

ANNOUNCEMENT OF COURSES

COURSE INFORMATION

Students should familiarize themselves with the information given below about the course descriptions. Courses are listed alphabetically. Each course is designated by a number. A descriptive title and the unit value (in parenthesis) follow the course number. The semester in which the course is usually offered is noted at the end of the course description following the grading option. See the key at the end of this section.

Numbering System: Courses numbered **100-199** are baccalaureate-level courses and will transfer to the California State University system and other four-year institutions. Please note that some of these courses would not be appropriate for specific majors or for the general education requirements for graduation. Students should check the current catalog of the institution of transfer to determine which courses are appropriate.

Courses numbered **300-399** are intended for certificate and associate degree programs. In some cases, with special arrangements, they may be acceptable for transfer to some four-year universities.

Courses numbered **400-499** are primarily vocational credit courses that are not applicable to the associate degree programs and do not transfer to four-year institutions.

Courses numbered **500-599** are college preparatory in nature and are not applicable to the associate degree programs and do not transfer to four-year institutions.

Internships (134/136): These courses are discipline specific, work-based learning opportunities for students capable of independent work and who demonstrate the desire for additional study beyond the classroom. See "Internship" for a more complete description of these courses.

Cooperative Education Courses (149): The Occupational Work Experience course provides on-the-job learning related to a student's educational or occupational goals, and is offered by numerous disciplines. See "Cooperative Education" for a more complete description.

Institutes (159, 359, 459): These courses are primarily technical, vocational skill building curriculum developed in specific disciplines.

Honors (188): Advanced academic experiences associated with general education courses. See "Honors" for a more complete description of the Honors Program.

Independent Projects (189/389): These courses are academic opportunities for students who are capable of independent work and who demonstrate the need or desire for additional study beyond the regular curriculum. See "Independent Projects" for a more complete description of the concept.

Topics In (199/399/499/599): These courses identify curriculum in specific disciplines that is not offered on a regular cycle (not within a two-year period). These courses are not included in any major core, but may be among the elective units of a program.

Workshops (179/379/479/579): These are courses designed in specific disciplines to test new curriculum before adopting it as part of an academic program. See "Workshops" for a more complete description of the concept.

Acceptable for Credit: This designation identifies the course and unit transferability to the CSU and UC systems.

CSU - accepted towards graduation at all California State University campuses.

UC - accepted towards graduation at all University of California campuses.

UC – Credit limitation - limited number of units accepted towards graduation at all University of California campuses.

UC – Determined after admission - acceptance towards graduation at the UC campus is determined after the student has transferred. Course units may not be applied for the UC 60-unit admission requirement.

CAN - California Articulation Number System: The CAN system is a statewide numbering system independent from course numbers assigned by local colleges. See "Transfer Information" in this catalog.

Variable Level Courses: The board of trustees has authorized that certain courses may be repeated for credit. Courses so designated will provide for increasing competency levels of performance. Repeatable courses are designated as AB (one repetition), ABC (two repetitions), or ABCD (three repetitions) as part of the course title. A student attempting to enroll in such a class in excess of the approved repetitions will be prevented from registering in that course. Please check this catalog for identification of variable level courses and the number of times they may be repeated.

Hours: Ordinarily, college classes do not meet every day in the week. The number of class hours and of laboratory hours for each week is indicated in the course description. The schedule of classes will indicate which hours of the day and which days in the week the class is scheduled. This schedule will be available before registration time.

Course Requirements: Course descriptions include skill requirements or recommended levels of preparation as follows:

Prerequisite: Condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or education program. (Skills you must have to take a class without which you are not likely to be successful.) If course work is used to demonstrate current readiness for enrollment, a grade of C or better in such course work is required. If a student believes the prerequisite has been met by other means, an appeal for prerequisite equivalency can be filed with the dean of counseling and matriculation. Deadlines for submission of an appeal are printed in the schedule of classes.

Corequisite: Condition of enrollment consisting of a course that a student is required to simultaneously take in order to enroll in another course.

Advisory: A skill or knowledge that the college has determined to be closely related to success in a particular class. Students are advised that without that skill or knowledge, their chances of success may be significantly reduced.

Limitation on Enrollment: Enrollment is subject to limitations based on reasons of:

1. health and safety; or
2. in cases of intercollegiate competition, honors courses, or public performance courses, allocation of available seats to those students judged most qualified and providing such courses are not core requirements for a major or a general education requirement for which there is no other course available; or

3. one or more sections of a course are limited to a cohort of students when other sections of the same course are available for open enrollment.

Field Trips: Certain courses have field trips scheduled as a regular part of the course. Some of these trips are scheduled for the evening, and some for Saturdays, or other days when the college is not usually in session. These trips are scheduled far enough in advance to give the student ample time in planning. Unless specifically advised otherwise, students are responsible for arranging their own transportation to and from the class site. The district assumes no liability or responsibility neither for the transportation nor for any person driving a personal vehicle who is not an agent of the district.

Grading Options:

CR	credit/no credit only
GR/CR	grade or credit/no credit
GR	letter grade only

Travel Courses: The possibility of offering enriched experiences to students through travel in both the United States and in foreign countries has been recognized by the college, and certain courses may be presented as travel classes during vacation time. Any travel class offered is equivalent to the same offering on campus and the student workload and testing is comparable to that on campus. The college assumes no responsibility for travel expenses, living costs, or incidental expenses incurred by anyone participating in a travel class. Because of enrollment demands, expenses, housing and travel arrangements, and other special considerations, travel classes will be offered only when student interest and other factors make them appropriate.

Semester in which a course is usually offered:

F = fall only	F1 = fall, odd years
S = spring only	F2 = fall, even years
U = summer only	S1 = spring, odd years
FSU= fall, spring summer	S2 = spring, even years
FS = fall, spring	U1 = summer, odd years
SU = spring, summer	U2 = summer, even years
UF = summer, fall	A = as needed
	D = contact department

ACCOUNTING

100 Survey of Accounting (3)

Three hours weekly. This course is Tech Prep articulated.

Acceptable for credit: CSU

A survey of financial and managerial accounting theory and practice with an emphasis on the user versus preparer perspective. This course is not open to students who have received credit for Accounting 101. (GR/CR) (F,S,U)

130 Financial Accounting (3)

Three hours weekly.

Acceptable for credit: CSU, UC

An introduction to the role of financial accounting in business and society and the accounting process. Topics include recognition, measurement, and classification of business events; analyzing and recording financial transactions; conceptual foundation of financial reporting; and the

usefulness of financial statements for decision making. This course is not open to students who have received credit for Accounting 121 and/or Accounting 122. (GR) (F,S)

140 Managerial Accounting (3)

Three hours weekly. Prerequisite: Accounting 130.

Acceptable for credit: CSU, UC

Introduces the analysis and techniques for aiding management in planning and controlling decisions, and the use of accounting data for budgeting, cost control, pricing, evaluation of performance and general decision making. This course is not open to students who have received credit for Accounting 123 and/or Accounting 124. (GR) (F,S)

150 Introduction to Accounting Information Systems (3)

Three hours weekly. Prerequisite: Accounting 130.

Acceptable for credit: CSU

An introduction to the development and analysis of accounting information systems including the use of a commercially-used small business accounting management system (QuickBooks). This course is not open to students who have received credit for Accounting 110. (GR) (F,S)

160 Introduction to Financial Statement Analysis (3)

Three hours weekly. Prerequisite: Accounting 130.

Acceptable for credit: CSU

An introduction to the analysis, interpretation, and research of financial statement information. (GR) (F,S)

170 Introduction to Tax Accounting (3)

Three hours weekly.

Acceptable for credit: CSU

A survey of the laws, procedures, returns, and subsidiary schedules involved in the preparation of federal and state personal tax returns. This course meets the continuing education requirements of the California Tax Preparer Program. This course is not open to students who have completed Accounting 305. (GR) (F,S)

317 Bookkeeping 1 (3)

Three hours weekly.

A study of basic bookkeeping practices using accrual accounting concepts for sole proprietorships, with emphasis on manual techniques of data entry and financial statement preparation. (GR/CR) (F)

318 Bookkeeping 2 (3)

Three hours weekly.

A study of basic bookkeeping practices using accrual accounting concepts for partnerships and merchandising business, with emphasis on manual techniques of data entry and financial statement preparation. (GR/CR) (F)

327 Payroll Accounting (3)

Three hours weekly.

A study of payroll computations, payroll record keeping, and the filing of quarterly and annual payroll tax reports. Topics include state disability insurance, unemployment insurance, and income taxes. Introduces, at the federal level, Social Security, unemployment insurance, and income tax and how these taxes affect the employee/employer. (GR/CR) (S)

359 Institutes in Accounting (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Training courses focusing on specialized accounting topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (CR) (A)

399 Topics in Accounting (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period). (CR) (A)

ADMINISTRATION OF JUSTICE**101 Administration of Justice System (3)**

Three hours weekly.

CAN AJ 2, acceptable for credit: CSU, UC

Presents the history and philosophy of administration of justice in America; recapitulation of the system; identification of the various subsystems, role expectations and their interrelationships; theories of crime, punishment, and rehabilitation; ethics, education, and training for professionalism in the system. (GR/CR) (F,S)

102 Principles and Procedures of the Justice System (3)

Three hours weekly.

Acceptable for credit: CSU

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 subsystem procedure from initial entry to final disposition and the relationship each segment maintains with its system members. (GR/CR) (S)

103 Concepts of Criminal Law (3)

Three hours weekly.

CAN AJ 4, acceptable for credit: CSU, UC

Historical development, philosophy of law and constitutional provisions, definitions, classification of crime, and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force. (GR/CR) (F)

104 Legal Aspects of Evidence (3)

Three hours weekly. Advisory: Administration of Justice 103 is strongly recommended.

Acceptable for credit: CSU

Origin, development, philosophy and constitutional basis of evidence, constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. (GR/CR) (F)

105 Community Relations (3)

Three hours weekly.

Acceptable for credit: CSU, UC

Exploration of the roles of the administration of justice practitioners and their agencies. Through interaction and study the student will become aware of the interrelationships and role expectations among the various agencies and the public. Principal emphasis will be placed upon the professional image of the system of justice administration and the development of positive relationships between members of the system and the public. (GR/CR) (S)

111 Criminal Investigation (3)

Three hours weekly.

Acceptable for credit: CSU

Fundamentals of investigation; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; fingerprints, polygraph, and follow-up and case preparation. (GR/CR) (F)

136 ABCD Internship Field Experience (1-8)

Acceptable for credit: CSU

For course description see "Internships."

149 ABCD Occupational Work Experience (1-8)

Acceptable for credit: CSU

For course description see "Cooperative Education."

179, 379 Workshops in Administration of Justice (.5-10)

179 - Acceptable for credit: CSU

For course description see "Workshops."

189 ABCD Independent Projects in Administration of Justice (1-3)

Acceptable for credit: CSU

For course description see "Independent Projects."

301 Juvenile Procedures (3)

Three hours weekly.

The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. (GR/CR) (F)

305 Police Patrol Procedures (3)

Three hours weekly.

A study of the procedures, philosophies and concepts of the police patrol system. It covers the vital areas of patrol preparation, field observation, field interviews, patrol systems, police ethics and professionalism, public service responsibilities, and their relationship to the administration of justice system. (GR/CR) (F)

306 Technical Police Report Writing (1.5)

One and one-half hours weekly.

Designed to prepare the student to complete standard police report forms required by the State of California; to prepare field interrogation cards; to identify personal property and physical descriptions of individuals; to identify the corpus delicti of specific State statutes; and to learn use of the 10-code using principles of communication involved in effective writing. (GR/CR) (A)

307 Narcotics Investigation (1.5)

One and one-half hours weekly.

Deals with the identification of narcotics offenses as stipulated in the California Penal Code, Health and Safety Code,

Welfare and Institutions Code, Business and Professions Code and Vehicle Code. Included will be surveillance, court testimony, probable cause and court decisions related to the narcotic offender. Special consideration will be given to physical evidence and the Uniform Control Substance Act. (GR/CR) (A)

308 Drugs and Drug Dependency (1.5)

One and one-half hours weekly.

An exploration of drugs and drug dependency. This includes classification, signs and symptoms, source, properties, effects, and methods of use. Designed for anyone interested in the subject of drug use and abuse. (GR/CR) (A)

315 Introduction to Criminology (3)

Three hours weekly.

Theories of the causes of criminal behavior, focusing on the person and the group; criminal behavior systems; the police behavioral response to criminal activity and its nature and causes. (GR/CR) (S)

318 Traffic Collision Investigation (1.5)

Four and one-quarter hours lecture and seven and one-half hours lab weekly. Prerequisite: Administration of Justice 111, 305, 306, and Administration of Justice 320 or 322.

Provides field officers with advanced knowledge and skills for investigating traffic collisions. Emphasizes documenting information and evidence at the collision scene. Participants will learn and demonstrate in practical simulations effective procedures for conducting preliminary traffic collision investigations. (GR) (F,S)

320 Basic Law Enforcement Academy (14)

Thirty-eight hours lecture, eight and one-half hours lab weekly. (Seven hundred forty four hours.) Limitation on Enrollment: Admission by application.

An intensified course designed to satisfy all State of California requirements for basic police recruit training. Presented in an environment of serious study, rigorous physical training, and standard law enforcement disciplinary procedures, the course is open to working peace officers and other interested students. (GR) (F,S)

321 Basic Law Enforcement Academy 1A (7)

Nineteen hours lecture, four hours lab weekly. (Three hundred sixty-eight hours.) Limitation on Enrollment: Admission by application. Advisory: Eligibility for English 101 or English 301.

The first in a two-course sequence designed to satisfy all State of California requirements for basic law enforcement officer training. The academy is presented in an environment of serious study, rigorous physical training, and standard law enforcement disciplinary procedures. (GR) (F)

322 Basic Law Enforcement Academy 1B (7)

Nineteen hours lecture, four and one-half hours lab weekly. (Three hundred seventy-six hours.) Prerequisite: Administration of Justice 321.

A continuation of Administration of Justice 321. Designed to complete the training requirements to satisfy the Basic Law Enforcement Training as established by the California Commission on Peace Officer Standards and Training. Academic, manipulative, and technical training are presented in an environment of serious study, rigorous physical training, and standard law enforcement disciplinary procedures. (GR) (S)

341 ABCD Emergency Vehicle Operations/Non-Law Enforcement (.5)

One-half hour lecture, one-half hour lab weekly.

An emergency vehicle operators course for those working in non-law enforcement public safety disciplines. The student will learn defensive driving and handling techniques in the classroom setting and through field examples. (GR) (F)

356 Crime Scene Investigation (2)

Four and one-quarter hours lecture and seven and one-half hours lab weekly. Prerequisite: Administration of Justice 111, 305, 306, and Administration of Justice 320 or 322.

Provides advanced instruction and hands-on application in photographing, protecting, and processing crime scenes as well as associated physical evidence. (GR) (F,S)

359 ABCD Institutes in Administration of Justice (.5-3)

Lecture and/or lab as required by unit formula. Limitation on Enrollment: State-required minimum professional education to qualify as a fully trained, professional law enforcement officer.

Training courses focusing on specialized administration of justice topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (GR) (A)

399 ABCD Topics in Administration of Justice (.5-3)

Lecture and/or lab as required by unit formula. Limitation on Enrollment: State-required minimum professional education to qualify as a fully trained, professional law enforcement officer.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offering. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period). (GR) (A)

421 Complaint Dispatcher (4.5)

One hundred twenty hours. Emphasizes the responsibilities and tasks of the public safety dispatcher in law enforcement and fire agencies. Students learn and demonstrate in practical simulations acceptable telephone and radio procedures as well as effective decision-making. (GR) (F,S)

AGRIBUSINESS

101 Introduction to Winemaking/Enology (3)

Three hours weekly.

Acceptable for credit: CSU, UC

An examination of enology (winemaking) including history, grape growing, chemistry, wine microorganisms, fermentation, winemaking operations, cooperage, physiology and sociology of wine, and health and legal issues. (GR/CR) (F,S)

102 Introduction to Viticulture (3)

Three hours weekly.

Acceptable for credit: CSU, UC

An introduction to viticulture including grape growing, biology, anatomy, history, distribution, propagation, varieties,

wine types, climate, common diseases and pests. (GR/CR) (F,S)

103 Sensory Evaluation of Wine (3)

Three hours weekly. Limitation on Enrollment: must be 21 years of age or older.

Acceptable for credit: CSU

An exploration of the principles of sensory wine evaluation. Demonstrates how wine quality is affected by climate, viticulture practices, production techniques, grape varieties, vineyard location, oak aging, and storage conditions. Participants will survey and evaluate commercial wine styles. (GR/CR) (F,S)

104 Advanced Sensory Evaluation of Wine (3)

Three hours weekly. Prerequisite: Agribusiness 103. Limitation on Enrollment: must be 21 years of age or older.

