURE: 3 hours per week.

The study of the principles and developmentally appropriate practices for providing children early literacy skills necessary for a strong foundation for conventional reading and writing. The course will address how to create an environment and curriculum to promote and encourage early literacy beginning at birth through age five.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 for elective credit only.

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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students **MUST** be working for pay or volunteer before registering for a Work Experience class. **NOTE:** Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

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. This course may be taken twice.

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 for elective credit only.

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 for elective credit only.

**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 for elective credit only.

**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 for elective credit only.

**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 295A-Z
SPECIAL TOPICS IN CHILD DEVELOPMENT .5-3 UNITS**

PREREQUISITE: None.

LECTURE: 8-54 hours per semester and

LABORATORY: 27-162 hours per semester.

Special Topics in Child Development cover selected subject matters that are current and relevant in the field of child development; possible topics include Emergent Curriculum, Ethics, Early Literacy, Children and Conflict, Nutrition, Childhood Obesity, Early Intervention, Dramatic Play, Child Abuse, Brain Development and Importance of Play.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

**COMPUTER INFORMATION
TECHNOLOGY**

DIVISION: Business & Information Technology

DIVISION DEAN: Margaret Ortiz, M.A.

FACULTY CHAIR: Roger Powell, M.S.

Business 200E

(909) 384-8910

OTHER FACULTY: Maha Al-Husseini, B.A.

Mona Jackson, M.A.

Barbara Saxon, B.S.I.S.

Vernon Stauble, Ph.D.

Mary Lou Vasquez, B.A.

ADMINISTRATIVE SECRETARY: Chris Williams

DIVISION OFFICE: Business 101

(909) 384-8908

LIAISON COUNSELOR: Patty Jones, M.A.

(909) 384-4404

The Computer Information Technology (CIT) Department provides a program of study for students who are preparing for employment in the field of computer management in business.

The CIT Department offers a complete introduction to computers and software, specific training in selected software packages, and advanced courses dealing with networks, specialized programming techniques, and management of computer facilities.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Utilize technology to organize and present information.
- Demonstrate working knowledge of basic computer function.

**CIT – COMPUTER INFORMATION TECHNOLOGY
ASSOCIATE OF ARTS DEGREE**

To graduate with a degree in Computer Information Technology, students must complete the following required courses plus the general breadth requirements for the Associate Degree. Completion of the Computer Business Applications Specialist certificate plus the following courses:

REQUIRED COURSES:		UNITS
CIT 101	Introduction to Computer Literacy	3
CIT 102	Advanced Computer Literacy	3
CIT 114	Spreadsheets: Excel	3
CIT 116	Database Management: Access	3
CIT 120	Internet	2
CIT 150	Office Applications Development	3
CIT 215	Database Management Systems	3
CIT 232	Data Communication and Networks	3
TOTAL UNITS:		23

**CIT – MANAGEMENT INFORMATION 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 MIS Certificate offers a complete introduction to computers, specific training in selected software packages, advanced courses dealing with networks, and management of computer facilities.

REQUIRED COURSES:	UNITS
CIT 101 Introduction to Computer Literacy	3
CIT 105 Windows	2
CIT 114 Spreadsheets: Excel	3
CIT 116 Database Management: Access	3
CIT 120 Internet	2
CIT 200 Business Programming Visual Basic	3
CIT 210 Systems Analysis and Design	3
CIT 215 Database Management Systems	3
CIT 232 Data Communications and Networks	3
CIT 031 Business English	3
Or	
ENGL 015 Preparation for College Writing	(4)
Or	
ENGL 101 Freshman Composition	(4)
Three units from the list of RECOMMENDED COURSES:	3
TOTAL UNITS:	31-32

RECOMMENDED COURSES:	UNITS
CIT 222 Independent Study in CIT	1-3
CIT 020 Word Processing: Microsoft Word	3

**CIT – OFFICE TECHNOLOGY
ASSOCIATE OF ARTS DEGREE**

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

REQUIRED COURSES:	UNITS
BUSAD 039 Strategies for Successful Employment	3
CIT 016 Advanced Keyboarding	3
CIT 020 Word Processing: MS Word	3
CIT 060 General Office Procedures	2
CIT 101 Introduction to Computer Literacy	3
CIT 105 Windows	2
CIT 114 Spreadsheets: Excel	3
TOTAL UNITS:	19

**CIT - OFFICE INFORMATION SYSTEMS
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 two Office Information Systems Certificates: Office/Clerical and Administrative Assistant.

OFFICE/CLERICAL CERTIFICATE

REQUIRED COURSES:	UNITS
BUSAD 039 Strategies for Successful Employment	3
CIT 013 Intermediate Keyboarding	3
CIT 020 Word Processing: Microsoft Word	3
CIT 025 Outlook	2
CIT 031 Business English	3
CIT 033 Machine Calculations	3

CIT 060 General Office Procedures	3
CIT 100 Introduction to Personal Computers	3
CIT 114 Spreadsheets: Excel	3
CIT 118 Microsoft Powerpoint	3
CIT 120 Internet	2
CIT 198 CIT Work Experience	1-4
TOTAL UNITS:	32-35

ADMINISTRATIVE ASSISTANT

**Completion of Office/Clerical Certificate (31-34 units)
plus the following:**

REQUIRED COURSES:	UNITS
Office/Clerical Certificate courses	31-34
CIT 016 Advanced Keyboarding	3
CIT 021 Word Processing: Adv Microsoft Word	3
CIT 116 Database Management: Access	3
Total Units required for the Administrative Assistant Certificate	40-43

**CISCO CERTIFIED NETWORK ASSOCIATE
CERTIFICATE**

This certificate is designed to prepare students to take the Cisco Certified Network Associate certification examination. This course of study prepares students for entry level employment in the computer networking field. The certificate is part of the Cisco Networking Academy program and all instruction is provided by Cisco Certified Academy Instructors using Cisco certified curriculum. This is the first level of Cisco certification. This course of study is open to all students.

REQUIRED COURSES:	UNITS
CIT 091 Networking Fundamentals, Semester One	3
CIT 092 Networking Fundamentals Basic Routing, Semester Two	3
CIT 093 Fundamentals of Lans, Local Area Networks, Semester Three	3
CIT 094 Fundamentals of Wans Wide Area Networks, Semester Four	3
TOTAL UNITS:	12

**CISCO CERTIFIED NETWORK PROFESSIONAL
CERTIFICATE**

This certificate is designed to prepare students to take the Cisco Certified Network Professional certification examinations. The certificate is part of the Cisco Networking Academy program and all instruction is provided by Cisco Certified Academy Instructors using Cisco certified curriculum. This is the second level of Cisco certification. Students must hold a current CCNA certification or have successfully completed CCNA networking at a registered Cisco Network Academy to take any courses in this certificate. Note that the courses can be taken in any order.

REQUIRED COURSES:	UNITS
CIT 095 Advanced Routers, Semester Five	3
CIT 096 Remote Access, Semester Six	3
CIT 097 Lan Switching, Semester Seven	3
CIT 098 Network Troubleshooting, Semester Eight	3
TOTAL UNITS	12

**COURSES OFFERED BY THE DEPARTMENT OF
COMPUTER INFORMATION TECHNOLOGY:**

CIT 008
BEGINNING KEYBOARDING, PART I 1.5 UNITS
PREREQUISITE: None.

LECTURE: 1 hour per week and
LABORATORY: 1.5 hours per week.

Keyboard mastery and correct stroking techniques leading to maximum skill in typing. Use of speed and accuracy drills designed to develop a keyboarding speed of at least 18 words per minute. This is a Part I course students can complete in half a semester.

Associate Degree Applicable

CIT 009
BEGINNING KEYBOARDING, PART II 1.5 UNITS
PREREQUISITE: CIT 008.

LECTURE: 1 hour per week and
LABORATORY: 1.5 hours per week.

Instruction and practice in typing personal and business letters, rough drafts, simple manuscripts, simple tabulation reports and various styles of letters. Practice in developing speed and control. Designed to develop a minimum keyboarding speed of 30 words per minute for five minutes. This is a Part II course students can complete in half a semester.

Associate Degree Applicable

CIT 010
BEGINNING KEYBOARDING 3 UNITS
PREREQUISITE: None.

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

Fundamentals of keyboarding including operation of a standard keyboard by touch. Instruction and practice in formatting a variety of personal and business documents, such as letters, reports, and tables. Use of speed and accuracy drills designed to develop a keyboarding speed of 30 words per minute for five minutes. This is a combined Part I and Part II course students can complete in one semester.

Associate Degree Applicable

CIT 013
INTERMEDIATE KEYBOARDING 3 UNITS
PREREQUISITE: CIT 010 or CIT 009.

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

Procedures for arranging and tabulating materials and preparing letters and business forms with an emphasis on accuracy and speed. Designed to develop a keyboarding speed of 45 words per minute for five minutes.

Associate Degree Applicable

CIT 016
ADVANCED KEYBOARDING 3 UNITS
PREREQUISITE: CIT 013.

DEPARTMENTAL ADVISORY: CIT 020.

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

Presents advanced applications of document processing that occur in modern offices including preparation of legal papers, financial reports, statistical materials, introductory desktop applications, and advanced letter production. Emphasis on skill building; producing documents with a computer; following directions; and the use of judgment and initiative in preparing documents.

Associate Degree Applicable

CIT 020
WORD PROCESSING: MICROSOFT WORD 3 UNITS

PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 010 or CIT 009.
LECTURE: 3 hours per week.

The production of professional quality documents using Microsoft Word software including the use and design of macros, and special features such as merging, preparing labels, and making columns and tables.

Associate Degree Applicable

CIT 021
WORD PROCESSING: ADVANCED MICROSOFT WORD 3 UNITS

PREREQUISITE: CIT 020.
LECTURE: 3 hours per week.

The production of professional quality documents using Microsoft Word's advanced features with bookmarks, annotations, macros, borders, frames, WordArt, Equation Editor, newspaper columns, styles, form templates, tables of contents, indexes, table of figures, table of authorities, charts, and hyperlinks, and preparation for Microsoft Certification exams.

Associate Degree Applicable

CIT 025
MICROSOFT OFFICE OUTLOOK 2 UNITS
PREREQUISITE: None.

LECTURE: 2 hours per week.

An introduction to a personal information management program that helps you organize your busy schedule. Learn how to track schedules, organize meetings, create e-mail messages, share information and data within workgroups, and maintain contact lists.

Associate Degree Applicable

CIT 030
RECORDS AND DATABASE MANAGEMENT 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

The course provides an introduction to manual and computerized filing systems. The principles governing records storage, and how to locate when needed, and how to apply the criteria for determining their disposition or retention are thoroughly explored.

Associate Degree Applicable

CIT 031
BUSINESS ENGLISH 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

Review of basic grammar, punctuation, capitalization and spelling. Emphasis on grammar, vocabulary building for effective business communication, and writing common business letters and memos.

Associate Degree Applicable

CIT 032
MACHINE TRANSCRIPTION 3 UNITS
PREREQUISITE: CIT 020.

DEPARTMENTAL ADVISORY: CIT 031.

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

The course provides instruction and practice in document formatting, editing, proofreading, and listening as well as the preparation of industry-specific documents for transcription.

Associate Degree Applicable

CIT 033
MACHINE CALCULATIONS 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: BUSCAL 050 or MATH 952.
LECTURE: 2 hours per week and
LABORATORY: 3 hours per week.
Instruction and practice on electronic desk calculators with application of skills to problems and mathematical computation for business and industry.
Associate Degree Applicable

CIT 043
LEGAL OFFICE PROCEDURES 3 UNITS
PREREQUISITE: CIT 010 or CIT 009.
LECTURE: 3 hours per week.
Specialized training for the legal office assistant including legal terminology; legal correspondence; professional relations with employers and clients; California Codes and court rules; and preparation and handling of legal forms.
Associate Degree Applicable

CIT 044
MEDICAL OFFICE TERMINOLOGY 3 UNITS
PREREQUISITE: None.
LECTURE: 3 hours per week.
The course covers the origin, correct spelling, pronunciation, meaning, and current use of medical terms and their application to medical records and reports.
Associate Degree Applicable

CIT 045
MEDICAL INSURANCE FORMS 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORIES: CIT 010 and CIT 044.
LECTURE: 3 hours per week.
A comprehensive study of various types of health insurance programs including insurance benefits, patient cost, sharing coverage, insurance terminology, and the proper handling of insurance claims in medical and dental offices.
Associate Degree Applicable

CIT 048
MEDICAL OFFICE PROCEDURES 3 UNITS
PREREQUISITE: CIT 010 or CIT 009.
DEPARTMENTAL ADVISORY: CIT 020.
LECTURE: 3 hours per week.
This course prepares students for employment as "front office" administrative medical assistants. Instruction is provided for both the traditional and technological medical environments. The course covers the medical environment and ethics. Students learn to input patient information, schedule appointments, handle billing, produce lists and reports, and handle insurance claims manually and electronically.
Associate Degree Applicable

CIT 060
GENERAL OFFICE PROCEDURES 2 UNITS
PREREQUISITES: CIT 013, CIT 020, CIT 031 and CIT 100.
DEPARTMENTAL ADVISORY: ENGL 914.
LECTURE: 1 hour per week and
LABORATORY: 3 hours per week.
This course offers training in essential skills necessary for general office employment and on-the-job performance. Students participate in office simulations that integrate software techniques, written and verbal communication skills, email, time management, and human relations skills with typical workplace activities, responsibilities, and general office routines.
Associate Degree Applicable

CIT 080
INSIDE THE PERSONAL COMPUTER 3 UNITS
PREREQUISITE: None.
LECTURE: 3 hours per week.
An introduction to the personal 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

CIT 081
INTRODUCTION TO OPERATING SYSTEMS – A+ 3 UNITS
PREREQUISITES: None.
DEPARTMENTAL ADVISORIES: CIT 080 and CIT 105.
LECTURE: 2 hours per week and
LABORATORY: 3 hours per week.
Basic, hands-on instruction and practice with computer Operating Systems. Prepares the student to use, install, configure, upgrade, manage and troubleshoot Windows type Operating Systems. Topics include the function of major components of the Operating System Desktop; installation, configuration, and upgrade of Operating Systems in both a stand-alone and networked environment; and diagnosis and troubleshooting of Operating System errors. Prepares the student to take the CompTIA A+ Operating System Technologies certification exam. Recommended for students interested in pursuing a career as a computer technician or being able to resolve their own Windows technical problems.
Associate Degree Applicable

CIT 091
NETWORKING FUNDAMENTALS, SEMESTER ONE (CISCO NETWORKING ACADEMY) 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORIES: MATH 952 and CIT 105.
LECTURE: 2 hours per week and
LABORATORY: 3 hours per week.
Designed to provide students with classroom and laboratory experience in the fundamentals of current and emerging networking technology. Topics covered include network topology, cabling, electrical considerations, the OSI model, Internet Protocol, addressing, bridges, switches, hubs, and routers. This is the first course in a four-course CCNA preparation sequence.
Associate Degree Applicable

CIT 092
NETWORKING FUNDAMENTALS BASIC ROUTING,
SEMESTER TWO (CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 091.

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

This course is the second in a series of four semester courses designed to prepare the student to test for the Cisco Certified Network Associate (CCNA) certification. CCNA certification indicates a foundation in and apprentice knowledge of networking for the small home/office market. Topics covered include router fundamentals, router setup and configuration, network management, routing and routed protocols, and network troubleshooting.

Associate Degree Applicable

CIT 093
FUNDAMENTALS OF LANS, LOCAL AREA
NETWORKS, SEMESTER THREE
(CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 092.

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

The third semester of the Cisco Academy provides students with classroom and laboratory experience in configuring routers for various industry standard protocols. It includes, but is not limited to segmentation of LAN's using bridges, routers, and switches; and virtual LANs, Fast Ethernet, cut-through and store and forward LAN switching.

Associate Degree Applicable

CIT 094
FUNDAMENTALS OF WANS, WIDE AREA NETWORKS,
SEMESTER FOUR (CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 093.

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

This course provides the fundamentals in Wide Area Network topologies, interfaces, protocols, linking technology, frame encapsulation, design, internetworking structure and theory, ISDN and ISDN components, configuration, frame relay, and subinterfaces. Learn through theory and hands-on application in the process of designing, configuring, installing and implementing a Wide Area Network.

Associate Degree Applicable

CIT 095
ADVANCED ROUTING, SEMESTER FIVE
(CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 094.

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

Cisco Semester Five focuses on advanced routing and using Cisco routers connected to local-area networks (LANs) and wide-area networks (WANs) typically found at medium to large network sites where students will be able to select and implement the appropriate Cisco IOS services required to build a scalable routed network. This is a first in a series of four courses recommended for CCNP (Cisco Certified network Professional) certification.

Associate Degree Applicable

CIT 096
REMOTE ACCESS, SEMESTER SIX
(CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 095.

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

Cisco Semester Six focuses on Remote Access to the network. This course will provide students with learning experiences in asynchronous dial-up, ISDN, DDR, X.25, Frame Relay, ODR, Wan backup, queuing, compression, NAT, and AAA. This is the second in a series of four courses recommended for CCNP (Cisco Certified network Professional) certification.

Associate Degree Applicable

CIT 097
LAN SWITCHING, SEMESTER SEVEN
(CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 094.

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

Cisco Semester Seven focuses on LAN Switching. The course will provide students with learning experiences in traditional campus networks, LAN media types, basic switch configurations, VLANs, Multilayer Switching, HSRP, Multicasting, and Restricting Network Access. This is the third in a series of four courses recommended for CCNP (Cisco Certified Network Professional) certification.

Associate Degree Applicable

CIT 098
NETWORK TROUBLESHOOTING, SEMESTER EIGHT
(CISCO NETWORKING ACADEMY) 3 UNITS

PREREQUISITE: CIT 094.

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

Cisco Semester Eight focuses on Network Troubleshooting. The course will provide students with learning experiences in troubleshooting methodologies. It will include Protocol Overview, Management and Diagnostic Tools, Troubleshooting TCP/IPS, LAN Switches, VLANs, Routing and Switching Processes, Frame Relay, ISDNs, and AppleTalk. This is the fourth in a series of four courses recommended for CCNP (Cisco Certified Network Professional) certification.

Associate Degree Applicable

CIT 100
INTRODUCTION TO PERSONAL COMPUTERS 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

A survey course for the use of software tools such as word processing, spreadsheets, graphics, presentation and database using Microsoft Office which includes hands-on experience on PC compatible computers.

Associate Degree Applicable

Course credit transfers to CSU.

CIT 101
INTRODUCTION TO COMPUTER LITERACY 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 010 or CIT 008.
LECTURE: 3 hours per week.

The course covers basic computer concepts including hardware components and application software programs. Topics include components of a computer system (CPU, memory, ports, busses, etc.), operating systems and utilities programs, communication and network, ethical issues, and usage of the Internet. The course covers also the use of word processing software to generate business documents, the use of the spreadsheets. Students will learn how to create, modify, insert formulas, use what-if-analysis/goal seek concepts, and format worksheets professionally. In addition the course covers the use of database software and covers concepts such as creating tables, queries, forms, and reports, and the use of presentation software and personal information management software such as Outlook.