Acceptable for credit: CSU

An investigation of Bordeaux, Burgundian, and Rhone varieties from regions where they occur world wide -- France, USA, Chile, Italy, Australia, New Zealand, and Germany. Focuses on geography/soils, enological considerations, viticulture practices, wine production techniques and styles produced. (GR/CR) (S)

105 Wine Marketing and Sales (3)

Three hours weekly.

Acceptable for credit: CSU

An introductory overview of the wine industry, production, planning, marketing channels, advertising, promotion, packaging, pricing, retail/wholesale distribution, and public relations. (GR/CR) (A)

106 Winery Organization (3)

Three hours weekly. Prerequisite: Agribusiness 101.

Acceptable for credit: CSU

Presents the many aspects of operating a small to medium-sized winery in today's business environment. Topics include an overview of the California grape and wine industry, government compliance, financial planning (capital and operating budgets), grape supply options, grape contracts, winery design and systems, quality control, sales planning, packaging, as well as marketing and distribution options. (GR/CR) (F,S)

110 Quality Wine Production (2)

Three hours weekly (twelve weeks). Prerequisite: Agribusiness 101. Advisory: Agribusiness 310.

Acceptable for credit: CSU

Designed for students aspiring to or currently working in wine production facilities. Topics include skills necessary to produce quality wine including techniques from harvesting the fruit to bottling the wine as well as skills for developing appropriate timelines for each step. (GR/CR) (S)

111 Global Positioning Systems (GPS) (1)

Six hours weekly (three weeks).

Acceptable for credit: CSU

An introduction to satellite navigation and location using the U.S. global positioning system, NAVSTAR. Topics include fundamentals of cartography (map reading and navigation, map scale, projections and coordinate systems), how satellites can be used to determine accurate location, collection

of field location data using a variety of GPS receivers, and entry and display of locational data in a geographic information system (GIS). This course is not open to students who are enrolled in or have received credit for Geographic Information Systems 111. (GR/CR) (F)

112 Fundamentals of Mapping with GIS (3)

Three hours weekly. Advisory: Computer Business Information Systems 101.

Acceptable for credit: CSU

An introduction to mapping sciences with a primary focus on GIS. Includes the history, structure, uses, hardware and software requirements as well as the basic operation of GIS. Other geographic technologies (aerial photography, remote sensing and global positioning systems) as they relate to GIS are examined. Recommended for those who use or anticipate using any of the many types of data that can be mapped. This course is not open to students who are enrolled in or have received credit for Geographic Information Systems 112. (GR/CR) (F,S)

113 GIS Spatial Field Technologies in Agriculture (3)

Four hours weekly (eight weeks). Prerequisite: Agribusiness 112 or Geographic Information Systems 112.

Acceptable for credit: CSU

A study of state-of-the-art spatial technologies used in agriculture including basic design, construction, and operation of spatially distributed sensors and instruments used to capture environmental data specific to an agricultural operation. Recommended for those who work with and manage agriculture and/or environmental resources. This course is not open to students who are enrolled in or have received credit for Geographic Information Systems 113. (GR/CR) (S)

120 Viticulture Operations 1 (3)

Two hours lecture, three hours lab weekly. Advisory: Agribusiness 102.

Acceptable for credit: CSU

Vineyard practices for the fall and winter seasons, including harvest, pruning, fertilization, weed control, erosion control, and propagation. Laboratory work will stress practical applications of viticulture theory. Operations in commercial vineyards will be studied through field trips. (GR/CR) (F)

121 Viticulture Operations 2 (3)

Two hours lecture, three hours lab weekly. Advisory: Agribusiness 102.

Acceptable for credit: CSU

Vineyard practices for the spring and summer seasons including cultivation, frost control, planting, training, irrigation, disease, and pest control. Laboratory work will stress practical applications of viticulture theory. Operations in commercial vineyards will be studied through field trips. (GR/CR) (S)

122 Viticulture Operations 3 (1)

One hour lecture, four hours lab weekly (eight weeks). Advisory: Agribusiness 121.

Acceptable for credit: CSU

Vineyard practices for the summer season including canopy management, crop load assessment and adjustment, pest and disease monitoring and management, weed control, irrigation, and grape quality improvement techniques. (GR/CR) (U)

125 Soils and Plant Nutrition (4)

Three hours lecture, three hours lab weekly. Advisory: Chemistry 120.

CAN AG 14, acceptable for credit: CSU, UC

A study of the physical, chemical, and biological properties of soils, including plant nutrition and factors affecting the availability of nutrients. Composition, value, use and application of fertilizer materials and soil amendments will be covered. (GR/CR) (F,S)

130 Integrated Pest Management for Grapes (4)

Three hours lecture, three hours lab weekly. Prerequisite: Agribusiness 102.

Acceptable for credit: CSU

A study of the various pests and diseases found in the Central Coast winegrape vineyards, emphasizing pest and disease identification, sampling and monitoring techniques, and control methods. Integrated pest management approaches will be emphasized, including the latest bio-control strategies, biotechnological advances, and disease modeling for risk management. Students will visit local vineyards, providing "hands-on" learning opportunities. (GR/CR) (A)

135 Grapevine Physiology (1)

Eight hours weekly (two weeks). Advisory: Agribusiness 102.

Acceptable for credit: CSU

An advanced study of grapevine physiology and phenology. Topics include vine balance, flowering and fruit set, stages of berry growth and vine water status. This course is designed for those working in the wine grape industry and already familiar with vineyard operations. (GR/CR) (A)

136 ABCD Internship Field Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission
For course description see "Internships."

140 Viticulture Operations 4 (3)

Two hours lecture, three hours lab weekly. Advisory: Agribusiness 120.

Acceptable for credit: CSU

Advanced vineyard practices for the fall season including crop projection, grape quality assessment, grape maturity monitoring, harvest coordination, post-harvest practices, and budgeting. Management planning and financial aspects of the operations are emphasized. (GR/CR) (F)

141 Viticulture Operations 5 (3)

Two hours lecture, three hours lab weekly. Advisory: Agribusiness 121.

Acceptable for credit: CSU

Advanced vineyard practices for the winter and spring seasons including vine balance determination, pruning, cover crop management, frost protection, vine training, vineyard research trials, and budgeting. Management planning and financial aspects of the operations are emphasized. (GR/CR) (S)

142 Viticulture Operations 6 (1)

One hour lecture, four hours lab weekly (eight weeks). Advisory: Agribusiness 122.

Acceptable for credit: CSU

Advanced vineyard practices for the summer season including equipment operation and maintenance, vine training,

vineyard research trials, and budgeting. Management planning and financial aspects of the operations are emphasized. (GR/CR) (U)

151 Winery Equipment (2)

Sixteen hours weekly (two weeks). Prerequisite: Completion of or concurrent enrollment in Agribusiness 101.

Acceptable for credit: CSU

Presents all aspects of winery equipment; function, use, location, safe operation and repair. A strong emphasis is placed on safety and legal compliance. Production, storage and packaging equipment are included. (GR/CR) (F)

149 ABCD Occupational Work Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission
For course description see "Cooperative Education."

159, 359 Institutes in Agribusiness (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

159 - Acceptable for credit: CSU, UC-Determined after admission

Training courses focusing on specialized agribusiness topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. See the current schedule of classes for topics being offered. (GR/CR) (A)

189 ABCD Independent Projects in Agribusiness (1-3)

Acceptable for credit: CSU, UC, UC-Determined after admission

For course description see "Independent Projects."

199, 399 Topics in Agribusiness (.5-3)

199 - Acceptable for credit: CSU, UC-Determined after admission

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified by these numbers are not offered on a regular cycle (not within a two-year period). (GR/CR) (A)

301 Pairing Wine and Food (.5)

One-half hour lecture, one-half hour lab weekly. Limitation on Enrollment: must be 21 years of age or older.

Designed to familiarize students with the components of tasting wine and food, to develop wine evaluation techniques, and to pair wines with appropriate food. (GR/CR) (F,S,U)

302 Advanced Pairing Wine and Food (.5)

One-half hour lecture, one-half hour lab weekly. Prerequisite: Agribusiness 301. Limitation on Enrollment: must be 21 years of age or older.

An advanced study of the components of tasting wine and food. (GR/CR) (F,S,U)

303 Epicurean Wine and Food (.5)

One-half hour lecture, one-half hour lab weekly. Prerequisite: Agribusiness 302. Limitation on Enrollment: must be 21 years of age or older.

Designed for advanced students wishing to expand their knowledge of wine and food pairings. Focuses on European as well as California wines with appropriate regional food. (GR/CR) (F,S,U)

304 Dessert Wine and Food Pairing (.5)

One-half hour lecture, one-half hour lab weekly. Prerequisite: Agribusiness 303. Limitation on Enrollment: must be 21 years of age or older.

Designed for advanced students wishing to expand their knowledge of specific wine and dessert pairings. Champagnes, sparkling wines and a variety of dessert wines (ports, sherries, Madiera) will be presented. (GR/CR) (F,S,U)

305 Pairing the Wines and Foods of Provence (.5)

One-half hour lecture, one-half hour lab weekly. Prerequisite: Agribusiness 303. Limitation on Enrollment: must be 21 years of age or older.

Designed for advanced students wishing to expand their knowledge of wine and food pairings. Focuses on the distinctive foods and wines of the Provence region in southern France. (GR/CR) (F,S,U)

306 Pairing the Wines and Foods of Tuscany (.5)

One-half hour lecture, one-half hour lab weekly. Prerequisite: Agribusiness 303. Limitation on Enrollment: must be 21 years of age or older.

Designed for advanced students wishing to expand their knowledge of specific wine and food pairings. Focuses on the distinctive foods and wines of the Tuscan region in northern Italy. (GR/CR) (F,S,U)

310 Basic Winemaking 1 (2)

Two hours lecture, four hours lab weekly (eight weeks). Advisory: Agribusiness 101. Limitation on Enrollment: must be 21 years of age or older.

The first course in a two-semester sequence, students are introduced to winemaking from grape harvest through bottling. (GR/CR) (F)

311 Basic Winemaking 2 (2)

Two hours lecture, one and one-half hours lab weekly plus 15 hours by arrangement (twelve weeks). Prerequisite: Agribusiness 310. Advisory: Agribusiness 101. Limitation on Enrollment: must be 21 years of age or older.

The second course in a two-semester sequence, students will chemically analyze, fine, and bottle the red and white wines that were fermented in the previous semester. (GR/CR) (S)

320 Wine Tasting Room Sales (1.5)

Three hours weekly (eight weeks).

Presents all aspects of wine tasting room service and sales. Cellar clubs, selling techniques, wine vocabulary, and the laws and regulations of serving wine in California will be covered. Legalities of shipping wine interstate and the various means of wine shipment are discussed. (GR/CR) (S,U)

340 Home Winemaking (2)

Three hours weekly (eleven weeks).

A study of all aspects and challenges of home winemaking focusing on the challenges of the smaller scale operations as compared to commercial winemaking. Topics include winegrape maturity criteria, fermentation protocol and chemistries, juice and wine analyses, and the prevention of oxidation of stored wines. (CR) (F,S)

360 Advances in Viticulture (.5)

One-half hour weekly. Advisory: Agribusiness 102.

Provides an opportunity for critical evaluation and discussion of selected viticultural research papers. Study of peer-review journals is intended to broaden the educational experience beyond the textbook and increase understanding in the areas of vineyard practices and fruit quality. (GR/CR) (F,S)

361 Advances in Enology (.5)

One-half hour weekly. Advisory: Agribusiness 101.

Provides an opportunity for critical evaluation and discussion of selected enological research papers. Study of peer-review journals is intended to broaden the educational experience beyond the textbook and increase understanding in the areas of enological practices and wine quality. (GR/CR) (F,S)

ANTHROPOLOGY

101 Introduction to Physical Anthropology (3)

Three hours weekly.

CAN ANTH 2, acceptable for credit: CSU, UC

An introductory exploration to the history of evolutionary thought, the biological basis of life, genetics, population biology, modern human variation, paleontology, primatology, and hominid evolution. Concurrent enrollment in Anthropology 110 is encouraged. (GR/CR) (F,S,U)

102 Introduction to Cultural Anthropology (3)

Three hours weekly.

CAN ANTH 4, acceptable for credit: CSU, UC

A study of human cultural variation and diversity. Topics include types of anthropological research, similarities, and differences in human behavior, social institutions, and life styles. (GR/CR) (F,S,U)

103 Introduction to Archaeology (3)

Three hours weekly.

CAN ANTH 6, acceptable for credit: CSU, UC

An introduction to human prehistory including major cultural developments and themes of the prehistoric past. Topics include fundamental principles of archaeology and human prehistory from earliest times up to the development of literate civilizations. Scientific methods used by archaeologists will also be covered. (GR/CR) (S2)

105 Language and Culture (3)

Three hours weekly.

Acceptable for credit: CSU, UC

An introduction to the study of language and communication in relation to culture. Focus is on the structure, function, and history of language as well as the social, symbolic and practical uses of language. Linguistic concepts, methodologies, and theoretical assumptions will be explored. Topics include language in everyday life and ritual events, socialization, multilingualism, miscommunication, and art-making as cultural activity. This course is not open to students who are enrolled in or have received credit for English 105. (GR/CR) (F,S)

110 Physical/Biological Anthropology Lab (1)

Three hours lab weekly. Corequisite: Anthropology 101 or completion of Anthropology 101 within the last two years.

Acceptable for credit: CSU, UC

An introductory exploration of micro-macro evolutionary theory, genetics, anthropometric techniques, primatology, human osteology, and the paleoanthropological fossil record. Students will become familiar with the materials and techniques of physical anthropology by focusing on human variation and evolution. (GR/CR) (F,S,U)

122 States of Consciousness: A Multidisciplinary Exploration (3)

Three hours weekly.

Acceptable for credit: CSU

An exploration of different states of consciousness, the means of attaining those states, their uses, misuses, and consequences. Topics include theories of consciousness, substance use and abuse, sleep, dreams, hypnosis, dissociation, out-of-body states, near-death experiences, psychic and paranormal phenomena, religious ecstasy and conversion, alternative religions, mediation, and prayer, culture-bound syndromes, non-Western methods of altering consciousness, and peak experiences. This course is not open to students who are enrolled in or who have received credit for Psychology 122 or Human Services 122. (GR) (F,S)

179, 379 Workshops in Anthropology (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

188 ABCD Honors - Anthropology (2)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Honors."

199 Topics in Anthropology (.5-3)

Acceptable for credit: CSU, UC-Determined after admission

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 199 are not offered on a regular cycle (not within a two-year period). (GR/CR) (A)

APPRENTICESHIP TRAINING

The primary objective of the apprenticeship program is to train workers in skilled occupations to meet the needs of the industry. The program is open to all individuals 18 years of age or older without regard to race, color, religion, national origin or sex.

Applications, or information concerning applications, may be obtained from the office of Resource Development.

The major training received by an apprentice is on the job working for a signatory contractor or employer. Therefore, enrollment in all courses listed under Apprenticeship Training is limited to indentured apprentices and qualified applicants.

481 AH Electricity (3)

One and one-half hours lecture, four and one-half hours lab weekly in related trade theory. Prerequisite: Registration is limited to indentured apprentices and those awaiting indenture.

Provides classroom theory directly related to skills performed at the work site, including tools and equipment, electrical principles and applications to basic AC-DC circuitry, motors, generators, controls, transformers, electrical codes and ordinances, related mathematics and drawing, and safety practices. (GR) (F,S)

484 AJ Plumbing (3)

One and one-half hours lecture, four and one-half hours lab weekly in related trade theory. Prerequisite: Registration is limited to indentured apprentices and those awaiting indenture.

Provides classroom theory directly related to skills performed at the work site, including tools and equipment, materials, fixtures, layout, installation practices, blueprint reading, related mathematics, laws and regulations, safety practices, and employer-employee relations. (GR) (F,S)

486 AH Operating Engineers (3)

One and one-half hours lecture, four and one-half hours lab weekly in related trade theory. Prerequisite: Registration is limited to indentured apprentices and those awaiting indenture.

Provides classroom theory directly related to skills performed at the work site, including the repair and operation of heavy-duty equipment, related mathematics, and science, particularly as they pertain to the electrical and hydraulic systems, and first aid and safety practices. The total program is designed for specialization in heavy duty mechanics. (GR) (F,S)

ARCHITECTURE

111 Architectural Graphics (3)

Two hours lecture, four hours lab weekly.

Acceptable for credit: CSU, UC

Covers the basic techniques of architectural graphics, including orthographic, paraline, and mechanical perspectives with shades and shadows. (GR/CR) (S)

112 Architectural Delineation (3)

Two hours lecture, four hours lab weekly. Prerequisite: Architecture 111.

Acceptable for credit: CSU, UC

The study of three-dimensional representations using various media to render architectural designs. (GR/CR) (F)

121 Architectural Drawing 1 (4)

Two hours lecture, six hours lab weekly.

Acceptable for credit: CSU

The first course in a two-semester sequence that prepares the student to enter the construction field as a drafter. Emphasizes the planning and the development of a set of residential plans that may be submitted for plan check approval. The first semester presents an overview of planning and building, particularly plans and schedules. (GR/CR) (S)

122 Architectural Drawing 2 (4)

Two hours lecture, six hours lab weekly.