Associate Degree Applicable
*Course credit transfers to CSU and *UC.*
CAN (California Articulation Number): BUS 6

CIT 102
ADVANCED COMPUTER LITERACY 3 UNITS
PREREQUISITE: CIT 101.
LECTURE: 3 hours per week.

Expands upon the basic fundamentals of hardware computer concepts, theory and software applications by creating word processing, spreadsheet, database, and presentation graphics and documents introduced in CIT 101.

Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

CIT 105
INTRODUCTION TO WINDOWS 2 UNITS
PREREQUISITE: None.
LECTURE: 1.5 hours per week and
LABORATORY: 1.5 hours per week.

Course will provide the necessary background to understand the graphical user interface of the most widely used operating system. An introduction to the computer operating system that simplifies the process of working with documents and applications, transferring data between documents, and organizing the manner in which one interacts with a computer.

Associate Degree Applicable
Course credit transfers to CSU.

CIT 114
SPREADSHEETS: EXCEL 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 100 or CIT 101.
LECTURE: 3 hours per week.

Production of workbooks using EXCEL, which integrates spreadsheet analysis, information management, and graphics. Includes the design and the use of worksheets; how to enter labels, numbers, formulas, and create graphs; how to format worksheets professionally; how to use Excel functions in different applications and understand the concept of data management in Excel; how to use the concept of what-if-analysis; how to consolidate data in a 3-D workbook and establish File Linking; and how to integrate Excel with the Web.

Associate Degree Applicable
Course credit transfers to CSU.

CIT 116
DATABASE MANAGEMENT: ACCESS 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 100 or CIT 101.
LECTURE: 3 hours per week.

Development and maintenance of a database. Provides a working knowledge of designing a database and setting field properties, storing, retrieving, printing, and indexing records; creating informational and technical queries; developing customized forms and reports; establishing different types of relationships; integrating Access with the Web; and creating a database Switchboard. Emphasis on developing a practical ability to use a database in a Windows environment with full graphical user interface functionality.

Associate Degree Applicable
Course credit transfers to CSU.

CIT 118
MICROSOFT POWERPOINT 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 105.
LECTURE: 3 hour per week.

Introduction to a presentation graphics program for those who plan to make effective and compelling presentations. Instruction includes developing and customizing presentations by using charts, clip art, pictures, presentation templates, WordArt, and information and graphics from Word, Excel, and Access.

Associate Degree Applicable
Course credit transfers to CSU.

CIT 120
INTERNET 2 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 105.
LECTURE: 1.5 hours per week and
LABORATORY: 1.5 hours per week.

Basics of the Internet using the World Wide Web and Netscape Navigator. Internet and the Information Superhighway provide electronic access to products, services and resources available throughout the United States and the world.

Associate Degree Applicable
Course credit transfers to CSU.

CIT 122
WEB PUBLISHING 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: CIT 101.
LECTURE: 3 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.

CIT 126
COMPUTER GRAPHICS **3 UNITS**
PREREQUISITE: CIT 101.

LECTURE: 3 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 graphics software to create professional-looking documents and hands-on experiencing using the PC.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

CIT 150
OFFICE APPLICATIONS DEVELOPMENT **3 UNITS**
PREREQUISITE: CIT 101.

DEPARTMENTAL ADVISORY: CIT 102.

LECTURE: 2 hour per week and

LABORATORY: 3 hours per week.

An introduction to Visual Basic for Application, Microsoft's application scripting language for Microsoft office applications. Topics include: programming basics; automated formatting of spreadsheet and word processor documents; design and construction of customized data entry screens for databases.

Associate Degree Applicable

Course credit transfers to CSU.

CIT 198
COMPUTER INFORMATION 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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

CIT 215
DATABASE MANAGEMENT SYSTEMS **3 UNITS**
PREREQUISITE: CIT 101.

LECTURE: 3 hours per week.

An introduction to the components of relational database management including data definition language, data manipulation language, screen generation, the use of report writers, and Structured Query Language (SQL).

Associate Degree Applicable

Course credit transfers to CSU.

CIT 222
INDEPENDENT STUDY IN COMPUTER
INFORMATION TECHNOLOGY **1-3 UNITS**
PREREQUISITE: CIT 101.

INDEPENDENT STUDY: 3-9 hours per week.

Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of information technology 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 for elective credit only.

CIT 232
DATA COMMUNICATIONS AND NETWORKS **3 UNITS**
PREREQUISITE: CIT 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 the control and management of LAN's and WAN's.

Associate Degree Applicable

Course credit transfers to CSU.

COMPUTER SCIENCE

DIVISION: Science
INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
FACULTY CHAIR: John Stankas, Ph.D.
Chemistry 114
(909) 384-8268
ADMINISTRATIVE SECRETARY: Rose Garcia
DIVISION OFFICE: Chemistry 121
(909) 384-8645
LIAISON COUNSELOR: Mary Beth Barrios, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Utilize technology to organize and present information.
- Demonstrate working knowledge of basic computer function.
- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.

**COMPUTER SCIENCE
ASSOCIATE OF SCIENCE DEGREE**

To graduate with a specialization in Computer Science and intending to transfer to four-year institutions, students must complete a total of 25-26 units listed below in addition to general education requirements.

REQUIRED COURSES:		UNITS
CS 110	Fundamentals of Computer Science	3
CS 190	Programming in C++	4
CS 265	Data Structures	3
PHYSIC 200	General Physics I	6
PHYSIC 201	General Physics II	6
SELECT ONE OF THE FOLLOWING COURSES:		3-4
CS 130	Applied Computer Logic	(3)
CS 170	Assembly Language	(4)
CS 215	Programming with Java	(4)
TOTAL UNITS:		25-26

COMPUTER SCIENCE CERTIFICATE

This certificate is designed to provide students with the fundamentals of software engineering, information processing concepts, and programming to prepare them for entry-level positions as programmers for scientific and business applications. In addition, this certificate completes the lower division requirements of the certificate program offered by the Computer Science Department at CSU San Bernardino.

REQUIRED COURSES:		UNITS
CS 110	Fundamentals of Computer Science	3
CIT 100	Introduction to Personal Computers	3
CS 120	Introduction to Visual Basic.NET	4
CS 220	Visual Basic.NET Programming II	3
SELECT ONE OF THE FOLLOWING COURSES:		
CS 190	Programming in C++	(4)
CS 215	Programming with Java	(4)
TOTAL UNITS:		17

**COURSES OFFERED BY THE DEPARTMENT OF
COMPUTER SCIENCE:**

**CS 110
FUNDAMENTALS OF COMPUTER SCIENCE 3 UNITS**
PREREQUISITE: MATH 095.

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

An orientation in computer science for computer science majors. Topics include an overview of the computer discipline, the 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 languages such as Visual Basic.NET and C++.

Associate Degree Applicable

*Course credit transfers to CSU and *UC.*

**CS 120
INTRODUCTION TO VISUAL BASIC.NET 4 UNITS**
PREREQUISITE: None.

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

An introduction to a Web-based programming language, Visual Basic.NET as it applies to scientific, business and manufacturing settings. Topics include problem solving, graphical user interface, program design, software tools, structured logic, object-oriented programming, graphics and animation, procedures, arrays, files, and Web projects.

Associate Degree Applicable

Course credit transfers to CSU and UC.

CAN (California Articulation Number): CSCI 6

**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 170
ASSEMBLY LANGUAGE 4 UNITS**
PREREQUISITE: CS 110.

**LECTURE: 3 hours per week and
LABORATORY: 3 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: 3 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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

CS 215
PROGRAMMING WITH JAVA **4 UNITS**

PREREQUISITE: CS 110.

LECTURE: 3 hours per week and
LABORATORY: 3 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.NET PROGRAMMING II **3 UNITS**

PREREQUISITE: CS 120.

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

Advanced programming using Visual Basic.NET 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; credit determined after transfer to UC.

CS 265
DATA STRUCTURES **3 UNITS**

PREREQUISITE: CS 190.

LECTURE: 2 hours per week and
LABORATORY: 3 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

COOPERATIVE
WORK EXPERIENCE
See WORK EXPERIENCE

CORRECTIONS

DIVISION:	Criminal Justice
ADMINISTRATIVE DEAN:	Gloria M. Fisher, J.D.
FACULTY CHAIR:	Patrick Buckley, B.S.
ADMINISTRATIVE SECRETARY:	Ruby Zuniga
DIVISION OFFICE:	Planetarium, 2nd Floor (909) 384-4431
LIAISON COUNSELOR:	Joyce Smith, M.A. (909) 384-4404

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Evaluate authority and bias of information.
- Locate, evaluate and select evidence to support or discredit an argument.
- Apply learned knowledge to new situations.
- Accept responsibility for own actions.
- Demonstrate respect for a diversity of ideas and the rights of others.
- Exhibit personal, professional and academic honesty.
- Recognize own biases and values.
- Develop time management skills.
- Set goals for educational, personal and professional development.
- Demonstrate etiquette in face-to-face and written interactions.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.

COURSES OFFERED BY THE DEPARTMENT OF CORRECTIONS:

The Corrections courses listed may not be offered every semester due to instructor availability. Please refer to the college semester schedule for class offerings.

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.

Overview of the techniques in counseling and interviewing available to practitioners in corrections. Use of appropriate techniques and theories in confidence building which the correctional employee may use in client interviews and counseling.

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 in 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 correctional officers 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.

The historical framework, concepts, and precedents that guide correctional practice. Course material will present a broader perspective of the correctional environment such as the civil rights of prisoners, responsibilities and liabilities of correctional officials, the courts, and police.

Associate Degree Applicable
Course credit transfers to CSU.

CRIMINAL JUSTICE
 (see also POLICE SCIENCE)

DIVISION: Criminal Justice
 ADMINISTRATIVE DEAN: Gloria Fisher, J.D.
 ADMINISTRATIVE SECRETARY: Ruby Zuniga
 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) 384-4404

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).

Core competencies emphasized by courses in this department:

- Read and retain information.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Evaluate authority and bias of information.

- Apply learned knowledge to new situations.
- Accept responsibility for own actions.
- Demonstrate respect for a diversity of ideas and the rights of others.
- Exhibit personal, professional and academic honesty.
- Display behavior consistent with ethical standards within a discipline.
- Apply lessons from the past to ethical issues faced in the present.
- Evaluate own ethical beliefs in relationship to moral dilemmas.
- Assume civic, political or social responsibilities.
- Recognize own strengths and weaknesses.
- Recognize own biases and values.
- Recognize own learning style. Give and receive constructive feedback.
- Develop time management skills.
- Set goals for educational, personal and professional development.
- Set goals to create balance in personal and professional life.
- Demonstrate etiquette in face-to-face and written interactions.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.
- Demonstrate knowledge of and respect for one's own culture.

CRIME SCENE INVESTIGATION

This certificate is designed for persons considering a career in Forensic Sciences or Criminalistics. Covering critical components of Crime Scene Investigation (CSI), collection of evidence, courtroom testimony and presentation, forensic anthropology, entomology and odontology.

REQUIRED COURSES:	UNITS
CRMJUS 086 Introduction to Crime Scene Investigation	2
CRMJUS 087 Intermediate Crime Scene Investigation	2
CRMJUS 088 Advanced Crime Scene Investigation	2
ADJUS 103 Concepts of Criminal Law	3
ADJUS 104 Legal Aspects of Evidence	3

Two (2) units of electives chosen from the following list:

CRMJUS 089 Forensic Photography	2
CRMJUS 090 Bloodstain Pattern Analysis	2
TOTAL UNITS:	14

COURSES OFFERED BY THE DEPARTMENT OF CRIMINAL JUSTICE:

The Criminal Justice courses listed may not be offered every semester due to instructor availability. Please refer to the college semester schedule of class offerings.

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 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 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 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 068
LAW ENFORCEMENT RESPONSE TO THE
MENTALLY ILL .25 UNIT
PREREQUISITE: CRMJUS 061.
LECTURE: 4 hours per semester and
LABORATORY: 4 hours per semester.

Students will acquire skills to facilitate communication with mentally ill and developmentally disabled members of the community. Students will be taught methods to de-escalate and control situations that have the potential for violence.

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 086
INTRODUCTION TO CRIME SCENE INVESTIGATION
2 UNITS

PREREQUISITE: None.
LECTURE: 24 hours per semester and
LABORATORY: 30 hours per semester.

This course is designed to be an introductory level course for those persons considering a career in Forensic Sciences or Criminalistics. Lecture topics include securing a crime scene, identification and collection of evidence at crime scenes, processing evidence and crime scenes for latent fingerprints, basic fingerprint pattern recognition, basic crime scene photography, documentation of the crime scene and the examinations performed, a discussion of common mistakes and how to avoid making them and an introduction to courtroom presentation and testimony.

Associate Degree Applicable

CRMJUS 087
INTERMEDIATE CRIME SCENE INVESTIGATION
2 UNITS

PREREQUISITE: CRMJUS 086.
LECTURE: 24 hours per semester and
LABORATORY: 24 hours per semester.

This course is designed to be an intermediate level course for those persons considering a career in Forensic Sciences or Criminalistics. Lecture topics include reviewing the critical components of the Basic CSI class, identification and collection of evidence at violent crime scenes, processing evidence and crime scenes for latent prints using advanced techniques, intermediate crime scene photography, documentation of the crime scene and the examinations performed, a discussion of common mistakes and how to avoid making them and courtroom presentation and testimony.

Associate Degree Applicable

CRMJUS 088
ADVANCED CRIME SCENE INVESTIGATION
2 UNITS

PREREQUISITE: CRMJUS 087.
LECTURE: 24 hours per semester and
LABORATORY: 30 hours per semester.

This course is designed to be an advanced level course for those persons considering a career in Forensic Sciences or Criminalistics. Lecture topics include reviewing the critical components of the basic and second level CSI classes, identification and collection of evidence at crime scenes involving death (homicides, suicide, accidental death and homicides that involve additional violence, such as sexual assault), processing of the deceased for physical evidence, latent fingerprints and other clues relating to the identity of the assailant, shooting reconstruction and gravesite excavation. This course will also discuss other specialties available to the death investigator, such as Forensic Anthropology, Entomology and Odontology.

Associate Degree Applicable

CRMJUS 089
FORENSIC PHOTOGRAPHY
2 UNITS

PREREQUISITE: None.
LECTURE: 24 hours per semester and
LABORATORY: 30 hours per semester.

This course is designed as an overall photography class with an emphasis on techniques needed for crime scene and evidence documentation. This course will discuss different types of cameras used for crime scene documentation, their advantages and disadvantages and special applications. This course will cover manual camera operations necessary for close-up, nighttime and other specialty photographs.

Associate Degree Applicable

CRMJUS 090
BLOODSTAIN PATTERN ANALYSIS
2 UNITS

PREREQUISITES: CRMJUS 088 and MATH 093 or
MATH 103 or equivalent.

LECTURE: 24 hours per semester and
LABORATORY: 30 hours per semester.

This course is designed to be an advanced level course for those persons considering a career in Forensic Sciences or Criminalistics. Lecture topics include the physical properties of blood, the dynamics of blood in flight, mathematical principles relating to bloodstain pattern interpretation and what this information can tell you about the crime that took place.

Associate Degree Applicable

DANCE

DIVISION: Visual, Performing and Media Arts
DIVISION DEAN: Marjorie Price, M.A., M.Ed.
FACULTY CHAIR: Matie Scully, M.M.
North Hall 204
(909) 384-8545
ADMINISTRATIVE SECRETARY: To Be Announced
(909) 384-8625
DIVISION OFFICE: North Hall 236
(909) 384-4445
LIAISON COUNSELOR: Juan Zepeda, M.S.
(909) 384-4404

Core competencies emphasized by courses in this department:

- Employ vocabulary of the subject studied.
- Give and receive constructive feedback.
- Evaluate diverse artistic works.
- Demonstrate creative thought through original expression.

COURSES OFFERED BY THE DEPARTMENT OF DANCE:

DANCE 101x2
BEGINNING MODERN DANCE
2 UNITS

PREREQUISITE: None.
LABORATORY: 6 hours per week.

A comprehensive survey of the beginning techniques of Modern Dance with a focus on vocabulary, placement and alignment, strength and flexibility exercises, and simple combinations of locomotor movement. This course may be taken twice.

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.
A progressive study of Modern Dance including strengthening exercises, center work on balance and control, rhythmic awareness, and combinations of increasing speed, length, and complexity. 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 and alignment, strength and flexibility exercises, and simple combinations of locomotor movement. This course may be taken two times.
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.
A progressive study of Jazz Dance including strengthening exercises, work on balance and control, rhythmic awareness, and combinations of increasing speed, length, and complexity. 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: Applied Technology & Transportation
 DIVISION DEAN: Gary Kelly, M.S.
 DIRECTOR: Kevin Anderson, M.B.A.
 FACULTY: Daniel Hook, A.S.
 DEPARTMENT SECRETARY: Amanda Moody
 (909) 382-4079
 DEPARTMENT OFFICE: 264 S. Leland Norton Way
 Suite A120, San Bernardino
 LIAISON COUNSELOR: Jennifer Mendoza, M.S.
 (909) 384-4404

Core competencies emphasized by courses in this department:

- Employ vocabulary of the subject studied.
- Find and interpret information.
- Apply learned knowledge to new situations.
- Accept responsibility for own actions.
- Exhibit personal, professional and academic honesty.
- Work effectively in group settings.
- Utilize conflict resolution skills.

HEAVY-DUTY DIESEL TECHNICIAN CERTIFICATE

This certificate is designed to prepare students for entry-level positions repairing and maintaining diesel engines in trucks, buses, locomotives, heavy vehicles, and mobile heavy-duty equipment. 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
CIT 101 Introduction to 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 Advanced Heavy-Duty Diesel Engines	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
TOTAL UNITS:	30

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, operation, 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 busses.
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
 ADVANCED HEAVY-DUTY DIESEL ENGINES** **4 UNITS**
PREREQUISITE: DIESEL 021.
LECTURE: 3 hours per week and
LABORATORY: 3 hours per week.
 Theory and practical shop in the repair, operation and the construction of heavy duty diesel engines. Includes principles of diesel turbo chargers and blowers; two and four cycle combustion systems. This course is an intermediate engine rebuild class.
Associate Degree Applicable

**DIESEL 026
 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 computer controlled diesel engines. Includes general trouble-shooting and diagnostics using assorted electronic and computerized test equipment on operable computer controlled diesel engines.
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 truck and bus systems. Fundamentals of truck components and systems are explained as students perform routine tasks. 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 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 shop work in maintenance, air conditioning, ABS, computers, and operations of the heavy-duty truck and bus systems. Course is designed to provide students the needed skills and knowledge to perform advanced level labor tasks in the heavy-duty truck and bus service industry.