Acceptable for credit: CSU

The second course in a two-semester sequence that prepares the student to enter the construction field as a drafter. Emphasizes the planning and development of a set of

residential plans that may be submitted for plan check approval. The second semester covers structural details, energy, and mechanical requirements, and a study of fire resistive materials and finishes. (GR/CR) (F)

131 Materials of Construction 1 (3)

Three hours weekly. Advisory: Concurrent enrollment in Architecture 121 is recommended.

Acceptable for credit: CSU

A general survey of the components, materials, types, and methods of building construction; terminology as applied to codes, foundations, concrete, light frame wood, heavy timber, soils, and the structural elements. This course is strongly recommended for those who are entering the construction industry. (GR/CR) (A)

160 Digital Tools for Architecture (3)

Two hours lecture, three hours lab weekly. Advisory: Architecture 111.

Acceptable for credit: CSU

Introduces computer design and presentation skills for architecture students. Topics include image editing, page layout and 3D modeling. This course is not open to students who are enrolled in or have received credit for Engineering Technology 160. (GR/CR) (A)

179, 379 Workshops in Architecture (.5-10)

179 - *Acceptable for credit: CSU*

For course description see "Workshops."

320 Uniform Building Code (3)

Three hours weekly.

Introduces the student to the purpose and use of the Uniform Building Code, and prepares the student to make job site judgments based on the Code. (GR/CR) (A)

ART

101 Art Appreciation (3)

Three hours weekly.

Acceptable for credit: CSU, UC

A study of the visual arts as an expression of thought and culture. (GR/CR) (F,S)

103 Art History Survey - Ancient to Medieval (3)

Three hours weekly.

CAN ART 2 CAN ART SEQ A, *acceptable for credit: CSU, UC*

A survey of painting, sculpture, and architecture in the western world from the Paleolithic through the Gothic period. (GR/CR) (F)

104 Art History Survey - Renaissance to Modern (3)

Three hours weekly. Advisory: Art 103 is recommended.

CAN ART 4 CAN ART SEQ A, *acceptable for credit: CSU, UC*

A survey of painting, sculpture, and architecture in the western world from Renaissance to modern times. (GR/CR) (S)

105 Art History Survey - Art of Mexico (3)

Three hours weekly.

Acceptable for credit: CSU, UC

A survey of the art of Mesoamerica, tracing the cultural development of the Valley of Mexico and the Yucatan Peninsula from the earliest archaeological findings to the present time. (GR/CR) (A)

106 Art of the 20th Century (3)

Three hours weekly. Advisory: Art 103 and 104.

Acceptable for credit: CSU, UC

A survey of art of the 20th century including its roots in the 19th century. Topics include the investigation of appropriation from a global perspective, alternative art markets, and the impact of multiculturalism on content, subject matter, and the studio process. A variety of media are covered such as architecture, painting, sculpture, film, photography, and the digital arts. (GR/CR) (A)

107 AB Computer Fine Art (3)

Two hours lecture, four hours lab weekly.

Acceptable for credit: CSU

An examination of the styles and techniques of computer fine art. (GR/CR)

108 Design 1 on the Computer (3)

Two hours lecture, four hours lab weekly.

Acceptable for credit: CSU

A basic study of visual design elements and principles, using the computer. This course is not open to students who are enrolled in or have received credit for Graphics 108. (GR/CR) (F,S)

110 Design 1 (3)

Two hours lecture, four hours lab weekly.

CAN ART 14, *acceptable for credit: CSU, UC*

An introduction to the elements and principles of design. (GR/CR) (F,S)

112 Design Color Theory (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 110 or Art/Graphics 108.

CAN ART 22, *acceptable for credit: CSU, UC*

An intensive study and application of color theory. (GR/CR) (S2)

113 Three Dimensional Design (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 110.

CAN ART 16, *acceptable for credit: CSU, UC*

Investigates a series of spatial design problems as they might apply to professional fields, including architecture, interior design, display, and sculpture. (GR/CR) (A)

115 Introduction to Animation (3)

Two hours lecture, four hours lab weekly.

Acceptable for credit: CSU

An introduction to animation production including classical character animation and nontraditional techniques. This course is not open to students who are enrolled in or have received credit for Multimedia Arts and Communication 115. (GR/CR) (F)

120 Drawing 1 (3)

Two hours lecture, four hours lab weekly.

CAN ART 8, *acceptable for credit: CSU, UC*

An exploration of freehand drawing using a variety of drawing media, with emphasis on two and three-dimensional spatial composition. (GR/CR) (F,S,U)

121 AB Drawing 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 120.

Acceptable for credit: CSU, UC

A continuation of Art 120 with greater emphasis on pictorial composition, style, and color drawing techniques. (GR/CR) (S)

122 AB Life Drawing 1 (3)

Two hour lecture, four hours lab weekly. Prerequisite: Art 120.

CAN ART 24, *acceptable for credit: CSU, UC*

A fundamental course in the study of the human figure including anatomy, form, movement, and composition. (GR/CR) (A)

123 AB Life Drawing 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 122.

Acceptable for credit: CSU, UC

A continuation of life drawing in the study of the human figure. (GR/CR) (A)

125 AB Painting in Acrylics 1 (3)

Two hours lecture, four hours lab weekly. Advisory: Art 110 and Art 120 are recommended.

CAN ART 10, *acceptable for credit: CSU, UC*

A study of acrylic painting techniques. (GR/CR) (A)

126 AB Painting in Acrylics 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 125.

Acceptable for credit: CSU, UC

An intermediate course with emphasis on the development of an individual style in acrylic painting. (GR/CR) (A)

127 AB Painting in Watercolor 1 (3)

Two hours lecture, four hours lab weekly. Advisory: Art 110 and Art 120 are recommended.

Acceptable for credit: CSU, UC

A study of watercolor techniques. (GR/CR) (A)

128 AB Painting in Watercolor 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 127.

Acceptable for credit: CSU, UC

An intermediate course with emphasis on the development of an individual style in watercolor painting. (GR/CR) (A)

129 AB Painting in Oils 1 (3)

Two hours lecture, four hours lab weekly. Advisory: Art 110 and Art 120 are recommended.

CAN ART 10, *acceptable for credit: CSU, UC*

A study of oil painting techniques. (GR/CR) (A)

130 AB Painting in Oils 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 129.

Acceptable for credit: CSU, UC

An intermediate course with an emphasis on the development of an individual style in oil painting. (GR/CR) (A)

131 ABCD Portraits (1.5)

One hour lecture, two hours lab weekly. Advisory: Art 120.

Acceptable for credit: CSU, UC

A study of portrait drawing and painting. (GR/CR) (F,S)

132 ABCD Landscape (1.5)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU, UC

An examination of the styles and techniques of landscape painting and drawing. (GR/CR) (F,S)

136 ABCD Internship Field Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Internships."

140 Fundamentals of Design - Composition (1.5)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU

A basic study of the elements and principles of design. The Art 140-141 sequence is equivalent to Art 110. This course is not open to students who are enrolled in or have received credit for Art 110 or Art 108. (GR/CR) (F,S,U)

141 Fundamentals of Design - Color (1.5)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU

A continuation of Art 140, paralleling the material in the second half of Art 110. This course is not open to students who are enrolled in or have received credit for Art 110 or Art 108. (GR/CR) (F,S,U)

142 Fundamentals of Drawing 1 (1.5)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU

An exploration of freehand drawing using a variety of drawing media with emphasis on two and three-dimensional spatial composition. The Art 142-143 sequence is equivalent to Art 120. This course is not open to students who are enrolled in or have received credit for Art 120. (GR/CR) (F,S,U)

143 Fundamentals of Drawing 2 (1.5)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU

A continuation of Art 142, paralleling the material in the second half of Art 120. This course is not open to students who are enrolled in or have received credit for Art 120. (GR/CR) (F,S,U)

149 ABCD Occupational Work Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Cooperative Education."

159 Institutes in Art (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Acceptable for credit: CSU, UC-Determined after admission

Training courses focusing on specialized art topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. See the current schedule of classes for topics being offered. (GR/CR) (A)

160 AB Ceramics 1 (3)

Two hours lecture, four hours lab weekly.

CAN ART 6, acceptable for credit: CSU, UC

An introduction to low fire clay and glaze processes, using handbuilding forming techniques. (GR/CR) (F,S,U)

161 Ceramics 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 160.

Acceptable for credit: CSU, UC

A continuation of Art 160, including introduction to the potter's wheel, mold making, slip casting, and the extruder. Decorating techniques and all work continue in the low fire temperature range. (GR/CR) (F,S)

162 Ceramics 3 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 161.

Acceptable for credit: CSU, UC

Advanced study in ceramics, including an introduction to reduction fired stoneware clay, glazes, and decorating techniques. (GR/CR) (F,S)

163 Ceramics Workshop (3)

Two hours lecture, four hours lab weekly. Advisory: Art 162.

Acceptable for credit: CSU, UC

A continuation of Art 162 with individualized assignments. (GR/CR) (F,S)

164 AB Sculpture 1 (3)

Two hours lecture, four hours lab weekly.

CAN ART 12, acceptable for credit: CSU, UC

A basic exploratory course in sculpture techniques and materials. (GR/CR) (A)

165 AB Sculpture 2 (3)

Two hours lecture, four hours lab weekly. Prerequisite: Art 164.

Acceptable for credit: CSU, UC

A continuation of Art 164 with an emphasis on the development of an individual style using various sculpture materials and techniques. (GR/CR) (A)

179, 379 Workshops in Art (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

188 Honors - Art (2)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Honors."

189 ABCD Independent Projects in Art (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

199 Topics in Art (.5-3)

Acceptable for credit: CSU, UC-Determined after admission

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing

program. See the current schedule of classes for topics being offered. Offerings identified as 199 are not offered on a regular cycle (not within a two-year period). (GR/CR) (A)

380 ABCD Art Lab (Ceramics) (.5)

One and one-half hours weekly. Corequisite: Art 160 or 161 or 162 or 163 or 159 as related to ceramics or 199 as related to ceramics.

An open-entry laboratory class designed to provide students with the opportunity to refine and expand techniques learned in the corequisite course. Students may enroll for any combination of Art 380 and Art 381 for a total of four semesters. Students may not be concurrently enrolled in Art 380 and Art 381. (CR) (F,S)

381 ABCD Art Lab (Ceramics) (1)

Three hours lab weekly. Corequisite: Art 160 or 161 or 162 or 163 or 159 as related to ceramics or 199 as related to ceramics.

An open-entry laboratory class designed to provide students with the opportunity to refine and expand techniques learned in the corequisite course. Students may enroll for any combination of Art 380 and Art 381 for a total of four semesters. Students may not be concurrently enrolled in Art 380 and Art 381. (CR) (F,S)

382 ABCD Art Lab (Sculpture) (.5)

One and one-half hours lab weekly. Corequisite: Art 164 or 165.

An open-entry laboratory class designed to provide students with the opportunity to refine and expand techniques learned in the corequisite course. Students may enroll for any combination of Art 382 and Art 383 for a total of four semesters. Students may not be concurrently enrolled in Art 382 and Art 383. (CR) (F,S)

383 ABCD Art Lab (Sculpture) (1)

Three hours lab weekly. Corequisite: Art 164 or 165.

An open-entry laboratory class designed to provide students with the opportunity to refine and expand techniques learned in the corequisite course. Students may enroll for any combination of Art 382 and Art 383 for a total of four semesters. Students may not be concurrently enrolled in Art 382 and Art 383. (CR) (F,S)

ASTRONOMY**100 Elementary Astronomy (3)**

Three hours weekly.

Acceptable for credit: CSU, UC

A survey course introducing the general principles and fundamental facts of astronomy. (GR/CR) (F,S)

179 Workshops in Astronomy (.5-10)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

189 ABCD Independent Projects in Astronomy (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

AUTO BODY TECHNOLOGY

330 Print Reading and Interpretation (3)

Three hours weekly.

Prepares students to read engineering drawings and specifications and to enable them to understand the intent of the engineer by interpreting the relationship of two-dimensional drawings with respect to actual objects or projects. This course is not open to students who are enrolled in or have received credit for, Automotive Technology 330, Engineering Technology 330, or Machine Technology 330. (GR/CR) (A)

351 Auto Body - Metal (3)

Two hours lecture, four hours lab weekly.

Designed to give the student a basic knowledge of automotive body work, including the essentials of metal collision repair. (GR/CR) (F,S)

353 Auto Body - Repair (3)

Two hours lecture, four hours lab weekly. Prerequisite: Auto Body 351.

Designed to cover the major areas of body and frame straightening and aligning, as well as trims, glass, and fiberglass. Attention is given to blend painting of damaged areas. (GR/CR) (S)

354 ABCD Selected Auto Body Paint Projects (1)

Three hours lab weekly. Prerequisite: Auto Body 356.

Projects selected by the student upon the recommendation of any faculty member and developed under the direct counseling and guidance of the instructional staff in the auto body technology disciplines. All work is completed within the auto body facilities under the direct supervision of the responsible instructor. The student must have the basic knowledge of painting techniques to complete the project. (GR/CR) (A)

355 ABCD Selected Auto Body Metal Projects (1)

Three hours lab weekly. Prerequisite: Auto Body 351.

Projects selected by the student upon the recommendation of any faculty member and developed under the direct counseling and guidance of the instructional staff in the auto body discipline. All work is completed within the auto body facilities under the direct supervision of the responsible instructor. The student must have the basic knowledge of auto body metal repair/refinishing techniques to complete the project. (GR/CR) (A)

356 Automotive Painting Techniques (3)

Two hours lecture, four hours lab weekly.

A study of automotive painting techniques, including the preparation of materials, types of equipment, characteristics of paints, and techniques of paint application. (GR/CR) (F)

358 Automotive Refinishing (3)

Two hours lecture, four hours lab weekly. Prerequisite: Auto Body 356.

The application of prepping, masking, painting, and detailing materials in automotive refinishing. (GR/CR) (S)

360 Collision and Painting Repairs (5)

Three hours lecture, six hours lab weekly. Prerequisite: Auto Body 353 and 358.

Designed to increase students' skill and knowledge in the areas of major collision repair, frame and chassis straighten-

ing, custom body and painting, and to develop their abilities to achieve commercially acceptable speed levels. Also appropriate for those currently employed in the auto body trade. (GR/CR) (S)

379 Workshops in Auto Body Technology (.5-10)

For course description see "Workshops."

381 Industrial Mathematics (3)

Three hours weekly. Prerequisite: Eligibility for Math 511.

Designed as the basic mathematics class for the industrial and engineering technology student wishing to gain proficiency in the applications of mathematics to practical situations, including percentage, area, volume, speed ratios of equipment, horsepower, and the essentials of plane trigonometry. This course is not open to students who are enrolled in or have received credit for Automotive Technology 381, Engineering Technology 381, Machine Technology 381, Maintenance Technology 381 or Welding Technology 381. (GR) (A)

389 ABCD Independent Projects in Auto Body Technology (1-3)

Prerequisite: Automotive Technology 100.

For course description see "Independent Projects."

AUTOMOTIVE TECHNOLOGY

100 Automotive Fundamentals (4)

Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU

Designed to teach the student complete car care, emphasizing the operating principles and service operations on all types of automobiles and light trucks. (GR/CR) (F,S)

133 Automotive Engine Rebuilding (5)

Three hours lecture, six hours lab weekly. Prerequisite: Automotive Technology 100.

Acceptable for credit: CSU

Designed to make the student proficient in all phases of automotive and industrial engine rebuilding, including crankshaft grinding, boring, honing, line boring, block and head resurfacing, crack repair, head reconditioning, precision measuring, balancing, and engine assembly. (GR/CR) (F)

303 Automotive Electricity (4)

Two hours lecture, four hours lab weekly.

Provides basic knowledge of the development and use of electricity in the modern automobile, and the application of electricity in the service station. (GR/CR) (F,S)

306 Automotive Air Conditioning Systems (1)

Three quarters of an hour lecture, one and one-half hours lab weekly. Prerequisite: Automotive Technology 100.

Covers the operating principles, troubleshooting, diagnosis, and repair of automotive air conditioning systems as used on today's vehicles. (GR/CR) (F)

313 Automotive Brakes (4)

Three hours lecture, three hours lab. Prerequisite: Automotive Technology 100.

A comprehensive examination of automotive and light truck brakes. Emphasis on repair and troubleshooting of domestic

and import systems, drum and disc mechanical systems, power brake systems, anti-skid systems, and computerized brake systems. (GR/CR) (F)

314 Suspension and Alignment (4)

Three hours lecture, four hours lab. Prerequisite: Automotive Technology 100.

Designed to familiarize the student with the theory of suspension design, and the repair and alignment of automotive suspensions including long and short arm suspension, McPherson Struts, Solid Axle, and Twin I Beam types. (GR/CR)

323 Power Trains (5)

Three hours lecture, six hours lab.

An introduction and comprehensive examination of automotive drive lines and differentials; manual transmissions; manual transaxles; automatic transmission fundamentals; flywheel and clutch and 4-wheel drive. Emphasis is placed on principles of operation, troubleshooting and intensive repair. (GR/SR) (F,S)

324 Automatic Transmissions (5)

Three hours lecture, six hours lab weekly. Prerequisite: Automotive Technology 100.

Designed to make the student proficient in four popular automotive transmissions: G.M., Ford, Chrysler, and foreign. Emphasis is on competent repair and troubleshooting of the automatic transmission. (GR/CR) (S)

330 Print Reading and Interpretation (3)

Three hours weekly.

Prepare students to read engineering drawings and specifications and to enable them to understand the intent of the engineer by interpreting the relationship of two-dimensional drawings with respect to actual objects or projects. This course is not open to students who are enrolled in or have received credit for Auto Body 330, Engineering Technology 330, or Machine Technology 330. (GR/CR) (A)

334 Automotive Machining (5)

Three hours lecture, six hours lab weekly. Prerequisite: Automotive Technology 100 and 133.

An intensified course in automotive machining, the course will emphasize student proficiency in machine operation. Content focuses on technological knowledge and methods used in today's automotive shops. (GR/CR) (S)

341 Automotive Carburetion/Injection (5)

Three hours lecture, five hours lab weekly. Prerequisite: Automotive Technology 100 and 303.

Designed to make the student proficient in automotive fuel systems. Emphasis on carburetion, fuel injection, turbocharging, and super charging. Diagnosis and intensive component repair is emphasized. (GR/CR) (F,S2)

343 Automotive Tune-Up and Engine Analysis (5)

Three hours lecture, six hours lab weekly. Prerequisite: Automotive Technology 303 and 341.

Designed to give the student a basic knowledge of the function and operation of test instruments, as well as a working ability to diagnose customer problems in the automotive tune-up area, including carburetion, computer command control, battery, cranking circuits, charging circuits, electrical accessory circuits, and dynamometer testing. (GR/CR) (S,F2)

344 Automotive Emission Control/State Clean Air Car Course (4)

Three hours lecture, three hours lab weekly. Prerequisite: Automotive Technology 341 and 343.

A study of auto emission control systems and their relationship to auto tune-up. Emphasis is on service to certify. The student is prepared for the State Emission Control License test. (GR/CR) (A)

379 Workshops in Automotive Technology (.5-10)

For course description see "Workshops."

381 Industrial Mathematics (3)

Three hours weekly. Prerequisite: Eligibility for Math 511.

Designed as the basic mathematics class for the industrial and engineering technology student wishing to gain proficiency in the applications of mathematics to practical situations, including percentage, area, volume, speed ratios of equipment, horsepower, and the essentials of plane trigonometry. This course is not open to students who are enrolled in or have received credit for Auto Body 381, Engineering Technology 381, Machine Technology 381, Maintenance Technology 381 or Welding Technology 381. (GR) (A)

389 ABCD Independent Projects in Automotive Technology (1-3)

Prerequisite: Automotive Technology 100.

For course description see "Independent Projects."

399 Topics in Automotive Technology (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period).

BIOLOGY

100 Introductory Biology (4)

Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU, UC - Credit limitation

An introduction to the concepts of biology with emphasis on their relevance to current problems of the world. Designed for majors in fields other than biological science, the course stresses genetics, cell biology, evolution, reproduction, ecology, behavior, and diversity of plants and animals. (GR/CR)

120 Humans and the Environment (3)

Three hours weekly.

Acceptable for credit: CSU, UC

Explores contemporary problems generated by human scientific, social and ethical interaction with the environment. Lectures examine the scope of present environmental problems, possible future impacts, and potential solutions. Topics include human impact on the environment, ecological controversies, ecosystem operation, water and energy perspectives, and values of wilderness preservation. Emphasis is on both local and global dimensions of the above topics. This course is not open to students who are enrolled in or

have received credit for Environmental Studies 101.
(GR/CR)

124 Human Anatomy (4)

Three hours lecture, three hours lab weekly. Advisory: Biology 301 or Biology 100. Chemistry 110 or Chemistry 120.

CAN BIOL 10 CAN BIOL SEQ B, acceptable for credit:
CSU, UC

An examination of the functional anatomy of the human organism. Lectures and laboratories investigate the microscopic and macroscopic structures of the major organ systems. (GR/CR) (F,S,U)

125 Human Physiology (4)

Three hours lecture, three hours lab weekly. Prerequisite: Biology 124. Advisory: Chemistry 120.

CAN BIOL 12 CAN BIOL SEQ B, acceptable for credit:
CSU, UC

A study of the functions and interactions of human cells, tissues, organs, and organ systems. Metabolic processes, negative feedback mechanisms, and homeostatic regulation are investigated in both lecture and laboratory sections. Emphasis is on the interaction of physiological processes responsible for the maintenance of normal body functions. (GR/CR) (F,S)

128 Microbiology (5)

Three hours lecture, five hours lab weekly. Prerequisite: Biology 100 or 124 or 125 or 150. Chemistry 110 or 120.

CAN BIOL 14, acceptable for credit: CSU, UC

An introduction to microorganisms, including morphology, physiology, and growth and interaction of bacteria and other microorganisms. Laboratory emphasizes microbiological techniques. (GR/CR) (F,S)

132 Marine Biology (4)

Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU, UC

An introductory study of the biotic and physical factors of the marine shore community, with primary emphasis on the flora and fauna of the Central California coast. Several field trips to the marine shore required. (GR/CR) (F,S)

135 Natural History of California (4)

Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU, UC

An exploration of the natural history of California including climatology, geology, ecology of marine and terrestrial habitats, and the history of human involvement in California. Basic information from lectures and readings will be examined in detail in laboratories and field trips. (GR/CR) (S2)

145 Desert Ecology (2)

One hour lecture, two hours lab weekly. Prerequisite: Biology 100 or Biology 124 or Biology 128 or Biology 132 or Biology 135 or Biology 150 or Biology 154 or Biology 155.

Acceptable for credit: CSU, UC

A short, intensive course in the study of the Mojave Desert. Eight weekly two-hour lectures serve as preparation for the field trip. Lecture topics include the study of desert formation, geology, climate, plant and animal adaptations, and current environmental impacts. Examples of lecture topics are observed in thirty-two hours of planned field activity, including a visit to the Soda Springs field station and Devil's Playground sand dune system. (GR/CR) (S2)

150 Cellular Biology (5)

Four hours lecture, four hours lab weekly. Prerequisite: Chemistry 120 and Math 331.

CAN BIOL 2 CAN BIOL SEQ A, acceptable for credit:
CSU, UC

A study of the nature of life, emphasizing its molecular and cellular aspects of life, particularly cellular reactions as governs of organismic metabolism, biological and chemical evolution, and Mendelian genetics. (GR) (F)

154 General Botany (5)

Three hours lecture, six hours lab weekly. Prerequisite: Math 331 and Biology 150 or 100.

CAN BIOL 6 CAN BIOL SEQ A, acceptable for credit:
CSU, UC

A survey of the plant kingdom, including structure and functions, heredity, relation to environment, economic uses, identification, the role of plants in the ecosystem, and important problems common to all plants. (GR/CR) (S)

155 General Zoology (5)

Three hours lecture, six hours lab weekly. Prerequisite: Math 331 and Biology 150 or Biology 100.

CAN BIOL 4 CAN BIOL SEQ A, acceptable for credit:
CSU, UC

An exploration of the organismic and populational aspects of the animal kingdom. Lecture topics emphasize animal ecology, animal behavior, vertebrate evolutionary trends, and animal form and function. Laboratories investigate the comparative anatomy of invertebrate and vertebrate taxa. Satisfies the university requirement for a second semester of biology. (GR/CR) (S1)

179, 379 Workshops in Biology (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops".

188 ABCD Honors - Biology (2)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Honors."

189, 389 ABCD Independent Projects in Biology (1-3)

189 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

199, 399 Topics in Biology (.5-3)

199 - Acceptable for credit: CSU, UC-Determined after admission

Lecture and/or lab as required by unit formula. Advisory: Eligibility for Reading 310 and English 300.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified by these numbers are not offered on a regular cycle (not within a two-year period).

BUSINESS

The Business department prepares students for positions in the business world upon completion of a two-year program

and provides a two-year transfer program for those students who intend to be admitted to a four-year college at the junior level.

The programs are designed to develop proficiency in technical skills and information; an understanding of the role and responsibility of business in present day society; a foundation of basic background materials for participation in the American enterprise system, and knowledge of the principles, procedures, and art of business management.

101 Introduction to Business (3)

Three hours weekly.

Acceptable for credit: CSU, UC

The nature of business, including principles, problems, practices, procedures, and organization. (GR/CR) (F,S,U)

102 Marketing (3)

Three hours weekly.

Acceptable for credit: CSU

The study of marketing channels and institutions; market structure, organizations, and behavior; retail, wholesale, and industrial marketing; and governmental regulations. (GR) (F,S,U)

103 Advertising (3)

Three hours weekly.

Acceptable for credit: CSU

A survey of advertising media; the psychology of advertising; motivational research; formulation of advertising budgets; mechanics of layout and copy; and evaluation and selection of media. (GR/CR) (S)

104 Business Organization and Management (3)

Three hours weekly. Advisory: Business 302.

Acceptable for credit: CSU

A study of the structure of business firms and the principles of organization that determine departmentation and lines of authority and responsibility. Covers management principles and function, including planning, organization and control within a business firm. (GR) (F,S,U)

106 Small Business Management (3)

Three hours weekly. Advisory: Eligibility for English 300.

Acceptable for credit: CSU

Intended primarily for students who plan to participate in an independently-owned business. Includes study of single proprietorships, partnerships, and corporations at all levels of the American economic system. Not designed as a substitute for Business 101 or Business 103, which serve as introductions to further study in business administration. (GR/CR) (F,S)

107 Human Relations in Business (3)

Three hours weekly. Advisory: Eligibility for or concurrent enrollment in English 300.

Acceptable for credit: CSU

A study of human relations in business including multicultural and gender relationships in the workplace. (GR) (F,S,U)

110 Business Law: Contracts and Sales (3)

Three hours weekly.

CAN BUS 8, *acceptable for credit: CSU, UC*

A study of the legal environment of business and a survey of the law of contracts, agency, bailments, and sales. (GR/CR) (F,S)

111 Internet Marketing (3)

Three hours weekly.

Acceptable for credit: CSU

A study of methods to create, distribute, promote, and price goods and services to a target market over the Internet. (GR/CR) (A)

121 Business Economics (3)

Three hours weekly. May be taken prior to or concurrently with Economics 101 or 102.

Acceptable for credit: CSU

An introduction to basic economic analysis and institutions. Macroeconomic analysis of income, employment, price level, and international trade. Microeconomic analysis of demand, production, competitive and noncompetitive product markets, and factor markets. Emphasis is placed on the applications of economic theory in the business environment. This course is not open to students who are enrolled in or have received credit for Economics 121. (GR) (F)

130 Consumer and Family Finance (3)

Three hours weekly. Advisory: Eligibility for Math 300.

Acceptable for credit: CSU

Designed to assist individuals and/or those working with individuals to analyze and direct their financial affairs. Elements and concepts of financial planning and decision making in the areas of budgeting, taxes, borrowing, money management, consuming, insurance, investments, retirement, and estate planning will be analyzed with an emphasis on application to changing family needs. This course is not open to students who are enrolled in or have received credit for Economics 130 or Family and Consumer Sciences 130. (GR/CR) (F,S)

136 ABCD Internship Field Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission
For course description see "Internships."

140 Survey of International Business (3)

Three hours weekly.

Acceptable for credit: CSU

An introduction to institutions and business practices in the international environment, emphasizing the major motivations compelling private firms to pursue international business. (GR/CR) (F)

141 Global Economics (3)

Three hours weekly. Advisory: Completion or concurrent enrollment in Economics 101 or Economics 102, or Economics 121 or Business 121.

Acceptable for credit: CSU, UC

An introduction to international economic issues. Explores why countries trade and addresses the consequences of trade restrictions. Alternative exchange rate systems, factors that cause exchange-rate fluctuations, and the determinants of a country's balance of trade are covered. Other topics include the politics of trade policy, the impact of trade on the job market, the role of international institutions in the global economy, financial crises, global environmental issues, and

international debt problems. This course is not open to students who are enrolled in or have received credit for Economics 141 or International Studies 141. (GR/CR) (F,S,U)

149 ABCD Occupational Work Experience (1-8)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Cooperative Education."

160 Business Communications (3)

Three hours weekly. Advisory: Eligibility for English 300 and the ability to keyboard 40 words per minute are strongly recommended.

Acceptable for credit: CSU

A study of communications used in the business world with emphasis on the content and practice of creating and writing various types of letters, memos, reports, Internet Email, and multimedia presentations. Spelling, correct word usage, sentence structure, punctuation, appearance of copy, and organization of ideas are stressed. (GR) (F,S)

179, 379 Workshops in Business Education (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

189 ABCD Independent Projects in Business (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects." Selected projects may be Tech Prep articulated.

302 Essentials of Management (3)

Three hours weekly.

A review of essential management skills including the role of the supervisor, supervisory challenges, and related human resources responsibilities. This course is not open to students who are enrolled in or have received credit for one or more of the "Essentials of Management" modules or Business 359 Essentials of Management. (GR/CR) (F,S)

303 Sales and Marketing (3)

Three hours weekly.

An overview of sales and marketing strategies including pricing, promotion, and distribution of goods, services, and concepts used to create relationships that satisfy individual and organizational objectives. This course is not open to students who are enrolled in or have received credit for one or more of the "Sales and Marketing: The Series" modules or Business 359 Sales and Marketing. (GR/CR) (F,S)

359 Institutes in Business (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Training courses focusing on specialized business topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (CR) (A)

399 Topics in Business (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period). (CR) (A)

CHEMISTRY

110 Chemistry and Society (4)

Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU

An introduction to the fundamentals of chemistry including the composition of matter, energy, and chemical reactions and their application to everyday living. Applications of chemistry in the areas of medicine, nuclear power, plastics, household products and societies effect on the environment will be emphasized. Intended for non-science majors. Not open to students who are enrolled in or have completed Chemistry 100, 105, or Chemistry 120. (GR/CR) (F,S)

120 Introductory Chemistry (4)

Prerequisite: Math 311. Three hours lecture, three hours lab weekly.

Acceptable for credit: CSU, UC - Credit limitation

An introductory course emphasizing the principles and practices of chemistry for the student having no prior background in chemistry. Not open to students currently enrolled in or who have received credit for Chemistry 100, 105, or 110. (GR/CR) (F,S,U)

140 Introductory Organic Chemistry (4)

Three hours lecture, three hours lab weekly. Prerequisite: Chemistry 120 with grade of "C" or better.

CAN CHEM 6, *acceptable for credit: CSU, UC*

An introductory study of the compounds of carbon, including both aliphatics and aromatics. Laboratory work consists of synthesis and reactions of representative compounds. Consideration is given to the simple aspects of organic analysis and to a thorough introduction to reaction mechanisms. The course is generally required of pre-medical, pre-dental, and biology majors. (GR/CR) (S)

150 General Chemistry 1 (5)

Three hours lecture, six hours lab weekly. Prerequisite: Chemistry 120 and Math 331.

CAN CHEM 2 CAN CHEM SEQ A, *acceptable for credit: CSU, UC*

A study of the principles and theories of chemistry. Topics include the kinetic-molecular theory of matter, atomic structure and the periodic table, chemical bonding, gases and stoichiometry. Experiments in standard qualitative and quantitative analysis emphasizing the collection and interpretation of data are covered in the lab. (GR/CR) (F,S)

151 General Chemistry 2 (5)

Three hours lecture, six hours lab weekly. Prerequisite: Chemistry 150.

CAN CHEM 4 CAN CHEM SEQ A, *acceptable for credit: CSU, UC*

A continuation of Chemistry 150, emphasizing the development of the principles and theories of chemical equilibria, chemical kinetics, thermodynamics and electro-chemistry, including an introduction to modern means of instrumental analysis. The laboratory consists of experiments in standard qualitative and quantitative analysis. (GR/CR) (F,S)

179, 379 Workshops in Chemistry (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

188 ABCD Honors - Chemistry (2)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Honors."

189 ABCD Independent Projects in Chemistry (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

COMPUTER BUSINESS INFORMATION SYSTEMS

101 Computer Concepts and Applications (3)

Three hours lecture, one hour lab weekly. Prerequisite: Computer Business Information Systems 301. Advisory: Computer Business Office Technology 100.

CAN CSCI 2, acceptable for credit: CSU, UC

A general education course focusing on computer concepts, terminology, uses, and the computer's effect on society. Introduces typical software applications such as word processing, spreadsheets, databases, presentation software, and Internet browsers. (GR/CR) (F,S,U)

108 Networking and Administration (3)

Three hours lecture, two hours lab weekly. Advisory: Computer Business Information Systems 301.