Associate Degree Applicable

**DIESEL 034
INTRODUCTION TO HEAVY-DUTY COMPRESSED
NATURAL GAS VEHICLE SYSTEMS 2 UNITS**

PREREQUISITE: DIESEL 026.
LECTURE: 1.5 hours per week and
LABORATORY: 1.5 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

**DIESEL 035
HEAVY-DUTY VEHICLE AUTOMATIC
TRANSMISSIONS 2 UNITS**

PREREQUISITE: None
LECTURE: 1.5 hours per week and
LABORATORY: 1.5 hours per week.

This course provides theory and hands on experience with heavy and medium-duty automatic transmission operation, construction, service and overhaul procedures. The purpose of the class is to prepare the students to successfully troubleshoot and repair heavy and medium-duty transmissions.

Associate Degree Applicable

ECONOMICS

DIVISION: Business & Information Technology
DIVISION DEAN: Margaret Ortiz, M.A.
FACULTY CHAIR: Nickolas Zoumbos, M.S.
Business 100D
(909) 384-8912
OTHER FACULTY: Walt Chatfield, Ph.D.
J. D. Dulgeroff, Ph.D.
ADMINISTRATIVE SECRETARY: Chris Williams
DIVISION OFFICE: Business 101
(909) 384-8908
LIAISON COUNSELOR: Patty Jones, M.A.
(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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Locate, evaluate and select evidence to support or discredit an argument.
- Construct a persuasive argument.
- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.
- Defend a logical hypothesis to explain observed phenomenon.

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 and UC.

**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 and *UC.*

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 and *UC.*

ECON 201
PRINCIPLES OF MICROECONOMICS
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): ECON 4

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 and *UC.*

ECON 222
INDEPENDENT STUDY IN ECONOMICS
1-3 UNITS

PREREQUISITES: ECON 200 and ECON 201.

INDEPENDENT STUDY: 3-9 hours per week.

Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of economics 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.

Limited transfer to UC; credit determined after transfer to UC.

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: Social Science & Human Development
DIVISION DEAN: Janice Noble, Ph.D.
FACULTY CHAIR: Juliann Martin, B.S.
North Hall 244
(909) 384-4457
OTHER FACULTY: Kathryn Adams, M.S.
Kellie Barnett, M.S.
Denise Knight, B.A.
Susan Shimoff, M.A.
ADMINISTRATIVE SECRETARY: Karen Deck
DIVISION OFFICE: Liberal Arts 122
(909) 384-8603
LIAISON COUNSELOR: Mary Beth Barrios, M.S.
(909) 384-4404

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.

ELECTRICITY/ELECTRONICS/ TECHNICAL CALCULATIONS

DIVISION: Applied Technology & Transportation
DIVISION DEAN: Gary Kelly, M.S.
FACULTY CHAIR: Edward Szumski, M.A.
Technical 108
(909) 384-8501
OTHER FACULTY: Carlos Busselle, B.A.
ADMINISTRATIVE SECRETARY: Cecile Smith
(909) 384-8902
DIVISION OFFICE: Technical 108
(909) 384-4451
(909) 384-4404
LIAISON COUNSELOR: Jennifer Mendoza, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Find and interpret information.

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

These certificates are designed to provide students with the fundamentals of electronics technology by offering courses common to electricity, communications and computers. This preparation can be for transfer to the university or for further study in areas of communications, computers, electricity, and aircraft electronics. It can also prepare students for entry-level positions in electronics maintenance, installation, field service, networking, and apprenticeship in the field of electronics technology. 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. 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 087 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
TOTAL UNITS:	34

2. COMMUNICATIONS ENGINEERING TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to communications engineering. The curriculum prepares students for entry-level positions in electronics communications maintenance, installation, field service, networking, and apprenticeship in the field of communications engineering technology. 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.

Complete the REQUIRED COURSES for Electronics Technology plus -

REQUIRED COURSES:	UNITS
ELECTR 220B F.C.C. Rules and Regulations	3
ELECTR 250B Radio Transmitters, Receivers and Antennas	4
ELECTR 255B Telephone Networking	4
TOTAL UNITS:	45

3. COMPUTER ENGINEERING TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to computer engineering. The curriculum prepares students for entry-level positions in computer maintenance, installation, field service, networking, and apprenticeship in the field of computer engineering technology. 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.

Complete the REQUIRED COURSES for Electronics Technology plus -

REQUIRED COURSES:	UNITS
ELEC 217B Industrial Electricity	4
ELECTR 158 Microcomputer Operation	2
ELECTR 280B Computer Operations and Maint	4
TOTAL UNITS:	44

4. ELECTRIC POWER TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to industrial electricity. The curriculum prepares students for entry-level positions in electrical maintenance, installation, field service, networking, and apprenticeship in the field of electronic power technology. 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.

Complete the REQUIRED COURSES for Electronics Technology plus -

REQUIRED COURSES:	UNITS
ELEC 216B Introduction to Industrial Electricity	4
ELEC 217B Industrial Electricity	4
ELEC 218B Controlling Industrial Electricity	4
TOTAL UNITS:	46

5. AVIONICS TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to avionics. The curriculum prepares students for entry-level positions in aircraft electricity, maintenance, installation, field service, networking, and apprenticeship in the field of avionics technology. 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.

Complete the REQUIRED COURSES for Electronics Technology plus -

AERO 121* Aviation Fundamentals	3
AERO 140D Instrument Ground School & Flight Sim.	4
ELECTR 220B FCC Rules and Regulations	3
ELECTR 250B Radio Transmitters, Receivers, & Antennas	4
ELECTR 257B Navigation & Communication Syst	4
TOTAL UNITS:	52

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

GENERAL ELECTRICIAN CERTIFICATE

This certificate will allow an "Electrician Trainee" to sit for the California State General Electrician Certification examination. These courses also satisfy the continuing education requirement every three years for certified electricians. Students working for certificates must have a basic knowledge for arithmetic, reading and writing in order to learn and work in the occupations they select.

REQUIRED COURSES	UNITS
ELEC 216B Introduction to Industrial Electricity	4
ELEC 217B Industrial Electricity	4
ELEC 218B Controlling Industrial Electricity	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 Laboratory	1
ELECTR 230 Semiconductor Devices	3
ELECTR 235 Solid State Circuit Analysis	4
ELECTR 265 Digital Logic Design	4
INSPEC 014C Advanced Construction Inspection: National Electrical Code	3
INSPEC 024C Community Relations for Civil Service Employees	3
PE 231 First Aid and CPR	3
TECALC 087 Technical Calculations	4
TOTAL UNITS:	44

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

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 216B
INTRODUCTION TO INDUSTRIAL ELECTRICITY 4 UNITS

PREREQUISITES: ELECTR 110 and ELECTR 111.

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 217B
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 218B
CONTROLLING INDUSTRIAL ELECTRICITY 4 UNITS
PREREQUISITES: ELECTR 115 and ELECTR 116.

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 and UC.

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 and UC.

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 and UC.

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 and UC.

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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

ELECTR 220B
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 for elective credit only.

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 for elective credit only.

ELECTR 230
SEMICONDUCTOR DEVICES 3 UNITS
PREREQUISITE: *ELECTR 110.*

LECTURE: *3 hours per week.*

This course is a study of semiconductor devices including the chemistry and physics of the structure of the atom and the operation of semiconductor 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 250B
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 255B
TELEPHONE NETWORKING 4 UNITS

PREREQUISITE: *ELECTR 115.*

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

Course includes telephone topology with emphasis on the Open System Interconnection (OSI) model, telephony color code, tools, patch panels, phone wiring and installation, voice and data block wiring, installation, and programming/troubleshooting a digital key system and network.

Associate Degree Applicable
Course credit transfers to CSU.

ELECTR 257B
NAVIGATION AND COMMUNICATION SYSTEMS 4 UNITS

PREREQUISITE: *ELECTR 250B.*

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 280B
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 290B
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 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

TECALC 087
TECHNICAL CALCULATIONS 4 UNITS

PREREQUISITE: *None.*

LECTURE: 4 hours per week.

Practical use and applications of technical calculations on topics such as electrical, measurements, temperature, volume, weight, and positioning. Includes the number line, working with dedicated formula, applied problems, geometric principles, graphs, right triangles, coordinate systems, and scientific notation.