Acceptable for credit: CSU

Assists students preparing to work as network administrators or server managers emphasizing installation and maintenance of a Windows NT Server on a LAN. Also provides preparation for the Windows NT certification exam. (GR/CR) (F,S)

112 Introduction to Programming (3)

Three hours lecture, two hours lab weekly. Advisory: Computer Business Information Systems 301 or 101 or Computer Science 102.

Acceptable for credit: CSU, UC Credit limitation

An introduction to Visual Basic, an object-oriented/event and procedure-driven programming language for the Windows environment. Provides skills necessary for the creation of professional-looking applications, development of macros in Excel, and use of procedures and modules in Access. (GR/CR) (F,S)

141 Spreadsheet Applications (3)

Three hours lecture, two hours lab weekly. Advisory: Computer Business Information Systems 101 or 371 or Computer Science 102.

Acceptable for credit: CSU

Provides the student with techniques for solving business problems and developing business decision-making processes using a software spreadsheet package. (GR/CR) (F,S)

142 Database Applications (3)

Three hours lecture, two hours lab weekly. Advisory: Computer Business Information Systems 101 or 372 or Computer Science 102.

Acceptable for credit: CSU

Provides the student with techniques for solving business problems and developing business decision-making processes using a commercial database software package. (GR/CR) (F,S)

301 Computer Fundamentals 1 (3)

Three hours lecture, one hour lab weekly.

Development of computer competency using the Windows operating system and a number of common computer peripherals. Provides students with the essential computer skills to succeed in college-level computer courses. (GR/CR) (F,S)

302 Computer Fundamentals 2 (3)

Three hours lecture, one hour lab weekly. Prerequisite: Computer Business Information Systems 301.

Development of advanced Windows operating system. Fundamentals of usage from intermediate through advanced topics. Provides students with the essential computer skills necessary to succeed in advanced computer courses. (GR/CR) (F,S)

315 Programming for the Web 1 (1.5)

Three hours lecture, one hour lab weekly (eight weeks). Advisory: Computer Business Information Systems 324.

An introduction to the principles of programming and scripting for the development of Web-based e-business and e-commerce solutions. Emphasizes programming concepts to develop Web pages that include client-side scripting. (GR/CR) (F,S)

321 Internet Business Applications (3)

Three hours lecture, one hour lab weekly. Advisory: Computer Business Information Systems 301 or proficiency in the use of Windows Operating System and Computer Business Office Technology 100 or skill in keyboarding.

Development of fundamental competency in Internet business applications. Explores a comprehensive range of skills from the basic uses of Internet browsers, search engines, and email to file transfer protocol, file compression, and bookmark management. Includes the use of editing software to create interactive business Web sites, searching for and registering domain names, and analyzing business web sites. (GR/CR) (F,S)

327 Building Business Web Sites (3)

Three hours lecture, one hour lab weekly. Advisory: Computer Business Information Systems 373.

An introductory to advanced course on business website development that consists of web site design, accessibility, usability, and troubleshooting. Presents skills necessary to create professional-looking business Web pages using images, tables, tags, cascading style sheets, forms, libraries, behaviors, and timelines. Includes uploading and maintaining pages on an Internet server site. Learn Macromedia Dreamweaver. (GR/CR) (F,S)

337 Presentation Design - PowerPoint (3)

Three hours weekly. Advisory: Computer Business Information Systems 373 or knowledge of Windows.

An introduction to computer-based business presentations and their development using PowerPoint. (GR/CR) (F,S)

343 Applied Project Management 1 (1.5)

Three hours lecture, one hour lab weekly (eight weeks). Advisory: Knowledge of current Windows operating system.

An introduction to managing comprehensive projects using a commercial project management software package. Provides skills necessary for planning and creating professional-looking schedules, communicating project information, and using the critical path. (GR/CR) (F,S)

359 Institutes in Computer Business Information Systems (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Training courses focusing on specialized computer business information systems topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (CR) (A)

371 Introduction to Spreadsheet Applications (1)

One-half hours lecture, one and one-half hours lab weekly.

Provides the student with an introduction to the use of spreadsheets using a microcomputer. This is a "hands-on", self-paced course with flexible hours. (CR) (F,S,U)

372 Introduction to Database Applications (1)

One-half hours lecture, one and one-half hours lab weekly.

Provides the student with an introduction to the use of electronic database management using a microcomputer database program. This is a "hands-on", self-paced course with flexible hours. (CR) (F,S,U)

373 Introduction to Windows (1)

One-half hours lecture, one and one-half hours lab weekly.

An introduction to the use of Windows, the most widely used graphical-user interface for the IBM PC (compatibles) or Apple Macintosh. This is a "hands-on" self-paced course with flexible hours. (CR) (F,S,U)

399 Institutes in Computer Business Information Systems (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period). (CR) (A)

Acceptable for credit: CSU

Elementary keyboarding by touch techniques for those who need to develop keyboarding and keypad skills necessary for using computer keyboards. Enrollment permitted until the last six weeks or that equivalent of each semester. (GR/CR) (F,S,U)

101 Keyboarding Applications (2)

Six hours lab weekly. Prerequisite: Computer Business Office Technology 100. This course is Tech Prep articulated.

Acceptable for credit: CSU

A beginning course in computerized document formatting, letter styles, tabulation, and touch techniques for speed development. Flexible hours. Enrollment permitted until the last six weeks or that equivalent of each semester. (GR/CR) (F,S,U)

131 Introduction to Word Processing (3)

Three hours weekly. Advisory: Ability to keyboard 25 words per minute. This course is Tech Prep articulated.

Acceptable for credit: CSU

An introduction to word processing designed to develop skills in formatting and editing documents using microcomputers. Includes setting tabs, creating headers and footers, inserting tables, creating newsletters and brochures and printing envelopes and labels. (GR/CR) (F,S,U)

132 Advanced Word Processing (3)

Three hours weekly. Prerequisite: Computer Business Office Technology 131. This course is Tech Prep articulated.

Acceptable for credit: CSU

An advanced word processing experience designed to develop industry proficiency in the skills required for processing information in today's electronic office. Includes inserting graphics and WordArt to create flyers and newsletters, creating online forms, inserting a table of contents and index for reports and books, creating a web page using word processing software, completing a mail merge, and recording macros. (GR/CR) (F,S)

302 Records Management (2)

Six hours lab weekly.

A comprehensive course in the principles and practices of records management. The course covers the rules of indexing and alphabetizing and various records management systems including geographic, numeric, subject, microfilming and magnetic-disc and tape storage plus the organization and operation of records management programs. Flexible hours. Enrollment permitted until the last six weeks or that equivalent of each semester. (GR/CR) (F,S)

305 Legal Office Procedures (3)

Three hours weekly. Prerequisite: Ability to keyboard 40 words per minute.

Focuses on law office secretarial procedures and terminology, covering the field of general civil procedure, unlawful detainer (landlord/tenant), adoption law, family law (dissolution), probate law, corporate law, and miscellaneous non-court documents, such as deeds and notes. (GR) (F)

**COMPUTER BUSINESS OFFICE
TECHNOLOGY****100 Keyboarding (1)**

Three hours lab weekly. This course is Tech Prep articulated.

312 ABC Keyboarding Speed and Development (1)

Three hours lab weekly. Prerequisite: Computer Business Office Technology 100. This course is Tech Prep articulated. Designed to follow the formal computerized keyboarding courses in order to bring up students' speed and accuracy by the touch method before they enter the job market. Enrollment permitted until the last six weeks of each semester. (GR/CR) (F,S,U)

325 AB Machine Transcription (1)

Two hours lab weekly. Prerequisite: Ability to keyboard 40 words per minute.

Designed to help the student master the techniques of machine transcription and review the rules of spelling, grammar, punctuation, letter placement, and the formatting of various business documents. (GR/CR) (F,S,U)

333 AB Basic Desktop and Internet Publishing for Business (3)

Three hours weekly. Prerequisite: Computer Business Information Systems 373. Advisory: Computer Business Information Systems 101 or Computer Business Office Technology 131.

Basics of desktop and Internet publishing for business documents. Topics include page layouts using columns and grids, adding multimedia elements, incorporating color, and publishing techniques. (GR/CR) (S)

334 Administrative Operations and Office Procedures (3)

Three hours weekly. Prerequisite: Computer Business Office Technology 101 or Computer Business Office Technology 331 or Computer Business Office Technology 360. Advisory: Ability to keyboard 25 words per minute.

Focuses on both the computerized and non-computerized administrative tasks performed by secretaries and administrative assistants in today's electronic office. Students will be required to utilize one or more of their office administration technical applied skills such as keyboarding in this course. (GR/CR) (F,S)

336 Introduction to Telecommunications and the Internet (1)

One-half hour lecture and one and one-half lab hours weekly. Prerequisite: Computer Business Information Systems 101 or 373.

An introduction to the use of telecommunication technology to send and retrieve information including the use of modems, email, and the Internet. This is a "hands-on", self-paced course with flexible hours. (CR) (F,S)

337 Presentation Design - PowerPoint (3)

Three hours weekly. Advisory: Computer Business Information Systems 373 or knowledge of Windows.

An introduction to computer-based business presentations and their development using PowerPoint. (GR/CR) (F,S)

340 Introduction to Voice Recognition (1)

Eight hours lecture, twenty-four hours lab (one week). Advisory: Computer Business Information Systems 373 or knowledge of Windows.

An introduction to the basic functions of voice recognition software. This is a "hands-on" self-paced, course with flexible hours. (CR) (F,S)

359 Institutes in Computer Business Office Technology (.5-3)

Lecture and/or lab as required by unit formula. Eligibility for enrollment will be determined by content of course.

Training courses focusing on specialized Computer Business Office Technology topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (CR) (A)

360 AB Essentials of Word Processing (1)

One-half hour lecture and one and one-half lab hours weekly.

An introduction to word processing using a Windows word processing package. This is a "hands-on", self-paced course with flexible hours. (CR) (F,S,U)

361 Introduction to Presentation Design (1)

One-half hour lecture and one and one-half lab hours weekly.

Provides the student with an introduction to the use of a presentation design program using a microcomputer. This is a "hands-on", self-paced course with flexible hours. (CR) (F,S,U)

399 Institutes in Computer Business Office Technology (.5-3)

Eligibility for enrollment will be determined by content of course.

Short-term training courses focusing on specialized Computer Business Office Technology topics. Topics will be identified on a periodic basis in conjunction with employment needs. Offerings identified as 399 are not offered on a regular cycle (not within a two-year period). (CR) (A)

COMPUTER ELECTRONICS**104 Introduction to Robotics and Mechatronics (3)**

Two hours lecture, three hours lab weekly.

Acceptable for credit: CSU

An introduction to robotic control applications. Basic electronics including digital, analog, and microcontroller devices, sensors and transducers, and actuators will be emphasized for automation control. Topics include Basic, Assembly and C language programming for robotic control; interfacing of indicators, switches, sensors and transducers; controlling motion and motors; monitoring and measurement of rotation; measuring light, temperature and conductance; application of navigation and measurement techniques; remote control applications; mechanical systems; and the control of frequency and sound. This course is not open to students who are enrolled in or have received credit for Electronics 104 or Engineering Technology 104. (GR/CR) (F,S)

128 Renewable Energy (3)

Two hours lecture, three hours lab weekly. Prerequisite: Computer Electronics/Electronics/Engineering Technology 104. Electronics 118 and 119 or Electronics 111 and 112 and 113 and 114.

Acceptable for credit: CSU

A study of the principles behind energy generation and conversion that can be applied to modern electrical,

mechanical, and chemical devices that use or produce power. Special emphasis will be given to the study of electricity as a renewable energy source. This course is not open to students who are enrolled in or have received credit for Electronics 128 or Engineering Technology 128. (GR/CR) (A)

131 Programmable Logic Controllers and Industrial Control Design (3)

Two hours lecture, three hours lab weekly. Prerequisite: Electronics 125 or Computer Science 141.

Acceptable for credit: CSU

A study of the purpose and operating features of a programmable logic controller (PLC). Topics include PLC terminology, architecture, input/output modules, memory, commands for internal relays, on/off timers, up/down counters, use of subroutines, program control, and math instructions. Relay schematics, ladder logic diagrams, and programming of logic controllers are emphasized. Sensing devices and time-driven process sequences will be studied and integrated into control systems. This course is not open to students who are enrolled in or have received credit for Electronics 131 or Engineering Technology 131. (GR/CR) (A)

133 Transducers, Sensors, and Programming for Industrial Control (3)

Two hours lecture, three hours lab weekly. Prerequisite: Computer Electronics/Electronics 104. Electronics 122 or Electronics 125 or Computer Science 141.

Acceptable for credit: CSU

A study with hands-on application of the mechanical engineering, electronics, computer programming and electromechanical concepts (mechatronics) in the production of goods and services. Emphasis is on how a wide variety of technical elements fit into industrial applications. Topics include transducers and sensors for light, heat, motion, pressure and position; switching devices; input and output signal conditioning; continuous, closed-loop, and proportional integral derivative process control; and safety. This course is not open to students who are enrolled in or have received credit for Electronics 133 or Engineering Technology 133. (GR/CR) (A)

138 Introduction to Motorola's 68000 Microprocessor Family (3)

Two hours lecture, three hours lab weekly. Prerequisite: Computer Science 141 or Electronics 125.

Acceptable for credit: CSU

An exploration of the Motorola MC 68000 family of microprocessors including internal architecture, memory, addressing, support devices and its control through the use of Assembly and C languages. Students will write programs to perform logic functions and high speed hardware control operations. The use of assemblers, compilers, linkers, and debugging tools will be explored. This course is not open to students who are enrolled in or have received credit for Electronics 138 or Engineering Technology 138. (GR/CR) (A)

139 Electrical Power, Motors, and Controls (3)

Two hours lecture, three hours lab weekly. Prerequisite: Electronics 122 and Electronics 125 or Computer Science 141.

Acceptable for credit: CSU

A study of electronics, signal communication and power technology that support efficient manufacturing processes for various industries. Topics include motors, their drives and controls, power electronics, PLCs, and communications networks used to monitor industrial processes. This course is not open to students who are enrolled in or have received credit for Electronics 139 or Engineering Technology 139. (GR/CR) (A)

162 Fluid Power and Control (2)

Two hours weekly.

Acceptable for credit: CSU

An introduction to the generation, control and basic applications of hydraulics and pneumatics force and motion systems. Topics include safety, properties of and forces in liquids, pumps, motors, valves, reservoirs, strainers, filters, accumulators, basic diagramming, system design and troubleshooting. This course is not open to students who are enrolled in or have received credit for Electronics 162 or Engineering Technology 162. (GR/CR) (A)

COMPUTER SCIENCE

102 Introduction to Computing with HTML (3)

Three hours lecture. Advisory: Computer Business Office Technology 100.

Acceptable for credit: CSU, UC

A general education course dealing with how computers work, how they are used and their effects on society. Includes an introduction to web-page design using HTML. (GR) (F,S)

105 PC Preventive Maintenance and Upgrading (3)

Two hours lecture, three hours lab weekly.

Acceptable for credit: CSU

Necessary skills and information needed to make an informed purchase, maintain, upgrade, and evaluate personal computer systems. Students will receive hands-on instruction for performing basic preventive maintenance and the installation of simple upgrades such as adding RAM, installing hard drives, sound cards, etc. Included is the study of soldering techniques, electronic part identification, and safety and system operation. Emphasis will be placed on the student's ability to keep personal computers running at their best performance levels. This course is not open to students who are enrolled in or have received credit for Electronics 105. (GR/CR) (F,S)

106 Network Essentials 1 (3)

Two hours lecture, three hours lab weekly. Advisory: Electronics/Computer Science 105 and either Electronics 125 or Computer Science 141.

Acceptable for credit: CSU

First course in a series designed to provide students with knowledge of and laboratory experiences with current and emerging computer networking technology. Focus will be on LANs, WANs, OSI models, IP addressing, cabling, CompTIA Network+, and network standards; the theory behind the various kinds of network architectures and data transmission methods, and the use of decision-making and problem-solving techniques in applying science, mathematics, and communication concepts to solve networking problems. Instruction and training are provided in the proper care,

maintenance, and use of networking software, tools, and equipment. Emphasis will be placed on the Cisco System Certification. This course is not open to students who are enrolled in or have received credit for Electronics 106. (GR/CR) (F,S)

107 Network Essentials 2 (3)

Two hours lecture, three hours lab weekly. Prerequisite: Electronics/Computer Science 106.

Acceptable for credit: CSU

Second course in a series designed to provide students with knowledge of and laboratory experiences with current and emerging computer networking technology. Focus will be on LANs, WANs, OSI models, IP addressing and router programming; and the theory behind the various kinds of network architectures and data transmission methods including network troubleshooting. Emphasis will be placed on the Cisco System Certification. This course is not open to students who are enrolled in or have received credit for Electronics 107. (GR/CR) (F,S)

108 Network Essentials 3 (2)

Three hours lecture, three hours lab weekly (eight weeks). Prerequisite: Electronics/Computer Science 107.