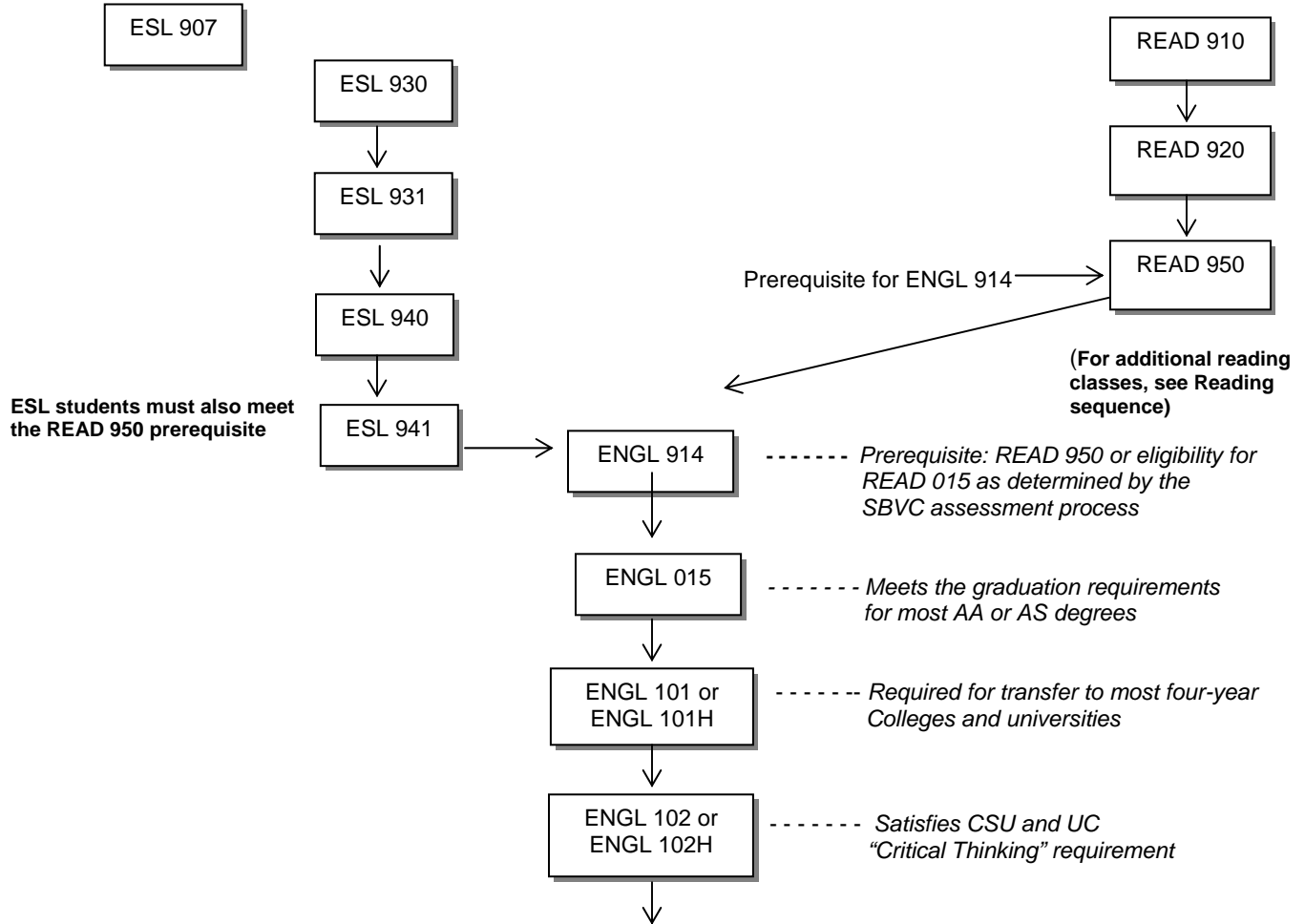
Associate Degree Applicable

Sequence of English Courses at SBVC

Your placement within any of the sequences is dependent on the results of the SBVC Reading and English assessment process.

(Contact a counselor for details and the Admissions Office for assessment dates.)

(ESL students are encouraged to take the Reading assessment as soon as possible)



ADVANCED ENGLISH COURSES

**Advanced English Courses: News Writing, Creating Writing, and Literature courses
(ENGL 120 through ENGL 281) have a prerequisite of ENGL 101**

- ENGL 120 Fundamentals of News Writing
- ENGL 122x4 Journalism Production
- ENGL 151 Freshman Composition and Literature
- ENGL 153 Literature and Film
- ENGL 155 Children's Literature
- ENGL 161 Women Writers
- ENGL 163 Chicano Literature
- ENGL 165 African-American Literature
- ENGL 175 Literature and Religion of the Bible
- ENGL 232 Creative Writing
- ENGL 260 American Literature: to the Mid-1800s
- ENGL 261 American Literature: from the Mid-1800s to the Present
- ENGL 270 English Literature to the 18th Century
- ENGL 271 English Literature from the 18th Century to the Present
- ENGL 275 Shakespeare
- ENGL 280 World Literature to the 17th Century
- ENGL 281 World Literature from the 17th Century to the Present

ENGLISH

DIVISION: Humanities
INTERIM DIVISION DEAN: Kathryn Weiss, Ed.D.
LIBERAL ARTS CHAIR: Diane Hunter, M.A.
LIBERAL ARTS 217A
(909) 384-8617

OTHER FACULTY: Horace Alexander, Ed.D.
Sharon Chapman, M.A.
Paula Ferri-Milligan, M.A.
Sheela Free, Ph.D.
Edward Jones, M.F.A.
Thomas Kinnaird, M.A.
Joel Lamore, M.A.
Dirkson Lee, M.A.
Yvette Lee, M.A.
William McKie, M.A.
Dolores Moreno, M.A.
Joseph Notarangelo, M.A.
Anasuya Pal, Ph.D.
Edward Perez, Ph.D.
Michael Slusser, M.A.
Julie Tilton, M.A.

ADMINISTRATIVE SECRETARY: To Be Announced
(909) 384-8633

DIVISION OFFICE: Liberal Arts 217
(909) 384-8633

LIAISON COUNSELOR: Juan Zepeda, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Evaluate diverse artistic works.
- Demonstrate creative thought through original expression.
- Demonstrate etiquette in face-to-face and written interactions.
- Work effectively in group settings.
- Utilize conflict resolution skills.
- Demonstrate knowledge of and respect for other cultures.
- Demonstrate knowledge of and respect for one's own culture.

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: READ 950 or eligibility for READ 015 as determined by SBVC assessment process OR ESL 941.

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 eligibility for ENGL 015 as determined by 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

ENGL 020
FUNDAMENTALS OF NEWS WRITING 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015 as determined by SBVC assessment process.

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 is on the most basic form, the news story. This non-transfer course is taught simultaneously with ENGL 120, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

Associate Degree Applicable

ENGL 022x4
JOURNALISM PRODUCTION 2 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
LABORATORY: 6 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. This non-transfer course is taught simultaneously with ENGL 122x4, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures. This course may be taken four times.

Associate Degree Applicable

ENGL 032
CREATIVE WRITING 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
LECTURE: 3 hours per week.

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. This non-transfer course is taught simultaneously with ENGL 232, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures

Associate Degree Applicable

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

ENGL 061
WOMEN WRITERS 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
LECTURE: 3 hours per week.

A survey of poetry and prose by prominent women writers, exploring historical and contemporary issues in women's lives. This non-transfer course is taught simultaneously with ENGL 161, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

Associate Degree Applicable

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

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

ENGL 070
ENGLISH LITERATURE TO THE 18TH CENTURY 3 UNITS

PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
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. This non-transfer course is taught simultaneously with ENGL 270, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

Associate Degree Applicable

ENGL 071
**ENGLISH LITERATURE FROM THE 18TH CENTURY
TO THE PRESENT** 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
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. This non-transfer course is taught simultaneously with ENGL 271, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

Associate Degree Applicable

ENGL 075
LITERATURE AND RELIGION OF THE BIBLE 3 UNITS

PREREQUISITE: ENGL 914 or eligibility for ENGL 015
as determined by SBVC assessment process.
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 non-transfer course is taught simultaneously with ENGL 175, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.

Associate Degree Applicable

ENGL 077
SHAKESPEARE 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015 as determined by SBVC assessment process.
LECTURE: 3 hours per week.

A critical analysis of a selection of Shakespeare's plays representative of his literary development. Lectures, films, and recordings will examine life and the theater in Elizabethan England. This non-transfer course is taught simultaneously with ENGL 275, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.
Associate Degree Applicable

ENGL 080
WORLD LITERATURE TO THE 17TH CENTURY 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015 as determined by SBVC assessment process.
LECTURE: 3 hours per week.

An introduction to world literature from the beginning to the seventeenth century, including a critical analysis of selected samples of literature within the context of the culture and time in which they were written. This non-transfer course is taught simultaneously with ENGL 280, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.
Associate Degree Applicable

ENGL 081
WORLD LITERATURE: FROM THE 17TH CENTURY TO THE PRESENT 3 UNITS
PREREQUISITE: ENGL 914 or eligibility for ENGL 015 as determined by SBVC assessment process.
LECTURE: 3 Hours per week.

An introduction to world literature from the seventeenth 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. This non-transfer course is taught simultaneously with ENGL 281, a transfer-level course. Assignments differ for the two courses although students participate in the same lectures.
Associate Degree Applicable

ENGL 101
FRESHMAN COMPOSITION 4 UNITS
PREREQUISITE: ENGL 015 or eligibility for ENGL 101 as determined by 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 and *UC.
CAN (California Articulation Number): ENGL 2

ENGL 101H
FRESHMAN COMPOSITION-HONORS 4 UNITS
PREREQUISITE: ENGL 015 or eligibility for ENGL101 as determined by 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 and *UC.

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 and *UC.

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 and *UC.

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 122x4
JOURNALISM PRODUCTION 2 UNITS
PREREQUISITE: ENGL 101 or ENGL 101H.
LABORATORY: 6 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 ENGL101 as determined by 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 two times.
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 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.

CAN (California Articulation Number): ENGL 14

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.

CAN (California Articulation Number): ENGL 16

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.
CAN (California Articulation Number): ENGL 8

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.
CAN (California Articulation Number): ENGL 10

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 17th 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.

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.

Core competencies emphasized by courses in this department:

- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.

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 931
PATTERNS OF CONTEMPORARY ENGLISH II 4 UNITS

PREREQUISITE: ESL 930 or eligibility as determined by 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 by 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

ENGINEERING

DIVISION: Science
 INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
 FACULTY CHAIR: John Stankas, Ph.D.
 Chemistry 114
 (909) 384-8268
 ADMINISTRATIVE SECRETARY: Rose Garcia
 DIVISION OFFICE: Chemistry 121
 (909) 384-8645
 LIAISON COUNSELOR: Mary Beth Barrios, M.S.
 (909) 384-4404

ENGR 100
ENGINEERING CAREER EXPLORATION **1 UNIT**
PREREQUISITE: *None.*

LECTURE: *1 hour per week.*

An introduction to the major fields of specialization in engineering and engineering technology professions. This course gives students a broad understanding of various career opportunities and the specialized demands and rewards of each field.