Acceptable for credit: CSU

Third course in a series designed to provide students with knowledge of and laboratory experiences with current and emerging computer networking technology. Focus will be on LANs, WANs, OSI models, IP addressing and router programming; and the theory behind the various kinds of network architectures and data transmission methods. Emphasis will be placed on the Cisco System Certification. This course is not open to students who are enrolled in or have received credit for Electronics 108. (GR/CR) (F,S)

109 Network Essentials 4 (2)

Three hours lecture, three hours lab weekly (eight weeks). Prerequisite: Electronics/Computer Science 108.

Acceptable for credit: CSU

The final course in a series designed to provide students with knowledge of and laboratory experiences with current and emerging computer networking technology. Focus will be on LANs, WANs, OSI models, IP addressing and router programming; and the theory behind the various kinds of network architectures and data transmission methods. Emphasis will be placed on the Cisco System Certification. This course is not open to students who are enrolled in or have received credit for Electronics 109. (GR/CR) (F,S)

121 Fundamentals of Programming 1 (4)

Four hours weekly. Prerequisite: Math 311. Advisory: Computer Science 102.

Acceptable for credit: CSU, UC

An introduction to the fundamentals of computer programming and software design. Topics include variables, data types, assignment, expressions, basic I/O, control flow, functions and parameters, scope, and data structures. Emphasizes top-down design, step-wise refinement, and an engineering approach, using a high-level language such as "C." (GR) (F,S)

122 Fundamentals of Programming 2 (2)

Four hours weekly (eight weeks). Prerequisite: Math 311. Advisory: Computer Science 121.

Acceptable for credit: CSU, UC

A continuation of the fundamentals of programming. Topics include algorithm design and problem-solving strategies; concepts of object-oriented programming: classes, objects, encapsulation, inheritance and polymorphism. Students will develop applications using class hierarchies and abstract data types. Searching and sorting algorithms will be introduced. (GR/CR) (F,S)

123 Fundamentals of Programming 3 (2)

Four hours weekly (eight weeks). Prerequisite: Math 311. Advisory: Computer Science 122.

Acceptable for credit: CSU, UC

A continuation of the fundamentals of programming. Topics include design and implementation of Abstract Data Types (ADT's); dynamic data structures such as linked lists, graphs, and trees; traversal using iterators; pointers, and dynamic allocation. Problem-solving strategies as well as design and analysis of algorithms are covered. (GR/CR) (F,S)

137 Microcomputer Architecture and Software Design (4)

Three hours lecture, three hours lab weekly. Prerequisite: Computer Science 141 or Electronics 125 and Electronics 126. Advisory: Any computer programming course is recommended.

Acceptable for credit: CSU, UC

Introduction to microcomputer system development. Emphasis is upon assembly language programming, computer/microprocessor architectures, addressing modes, and machine language formats. Assemblers, disassemblers, cross-assembly techniques, simulators, and hardware development systems will be studied and used for the development, debugging and testing of software. Problem solution, programming style, and techniques will be stressed throughout this course. This course is not open to students who are enrolled in or have received credit for Electronics 137. (GR) (F,S)

141 Computer Fundamentals in Digital Design (3)

Three hours weekly. Prerequisite: Math 331.

Acceptable for credit: CSU, UC

An introduction to digital logic design emphasizing design concepts, CAD tool use, VHDL programming, and design simulations. Topics include number systems and codes; Boolean algebra, functions and minimization, VHDL programming and simulation; combinational logic circuits, control and computation circuits, feedback circuits; sequential design and finite machines, HDL chip design microcontrollers and Assembly language programming. (GR/CR) (F,S)

142 Computer Fundamentals in Digital Design Laboratory (2)

Six hours lab weekly. Prerequisite: Completion of or concurrent enrollment in Computer Science 141.

Acceptable for credit: CSU, UC

Hands-on laboratory designed to parallel Computer Science 141. Emphasis is on digital design and system integration. Special logic design and implementation software and circuit analysis software are used to develop logic designs, simulate performance, and program devices. HC11 Microcontroller and Assembly programming are introduced. (GR/CR) (F,S)

148 Mechatronics Systems (4)

Three hours lecture, three hours lab weekly. Prerequisite: Computer Science 137 or Electronics 137.

Acceptable for credit: CSU

Microprocessor (microcontroller) based Mechatronics control system design. Emphasis is placed on programmable peripheral support devices, input sensors, programming, and diagnostic techniques. Interfacing for the control of inductive and non-inductive devices will be studied. Single and multiple chip, 8-bit and 16-bit controller designs will be implemented. This course is not open to students who are enrolled in or have received credit for Electronics 148. (GR/CR) (F,S)

161 Discrete Structures (3)

Three hours weekly. Prerequisite: Math 181 and either Computer Science 121 or Computer Science 175.

Acceptable for credit: CSU, UC

An introduction to the discrete structures of computing, including propositional and predicate logic, methods of proof, functions, computer arithmetic, algorithm complexity, recursion, graphs, trees, sets and relations, networks, induction, and combinatorics. (GR) (S2)

164 Software Engineering (3)

Three hours weekly. Prerequisite: Math 311. Advisory: Computer Science 121 and Computer Science 122 or Computer Science 175.

Acceptable for credit: CSU, UC

A language-independent study of current software development methodologies. Students learn and perform the stages of requirements analysis, system design, implementation, testing and debugging, maintenance in the course of completing a practical software project. A modern programming language such as Java will be used. (GR) (F)

171 FORTRAN (3)

Three hours weekly. Prerequisite: Math 181.

CAN CSCI 4, *Acceptable for credit: CSU, UC*

Computer programming in structured FORTRAN applied to the disciplines of science and engineering, emphasizing scientific algorithms, efficiency, file handling, libraries, and intrinsics. Programming teamwork is emphasized. (GR) (A)

172 Linux and Shell Scripting (3)

Three hours weekly. Advisory: Computer Science 121 or Computer Science 175.

Acceptable for credit: CSU, UC

A study of the UNIX-based operating systems covering command basics, file management, as well as shell use and programming. Topics include the kernel; various interactive shells; processes; the file system; utilities such as awk, sed, and grep; and regular expressions. The Linux operating system is used. (GR) (S)

175 Object-Oriented Programming (3)

Three hours weekly. Prerequisite: Math 311. Advisory: Computer Science 121.

Acceptable for credit: CSU, UC

A study of object-oriented programming including objects, classes, member functions, encapsulation, inheritance and polymorphism. Control flow, function overloading, search

and sort algorithms, recursion, template classes and functions, as well as dynamic data structures are covered. Uses the C++ language. (GR) (F)

179, 379 Workshops in Computer Science (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

189 ABCD Independent Projects in Computer Science (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

199 Topics in Computer Science (1-3)

Acceptable for credit: CSU, UC-Determined after admission

Lecture and/or lab as required by unit formula. Prerequisite: Math 311. Advisory: Computer Science 121 or Computer Science 175.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 199 are not offered on a regular cycle (not within a two-year period). (GR)

310 Introduction to Network Platforms, NOSs, Security, and Maintenance (4)

Three hours lecture, three hours lab weekly. Advisory: Electronics/Computer Science 107 and Electronics/Computer Science 105.

Study of hardware and software platforms related to network installation, maintenance, upgrade, and repair. Major study areas will include server and workstation hardware requirements; WAN upgrading; network operating systems (Novell NetWare, Microsoft Windows NT, and UNIX) including client software (16-bit and 32-bit); backup and disaster planning for networks; network preventive maintenance; adding network services (network printing, network CD-ROMs, network modems, internet access); troubleshooting hardware and software problems. This course is not open to students who are enrolled in or have received credit for Electronics 310. (GR/CR) (F,S)

320 A+ Certification (2)

Two hours lecture, two hours lab weekly. Advisory: Electronics/Computer Science 105.

Computer repair and maintenance with a focus on preparations required for achieving the industry standard CompTIA A+ Certification. The "hands-on" study includes the A+ Core Test Domains and the Windows/DOS Test Domains. This course is not open to students who are enrolled in or have received credit for Electronics 320. (GR/CR) (F,S)

332 Wireless Network Administrator (3)

Two hours lecture, three hours lab weekly.

A study of the basic concepts and technologies of wireless data networking. Includes basic RF theory, WiFi infrastructure, link budget math, troubleshooting techniques, site survey skills, and security measures. Prepares students to take the CWNA Certification Exam at Prometric Testing Centers. This course is not open to students who are enrolled in or have received credit for Electronics 332. (GR/CR) (F,S)

333 Introduction to Network Security (2)

One hour lecture, three hours lab weekly. Prerequisites: Electronics 106 or Computer Science 106.

A comprehensive overview of network security. General security concepts, communications security, infrastructure security, basics of cryptography, and operational/organizational security will be covered. Prepares students to take the CompTIA Security+ Certification Exam at Prometric or Vue sites. This course is not open to students who are enrolled in or have received credit for Computer Science 333. (GR/CR) (F,S)

COOPERATIVE EDUCATION

Cooperative education is a program of directed work experience in which students learn skills and develop attitudes on the job through a cooperative effort between employers and college coordinators, by accomplishing specific measurable learning objectives.

Work experience units are earned based on total hours worked within the enrollment period.

Paid placement

- 1 unit - 75 hours
- 2 units - 150 hours
- 3 units - 225 hours
- 4 units - 300 hours
- 5 units - 375 hours
- 6 units - 450 units
- 7 units - 525 hours
- 8 units - 600 hours

Unpaid Placement

- 1 unit - 60 hours
- 2 units - 120 hours
- 3 units - 180 hours
- 4 units - 240 hours
- 5 units - 300 hours
- 6 units - 360 hours
- 7 units - 420 hours
- 8 units - 480 hours

Interested students not currently employed should contact the Cooperative Education office for information on job development.

Any student who has received a W or F in cooperative education two or more times must consult with a coordinator before re-enrolling.

Cooperative education meets the requirements for graduation as a part of the major or as elective credit (related directly to occupational goals) in every major listed below. Veterans who desire certification for benefits should refer to the Veterans Bulletin of Cooperative Education for additional information.

134 ABCD Internship Seminar (1)

One hour weekly. Corequisite: Cooperative Education course (149 or 302) or Internship Field Experience (136) course (discipline specific).

Acceptable for credit: CSU, UC-Determined after admission

Provides students with a seminar format to discuss, analyze, and critically evaluate their work-based learning experiences. This forum emphasizes job market information, attitudes, and abilities that facilitate job success; skills necessary for maintaining employment; and techniques for enhancing job advancement opportunities. (GR) (F,S)

149 ABCD Occupational Work Experience (1-8)

149 - Acceptable for credit: CSU, UC-Determined after admission

See program description above for cooperative education for class hours. Limitation on Enrollment: Requires employer participation and approval of a college coordinator.

Supervised employment extending classroom-based occupational learning to an on-the-job learning station related to the student's educational or occupational goals. Occupational work experience is available in the disciplines listed below. (GR/CR)

Administration of Justice (AJ 149)**Agribusiness (AGBUS 149)****Fine Arts (ART 149)**

- Applied Design
- Film
- Graphics
- Photo

Business (BUS 149)

- Accounting
- Business
- Computer Business Office Technology

Early Childhood Studies (ECS 149)**Environmental Technology (ENVT 149)****Fire Technology (FT 149)****Family and Consumer Sciences (FCS 149)****Health Sciences**

- Medical Assisting (MA 149)

Industrial Technology (IT 149)

- Architecture
- Automotive Technology
- Diesel and Industrial Technology
- Engineering Technology
- Welding Technology

Journalism (JOURN 149)**Life and Physical Science (PHYSC 149)**

- Biology
- Chemistry
- Geology

Pharmacy Technology (PHT 149)**Physical Education (PE 149)**

- Health Education
- Physical Education

Social Science (SOCSCI 149)**302 AB General Work Experience (1-6)**

See program description for cooperative education for class hours. Limitation on Enrollment: Requires employer participation and approval of a college coordinator.

Supervised employment designed to increase career awareness and to assist students in acquiring desirable work habits and attitudes. The work experience need not be related to the student's educational goals. (GR/CR)

COSMETOLOGY**301 Introduction to Cosmetology (6)**

Forty hours lab weekly (six weeks).

An overview of the field of cosmetology with extensive practice in introductory hair, skin and nail care techniques. The course covers the practices of beauty salon operation, good customer and public relations, and analysis of the Cosmetology Act and State Board Rules and Regulations. (GR)

302 ABCD Advanced Cosmetology (6)

Forty hours lab weekly (twelve weeks). Prerequisite: Cosmetology 301.

Provides students with advanced laboratory and salon experience in the field of cosmetology and related sciences. Includes theories and practices in hair styling, permanent waving, chemical straightening, haircutting, hair coloring and bleaching, scalp and hair treatments, facials, eyebrow arching and hair removal, makeup, manicuring and pedicuring. Students are required by the State Board of Cosmetology to complete COS 301 and COS 302 A-C for a total of 1600 hours in order to qualify to take the licensure examination and become eligible to practice as a cosmetologist. (GR)

310 Manicuring (6)

Forty hours lab weekly (eleven weeks).

Designed to prepare the student to take the state board examination required to obtain a license as a manicurist/pedicurist. Includes the study of anatomy, sanitation and sterilization, and safety precautions as applied to manicuring and pedicuring operations. Students will develop knowledge and skills and water and oil manicuring, hand and arm massage, complete pedicure procedures, massage, and nail analysis. (GR)

389 ABCD Independent Projects in Cosmetology (1-3)

For course description see "Independent Projects."

DANCE

Because all colleges, universities, and private dance companies have different requirements, all dance majors should consult a Dance faculty member concerning specific areas of study.

101 Dance Appreciation (3)

Three hours weekly.

Acceptable for credit: CSU, UC

An overview of the development of dance as an art form from its historical roots to contemporary trends, emphasizing multicultural/gender issues. (GR/CR) (F)

105 Appreciation of the American Musical on Stage and Screen (3)

Three hours weekly.

Acceptable for credit: CSU, UC

The development of the American musical as a theatrical art form through critical appraisal of major composers, lyricists and playwrights from the early 20th century until the present. This course is not open to students who are enrolled in or who have received credit for Drama 105, Film 104, or Music 105. (GR/CR) (F,S)

110 ABCD Modern Dance (2)

One hour lecture, two hours lab weekly plus six hours by arrangement.

Acceptable for credit: CSU, UC

The study and execution of fundamental modern dance techniques including movement skills and the basic rhythmic structure of dance. Students have the opportunity to create their own movement combinations. (GR/CR) (F,S)

111 ABCD New Age Styles (2)

One hour lecture, two hours lab weekly plus six hours by arrangement. Prerequisite: Dance 110.

Acceptable for credit: CSU, UC.

The study and execution of modern dance techniques, including level 2 movement skills with a more advanced rhythmic structure. Students will study styles such as Martha Graham, Merce Cunningham and Jose Limon. The opportunity to create and perform their own movement combinations is part of the structure of the class. (GR/CR) (F,S)

115 ABCD Freestyle Dance Techniques (3)

Two hours lecture, two and one-half hours lab weekly. Prerequisite: Dance 111. Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC.

Emphasizes the particular styles of Cunningham, Graham, and Limon, including turns, extensions, and complex floor work. Students have the opportunity to create their own movement combinations. (GR/CR) (A)

116 ABCD Yoga-based Pilates (.5)

Three hours lab weekly.

Acceptable for credit: CSU, UC

An introduction to yoga-based Pilates exercise techniques. (CR) (A)

120 ABCD Ballet (2)

One hour lecture, two hours lab weekly plus six hours by arrangement.

Acceptable for credit: CSU, UC

An introduction to the fundamentals of ballet movement and terminology. Barre work emphasizes the basic exercises of ballet that develop control, strength, and basic body placement. Center work concentrates on basic ballet combinations of adage, jumps, waltz, and turns. Students have the opportunity to create their own movement combinations. (GR/CR) (F,S)

121 ABCD Barre and Center Techniques (2)

Three hours lab weekly. Prerequisite: Dance 120.

Acceptable for credit: CSU, UC

A study at the intermediate level of movements appropriate to classical music, including intermediate level ballet barre, center adagio, turns, and allegro movement. Students have the opportunity to create their own movement combinations. (GR/CR) (F,S)

125 ABCD Classical Dance Forms (3)

Two hours lecture, two and one-half hours lab weekly. Prerequisite: Dance 121.

Acceptable for credit: CSU, UC

Emphasizes complex work in the Russian and Italian styles, including pirouettes, beats, and pointe work. Students have the opportunity to develop techniques of classical dance forms. (GR/CR) (A)

126 ABCD Ballet Barre (.5)

Three hours lab weekly (eight weeks).

Acceptable for credit: CSU, UC

An introduction to the fundamentals of ballet movements at the barre with emphasis on proper body placement and alignment. (CR) (A)

130 ABCD Jazz (2)

One hour lecture, two hours lab weekly, plus six hours by arrangement.

Acceptable for credit: CSU, UC

An introduction to the basic movements appropriate to contemporary jazz music, emphasizing exercises that develop body stretch and strength, and improve rhythmic abilities and movement coordination. Covers different jazz styles, including rock, modern jazz, and theater dance. Students have the opportunity to create their own movement combinations. (GR/CR) (F,S)

131 ABCD Techniques of Contemporary Dance (2)

Three hours lab weekly, plus six hours by arrangement. Prerequisite: Dance 130.