Associate Degree Applicable
Course credit transfers to CSU

ENGR 265
ENGINEERING MECHANICS – STATICS **3 UNITS**
PREREQUISITE: *PHYSIC 200.*

LECTURE: *3 hours per week.*

This course lays the foundation of Newtonian mechanics for students to learn the basic fundamental engineering science and serves as the building blocks for further courses in analysis and design. A study of two- and three-dimensional equilibrium of particles and rigid bodies; concentrated and rigid bodies; concentrated and distributed force systems; shear and bending moment stresses in beams and other rigid bodies; analysis of frames, machine and trusses; force resultants using vectors in two and three dimensions; non-coplanar force systems, friction forces; center of gravity and moment of inertia.

Associate Degree Applicable
Course credit transfers to CSU and UC.

ESCROW

See the Department of REAL ESTATE AND ESCROW

FAMILY AND CONSUMER SCIENCE

DIVISION: Social Science & Human Development
 DIVISION DEAN: Janice Noble, Ph.D.
 FACULTY CHAIR: Juliann Martin, B.A.
 North Hall 244
 (909) 384-4457
 ADMINISTRATIVE SECRETARY: Karen Deck
 DIVISION OFFICE: Liberal Arts 122
 (909) 384-8603
 LIAISON COUNSELOR: Mary Beth Barrios, M.S.
 (909) 384-4404

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Employ vocabulary of the subject studied.
- Find and interpret information.
- Apply learned knowledge to new situations.
- Apply principles of scientific reasoning to solve problems.
- Display behavior consistent with ethical standards within a discipline.

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

This certificate is designed to prepare students for entry-level employment in dietetics, assisting dieticians in the provision of food service and nutritional programs. 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
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
TOTAL UNITS:	21

2. DIETETIC SERVICE SUPERVISOR CERTIFICATE

This certificate is designed to prepare students to meet the California Department of Health Licensing Requirements for Dietetic Service Supervisor [DSS] in order to supervise production, writing menus, designing diets, teaching classes to food service personnel, and giving diet instructions. 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
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)
TOTAL UNITS:	25.5-32.5

COURSES OFFERED BY THE DEPARTMENT OF FAMILY AND CONSUMER SCIENCE:

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 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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students MUST be working for pay or volunteer before registering for a Work Experience class. NOTE: Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

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 for elective credit only.

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.

FOOD SERVICE

See the Department of RESTAURANT
MANAGEMENT/FOOD SERVICE

FRENCH

DIVISION: Humanities
INTERIM DIVISION DEAN: Kathryn Weiss, Ed.D.
FACULTY CHAIR: Nori Sogomonian
North Hall 221-222
(909) 384-8544
ADMINISTRATIVE SECRETARY: To Be Announced
(909) 384-8633
DIVISION OFFICE: Liberal Arts 217
(909) 384-8633
LIAISON COUNSELOR: Juan Zepeda, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Speak clearly.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.
- Apply learned knowledge to new situations.
- Work effectively in group settings.
- Demonstrate knowledge of and respect for other cultures.

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): FREN 2

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): FREN 4

GEOGRAPHIC INFORMATION SYSTEMS

DIVISION: Science
INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
FACULTY CHAIR: Todd Heibel, Ph.D.
Chemistry 113
(909) 384-8638
ADMINISTRATIVE SECRETARY: Rose Garcia
DIVISION OFFICE: Chemistry 121
(909) 384-8645
LIAISON COUNSELOR: Rutina Taylor, M.A.
(909) 384-4404

**GEOGRAPHIC INFORMATION SYSTEMS
CERTIFICATE**

This certificate is designed to prepare students for entry-level employment in Geographic Information Systems [GIS] and automated mapping technology, utilizing earth resources data satellites, aerial photography, and computerized data banks of spatial data. 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)
TOTAL UNITS:	16

**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: CIT 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 for elective credit only.

**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 for elective credit only.

**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 for elective credit only.

**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 for elective credit only.

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 for elective credit only.

GIS 139
GLOBAL POSITIONING SYSTEMS (GPS) **1 UNIT**
FIELD TECHNIQUES
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 for elective credit.

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 for elective credit only.

GEOGRAPHY

DIVISION: Science
 INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
 FACULTY CHAIR: Todd Heibel, Ph.D.
 Chemistry 113
 (909) 384-8638
 OTHER FACULTY: Maureen Smith, M.A.
 ADMINISTRATIVE SECRETARY: Rose Garcia
 DIVISION OFFICE: Chemistry 121
 (909) 384-8645
 LIAISON COUNSELOR: Rutina Taylor, M.A.
 (909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.
- Demonstrate active listening skills.

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).

REQUIRED COURSES:	UNITS
GEOG 102 Cultural Geography	3
GEOG 106 Geographic Perspectives on the Environment	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)
TOTAL UNITS:	20

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
GEOGRAPHIC PERSPECTIVES ON THE ENVIRONMENT 3 UNITS

PREREQUISITE: None.

LECTURE: 3 hours per week.

Introductory study of the latest geographic perspectives of critical environmental issues occurring within and across local, regional, national, and global scales. Creates an awareness of the geography of human-environment relationships, in particular how nature and natural resources are defined, contested, distributed, and consumed. Emphasis is on social, political, cultural, psychological, and economic evaluation of natural resources and associated resource management, occurring in place and across space and including exploitation, conservation, and preservation values.

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.

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; credit determined after transfer to UC.

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 above 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 and UC.

GEOLOGY

DIVISION: Science
INTERIM DIVISION DEAN: Susan Bangasser, Ph.D.
FACULTY CHAIR: Todd Heibel, Ph.D.
Chemistry 113
(909) 384-8638
ADMINISTRATIVE SECRETARY: Rose Garcia
DIVISION OFFICE: Chemistry 121
(909) 384-8645
LIAISON COUNSELOR: Mary Beth Barrios, M.S.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Employ vocabulary of the subject studied.

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).

REQUIRED COURSES:	UNITS
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

Eight units from the list of RECOMMENDED COURSES 8
TOTAL UNITS: 48

RECOMMENDED COURSES:	UNITS
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 and *UC.*
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 and *UC.*

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 by 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 and *UC.*

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. This course may be taken four times.

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 and *UC.*

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 and *UC.*

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; credit determined after transfer to UC.

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: Any GEOL course.

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 two times.

Associate Degree Applicable

Course credit transfers to CSU.

HEALTH EDUCATION

See the Department of
PHYSICAL EDUCATION AND HEALTH

HISTORY

DIVISION: Social Science & Human Development
DIVISION DEAN: Janice Noble, Ph.D.
FACULTY CHAIR: Edward Gomez, M.A.
Liberal Arts 135
(909) 384-8596
OTHER FACULTY: Colleen Calderon, M.A.
Daniel Walker, Ph.D.
ADMINISTRATIVE SECRETARY: Karen Deck
DIVISION OFFICE: Liberal Arts 122
(909) 384-8603
LIAISON COUNSELOR: Rutina Taylor, M.A.
(909) 384-4404

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.

Core competencies emphasized by courses in this department:

- Read and retain information.
- Write clearly.
- Find and interpret information.
- Evaluate authority and bias of information.
- Locate, evaluate and select evidence to support or discredit an argument.
- Construct a persuasive argument.
- Demonstrate knowledge of and respect for other cultures.
- Demonstrate knowledge of and respect for one's own culture.

COURSES OFFERED BY THE DEPARTMENT OF HISTORY:

**HIST 100
UNITED STATES HISTORY TO 1877 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
UNITED STATES HISTORY: 1865 TO PRESENT 3 UNITS**

PREREQUISITE: None.
LECTURE: 3 hours per week.

A general survey of the history of the United States from the Reconstruction era to present times. This course will emphasize the various social, political, cultural and economic forces which shaped North American history.

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.

Associate Degree Applicable
Course credit transfers to CSU and UC.

**HIST 110
INTRODUCTION TO SERRANO CULTURAL STUDIES 3 UNITS**

PREREQUISITE: None.
LECTURE: 3 hours per week.

An introduction and general overview to Serrano culture as represented by studies and research in history, archeology, linguistics, and ethnography. Relationships with other Native Americans and European people as influences will also be explored.

Associate Degree Applicable
Course credit transfers to CSU and UC.

**HIST 137
RACIAL AND ETHNIC GROUPS IN UNITED STATES HISTORY 3 UNITS**

PREREQUISITE: None.
LECTURE: 3 hours per week.

An introduction to United States history focusing on the experiences of racial and ethnic groups that spans from the early Colonial period to present times. This course chronologically presents various racial and ethnic groups and their experiences through major social, political, economic, and cultural events in United States history. This course compares the experiences of racial and ethnic groups, such as African Americans, Native Americans, Jewish immigrants, European immigrants, Asian Americans, and Latinos throughout the establishment and development 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 17th 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 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 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.***HIST 222****INDEPENDENT STUDY IN HISTORY****1-3 UNITS****PREREQUISITE: None.****INDEPENDENT STUDY: 3-9 hours per week.**

Assigned projects involving research and analysis of selected topic(s) or directed study for students who are interested in furthering their knowledge of history on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment is limited to those who meet independent study criteria. Prior to registration, a contract must be prepared by the student and the department chairperson. See department chairperson for details.

*Associate Degree Applicable**Course credit transfers to CSU.**Limited transfer to UC; credit determined after transfer to UC.***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; credit determined after transfer to UC.***HUMAN SERVICES**

DIVISION: Social Science & Human Development
 DIVISION DEAN: Janice Noble, Ph.D.
 FACULTY CHAIR: James Robinson, M.A., C.A.T.S.
 Liberal Arts 139
 (909) 384-8583
 OTHER FACULTY: Joan Harter, M.S., C.A.T.S.
 ADMINISTRATIVE SECRETARY: Karen Deck
 DIVISION OFFICE: Liberal Arts 122
 (909) 384-8603
 LIAISON COUNSELOR: Rutina Taylor, M.A.
 (909) 384-4404

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

This certificate is designed to provide students with career preparation at the vocational certificate level in the field of substance abuse intervention and counseling for those preparing for careers in alcohol/drug counseling or other related human or social services fields. 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
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 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)
TOTAL UNITS:	46

2. CAREER SPECIALIST CERTIFICATE

This certificate is designed to provide students with career preparation at the vocational certificate level to prepare them for entry-level employment in the field of career preparation and counseling. 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

HUMSV 170 Introduction to Human Services	3
HUMSV 172 Group and Family Dynamics	3
HUMSV 173 Helping and Interpersonal 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, including HUMSV 207, should be completed prior to field work courses.

HUMSV 198E Career Specialist Work Experience	2
and	
HUMSV 195A or B Human Services: Intern Seminar I or II	1

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
TOTAL UNITS:	31

3. CASE MANAGEMENT IN THE PUBLIC SECTOR CERTIFICATE

This certificate is designed to prepare students for entry-level employment in case management in public social services setting, including the fundamentals of organizational structure, funding, evaluation, assessment and referral, employment services, and career paths. 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

HUMSV 140 Case Management in Public Service	3
HUMSV 167 Crisis Intervention, Assessment, Referral	3
HUMSV 170 Introduction to Human Services	3
HUMSV 173 Helping and Interpersonal Skills	3

REQUIRED FIELD WORK COURSES: UNITS

A minimum of three courses required for the certificate, including HUMSV 140 and HUMSV 170, should be completed prior to field work courses.

HUMSV 198F Case Management Work Experience	2
and	
HUMSV 195A or B Human Services: Intern Seminar I or II	1

REQUIRED GENERAL EDUCATION COURSES: UNITS

ENGL 015 Preparation for College Writing	4
or	
ENGL 101 Freshman Composition	(4)
CIT 100 Introduction to Personal Computers	3
PSYCH 100 General Psychology	3
SPEECH 111 Interpersonal Communication	3
SPEECH 174 Intercultural Communication	3
TOTAL UNITS:	31

4. EATING DISORDERS STUDIES CERTIFICATE

This certificate is designed to provide students with career preparation at the vocational certificate level to prepare them for entry-level employment in the field of eating disorders intervention, counseling, and treatment. 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
HUMSV 170 Introduction to Human Services	3
HUMSV 172 Group and Family Dynamics	3
HUMSV 173 Helping and Interpersonal 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 should be completed prior to field work courses.

HUMSV 198G Eating Disorders Work Experience and HUMSV 195A or B Human Services: Intern Seminar I or II	2 1
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REQUIRED GENERAL EDUCATION COURSES:	UNITS
ENGL 015 Preparation for College Writing or ENGL 101 Freshman Composition	4 (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
TOTAL UNITS:	40

5. HUMAN SERVICES CERTIFICATE

This certificate is designed to prepare students for entry-level employment in human services by providing them with fundamental, vocational certificate-level knowledge of the methodologies of intervention at the individual, group, and community levels. 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
HUMSV 170 Introduction to Human Services	3
HUMSV 172 Group and Family Dynamics	3
HUMSV 173 Helping and Interpersonal Skills	3
HUMSV 179 Legal/Ethical Issues in Human Services	3
PSYCH 132 Counseling Techniques	3
SOC 110 Contemporary Social Issues or SOC 141 Race & Ethnic Relations and Six other units of Human Services courses	3 (3) 6

REQUIRED FIELD WORK COURSES: **UNITS**
A minimum of four Human Services courses required for the certificate should be completed prior to field work courses.

The following courses are to be taken together:

HUMSV 195A Human Services: Intern Seminar I	1
HUMSV 198C Human Services Certificate Work Experience I	2

The following courses are to be taken together:

HUMSV 195B Human Services: Intern Seminar II	1
HUMSV 198D Human Services Certificate Work Experience II	2

REQUIRED GENERAL EDUCATION COURSES:	UNITS
ENGL 015 Preparation for College Writing or ENGL 101 Freshman Composition	4 (4)
PSYCH 100 General Psychology	3
SOC 100 Introduction to Sociology	3
TOTAL UNITS:	40

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 for elective credit only.

HUMSV 160
HUMAN SERVICES ASPECTS OF 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.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

HUMSV 167
CRISIS INTERVENTION, ASSESSMENT, REFERRAL, AND EVALUATION 3 UNITS
PREREQUISITE: None.

LECTURE: 3 hours per week.

History and definitions of crisis intervention. Intervention theories and models, interviewing techniques, referral procedures, and assessment. Analysis of types of crises such as suicide, substance abuse and violence in the workplace; common dangers; and coping methods. Professional issues including legal and ethical issues, confidentiality, cultural sensitivity and burn out.

Associate Degree Applicable

Course credit transfers to CSU for elective credit only.

HUMSV 170
INTRODUCTION TO HUMAN SERVICES **3 UNITS**
PREREQUISITE: None.

LECTURE: 3 hours per week.

Historical and theoretical perspectives of human services in response to social problems. Legal, ethical, and problem solving models are presented. Implications of ethnic, gender, and cultural diversity issues are discussed.
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.
Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 173
HELPING AND INTERPERSONAL 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.
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 and 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. 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
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Alcohol/Drug Studies Certificate.
LECTURE: 3 hours per week.
Designed for students seeking certificates in Alcohol/Drug Studies, 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.**
Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 184
ALCOHOL/DRUG: COUNSELING II 3 UNITS
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Alcohol/Drug Studies Certificate and HUMSV 183, HUMSV 197A and HUMSV 198A.
LECTURE: 3 hours per week.
Designed for students seeking certificates in Alcohol/Drug Studies, 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.**
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 for elective credit only.

HUMSV 188
ALCOHOL/DRUG: MEDICAL ASPECTS 3 UNITS
PREREQUISITE: None.
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 for elective credit only .

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 for elective credit only.

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.
Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 195A
HUMAN SERVICES: INTERN SEMINAR I 1 UNIT
PREREQUISITE: None.
DEPARTMENTAL ADVISORY: Complete at least four Human Services courses required for any of the Human Services Department Certificates(excluding the Alcohol/Drug Studies 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 student's work experience. **STUDENTS MUST ALSO TAKE THE WORK EXPERIENCE CLASS THAT MATCHES THEIR CERTIFICATE GOAL (HUMSV 198 A-Z).**
Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 195B
HUMAN SERVICES: INTERN SEMINAR II 1 UNIT
PREREQUISITE: None.

DEPARTMENTAL ADVISORY: Complete at least four Human Services courses required for any of the Human Services Department Certificates (excluding the Alcohol/Drug Studies 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' work experience. **STUDENTS MUST ALSO TAKE THE WORK EXPERIENCE CLASS THAT MATCHES THEIR CERTIFICATE GOAL (HUMSV 198 A-Z).**

Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 197A
ALCOHOL/DRUG: INTERN SEMINAR I 1 UNIT
DEPARTMENTAL ADVISORY: Prior to field work courses, students should complete four of the

Human Services courses required for the Alcohol and Drug Studies Certificate (one of which must be either HUMSV 181 or HUMSV 190.) HUMSV 179, if not taken before field work courses, should be taken during the first semester of field work.

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. This course serves as a lecture-based support for students in fieldwork. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE SHOULD ALSO TAKE HUMSV 183 AND HUMSV 198A.**

Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 197B
ALCOHOL/DRUG: INTERN SEMINAR II 1 UNIT
DEPARTMENTAL ADVISORY: Students should complete HUMSV 183, HUMSV 197A and HUMSV

198A.

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. This course serves as a lecture-based support for students in fieldwork. **STUDENTS SEEKING ALCOHOL/DRUG STUDIES CERTIFICATE SHOULD ALSO TAKE HUMSV 183 AND HUMSV 198A.**

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 to earn units using the following formula: For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 198 courses. Students **MUST** be working for pay or volunteer before registering for a Work Experience class. **NOTE:** Only one section of Work Experience may be taken during a semester.

Associate Degree Applicable
Course credit transfers to CSU for elective credit only.

HUMSV 198A-Z
198A ALCOHOL/DRUG WORK EXPERIENCE I
198B ALCOHOL/DRUG WORK EXPERIENCE II
198C HUMAN SERVICES CERTIFICATE WORK EXPERIENCE I
198D HUMAN SERVICES CERTIFICATE WORK EXPERIENCE II
198E CAREER SPECIALIST WORK EXPERIENCE
198F CASE MANAGEMENT WORK EXPERIENCE
198G EATING DISORDERS WORK EXPERIENCE
2-3 UNITS

PREREQUISITE: None.

DEPARTMENTAL ADVISORY: Complete the minimum courses required for taking the Field Work Courses for any of the Human Services Department Certificates.

Supervised work experience in specific agencies to provide student with field experience in the area of Human Services. Students work in their assigned agencies 10-15 hours per week with 5 hours each week equal to one unit. Schedule Description: Supervised work experience to provide students with field experience in the area of Human Services with 5 hours each week equal to one unit.

Associate Degree Applicable
Course credit transfers to CSU.

HUMSV 204A
CAREER SPECIALIST: FIELD WORK I
PREREQUISITE: None.

COREQUISITE: HUMSV 195A.

DEPARTMENTAL ADVISORY: Complete four Human Services courses required for the Career Specialist Certificate.

Supervised field experience to provide students with work experience. 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 for elective credit only.

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 for elective credit only.