Acceptable for credit: CSU, UC

A study at the intermediate level of movements appropriate to contemporary music, including turns, floor work, isolation combinations, and rhythm techniques. Students have the opportunity to create their own movement combinations. (GR/CR) (F,S)

133 ABCD Hip Hop/Jazz Styles (2)

One hour lecture, two hours lab weekly.

Acceptable for credit: CSU, UC

An introduction to hip hop and jazz dance styles. (GR/CR) (F,S)

134 ABCD Funk Dance (.5)

Three hours lab weekly. Advisory: Dance 130.

Acceptable for credit: CSU, UC

A study of the complex rhythms of funk dance as appropriate to the jazz dance style. Floor work, isolations, turns, and rhythmic techniques will be studied. (CR) (F,S)

135 ABCD Commercial Dance Forms (3)

Two hours lecture, two and one-half hours lab weekly. Prerequisite: Dance 131. Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

Emphasizes the techniques of commercial dance forms, particularly the Luigi, Jack Cole, and Bob Fosse styles of commercial theatre, including complex turns, floor work, isolation combinations, and rhythm techniques. Students have the opportunity to create their own movement combinations. (GR/CR) (A)

136 ABCD Lyrical Jazz (.5)

One and one-half hours lab weekly. Advisory: Dance 130.

Acceptable for credit: CSU, UC

Emphasizes intermediate techniques of lyrical jazz forms, including complex turns, extensions and rhythmic techniques. Expression of movement will be studied. (CR)

140 ABCD Folkloric Dances of Mexico and Spain (1)

Three hours lab weekly.

Acceptable for credit: CSU, UC

An introduction to the fundamentals of movements appropriate for Mexican folkloric and dances of Spain, empha-

sizing exercises to improve rhythmic abilities and movement coordination. (GR/CR) (F,S)

141 ABCD Ballet Folklorico Ensemble (1.5)

Four and one-half hours lab weekly. Advisory: Dance 140.

Acceptable for credit: CSU, UC

A study of movements of Mexican folklorico dance and dances of Spain, emphasizing complex rhythmical patterns. (GR/CR) (F,S)

142 ABCD Floricanto Dance (.5)

Three hours lab weekly. Advisory: Dance 140.

Acceptable for credit: CSU, UC

Floricanto dance from Mexico and Spain at the intermediate level. (GR/CR) (F,S,U)

145 ABCD Clinic in Folklorico Zapateados (.5)

Three hours lab weekly. Prerequisite: Dance 140. Advisory: Dance 141.

Acceptable for credit: CSU, UC

A study of Zapateado movements associated with Mexican Folklorico dances. (GR/CR) (A)

148 ABCD Folklorico Concert Production (2)

Eight hours lab weekly (twelve weeks). Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

An opportunity for students to use their performance skills in a major Folklorico concert. (GR) (F,S)

150 ABCD Hoofing (.5)

Three hours lab weekly (eight weeks). Advisory: Dance 152.

Acceptable for credit: CSU, UC

A study of intricate tap movements using the hoofing style. (GR/CR) (F,S)

151 ABCD Clinic in Tap (.5)

Four hours lab weekly.

Acceptable for credit: CSU, UC

An introduction to the basic movements of tap dancing, emphasizing styles of musical theater as related to tap. (GR/CR) (U)

152 ABCD Musical Theater Forms: Tap Dance (2)

One hour lecture, two hours lab weekly plus six hours by arrangement.

Acceptable for credit: CSU, UC

An introduction to the basic movements of tap dancing, emphasizing styles of musical theater as related to tap. Covers exercises to develop rhythmic abilities and movement coordination. (GR/CR) (F,S)

153 ABCD Musical Theater: Intermediate Rhythmic Forms (2)

One hour lecture, two hours lab weekly plus six hours by arrangement. Prerequisite: Dance 152.

Acceptable for credit: CSU, UC

A study of intermediate level movements of tap dancing and freestyle rhythmic forms, emphasizing styles of musical theater as related to tap. (GR/CR) (F2)

154 ABCD Pointe and Partnering (1)

One and one-half hours weekly. Prerequisite: Dance 121.

Acceptable for credit: CSU, UC

Designed for the intermediate level student. Ballet pointe work will be taught for women; while men will work on masculine ballet movement. Techniques for partnering will also be explored. (GR/CR) (U)

155 ABCD Pilates-based Body Conditioning (.5)

One and one-half lab hours weekly.

Acceptable for credit: CSU, UC

An introduction to Pilates-based exercise techniques. (CR) (A)

156 ABCD Techniques for Stretch and Warm Up (1)

Three hours lab weekly.

Acceptable for credit: CSU, UC

Designed to help students increase range of motion while decreasing injuries associated with improper preparation for physical activities. Students learn to maintain a position for a sustained period of time in order to allow the body to stretch and warm up its muscles. While the class is particularly important for dancers and athletes, all students can benefit. (GR/CR) (A)

160 ABCD Clinic in Ballet Forms (.5)

Four hours lab weekly.

Acceptable for credit: CSU

A study of fundamental dance techniques, focusing on building basic stretch and strength for the student. Emphasis on style varies according to the needs of the student. (GR/CR) (U)

161 ABCD Clinic in Intermediate Ballet Forms (.5)

Four hours lab weekly. Prerequisite: Dance 120 and 160.

Acceptable for credit: CSU, UC

A study in intermediate dance techniques, focusing on the classical style. (GR/CR) (U)

162 ABCD Clinic in Contemporary Forms (.5)

Four hours lab weekly.

Acceptable for credit: CSU, UC

A study of fundamental dance techniques in contemporary forms, emphasizing building stretch and strength and learning rhythmic forms to contemporary music. (GR/CR) (U)

163 ABCD Clinic in Intermediate Contemporary Dance Forms (.5)

Four hours lab weekly. Prerequisite: Dance 130 and 162.

Acceptable for credit: CSU, UC

A study of intermediate dance techniques in the contemporary styles. Emphasis on complex rhythmic movements. (GR/CR) (U)

164 ABCD Clinic in Modern Forms (.5)

Four hours lab weekly.

Acceptable for credit: CSU, UC

Basic modern dance techniques including warm-ups, locomotor moves, combinations, improvisation, and terminology. A live performance concludes the six-week session. (GR/CR) (U)

165 ABCD Clinic in Hip Hop (.5)

Four hours lab weekly.

Acceptable for credit: CSU, UC

An introduction to hip hop dance. (GR/CR) (U)

167 ABCD Rhythm Tap (.5)

Three hours lab weekly. Advisory: Dance 152 or Dance 153.

Acceptable for credit: CSU, UC

A study of complex tap rhythms. (GR/CR) (S)

168 AB Clinic in Stretch (.5)

Four hours lab weekly.

Acceptable for credit: CSU, UC

Designed to help students increase range of motion while decreasing injuries associated with improper preparation for physical activities. Students learn to maintain a position for a sustained period of time in order to allow the body to stretch and warm its muscles. While the class is particularly important to dancers and athletes, all students can benefit. (GR/CR) (U)

170 Rhythms for Dancers (1)

One-half hour lecture, one hour lab weekly. Advisory: Dance 105, 110, 120, or 130 is recommended.

Acceptable for credit: CSU, UC

The study of music terminology and basic rhythms as they relate to dance, including quality and phrasing and extensive practice in counting and moving to music. (GR) (S2)

171 ABCD Dance Composition/Choreography (3)

One hour lecture, three hours lab weekly. Advisory: Dance 110, 120 or 130.

Acceptable for credit: CSU, UC

An exploration of movement expression through improvisation and choreographic exercises, using music, rhythm, space, time, emotions, props, and sets. Students have an opportunity to work on a choreographic piece as a complete concert piece. (GR/CR) (S1)

172 ABCD Ballroom Dance (.5)

Three hours lab weekly.

Acceptable for credit: CSU, UC

Basic ballroom dances including the rumba, cha-cha, fox trot, waltz, tango and swing. (CR) (F,S,U)

173 ABCD Choreography (3)

One hour lecture, three hours lab weekly. Prerequisite: Dance 171.

Acceptable for credit: CSU, UC

An exploration of movement expression using intermediate-level choreographic exercises. Students will work on several choreographic projects. (GR) (A)

174 ABCD Complex Ballroom Rhythms (.5)

Three hours lab weekly (eight weeks). Advisory: Dance 172.

Acceptable for credit: CSU, UC

A study of complex ballroom dances. (CR) (A)

175 ABCD Salsa, Swing, and Two-Step (.5)

Three hours lab weekly (eight weeks).

Acceptable for credit: CSU, UC

An introduction to the specific styles of salsa, swing, and two-step as social dance forms. (CR) (U)

176 ABCD Choreography Field Work (2)

Twelve hours lab weekly (eight weeks).

Acceptable for credit: CSU

Designed to give the intermediate-level dance student projects in choreography that will lead to a performance. (GR) (U)

177 ABCD Floor Barre (.5)

Three hours lab weekly (eight weeks).

Acceptable for credit: CSU

Floor barre exercises designed to correct alignment and build strength in muscles for proper dance performance. Based on Zena Rommett's training. (CR) (F,S,U)

178 ABCD Latin and Jitterbug Dance Forms with Lifts (.5)

Three hours lab weekly (eight weeks). Prerequisite: Dance 175.

Acceptable for credit: CSU, UC

A study of complex Latin and jitterbug dance forms. Partner lifts will be explored. (CR) (A)

179 Workshops in Dance (.5-10)

179 - *Acceptable for credit: CSU, UC-Determined after admission*

For course description see "Workshops."

180 ABCD Performance Lab (3)

Eleven and one-quarter hours lab weekly. (One-hundred eighty hours.) Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

Provides an opportunity for students to utilize all the performance and choreographic skills used in dance performance, including performing on campus in informal concerts and in a major concert in the college theatre. (GR) (F,S)

181 ABCD Ensemble Summer Production (2)

Eleven hours lab weekly. Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

Provides the opportunity for the career-oriented dance performer to work in a repertory company culminating in a main stage concert. The student will be challenged with the rigors of professional experience among practicing professional artists who collaborate in choreography, rehearsal, technical preparation, and self analysis. Students may take Dance 181 and Dance 183 or any combination of the two up to a total of four classes. (GR) (S)

182 ABCD Technical Production Lab (3)

Nine hours weekly.

Acceptable for credit: CSU, UC

Provides an opportunity for students to develop and apply technical expertise and skills utilized in dance performance, including lighting, costuming, and set-prop design and construction. (GR) (F,S)

183 ABCD Dance Ensemble (3)

Eleven and one-quarter lab hours weekly. (One hundred eighty hours.) Corequisite: Any dance technique class. For students with extensive dance background and performance experience.

Acceptable for credit: CSU, UC

Provides the opportunity for career-oriented dance performers to work with staff and guest artists in the rehearsal and performance experience. Department concerts plus performance in the community comprise the year-round performing activities. Students may take Dance 181 and Dance 183 or any combination of the two up to a total of four classes. (GR) (S)

184 ABCD Summerdance Production (2)

Ninety-six hours lab for one week. Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

An intensive course providing the student with an opportunity to experience all the skills used as a performer and choreographer in dance performance. (GR) (U)

185 AB Introduction to Performance Skills (3)

Ten hours lab weekly.

Acceptable for credit: CSU, UC

An introductory skills class in performance techniques. Provides opportunity for students to learn and perfect performing skills used in a dance performance. (GR) (F,S)

186 ABCD Dance Production (2)

Twelve hours lab weekly (eight weeks). Limitation on Enrollment: Audition.

Acceptable for credit: CSU, UC

An opportunity for students to learn and use performance skills necessary to mount a major concert. (GR) (F,S,U)

187 ABCD Folkloric Touring Production (2)

Twelve hours lab weekly (eight weeks). Advisory: Dance 140 or Dance 141.

Acceptable for credit: CSU, UC

Provides an opportunity for students to use their folkloric performance skills in a variety of stage/audience settings. (GR) (F)

189 ABCD Independent Projects in Dance (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

356 ABCD Dance Team (1.5)

Four and one-half hours lab weekly. Limitation on Enrollment: Audition.

A performance-based course involving dance synchronized movements. (GR/CR) (S)

357 ABCD Cheer Team (1.5)

Four and one-half hours lab weekly. Limitation on Enrollment: Audition.

A performance-based course incorporating cheer and chant skills. (GR/CR) (F,S)

358 ABCD Spirit Squad Stunts (2)

Six hours lab weekly. Limitation on Enrollment: Audition.

An opportunity for students to refine their cheerleading skills. (GR) (F,S)

DENTAL ASSISTING

The following dental assisting courses make up the major. A grade of C or better in the designated dental assisting classes is required to progress in the program. To be admitted to the program the student must obtain the official application forms and follow the outlined procedures for enrollment. Upon completion of this program, the student is qualified to take the California Registered Dental Assistant's Examination.

310 Exploring Career Opportunities (3)

One hour weekly (four weeks).

An exploration of dental health career options. Provides information that enables students to make informed decisions about future career pathways. (CR) (F,S,U)

314 Introduction to Bio-Dental Science (3)

Three hours weekly. Prerequisite: Completion of requirements for admission to program.

Presents basic terminology related to human anatomy and physiology with emphasis on head and neck anatomy. Introduces bio-dental sciences: dental nomenclature, embryology, histology, morphology, pathology, microbiology, pharmacology, and preventive dentistry. (GR) (F)

315 Dental Assisting (4.5)

Six hours lecture, nine hours lab weekly. Prerequisite: Completion of requirements for admission to program.

Prepares the student to provide patient care and perform chairside clinical procedures. Emphasis is on diagnostic and restorative dentistry. Introduces dental procedures, instrumentation, and related supplies. Topics also include infection control, management of hazardous materials, emergency medical procedures, and management of pain and anxiety. (GR) (F)

316 Dental Assisting for Specialty Procedures (4.5)

Six hours lecture, nine hours lab weekly. Prerequisite: Satisfactory completion of Dental Assisting 315 with a C or better.

Designed to cover the principles of specialty procedures, emphasizing chairside assisting and clinical procedures, including instrumentation and related materials for endodontics, oral surgery, prosthodontics, periodontics, pedodontics and orthodontics. (GR) (F)

324 Office Management for a Dental Practice (1.5)

One hour lecture, two hours lab weekly. Corequisite: Dental Assisting 314, 315 and 316.

Covers secretarial and accounting procedures related to office management, including telephone techniques, appointment book management, general correspondence of a dental practice, care of business equipment, third party insurance, accident and government health programs, general accounting statements, banking procedures, payroll and other related administrative duties. Dental software program is utilized. (GR) (F)

325 Clinical Dental Procedures (3)

Four hours lecture, four hours lab weekly (ten weeks). Prerequisite: Dental Assisting 314, 315, 316, and 324.

Focuses on intra-oral procedures including temporary crowns, temporary restorations, coronal polishing as well as clinical procedures performed by Registered Dental Assistants. Emphasis is also given to the California State Board testing requirements. (GR) (S)

326 Dental Radiography (4)

Three hours lecture, four hours lab weekly. Prerequisite: Dental Assisting 315 and Dental Assisting 316.

Designed to provide study in principles and procedures related to dental radiography, history, radiation physics and biological effects, protection procedures and safety guidelines. The course includes film identification, processing, mounting and evaluation. Laboratory exposures on a mannequin cover intra-oral techniques for periapical and bitewing films utilizing various techniques and film-holding devices. Clinical exposures of patients are completed with authorization of a licensed dentist, evaluated by faculty and utilized by the dentist for diagnostic purposes. A certificate will be issued to each student who successfully completes the course. (GR) (S)

327 Comprehensive Dental Screening (.5)

Six hours lab weekly (four weeks). Prerequisite: Successful completion of first semester dental assisting courses. Corequisite: Enrollment in second semester dental assisting courses.

Clinical application of comprehensive screening skills. Emphasizes chair-side assisting as well as identifying and recording clinical findings. (GR) (S)

329 Dental Assisting Practicum (5)

Fifteen hours lab weekly. Prerequisite: Successful completion of first semester dental assisting courses. Corequisite: Enrollment in second semester dental assisting courses.

Provides supervised learning experiences in the various applications of dental assisting skills. (GR) (S)

348 RDA - Success Seminar (.5)

Eight hours. Prerequisite: Successful completion of second semester dental assisting program courses.

Designed to prepare students for the written components of the State Board examination. The California State practice act will be reviewed. (GR) (S)

DRAMA

101 Fundamentals of Theatre 1 (10)

Six hours lecture, fourteen hours lab weekly. Prerequisite: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

The required prerequisite to all sophomore theatre arts courses. In a series of lectures, demonstrations, activities, assigned readings, and laboratory projects, the student examines the theatrical synthesis by exploring the elements of theatrical production. Team-taught by the drama faculty,

staff and resident and guest artists, the student examines the aesthetics and theory of the drama, the nature of dramatic action, and the arts and crafts vital for communication with an audience. The class explores the interpretation of drama through the art of the actor, with exercises and laboratory projects designed to develop the actor's vocal, physical, emotional, creative, and intellectual capacities. The class explores the interpretation of the drama through the art of the designer and the technician with lectures, demonstrations, and laboratory projects in the stage craft skills. This course is the equivalent of three units of basic acting, two units of stage craft, two units of voice and speech, two units of dramatic theory, and one unit of movement. (GR) (F)

102 Fundamentals of Theatre 2 (10)

Six hours lecture, fourteen hours lab weekly. Prerequisite: Drama 101.

Acceptable for credit: CSU, UC

A continuation of Drama 101, with emphasis on individual development. (GR) (S)

103 Theatre Appreciation (3)

Three hours weekly.

CAN DRAM 18, *acceptable for credit: CSU, UC*

Explores theatre as an artistic medium for enhancing understanding of the diversity of the human experience and as a reflection of the development of civilization. Emphasizes the theatre's relevance to the contemporary world. (GR/CR) (A)

104 Introduction to Acting (3)

Three hours weekly.

CAN DRAM 8, *acceptable for credit: CSU, UC*

An introduction to the techniques of the actor, emphasizing theatre games, improvisation, pantomime, observation, concentration and sense memory. (GR/CR) (F,S)

105 Appreciation of the American Musical on Stage and Screen (3)

Three hours weekly.

Acceptable for credit: CSU, UC

The development of the American musical as a theatrical art form through critical appraisal of major composers, lyricists and playwrights from the early 20th century until the present. This course is not open to students currently enrolled in or who have received credit for Dance 105, Film 104, or Music 105. (GR/CR) (F,S)

106 Intermediate Acting/Scene Study (3)

Two hours lecture, three hours lab weekly. Prerequisite: Drama 104. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

An intermediate study of the acting process as a means to enhance personal expression and promote professional growth. Development of individual insight, skill and discipline in the presentation of dramatic materials through lecture, demonstration, interactive exercises, monologue study and partnered scene work is emphasized. (GR/CR) (F,S,U)

110 History of the World Theatre 1 (3)

Three hours weekly.

Acceptable for credit: CSU, UC

A history of the development of the theatre including its playwrights, structures, and methods of staging and acting from the Greeks to 1642. (GR/CR) (S)

111 History of the World Theatre 2 (3)

Three hours weekly.

Acceptable for credit: CSU, UC

A history of the development of the theatre including its playwrights, structures, and methods of staging and acting from 1642 to the contemporary period. (GR/CR) (F)

112 ABCD Theatre Production Lab (3)

Nine hours lab weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

The exploration and development of a theatrical production. Students apply the necessary skills for the process of mounting a professional theatrical production. (GR) (F,S,U)

113 ABCD Performance Lab (3)

Eleven and one-fifth hours lab weekly. (One hundred and eighty hours) Prerequisite: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

Required of all acting majors. In this laboratory the student can apply and develop all of the skills utilized in dramatic performance. Absence from a production laboratory meeting is allowed only with prior approval of the instructor. (GR) (F,S,U)

114 ABCD Introduction to Theatre Laboratory (1)

Three hours lab weekly. Prerequisite: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

An opportunity to experience professional theatre by assisting in one of the PCPA production areas: the artistic office, acting, directing, musical direction, choreography, design, production management, marketing, casting, or any of the production shops. (GR/CR) (F,S,U)

115 ABCD Repertory Theatre (10)

Thirty-five hours lab weekly. (Five hundred sixty hours) Limitation on Enrollment: Audition or interview.

Acceptable for credit: CSU

The career-oriented theatre student works in every aspect of preparation for a touring multiple-production season. Each student is placed in the repertory company according to proficiency in a major area of emphasis. Areas of study include acting, singing, dance, design, costume crafts, property crafts, lighting, sound and scenery crafts, marketing, house and stage management. Within the framework of preparation for touring repertory theatre, the student is challenged with the rigors of a professional experience among practicing professional artists who collaborate in a program of lecture, rehearsal, technical preparation, self-analysis, and discussion. (GR/CR) (U)

118 ABCD Introduction to Technical Theatre Lab (1)

Three hours lab weekly. Limitation on Enrollment: Interview with PCPA Theaterfest's Production Manager.

Acceptable for credit: CSU

An opportunity to experience technical theatre by assisting in one of the PCPA shops (lighting, sound, scenery,

costumes, paints, props), the design studio, the stage management office, or on the running crew of a production. (GR/CR) (S)

120 Advanced Applied Acting 1 (10)

Six hours lecture, fourteen hours lab weekly. Prerequisite: Drama 102.

Acceptable for credit: CSU, UC

Through a series of lectures, demonstrations, activities, assigned readings, and laboratory projects, the student explores the theatrical synthesis from the specific standpoint of the professional actor. Practical application of basic acting skills in the major theatrical styles, with emphasis on personal acting problems, is supplemented by more intensive classes in vocal skills (including voice production and projection, articulation, use of the International Phonetic Alphabet and Standard American Speech) and body techniques for the actor (including techniques of relaxation, body alignment and concentration of energy, as well as solutions to specific physical problems required of the actor by period styles and production concepts). Script analysis and the techniques for scoring a dramatic text are also covered. The class is team-taught by the drama faculty and staff in conjunction with resident and guest artists. (GR) (F)

121 Advanced Applied Acting 2 (10)

Six hours lecture, fourteen hours lab weekly. Prerequisite: Drama 120.

Acceptable for credit: CSU, UC

A continuation of Drama 120 with specific emphasis on personal acting problems. (GR) (S)

122 Stage Management (2)

Two hours weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU

An exploration of basic stage managerial skills for organizing, preparing, and fulfilling theatrical production from the inception through rehearsal and performance. (GR) (F,S)

123 Theatre Graphics (2)

One hour lecture, three hours lab weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

Explores the language of drawing and painting for the theatre and the techniques used to communicate visual ideas in the theatre. Hand drawing, the use of basic perspective, working with color, and supporting computer applications are emphasized. (GR) (F,S)

124 Scenery Stagecraft (2)

Two hours lecture, one hour lab weekly. Prerequisite: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

An exploration of stagecraft with an emphasis on the tools and techniques used in set construction. Construction and production safety, commonly used materials, design appropriate building techniques, and understanding blueprints are explored through lecture and hands-on lab application. Required for all technical theatre majors. (GR) (F,S)

125 Properties Stagecraft (2)

Two hours lecture, one hour lab weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

An exploration of stagecraft with an emphasis on the tools and techniques used in stage properties design and construction. Integrated construction techniques, commonly used materials, historic research, product resources, and design appropriate building techniques are explored. (GR) (F,S)

126 Script Analysis for Technicians (2)

Two hours weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU

Explores script analysis for theatrical production. Focus is on the technician's role in the production based on the artistic team's analysis. Techniques used to evaluate and communicate ideas in the theatre are examined. (GR) (F)

136 Theatre Design and Technology – Sets 1 (2)

One hour lecture, three hours lab weekly. Prerequisite: Drama 123.

Acceptable for credit: CSU, UC

The first of two courses that explores fundamental set design and drafting techniques that includes hand drafting, computer applications such as Vectorworks, set model construction, and black and white elevation development. (GR) (F,S)

137 Theatre Design and Technology – Sets 2 (1)

One hour lecture, one hour lab weekly. Prerequisite: Drama 136.

Acceptable for credit: CSU, UC

The second of two courses presenting the techniques used in set design including script analysis, communication techniques with the director, design development, model painting, and paint elevation development. Hand and computer color techniques will be explored. Required for all technical theatre majors. (GR) (F,S)

140 Theatre Design and Technology – Lights 1 (2)

Two hours weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

The first of two courses that explores fundamental theatrical lighting terms, tools and equipment. Basic electricity, instrument identification, color media, and production procedures applicable to the use of lights for illumination and practical instruments will be discussed and demonstrated. (GR) (F,S)

141 Theatre Design and Technology – Lights 2 (1)

One hour weekly. Prerequisite: Drama 140.

Acceptable for credit: CSU, UC

The second of two courses that explores theatrical lighting through lighting techniques. Includes design principals, computer applications, the role of the assistant lighting designer, and script analysis appropriate to creating a light plot. (GR) (F,S)

151 Theatre Design and Technology – Costumes 1 (2)

One hour lecture, three hours lab weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

The first of two courses that explores the fabrics, tools, and techniques used in costume and soft goods construction for theatrical application. Hand sewing and machine sewing techniques, basic garment and project construction, and theatrical decoration are emphasized. (GR) (F,S)

152 Theatre Design and Technology – Costumes 2 (1)

One hour weekly. Prerequisite: Drama 151.

Acceptable for credit: CSU, UC

The second of two courses that explores the techniques used in costume design. Includes advanced construction techniques, script analysis, communication techniques with the director, costume plot management, design development, and costume rendering techniques. The role of the design assistant and communication processes with the costume shop manager will be discussed. (GR) (F,S)

161 Theatre Design and Technology – Sound 1 (2)

Two hours lecture, one hour lab weekly. Prerequisite: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU, UC

The first of two courses that explores the mechanics of sound, the production process for a variety of playback systems, the function and proper use of equipment and start to develop a critical ear is through lecture, demonstration and lab projects. Required for all technical theatre majors. (GR) (F,S)

162 Theatre Design and Technology – Sound 2 (1)

One hour weekly. Prerequisite: Drama 161.

Acceptable for credit: CSU, UC

The second course exploring sound technology that further explores sound design development, implementation and playback systems. Design principals, script analysis, and fine-tuning listening skills will be studied through class discussion, demonstration, and class projects. Required for all technical theatre majors. (GR) (F,S)

165 Scene Painting 1 (1)

One hour weekly. Limitation on Enrollment: Completion of the program application and procedures for enrollment. Advisory: Eligibility for English 101 or English 301.

Acceptable for credit: CSU

The first of two courses that explores the tools, techniques and terminology used in the craft of scene painting. Topics include the role of the scenic artist in the production process. (GR) (F,S)

166 Scene Painting 2 (2)

Two hours lecture, one hour lab weekly. Prerequisite: Drama 165.

Acceptable for credit: CSU

The second of two courses that explore the technical and aesthetic craft of scene painting with an emphasis on faux painting techniques (techniques which represent real surfaces) trompe l'oeil painting and working from a graphics image. (GR) (F,S)

173 ABCD Project Development in Theatrical Design and Production (1)

Three hours lab weekly. Prerequisite: Drama 124, Drama 125, Drama 136, Drama 140, Drama 151 and Drama 161. Corequisite: Completion of or concurrent enrollment in Drama 177.

Acceptable for credit: CSU, UC

An exploration of the aesthetics and theory of theatrical design and production through in-depth study of a design and production component. Team taught by theatre faculty with project work designed to enhance the student's skill and knowledge in a chosen component and build the portfolio. Project work can result in theoretical studies and designed, created technical prototypes, or production elements created for PCPA productions. (GR) (S)

175 Advanced Scenery Stagecraft (1)

One hour weekly. Prerequisite: Drama 124.

Acceptable for credit: CSU, UC

An advanced study of stagecraft techniques and procedures used to construct scenery and scenic elements as they apply to PCPA productions and the industry at large. The role of the technical director and the skills needed to plan, manage, and complete construction of scenic elements will be explored through lecture, demonstration, and assigned projects. Concurrent enrollment in Drama 125 permitted. Required for all technical theatre majors. (GR) (F,S)

176 Advanced Properties Stagecraft (1)

One hour weekly. Prerequisite: Drama 125

Acceptable for credit: CSU, UC

The second of two courses that explore research techniques and organizational systems used to create and manage stage properties for theatrical productions. Internet and library resources, catalog resources, interdepartmental communications, managing a construction calendar, and other complex construction techniques are explored through discussion, demonstration and project work. Required for all technical theatre majors. (GR) (F,S)

177 Scenography (2)

One hour lecture, three hours lab weekly. Prerequisite: Drama 124, Drama 125, Drama 136, Drama 140, Drama 151, and Drama 161. Corequisite: Drama 173.

Acceptable for credit: CSU

The study, integration and presentation of technical components as applied to a theatrical production. Provides an opportunity for skills application in a collaborative environment. (GR) (S)

179, 379 Workshops in Drama (.5-10)

179 - Acceptable for credit: CSU, UC-Determined after admission

For course description see "Workshops."

189 ABCD Independent Projects in Drama (1-3)

Acceptable for credit: CSU, UC-Determined after admission

For course description see "Independent Projects."

199 Topics in Drama (.5-3)

Acceptable for credit: CSU, UC-Determined after admission Lecture and/or lab as required by unit formula. Prerequisite/Corequisite/Advisory: Determined by course content.

Provides an opportunity to explore particular aspects of the discipline, which are not covered in detail in the existing program. See the current schedule of classes for topics being offered. Offerings identified as 199 are not offered on a regular cycle (not within a two-year period). (GR) (A)

301 ABCD Actors' Ensemble (6)

Twenty-one hours lab weekly. (Three hundred thirty-six hours) Limitation on Enrollment: Audition.

An opportunity for experienced acting students to participate in an ensemble situation, and to enhance their personal skill levels by interacting with other ensemble members as they perform together in a variety of production styles. (GR) (F,S)

302 ABCD Internship in Technical Theatre (6)

Twenty-one hours lab weekly. (Three hundred thirty-six hours) Limitation on Enrollment: Audition, interview and portfolio review.

A vocational course offering the opportunity for theatre technician/design practitioners to update, develop, and refine their skills in a functioning theatre setting. Under the supervision of the professional staff, the students polish a variety of theatre skills through working with beginning students in the areas of drafting, design aesthetics, stage managing, lighting, scenic production techniques, and all aspects of costuming, properties, and sound production. (GR) (F,S)

EARLY CHILDHOOD STUDIES

The Early Childhood Studies program is designed to give students an awareness of early childhood developmental patterns as well as experience and confidence in curriculum methodologies for children under the age of six. Courses give in-service and pre-service training, and parents and teachers of young children in the community are encouraged to participate in the program. Presently, the college has three schools for young children, which are open for student observation and participation, each weekday, a children's center serving Allan Hancock College student families, and two parent-cooperative nursery schools which serve families from the community at large. The Children's Center and Parent-Child Study Center are located on campus; the Parent-Child Workshop is located on Patterson Road in Orcutt. Courses meeting the Title XXII licensing requirements and the Children's Center Instructional Permit are identified in the Early Childhood Studies Student Teacher Handbook available at building J, the counseling office, and at the campus Children's Center.

100 Early Child Development (3)

Three hours weekly.

CAN FCS 14, acceptable for credit: CSU, UC

The study of child development from the prenatal through the middle-school age, emphasizing physical, cognitive, emotional, and social patterns of growth, as well as insights into child development research methodology. (GR/CR) (F,S,U)

101 Child, Family, and Community (3)

Three hours weekly.

Acceptable for credit: CSU, UC

A study of the sociological patterns that surround a growing child, emphasizing the influences of family and community, and focusing on the important role that a teacher plays in a child's formative years. (GR/CR) (F,S,U)

103 Health and Safety for Children (2)

Two hours weekly.

Acceptable for credit: CSU

Focuses on health and safety management, emergency preparedness, CPR and first aid for infants and young children. This course fulfills the Title 22 requirement for health and safety education for childcare workers. (GR/CR) (F,S)

105 Education of the Young Child (4)

Three hours lecture, two hours observing in a school for young children weekly. Prerequisite: Early Childhood Studies 100 with grade C or better. Advisory: Early Childhood Studies 101.

Acceptable for credit: CSU

A lecture and laboratory observation course focusing on cognitive, physical, and solid-emotional characteristics of young children in educational settings. Emphasis is on those philosophical points, which guide the development of curriculum in those settings. (GR/CR) (F,S)

106 Creative Practice for Young Children (4)

Three hours lecture, two hours participating in a school for young children weekly. Prerequisite: Early Childhood Studies 105 with grade C or better.

Acceptable for credit: CSU

The study of creative art, music, dance, drama, and literature forms appropriate for children under six. Workshops offer opportunities for student exploration of these forms prior to using them in actual nursery school settings. (GR/CR) (F,S)

107 Field Experience (4)

One hour lecture, nine hours as an assistant teacher in a school for young children weekly. Prerequisite: Early Childhood Studies 106 with grade C or better. Corequisite: Early Childhood Studies 110.

Acceptable for credit: CSU

Nine hours per week of supervised practicum teaching in an Allan Hancock College school for young children. The accompanying seminar focuses on teaching goals, insights, satisfactions, and problem areas. (GR/CR) (F,S)

108 Field Experience (2)

One hour lecture, four hours as an assistant teacher in a school for young children weekly. Prerequisite: Early Childhood Studies 106 with grade C or better. Corequisite: Early Childhood Studies 110.

Acceptable for credit: CSU

Four hours per week of supervised practicum teaching in an Allan Hancock College school for young children. The accompanying seminar focuses on teaching goals, insights, satisfactions, and problem areas. NOTE: ECS 108 and 109 are equivalent to ECS 107. Students who have completed ECS 107 may not enroll in ECS 108 or 109. (GR/CR) (F,S)